



Questioned Documents Examination Test No. 16-521 Summary Report

This test was sent to 245 participants. Each sample pack consisted of two questioned prescriptions recovered from a pharmacy (Q1, Q2) and two exemplar prescriptions provided by the doctor for comparison (K1, K2). Participants were requested to analyze the questioned prescriptions to determine if either was authentic as represented by the known exemplars. Data were returned from 215 participants (88% response rate) and are compiled into the following tables:

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This report contains the data received from the participants in this test. Since these participants are located in many countries around the world, and it is their option how the samples are to be used (e.g., training exercise, known or blind proficiency testing, research and development of new techniques, etc.), the results compiled in the Summary Report are not intended to be an overview of the quality of work performed in the profession and cannot be interpreted as such. The Summary Comments are included for the benefit of participants to assist with maintaining or enhancing the quality of their results. These comments are not intended to reflect the general state of the art within the profession.

Participant results are reported using a randomly assigned "WebCode". This code maintains participant's anonymity, provides linking of the various report sections, and will change with every report.

Manufacturer's Information

Each sample set contained four items: Items K1 and K2, two exemplar prescriptions from a doctor's office, and Items Q1 and Q2, two questioned prescriptions recovered from a pharmacy. The pharmacy believed the questioned prescriptions may be forgeries and provided them to the police. The doctor created two exemplar prescriptions depicting the features of authentic documents for comparison. Participants were asked to examine the items and determine if the questioned items were authentic prescriptions as represented by the known exemplars.

SAMPLE PREPARATION-

Two prescription templates were created using Microsoft Publisher, each containing slightly differing line layouts, spacing, and fonts. Items K1 and K2 were created using the first template, and then printed on DocuGard 7-feature multi-purpose security paper using a laser printer. Each item was then stamped with a laser-cut, pre-inked stamp containing the doctor's signature and hand dated with a Pentel RSVP medium black ballpoint pen. Items Q1 and Q2 were created using the second template, and a scan of the doctor's signature was digitally placed on the signature line. The items were then printed on DocuGard 2-feature multi-purpose security paper using a second laser printer. The questioned items were hand dated by a different individual using a Papermate medium black ballpoint pen. All four test items were trimmed to a smaller, consistent size.

SAMPLE SET ASSEMBLY-

After quality reviews were complete, each test item was packaged into its respective item envelope beneath a piece of chipboard and sealed with clear tape. All four items were then placed into a pre-labeled sample set envelope. Following predistribution testing, each sample set envelope was sealed with evidence tape and initialed "CTS."

VERIFICATION-

Predistribution examiners determined the questioned items (Q1, Q2) were not authentic prescriptions as depicted by the known exemplars (K1, K2). This was supported by the following observations: template differences between the known and questioned items, specifically fonts and spacing; paper security features found on the known items that were not found on the questioned items; and differences in the manufacture of the signatures on the known versus the questioned items.

Summary Comments

Each sample set consisted of four items - two exemplar prescriptions from a doctor's office (K1, K2) that demonstrate the features of authentic prescriptions and two questioned prescriptions that were recovered from a pharmacy (Q1, Q2). The pharmacy suspected that the questioned items were not authentic and provided them to police for investigation. The Q1 and Q2 prescriptions were not authentic documents issued by the doctor's office (Refer to the Manufacturer's Information for preparation details).

For question 1, "Could the questioned items (Q1, Q2) be authentic prescriptions as represented by the known exemplars?", 98.6% of participants reported that the questioned prescriptions were not authentic ("E", 203 participants) or were probably not authentic ("D", 9 participants). Three participants (1.4%) could not determine if the prescriptions were authentic ("C"). No participants identified the prescriptions as authentic ("A", "B").

A majority of participants provided the following observations to support their conclusion that the questioned prescriptions were not authentic: security features of the known prescriptions were not found on the questioned prescriptions; computer font styles differed between the known and questioned prescriptions; and the deposition technique of the doctor's signature on the known prescriptions was different from that of the questioned prescriptions. Some participants also observed that handwriting characteristics of the handwritten date on the known prescriptions were different from those of the questioned prescriptions; however, there was an inadequate amount of handwriting for definitive determinations to be made about their authorship.

Across the 215 responding participants, 862 methods of analysis were reported in total. Some of these methods were reported more than once by a single participant, indicating that the technique was possibly performed more than once to examine different features of the documents. The most commonly reported technique utilized was Video Spectral Comparator (VSC), reported 217 times. Other frequently reported methods include Stereomicroscope (138), Visual Examination (97), and Ultraviolet (UV) Examination (81). The methods listed in the response summary are the preloaded options for selection via the CTS Portal and do not reflect all answers provided by participants.

Examination Results

Based on the findings of your examination, could the questioned items (Q1, Q2) be authentic prescriptions as represented by the known exemplars?

Response Key:

- A. The questioned prescription IS AUTHENTIC and issued by the doctor.
- B. The questioned prescription IS PROBABLY AUTHENTIC and issued by the doctor.
- C. CANNOT DETERMINE whether or not the questioned prescription is authentic and issued by the doctor.
- D. The questioned prescription IS PROBABLY NOT AUTHENTIC and not issued by the doctor.
- E. The questioned prescription IS NOT AUTHENTIC and not issued by the doctor.

TABLE 1

WebCode	Q1	Q2	WebCode	Q1	Q2	WebCode	Q1	Q2
2BKVG2	E	E	4TWGQ3	E	E	7X3WDV	E	E
2HR9NZ	E	E	4UQ3ME	E	E	7YXFEW	E	E
2KTMJ6	E	E	4WE8AY	E	E	7Z4XDT	D	D
2T7ECM	E	E	68TVQV	E	E	844EET	E	E
2WMUNZ	E	E	6AWTZ4	E	E	879UYD	E	E
2ZJQ4E	E	E	6AZDPR	E	E	87DDMG	E	E
33NF63	E	E	6BUYHH	E	E	8K766W	E	E
34ZE2W	E	E	6E9UYF	E	E	8MZGXX	E	E
3BK7W6	E	E	6GFW87	E	E	8N7G2W	E	E
3CBGMX	E	E	6U4YPX	E	E	8P4LKC	E	E
3CW2HW	E	E	6U8JEL	E	E	8PNG9T	E	E
3FVCDW	E	E	6UL8FD	E	E	8YRKBG	E	E
3GQVFX	E	E	6UM3XX	E	E	8ZM4CH	E	E
3JQFUG	E	E	79HJNG	C	C	96UZKP	E	E
3JXDET	E	E	79KD73	E	E	9GPZB8	E	E
44E2BY	E	E	7C6CNQ	E	E	9KPC88	E	E
44TMML	E	E	7DZUQR	E	E	9QV6YH	E	E
4N2PKQ	E	E	7KB34M	E	E	9XWCMX	E	E
4TVMAG	E	E	7U3LGV	E	E	9YLMQ	E	E

TABLE 1

WebCode	Q1	Q2	WebCode	Q1	Q2	WebCode	Q1	Q2
AFQGKQ	C	C	DQWL8N	E	E	HLPPPJ	E	E
APHL3R	E	E	DWKBL8	E	E	HLT7NH	E	E
AYMXTU	E	E	DZM8DM	E	E	HMJGEB	E	E
B6TLCM	E	E	E2EHLR	E	E	HNEZFC	E	E
B8U29R	E	E	EG6DEK	E	E	HXMP3M	E	E
BJJBW	E	E	EK4NAK	E	E	J84J8N	E	E
BK2RBY	E	E	EUBKV3	E	E	JCH43G	E	E
BKYXTE	E	E	EWM63R	E	E	JCXQCJ	E	E
BPVNZQ	E	E	F7NVAK	E	E	JE4XUB	E	E
BZTPCU	D	D	FDP87H	E	E	JE8HKY	E	E
BZXREL	E	E	FMTC87	E	E	JGTHJF	D	D
CC4GGF	E	E	FUUJVL	E	E	JLNCGG	E	E
CFY9NR	E	E	FVKVLE	E	E	JNVG9J	D	D
CGABCB	E	E	G7H7EM	E	E	JRTUWA	E	E
CGXD77	E	E	GDKDYG	E	E	JUZCU6	E	E
CQW9ZV	E	E	GK4KGL	E	E	K4MNHQ	E	E
CQZTQJ	E	E	GKY4JM	E	E	K6C29Z	E	E
CVMNK	E	E	GLTW9E	E	E	K6DWPL	E	E
CXLKKR	E	E	GNZE7A	E	E	KH3VH9	E	E
CZR3JM	E	E	GWBFRB	E	E	KH4EVC	E	E
D2DFCP	E	E	H2MUXG	E	E	KHXEKA	E	E
D82V64	E	E	H3HCZH	E	E	KK4WH7	E	E
DKVABR	E	E	H4R9GF	E	E	KXBMKE	E	E
DMF478	D	D	H7CB8L	E	E	KY83XB	E	E
DPP49T	E	E	H92NQ4	E	E	L8W28G	E	E

TABLE 1

WebCode	Q1	Q2	WebCode	Q1	Q2	WebCode	Q1	Q2
L97F7A	E	E	QPHKJ4	E	E	UY4Z7	E	E
LBWC4G	E	E	QPK4W8	E	E	V7NDET	E	E
LHTEXF	E	E	QPZEKD	E	E	V7TVDR	E	E
LJNWWG	E	E	QQUZD6	E	E	VFCAEA	E	E
LPF89E	E	E	QQXK3T	E	E	VGBEXN	E	E
LQBMLC	E	E	QUE36B	E	E	W7BYT6	E	E
MAV44V	E	E	QV6B4D	D	D	W828T9	E	E
MJMLH4	E	E	R2AAGP	E	E	W8GT3A	E	E
MPGANB	E	E	R2B4XA	E	E	W8ZDCN	E	E
MUQM7A	E	E	R36EQB	E	E	WBKCB4	E	E
MZBZCJ	D	D	R73BGH	E	E	WGQVQW	E	E
MZRUX7	E	E	RBW869	E	E	WMR8LT	E	E
NAXXLG	E	E	RBZRVX	E	E	WVPQB4	E	E
NH98WF	E	E	REVLTY	E	E	X7KBZ9	E	E
NNEQAM	E	E	RG34RU	E	E	X8VFEX	E	E
NZQFP4	E	E	RG4X9E	E	E	XBVNH8	E	E
P42QFD	E	E	RJC26C	E	E	XR4HC3	E	E
P86CDB	E	E	RNM688	E	E	XX7RGA	D	D
PADRKG	E	E	T26CJX	E	E	XXAB7X	E	E
PAVM64	E	E	T64MEX	E	E	XY4WZP	E	E
PB264Y	E	E	TFM686	E	E	Y23VNM	E	E
PKC8NZ	E	E	U7V7U6	E	E	Y3XDPN	E	E
PUKXBC	E	E	UELN9D	E	E	Y3Y879	E	E
QBL9BZ	E	E	UJ2YLG	E	E	YCKCFT	E	E
QNP KU7	E	E	UWVLG4	E	E	YNDVUY	D	D

TABLE 1

WebCode	Q1	Q2	WebCode	Q1	Q2	WebCode	Q1	Q2
YPT7XX	E	E						
YX3JRM	E	E						
YXMZ8P	E	E						
Z24P68	E	E						
Z6JBYZ	E	E						
Z7ET22	E	E						
ZGH4CW	E	E						
ZXH3CJ	C	C						

Response Summary			Total Participants: 215
<i>Based on the findings of your examination, could the questioned items (Q1, Q2) be authentic prescriptions as represented by the known exemplars?</i>			
Response	Q1	Q2	
A	0	0	
B	0	0	
C	3	3	
D	9	9	
E	203	203	

Response Key:

- A. The questioned prescription IS AUTHENTIC and issued by the doctor.
- B. The questioned prescription IS PROBABLY AUTHENTIC and issued by the doctor.
- C. CANNOT DETERMINE whether or not the questioned prescription is authentic and issued by the doctor.
- D. The questioned prescription IS PROBABLY NOT AUTHENTIC and not issued by the doctor.
- E. The questioned prescription IS NOT AUTHENTIC and not issued by the doctor.

Methods and Observations

What methods/techniques did you utilize? What observations were made from each method/technique?

TABLE 2

WebCode	Methods/Techniques	Observations
2BKVG2	VSC	UV; Long & Short- Differences noted between security markers on the back of Q1 & Q2 and K1 & K2. Date entry slight differences in ink on Q1 & Q2 when compared to K1 & k2.
	Stereomicroscope	Toner signatures on Q1 & Q2, K1 & K2 ink. Q1 Q2 and K1 & k2 toner created type.
	ESDA	Negative results on Q1 & Q2
	Oblique Lighting	Negative results Front & Back Q1 & Q2
2HR9NZ	ESDA	Apart from embossments from the handwritten dates, no marks discernible as writing impressions were developed by the ESDA on Q1 or Q2. Possible transportation marks were developed on Q1 and Q2. K1 and K2 have not yet been examined using the ESDA (scope for further work).
	Handwriting Examination	Macroscopic and microscopic examination and comparison of dates on Q1 and Q2 with Sp HW dates on K1 and K2. Limitations: 1. small amount of HW in question. 2. There are no 3s or 8s in the K and only 1 or 2 examples of the other numerals and characters appearing in Q HW - need more K examples of all numerals and symbols appearing in Q HW. Observations: Differences between Q1 + K1/2 and Q2 + K1/2. Hypotheses for each Q entry: H1: The Q entry was written by the writer of the K. H2: The Q entry was written by a person other than the writer of the K. Conclusion: On the basis of the observations and within the limitations, I am inconclusive as to which H the evidence supports.
	Micrometer	Paper of Q and K all have similar thickness and dimensions.
	Oblique Lighting	Apart from embossments from the handwritten dates, no marks discernible as writing impressions were detected using oblique light on Q1 or Q2.
	Stereomicroscope	Q + K have similar blue offset lithography printed dots in the background = "COPY UNAUTHORIZED" pantograph (different alignment to edge of the paper Q1/Q2 v K1/K2). Borders, text (pro forma and variable) and signing line = black toner printed Q1 and Q2 indistinguishable from one another but different to K1 and K2 (K1 and K2 indistinguishable). HW Date = optically indistinguishable black ball point pen ink on Q + K. Signature = K1/K2 = black fluid ink stamp impression. Q1/Q2 = toner printed reproductions of signature stamp impressions such those on appearing on K1 and K2.
	Paper investigation	A google search of "DocuGard" brought up information about the security features on the webpage http://www.pariscorp.com/dg-med-multi-purpose-security.php . The following inquiry was made with the paper manufacturer: "Please clarify whether your company is responsible for: (a) printing the hidden "UNAUTHORIZED COPY" image on the paper; and/or (b) printing the "DocuGard" UV security feature." We were directed to the webpage discussed above. NB: The website describes other security features in the paper that we did not observe - scope for further work is to examine the Q and K documents again with a view to possibly detecting these features (however, some of these features require invasive examinations).

TABLE 2

WebCode	Methods/Techniques	Observations
	Typography examination	K1/K2 and Q1/Q2 printing in alignment (within each of Q + K) but out of alignment between Q + K (Differences in print layout relative to paper edges and especially in relative positioning of pro forma texts). K1/K2 and Q1/Q2 typestyle and line spacing similar within Q and K but different between Q + K (for both pro forma text and variable text).
	VSC	UV - different degree of UV fluorescence between K + Q, K1/K2 has a latent print UV "DocuGard Watermark" on the back - not on Q1/Q2. IRR + IRL - no detected differences between Q + K Transmitted light - no watermark in paper, different opacity pattern between Q + K.
2KTMJ6	VSC	Printing, Security Paper
	ESDA	Indented writing
	Stereomicroscope	Printing, Stamp impressions
	Transparencies	Stamp impressions
2T7ECM	Stereomicroscope	All the dates were written with a writing instrument as the ink is visible on the paper fibres.
	UV	Under UV light, the documents appear to be bright and glowing. Under transmitted light, documents marked, "K1 and K2" have an emblem/watermark that appears with the word "Docuguard." This is evident that the document is authentic. Specimens marked "Q1 and Q2 were typed on normal paper as the watermark does not appear. Therefore "Q1 and Q2" are not authentic.
2WMUNZ	Stereomicroscope	The black text on K1 and K2 was printed with a toner process, and the signatures are consistent with a stamp. The text and signatures on Q1 and Q2 were printed with a toner process. Additional differences between the fonts used for K1 and K2 and those used for Q1 and Q2 were noted. (See visual exam below.)
	Visual Examination	Visual and microscopic comparison and examination with transparencies show that the fonts used for K1 and K2 are different than those used for Q1 and Q2. The serif font on K1 and K2 has a different style "r", "g", "y", "A", "2", "0", "&", and "O" than those found on Q1 and Q2. Also, the "Rx" characters don't touch on K1 and K2, but they do touch on Q1 and Q2. The non-serif font on K1 and K2 has a different "8" "t", and "2" than those found on Q1 and Q2. Also, the spacing between the phone number in the header and the line below it is narrower on K1 and K2. Use of transparencies shows the spacing of "Take one tablet by mouth" on K2 is wider than that same text on Q1. The handwritten dates were too limited in complexity to make a determination of authorship.
	ESDA	Possible machine impressions were detected on the front of K2. Impressions look like small filled-in vertical rectangles in 3 columns down the middle of the page. No other impressions of evidentiary value were detected.
	VSC	An artificial "DocuGard" watermark was seen on the back of K1 and K2 but not Q1 or Q2 under 365 nm UV.
2ZJQ4E	UV	There are differences in UV reaction on the back page of Q1 and Q2 compare with the back page of K1 and K2.
	Stereomicroscope	The printed signatures in Q1 and Q2 could be seen toner particles while the printed signatures in K1 and K2 could not be seen.

TABLE 2

WebCode	Methods/Techniques	Observations
	Font observation	Q1 and Q2 have different font and size compared with K1 and K2.
	Visual Examination	No differences in latent texts were noted after made a photocopy of Q1, Q2, K1 and K2 paper.
	Micrometer	No differences in length and width were noted between Q1, Q2, K1 and K2.
	Oblique Lighting	No writing indentation was observed in Q1 and Q2.
	Raman Spectroscopy	No differences in Raman spectra were noted between Q1, Q2, K1 and K2 paper.
	Handwriting Examination	With the limited amount of writing available for comparison, common authorship of the handwritten entries could not be determined.
33NF63	Micrometer	[No observations reported.]
	Handwriting Examination	[No observations reported.]
	VSC	[No observations reported.]
34ZE2W	Visual Examination	Font comparison: the font on Q1 and Q2 is the same, the font on K1 and K2 is the same but the font on Q documents differs from the font on K documents. Handwriting comparison: the dates on Q1 and Q2 appear similar handwriting, the dates on K1 and K2 appear similar handwriting. There are some differences between the comparable features of the Q and K dates but it is not possible to assess the significance of these due to the small amount of writing.
	Lightbox	Template formatting: the Q documents format of the template, such as box sizes differs from the K document format of the template. However, the significance of this cannot be fully assessed due to lack of further contemporaneous known prescriptions as the template of the prescription could have changed over time.
	Stereomicroscope	Signatures: K signatures have been produced using a handstamp and ink. The Q signatures have been produced using an electrostatic printing process.
	VSC	All of the questioned signatures are similar from one to another and overlay exactly. Therefore, all of the signatures on the Q documents and K documents must share a common origin, whether that be a handstamp or original 'master signature artwork' used to produce the handstamp.
	UV	Paper: All of the paper used for the Q and K prescriptions is medical grade specialist paper produced by Docuguard. However, the K documents have UV printing on the reverse that is not present on the Q documents.
3BK7W6	VSC	Lab Items 1 (K1), 2 (K2), 3 (Q1), and 4 (Q2) examined under transmitted UV, IR range 550nm-800nm, and IRL range 380nm-675nm. Results: All 4 documents have repetitive security watermark 'UNAUTHORIZED COPY' on the blue side. White side: Lab Items 3 and 4 (Q1 and Q2) no watermark; Lab Items 1 and 2 (K1 and K2) repetitive security watermark "DocuGard". Dates on all 4 documents: Original ink entries. All reacted under IRL range 380nm-640nm. Machine-generated text and signatures on blue side of all documents: No reaction under IR/IRL. White side of documents: The "Sa" of the signatures on Lab Items 1 and 2 (K1 and K2) reacted under IRL range 380nm-640nm. No reaction on Lab Items 3 and 4 (Q1 and Q2).

TABLE 2

WebCode	Methods/Techniques	Observations
Stereomicroscope		"Sarathi Harris" signatures: Lab Items 3 and 4 (Q1 and Q2) are not naturally written signatures, but are toner based. These two signatures produced by a laser printer or a toner laser copier. Lab Items 1 (K1) and 2 (K2) are not naturally written signatures, but are rubber stamp facsimiles of the same signature. The tint of the black stamp ink is a grayish-black. Font size on Lab Items 3 and 4 (Q1 and Q2) is smaller than font size used on Lab Items 1 and 2 (K1 and K2). Examination of font style for the machine-generated text revealed differences in a few of the fonts: Lab Items 1-4 (Q1, Q2, K1, and K2) are as follows: letterhead, "Patient & DOB:", "Rx:", and "Signature and Date" are serif; medication and its dosage information located in center of page are sans-serif. Differences in font observed in comparable letters: Lab Items 3 and 4 (Q1 and Q2): "a" terminal movement on bottom right that does not taper; the "r" has a short terminal that points downward. Lab Items 1 and 2 (K1 and K2) the "a" tapers upward; the "r" has a short terminal pointing upward.
ESDA		Lab Items 3 and 4 (Q1 and Q2) were examined for indented writing using the ESDA. Results negative as no discernible indentations were recovered.
Visual Examination		The signature/date baselines on Lab Items 3 and 4 (Q1 and Q2) are shorter than signature/date baselines on Lab Items 1 and 2 (K1 and K2). Lab Items 3 and 4 (Q1 and Q2) baselines measure 136mm; Lab Items 1 and 2 (K1 and K2) baselines measure 140mm. Black border to edge of paper: Lab Items 3 and 4 borders (Q1 and Q2) do not align to Lab Items 1 and 2 (K1 and K2). Lab Items 3 and 4 (Q1 and Q2): Left margin: 4mm; Right margin: 3mm; Top margin: 7mm; Bottom margin: 3mm. Lab Items 1 and 2 (K1 and K2): Left margin: 4mm; Right margin: 3mm; Top margin: 6mm; Bottom margin: 4mm. Borders on Lab Items 3 and 4 (Q3 and Q4) are shorter than Lab Items 1 and 2 (K1 and K2) borders.
Handwriting Examination		Acetate overlay of Lab item 2 (K2) onto Lab Item 3 (Q1), Lab Item 4 (Q2), and Lab Item 1 (K1) result: all 4 share the same original source signature. Numerals were examined. Inconclusive as to number of writers of numerals due to lack of comparability and brevity of the numerals.
Paris Corporation website information		Emailed CTS to ascertain manufacturing information of Lab Items 1-4 documents. Referred to Paris Corporation website, http://www.pariscorp.com/dg-med-multi-purpose-security.php . Website describes the security features used in their medical and multi-purpose papers. Company can produce state government specific medical prescription papers with up to 10 security features. Manufacturing process of watermarks unknown, but each watermark text is a separate security feature option offered by Paris Corporation
Scanning		Scanning of Lab Items 1 through 4 (K1, K2, Q1, and Q2) revealed the repetitive "UNAUTHORIZED COPY" security watermark on the blue (front) side of the documents. Scanning the white side (back) of Lab Items 1 through 4 (K1, K2, Q1, and Q2) revealed a bluish-purple tint to the paper. The "DocuGard" repetitive security watermark was revealed on the white side of Lab Items 1 and 2 (K1 and K2). No watermarks were observed on the white side of the scanned Lab Items 3 and 4 (Q1 and Q2).
3CBGMX	Visual Examination	The line spacing in the Doctors address is different on Q1 & Q2 (4.5mm) compared to K1 & K2 (5mm). The distance between the Signature and the date is significantly shorter on Q1 & Q2 compared to K1 & K2.

TABLE 2

WebCode	Methods/Techniques	Observations
	Stereomicroscope	On Q1 & Q2, the Background printing is Offset and the text and signature is printed with toner. The date is made by black died ink. There is nothing printed on the back of the pages. On K1 & K2, the Background printing is Offset and the text is printed with toner. The signature is a stamp. The date is made by black died ink. On the back of the pages, there is a white printing "DocuGardTM"
	ESDA	No trace evidence has been found on Q1 and Q2 by applying EDSA.
	Micrometer	The thickness of the pages is the same on Q1, Q2, K1 and K2; 10.5micrometers. But at the Locations, where there is the printing on the back of the pages of K1 and K2, the page is thicker.
	UV	No difference has been detected between the front of Q1, Q2 and K1, K2. On the back of K1 and K2, there is a dark printing visible "DocuGardTM" over the whole page. On the back of Q1 and Q2, no printing is visible.
	Handwriting Examination	There is too little Information for an Extended handwriting examination. But there is a great difference in the angle of the writing on Q1 and Q2 compared to the writing on K1 and K2.
	Infrared, Doculight	The ink of the date on Q1, Q2 and K1, K2 could not be differenciated by optical methods.
3CW2HW	Spectral - UV & oblique lighting	K1 & K2 display printed security feature on back of paper, not visible in Q1 & Q2
	Microscopic Examination	Background printing on Q1 & Q2 display difference in quality to K1 & K2
	Macroscopic and Overlay	Font on Q1 & Q2 does not align with K1 & K2, K1 & K2 consistent with each other.
	Microscopic Examination	Signature on K1 & K2 consistent with being stamp impression, Q1 & Q2 laser printed
3FVCDW	Oblique Lighting	All items examined using crime lite 82L with nil unsourced impressions observed. Original HW observed only.
	ESDA	All items examined using ESDA with some unsourced indecipherable scratchings on Q2, K1 and K2.
	VSC	All items examined under VSC using a range of lighting. Ink ID for both confirmed as toner and ballpoint. All inks reacted in a similar manner on both K and Q docs. Security print on the rear of the KD's was observed. Small eyelets/loops were filled in and small ticks were shortened upon examination.
	Bitmap code	No bitmap code/yellow dots detected when examined under 'bluelight bandpass' on VSC and all other bandpass settings.
	Visual Examination	Basic visual examination using natural light revealed security print "DocuGuard" on the rear of both known documents. This wasnt visible in the Questioned docs.
	transmitted light (light box)	Overlays between the known and questioned docs revealed inconsistencies between the two. The line at the bottom of the page in the known docs is longer. This also confirmed different font sizes and types in areas of print throughout the page as well as multiple differences in sizes of margins, spacing and lines etc (at least 4mm)
	microscopic exam using 10 loupe	this process revealed that the items contained both ballpoint and toner ink processes abd confirmed differencnes in font type.

TABLE 2

WebCode	Methods/Techniques	Observations
	paper size	all items were measured using a calibrated rule with all at 197mm x 238mm. Further measurements revealed the paper thickness to be between 109 and 111.
3GQVFX	Macroscopic	Observed general appearance & format. The front sides of the papers appears similar. The back sides of the questioned papers are different from the knowns.
	Microscopic	The known "signatures" are ink. The questioned "signatures" are toner. The serif and sans serif fonts on the questioned & known documents are consistent among their respective group of the known or questioned documents. These fonts differ between the respective groups of questioned documents & exemplar documents.
	Oblique Light	Examined for visible impressions. None observed.
	ESDA (EDD)	Examined for latent impressions. There were a few extraneous marks. The exemplar "signatures" on the known documents attracted toner particles. No further impressions of discernible significance were observed.
	VSC-6000 (Alternate light)	Observed the UV reactive printing on the back of the known paper. Looked for other IR & UV reactive properties. None observed.
	VSC-6000 - Create Overlays	Observed the overlay agreement between the two known & questioned signatures. The overlays also demonstrate the format agreement that is respectively consistent among the known group and somewhat less consistent among the questioned group. Overlays demonstrate the format disagreement when the known documents are compared to the questioned documents. Additionally, though the questioned "signatures" are toner, they overlay the known "signatures" with such unnatural agreement that these two groups of "signatures" share a common source.
3JQFUG	Visual Examination	In the señaleto analysis method was applied. First was an observation, then the identification of the particular characteristics of each of the documents and then compared between k1, k2, Q1 and Q2. differences in fonts are printed encontratron as the morphologic variation of serifs.
	VSC	with the help of VSC, there was a superimposition of impressions letterheads, obtaining differences in literal spaces and linear spaces. There are also differences in the types caliber.
	UV	I found impressions using fluorescent UV light of 312 nm in the VSC
3JXDET	Stereomicroscope	Q is toner and K is not.
	Visual Examination	K had "DocuGard" on back, the K did not
44E2BY	VSC 6000/HS (Transmitted Ultraviolet) light	Under transmitted UV, the questioned prescription "Q1" and "Q2" didn't show any watermark where as both specimen prescriptions "K1" and "K2" showed watermark as security features.
44TMML	Stereomicroscope	The signature on the documents "Q1" and "Q2" have been printed by means of laser printing technology and, therefore, differ from the signatures on the known exemplars marked "K1" and "K2".
	Stereomicroscope	The font used on the documents marked "K1" and "K2" differ from the font used on the documents marked "Q1" and "Q2"

TABLE 2

WebCode	Methods/Techniques	Observations
	VSC	The documents marked "K1" and "K2" bear a "DocuGard" security feature on their reverse, whereas the documents marked "Q1" and "Q2" do not. This security feature was made visible by using UV light. It is also visible when the document is viewed at an angle.
4N2PKQ	UV	UV FEATURES (i.e DESIGN AND WORDING "DocuGard") were observed on item "K1" and "K2" under UV LIGHT. NO UV FEATURES (i.e DESIGN AND WORDING DocuGard) were observed on item "Q1" and "Q2" under UV LIGHT. ITEM "K1", "K2", "Q3" AND "Q4" FLUORESCCE UNDER UV LIGHT.
	VSC	SIGNATURE WAS OBSERVED FROM THE BACK PAGE OF ITEM "K1" AND "K2'USING VSC UNDER FLOOD LIGHT. NO SIGNATURE WAS OBSERVED FROM THE BACK PAGE OF ITEM "K1" AND "K2'USING VSC UNDER FLOOD LIGHT.
	Visual Examination	THE FONT (i.e &) OF ITEM "K1"AND "K2" IS DIFFERENT FROM THE FONT OF ITEM 'Q1" AND "Q2". THE COLOUR OF ITEM "K1", K2", "Q1" AND "Q2"ARE SIMILAR.
	(FOURIER TRANSFORM INFRARED (FTIR).	THE CHEMICAL CHARACTERISTICS OF ITEM "K1", K2", "Q1" AND "Q2"ARE SIMILAR USING (FOURIER TRANSFORM INFRARED (FTIR).
	Other	[No observations reported.]
4TVMAG	Microscope	40x -140 magnification revealed embedded security features in K-1 and K-2, Q-1 & Q-2 paper.
	Ink examination / UV	Revealed dates on K-1, K-2, Q-1, Q-2 to be wet ink.
	Scanner/ Word Processing Apps	Scanning the Q-1 & Q-2, K-1, K-2 revealed that using a word processing application, ("Word" and Adobe Acrobat) on the K1, K2 eliminates embedded security features, leaving a clean "original".
	Comparison Techniques/ Light Box/ Computer	Compared alleged original rubber stamp signatures to Q-1, Q-2. Under 40-140x in conjunction with magnification to examine for security features, the words "unauthorized copy" can be observed, embedded in the K1, K2, Q1, Q2 - enlarging K1, K2 on the computer after scanning
	Overlays/ Enlargements	Overlays of K1, K2, Q1, Q2 - observed non-identical placement.
4TWGQ3	ESDA	No indented writing or other pertinent information observed on the questioned Items 6 and 7 (CTS Items Q1 and Q2)
	UV	"DocuGard" appears on back of Items 4 and 5 (CTS Items K1, K2);"DocuGard" did not appear on back of Items 6 and 7 (CTS Items Q1 and Q2)
	Stereomicroscope	Offset printing process (no embossing, even inking) on background of Items 4 through 7 (CTS Items K1, K2, Q1, Q2); Toner print process (melted, mounded beads of toner) on format and text of Items 4 through 7 (CTS Items K1, K2, Q1, Q2) and signatures on Items 6 and 7 (CTS Items Q1 and Q2); Stamped impression (even ink, no indentation) for signatures on Items 4 and 5 (CTS Items K1 and K2); original ball point pen for date entries on Items 4 through 7 (CTS Items K1, K2, Q1, Q2)
	Visual Examination	Different fonts between known Items 4 and 5 (CTS Items K1 and K2) and Questioned Items 6 and 7 (CTS Items Q1 and Q2); no Watermarks
4UQ3ME	VSC	Security print and logo (DocuGaurdTM + Logo) is visible on backside of K1 & K2 but absent on backside of Q1 & Q2.

TABLE 2

WebCode	Methods/Techniques	Observations
	Stereomicroscope	Signatures on K1 & K2 are stamp signatures. Signatures on Q1 & Q2 are produced using toner technology.
	VSC	Font and line spacing used in Q1 & Q2 are different as compared to K1 & K2.
4WE8AY	VSC	VSC equipment was used to verify the security features of documents Q1 and Q2 through the use of ultraviolet light, resulting documents Q1 and Q2 were not printed on security paper. likewise overlaying the tool was performed VSC I obtained result that Q1 and Q2 documents were not printed on the same printing matrix characteristics.
	Stereomicroscope	Microscopic equipment was used to verify signatures on documents reflected Q1 and Q2, resulting in firms Q1 and Q2 do not identify with the matrix printing of original documents.
	Visual Examination	visually observing the documents Q1 and Q2 was established that handwritten dates of each doctor's prescription do not identify with those embodied in the authentic.
68TVQV	Microscopic Examination	K1/K2 signatures are made using a signature stamp, while Q1/Q2 signatures are toner. Paper is similar between Q1/2 & K1/2. Print font is the same in Q1 & Q2, also the same in K1 & K2; however, different print font between Q1/2 and K1/2. Examination of the back of the prescriptions show bleed through of the signature ink on K1/2, while no similar bleed through is present in the areas of the signatures on Q1/2.
	Video Spectral Comparator	Signatures on Q1/2 and K1/2 overlay with each other; however, no significant damage/identifiable characteristics. Therefore, signature on K1/2 or another identical signature is the parent of the signatures on Q1/2. Printed heading box and body box overlay. When heading/body boxes in K1/2 overlay, then the print inside the boxes is spatially correct - overlay. Also, when the heading/body boxes in Q1/2 overlay, the print inside the boxes is spatially correct - overlay. However, when the heading/body boxes in Q1/2 overlay with K1/2, then the print inside the boxes is not spatially correct and does not overlay (including the signature & date plus signature line).
	Electro-Static Detection Apparatus (ESDA)	ESDA examinations were conducted on Q1/2 with no discernable impressions developed.
6AWTZ4	Stereomicroscope	Watermark "UNAUTHORIZED COPY" noted in K1, K2, Q1, Q2. Difference in line quality and intensity of stamped signature between K1, K2 and Q1, Q2.
	Oblique Lighting	No indented writing noted.
	VSC	Absence of DocuGard at UV 365nm Transmittance in Q1 and Q2, present in K1 and K2. Hand written date disappears in K1, K2, Q1, Q2 at IR 778nm. Under Spot Fluorescence, ink on date turns white in K1, K2, Q1, Q2.
	Micrometer	Paper thickness is the same for K1, K2, Q1, Q2.
	Cole-Palmer Ruler	Differences in measurements of margin edges between K1, K2 and Q1, Q2. Paper length and widths measure the same for K1, K2, Q1, and Q2.
	Visual Examination	Macroscopic examination of K1, K2, Q1, and Q2 showed a similarity in color of paper and the presence of some type of watermark.
	Sartorius Balance ED 220s	The weight of K1 and K2 are slightly heavier than Q1 and Q2.

TABLE 2

WebCode	Methods/Techniques	Observations
	Hand Held Magnifier	Differences in the font noted between K1, K2, and Q1, Q2.
6AZDPR	VSC	1. On VSC – 6000 the following examinations were done: 2. Magnification and flood light for examination of physical match. 3. Magnification and 365nm Ultra Violet light for security paper. 4. Magnification and side light for indentations on the document.
	Stereomicroscope	1. Microscope for magnification on ink, printing and background on document
6BUYHH	Stereomicroscope	Micro printing and hidden pantographs on Q1, Q2, K1 and K2. Signature stamp on K1-2 different than machine created signature stamp on Q1-Q2. Ink from signature stamp of K1-2 went around the dots of the micro printing. In Q1-2 the toner like ink laid over the micro dots.
	Visual Examination	K1-2 did not match outline and margins of text of Q1-2. Hand written dates of K1-2 and Q1-2 appear to be from different writers.
	Oblique Lighting	DocuGard watermark appears on back of K1-2 but not on Q1-2.
6E9UYF	UV light (VSC 6000/HS)	While "DocuGard" fluorescent over print is seen at the back side of K1 and K2 as a security feature, Q1 and Q2 don't have this security feature under UV light.
	Microscopic/Macroscopic examination	There are differences between the printed parts of the documents from the point of type size, character spacing and line spacing. It is detected that while the signatures on K1 and K2 are stamped, the signatures on Q1 and Q2 are printed by a laser printer.
	Handwriting Examination	There are differences between the documents from the point of forming of the existing numbers even though the numbers showing the dates are limited.
6GFW87	Visual Examination	General alignment of Q1 and Q2 including border line, header text, Rx custom information and signature line not in agreement with K1 and K2 documents. Noted that all 4 signatures overlay, indicating they may share a common source at some point in time
	Visual Examination	Font styles not consistent between known (K1 and K2) and questioned (Q1 and Q2) documents.
	VSC	Security feature observed on K1 and K2, but not present on Q1 and Q2.
	Stereomicroscope	Signature on K1 and K2 was prepared via different method than Q1 and Q2.
	ESDA	No indented writing observed on Q1 or Q2.
6U4YPX	Visual Examination	The page margins, line spaces and font of printing contents on Q1 and Q2 are different from that on K1 and K2.
	VSC	Both Q1, Q2 and K1, K2 have "UNAUTHORIZED COPY" hidden pantograph on the top side of the paper. But format of the hidden pantograph are different between Q1, Q2 and K1, K2. On the other side, K1 and K2 contain watermarks on the back of the paper, while Q1 and Q2 do not.
	Stereomicroscope	The signature of "Sarathi Harris" on Q1 and Q2 were printed by a laser printer, which is different from that on K1 and K2.

TABLE 2

WebCode	Methods/Techniques	Observations
	Handwriting Examination	The characteristics of hand written date on Q1 and Q2 are different from that on K1 and K2.
6U8JEL	UV	The security feature, i.e. the word "DocuGard" and an emblem were observed on "K1" and "K2"; and not observed or not present on "Q" and "Q2".
	VSC	Space between capital letter "R" and small letter "x" was observed on "K1" and "K2" while no spacing between same letters on "Q1" and "Q2".
	VSC	The strokes of the letters "r" and "i" on the address are designed similarly on "K1" and "K2"; but different from that of "Q1" and "Q2".
	VSC	Capital letter "A" on "K1" and "K2" has a flat top while the capital letter "A" on "Q1" and "Q2" is angular or pointed at the top.
	VSC	The number "2" on "K1" and "K2" on the address has a blunt termination stroke while on "Q1" and "Q2" the termination stroke is tapering.
	VSC	The number "3" on "K1" and "K2" on the address has a part which is wider, while on "Q1" and "Q2" the same part is narrower.
	VSC	The slant on the handwritten part (i.e. date) on "K1" and "K2" is predominantly to the right while the slant of the same date on "Q1" and "Q2" is predominantly straight.
6UL8FD	UV	Exposing the questionable documents to ultraviolet light Chamber, it is no reaction as opposed to employers that if react, with text of security.
	VSC	There are dithering in the dubitado and indubitado, as well as differences in characters between the question and patterns.
	Stereomicroscope	The morphology of the characters seen in detail and differences can be among the material dubitado and indubitado.
6UM3XX	Visual Examination	Signatures on Q1 and Q2 were toner produced, differences in font styles and font size noted, Security water mark on K1 and K2 not present on Q1 and Q2, line spacing in body of Rxs different between K and Q1/Q2, layout spacing of signature line different between K and Q1/Q2
	VSC	Paper different under UV between K and Q1/Q2, unable to differentiate toner ink K vs Q1/Q2, signatures on K are ink, Q1/Q2 signatures are toner,
	Stereomicroscope	Used VSC stereomicroscope to capture images of differences in font, also overlay done of K vs. Q1/Q2 to show spacing/size differences, ink vs. toner of signatures as noted in visual examination
79HJNG	Visual Examination	The Font of the text or the impression of the documents "K1" y "K2" is different from the used one for the confection of the evidences "Q1" and "Q2".
	Stereomicroscope	MICROSCOPIO LEICA S6D: For the observation of the systems of impression, possible manipulations and text and handwriting signatures. Four documents have the funds printed in offset (blue). Láser printed (black tonner) of the boxes and information printed before of the "K1" y "K2" and for the signatures of the "Q1" y "Q2". The signatures of the "K1" y "K2" are not original. They are printed by ink-jet. Major dirt of impression observes in the information and in the boxes opposite to the signatures of "Q1" y "Q2". Four signatures have the same origin, the same graphical file. The information of dates in "K1", "K2", "Q1" and "Q2" are handwritten by the useful one of black color.

TABLE 2

WebCode	Methods/Techniques	Observations
	VSC	VIDEO COMPARATORE PROJECTINA "NIRVIS": The reverses of the documents "K1" and "K2" present invisible inks with response to the ultraviolet light. This does not happen in the documents "Q1" and "Q2". After the observation by means of sources of infrared light in manners of excitation and absorption of luminescence: - No se observan alteraciones. - Significant reactions are not observed. Four signatures fit by means of overlapping. The amend of the chapeau texts present an imbalance between "K1" – "K2" and "Q1"- "Q2". The line for the signature printed in "Q1" and "Q2" does not present the same location (with regard to the box) compared with "Q1" and "Q2".
	WEB "DOCUGARD" (Manufacturer of the paper)	The safety measures have consulted in the official page of the manufacturer. The supports of paper do not present the safety measures indicated in the web of the manufacturer.
79KD73	VSC	"DOCUGARD" Watermark visible on K-1 and K-1. Not visible on Q-1 and Q-2.
	Oblique Lighting	Nothing significant observed.
	Micrometer	Consistent paper thickness between questioned and known documents.
	Visual Examination	Using transmitted light misalignment of headers and signature & date and signature line observed between the questioned and known documents.
	Stereomicroscope	Differences in line quality of the signatures between the questioned and known documents.
	Copier	"UNAUTHORIZED COPY" appears on background of copies of both questioned and known documents when the originals are copied.
7C6CNQ	ESDA	The signatures appearing on Items Q-1 and Q-2 failed to hold the negatively charged toner particles when subjected to the Electrostatic Detection Apparatus as opposed to the prescription exemplars provided by Dr. Sarathi Harris appearing on Items K-1 and K-2.
	Visual Examination	Macroscopic and microscopic examination of the documents discovered dissimilar font styles between Items Q-1 and Q-2 and the prescription exemplars provided by Dr. Sarathi Harris appearing on Items K-1 and K-2. (Unable to verify via email to manufacturer.) John Doe example prescription, dated April 2, 2016 and K2: Jane Doe example prescriptions, dated April 2, 2016 have "DocuGard Security Seals" on back of prescription forms. Q-1: James Denver prescription, dated March 14, 2016 and Q-2: Amanda Miller prescription, dated March 18, 2106 lack DocuGard Security Seals. (Unable to verify via email to manufacturer.)
	Handwriting Examination	Inter-comparison examination and analysis between the Questioned handwritten entries appearing on Questioned prescriptions appearing on Items Q-1 and Q-2 with the prescription exemplars provided by Dr. Sarathi Harris appearing on Items K-1 and K-2 revealed a few dissimilarities in handwriting characteristics and habits.
	VSC	John Doe example prescription, dated April 2, 2016 and K2: Jane Doe example prescriptions, dated April 2, 2016 have "DocuGard Security Seals" on back of prescription forms. Q-1: James Denver prescription, dated March 14, 2016 and Q-2: Amanda Miller prescription, dated March 18, 2106 lack DocuGard Security Seals. (Unable to verify via email to manufacturer.)

TABLE 2

WebCode	Methods/Techniques	Observations
7DZUQR	Visual Examination	Offset litho security printed faces, both Q and K, oblique light exam unremarkable, toner outlines, letterhead, and field headers, body of prescriptions. K1 and K1 signature field is a stamp whereas Q1 and Q2 is toner, dates are black ball point pen ink. Spacing of font in letterheads differs btw Qs and Ks, font is different in letterhead and field headings btw Qs and Ks, font size of prescription body is different btw Qs and Ks
	Stereomicroscope	Adjunct to visual examination described above. Also used handheld magnifiers.
	VSC	Security print background is found on backs of Ks, but it is absent on Qs. No other hidden marks found.
	ESDA	Unremarkable for further differentiation. Lifts made of both face and back of each document. It is noted that the stamp impressions showed black toner, thus due to some fiber disturbances at the stamp impressions.
7KB34M	VSC	Magnification and flood light for examination of physical match. There is no physical match between the addresses on the disputed documents marked "Q1" and "Q2" and specimen documents marked "K1" and "K2".
	VSC	Magnification and flood light for examination of physical match. There is no physical match between the signature and date baseline on the document "Q1" and "Q2" and specimen documents marked "K1" and "K2".
	UV	Ultraviolet light (365) UV features could be observed on the back of the specimen documents marked "K1" and "K2" but could not be observed on the back of the disputed documents marked "Q1" and "Q2".
	UV	Transmitted ultraviolet light (365) UV features could be observed on the front of the specimen documents marked "K1" and "K2" but could not be observed on the front of the disputed documents marked "Q1" and "Q2".
	Visual Examination	The word "DocuGard" could be observed at the back of specimen documents marked "K1" and "K2" with the naked eye but could not be observed at the back of the disputed documents marked "Q1" and "Q2".
7U3LGV	Visual Examination	"copy unauthorized" security on both known and question prescriptions
	VSC	"copy unauthorized" security on both known and question prescriptions
	UV	"DocuGard TM" security on the reverse of the known prescriptions only.
7X3WDV	UV	K1 and K2 exhibits a "Docuguard" UV-reactive print but both document Q1 and Q2 do not exhibit this.
	Visual Examination	Q1, Q2, K1 and K2 all exhibit "UNAUTHORISED COPY" anti-copy watermark.
	Stereomicroscope	Signatures in Q1 and Q2 were electrophotographically printed and were inconsistent with the stamped signatures on K1 and K2
	Handwriting Examination	The handwriting on Q1 and Q2 showed some differences in handwriting characteristics from the handwriting on K1 and K2.
7YXFEW	Macro and microscopic examination	Paper size & colour (front) similar between Q1 and Q2 and K1/K2. All contain security feature to prevent scanning/copying (present in background printing on front)
	VSC	K1/K2 contain repeated "DocuGard" text and logo on rear of sheets - visible under UV. Not seen on Q1 or Q2.

TABLE 2

WebCode	Methods/Techniques	Observations
	Microscopic examination and overlay comparison	Proforma and prescription text on all documents (K and Q) printed using black toner. Ball-pen used for handwritten issue dates. Superimposable liquid ink signatures on K1 and K2 produced by handstamp. Signatures on Q1 and Q2 superimposable with those on K1/K2 but printed using toner process, not handstamp. Some extraneous marks in toner around signatures on Q1 and Q2 in common with similar marks in liquid ink around signatures on K1/K2.
	Comparison using overlays and enlargements	Differences between layout and font of proforma parts of Q1 and Q2 when compared to K1 and K2.
7Z4XDT	UV	Ultraviolet light revealed that Q1 and Q2 were not printed on the same safety paper as was K1 and K2. Long range ultraviolet light revealed repetition of the "DocuGard" printed words and Logo on the reverse side of K1 and K2 but this security feature was not present on the reverse side of Q1 or of Q2.
	Handwriting Examination	Different handwriting features of the handwritten dates comparing the questioned to the known dates, revealed differences in the numbers 4, 6 and the slash marks. However, additional known numbers by Dr. Harris should be provided for further examinations.
	computer enhancement	An additional security feature was observed but this time it was on the front sides of K1 and K2 which is the security background printing "UNAUTHORIZED COPY" over the entire fronts of K1 and K2. This printing is embedded in the blue cast of the fronts of K1 and K2 and is not visible to the unaided eye, however, using the curves feature in Adobe photoshop, the pattern was revealed. The curiosity, however, is that this same security feature is also on the front sides of Q1 and Q2, so I would want to consult with the submitting agency/attorney to try to gain insight in an attempt to resolve why one of the security features of the knowns also appears in the questioned documents. The lack of any explanation for this at this time is the reason for the qualified opinion herein.
844EET	Microscopic Examination	The background printing on Q1 and Q2 was printed by offset printing method. The dates on Q1 and Q2 were handwritten. The signatures at the lower left corners and the other contents on Q1 and Q2 were printed by toner deposition printing method.
	Microscopic Examination	The background printing on K1 and K2 was printed by offset printing method. The dates on K1 and K2 were handwritten. The signatures at the lower left corners on K1 and K2 were stamped. And the other contents on K1 and K2 were printed by toner deposition printing method.
	Microscopic Examination	Font design details of English letters (such as r, a, i, l, e, t, R and x), symbols (such as & and -), numerals (such as 1, 2, and 3) were found to be different between the two questioned prescriptions in Q1 and Q2 and the two control prescriptions in K1 and K2.
	Handwriting Examination	Differences in writing characteristic features in relation to design (numerals 4 and 6) and slanting (slashes) were found between the two questioned prescriptions in Q1 and Q2 and the two control prescriptions in K1 and K2.
	Ultraviolet Light	Under UV light, repeated logos and words "DocuGard" were found on the rear sides of the two control prescriptions in K1 and K2, but not on the two questioned prescriptions in Q1 and Q2.
	Transmitted light	No significant findings on K1, K2, Q1 and Q2.

TABLE 2

WebCode	Methods/Techniques	Observations
	Electrostatic detection apparatus	No significant findings on K1, K2, Q1 and Q2.
879UYD	VSC	WITH the help of the VSC 6000 and scanner, it subjected the four documents K1, K2, Q1, Q2 under the influence of the light UV front - back, established that indeed the documents K1 and K2, react in the back OBSERVANDPSE the characters alphabetic "DOCUGARD" and a shield that must be the logo symbol. WITH the help of the VSC 6000 and scanner, it subjected the four documents K1, K2, Q1, Q2 under the influence of the light UV front - back, established that indeed the documents K1 and K2, react in the back OBSERVANDPSE the characters alphabetic "DOCUGARD" and a shield that must be the logo symbol. Then to magnify with Zoom on the obverse of the alphanumeric characters contained in documents K1 and K2, are taken the respective pictures for then be collated and compared with Q1 and Q2. In the same way we do with documents Q1 and Q2, they magnify the same way that can be checked against K1 and K2. Then compare the four documents K1 and Q1, K2 and Q2, K2 and Q1, K1 and Q2, in fact demonstrating differences in morphological order in alphanumeric characters contained in pattern and the questioned documents.
	UV	WITH the help of the VSC 6000 and scanner, it subjected the four documents K1, K2, Q1, Q2 under the influence of the light UV front - back, established that indeed the documents K1 and K2, react in the back OBSERVANDPSE the characters alphabetic "DOCUGARD" and a shield that must be the logo symbol.
87DDMG	Stereomicroscope	a)Documents were magnified, revealing that the signatures on the documents marked "Q1" and "Q2" have been printed with a laser printer (indicative by the presence of toner particles). The signatures on the documents marked "K1" and "K2" are stamp impressions. b)The fonts used on the documents marked "Q1" and "Q2" differ from the fonts used on the documents marked "K1" and "K2".
	VSC	a)Under UV-The documents marked "K1" and "K2" reveal the security printing with the logo "DocuGuard" on their reverse sides as opposed to the documents marked "Q1" and "Q2", which do not.
	Destructive Method-Rubbing a coin against the reverse surface of the document	a)Features printed in "coin reactive ink" were revealed on the reverse of the documents marked "K1" and "K2". These features were absent from the documents marked "Q1" and "Q2".
8K766W	Visual Examination	K1 and K2 front and back no impressions of investigative value were found.
	Oblique Lighting	K1 and K2 front no impressions of investigative value were found.
	Oblique Lighting	Utilizing visual/ side/ oblique lighting on the back of each-- K1 and K2--visible security features present.
	Visual Examination	Q1 and Q2 front and back no impressions of investigative value were found.
	Oblique Lighting	Q1 and Q2 front and back no impressions of investigative value were found and no visible security features were present.
	ESDA	Q1 and Q2 front and back no impressions of investigative value were found.

TABLE 2

WebCode	Methods/Techniques	Observations
	Stereomicroscope	Q1 and Q2 printed material--non-impact print process --toner/laser on each; handwritten date on each characteristics of a black ballpoint pen; signature--reproduced non-impact print process--toner/laser on each. Visually and microscopically the printed material has the characteristics of the font --Times New Roman. K1 and K2 printed material--non-impact print process --toner/laser on each; handwritten date on each characteristics of a black ballpoint pen; signature--characteristics of liquid ink on each. Visually and microscopically the printed material has the characteristics of the font -- Perpetua.
	VSC	Utilizing UV, K1 and K2-- on the back of each--visible security features present (DocuGard). Q1 and Q2 on the back of each -- no visible security features were present.
8MZGXX	Visual Examination	The general color and size appear to be consistent between Exhibits Q1-Q2 and K1-K2. The reverse of Exhibits K1 and K2 contain a light-colored, repeated printing of the DocuGard name and logo, but Exhibits Q1 and Q2 do not appear to have any printing on the reverse.
	Stereomicroscope	The bodies of Exhibits K1 and K2 were printed using toner technology. The signatures were placed on the documents with a rubber stamp using liquid ink. The dates were written using ballpoint ink. The bodies of Exhibits Q1 and Q2 were printed using toner technology. The signatures were also printed using toner technology. The dates were written using ballpoint ink.
	VSC	Using reflected ultraviolet light at 254nm, the DocuGard name and logo on the reverse of Exhibits K1 and K2 darkened and were clearly visible. The reverse of Exhibits Q1 and Q2 when viewed with reflected ultraviolet light at 254nm had no printing visible. The ballpoint date entries on Exhibits Q1, Q2, K1, and K2 exhibited infrared luminescence at 735nm.
	ESDA	Exhibits Q1 and Q2 were examined for the presence of handwriting indentations, but the results were negative.
	Handwriting Examination	Due to the limited amount of comparable handwriting, no conclusion could be rendered regarding whether or not the writer of the dates on Exhibits K1 and K2 wrote the questioned handwritten dated entries on Exhibits Q1 and Q2.
8N7G2W	Stereomicroscope	Q1 AND Q2 WERE PRINTED USING THE SAME TECHNIQUE: AM/OFFSET MACHINERY, A FEATURE THAT IS SHARED WITH AUTHENTIC SAMPLES.
	Stereomicroscope	Q1 AND Q2 WERE DATED USING AN OIL BASED BALLPEN, THE SAME TECHNIQUE THAN THE AUTHENTIC SAMPLES.
	Stereomicroscope	Q1 AND Q2 WERE VALIDATED WITH A DIFFERENT SIGNING TECHNIQUE THAN THE AUTHENTIC SAMPLES: LASER PRINTED INSTEAD OF WET STAMPED.
	VSC	Q1 AND Q2 ARE COMERCIAL SUBSTRATE INSTEAD OF SECURITY PAPER AND DO NOT INCLUDE UV LUMINISCENT INK LIKE THE AUTHENTIC SAMPLES.

TABLE 2

WebCode	Methods/Techniques	Observations
8P4LKC	Stereomicroscope	2.1 Macroscopic observation: Q1, Q2 and K1 documents directly observed with magnifying glass and stereomicroscope, K2 contours, sizes and printing lines facing visually compare documents, to see if they have the same size, type of paper, prints, letters and shapes. printing paper analyzed macroscopically, label printing, writing, and printing format background to determine whether or not for the system observed in the known documents.
	UV	observation under UV light: the reaction of the paper sheets Q1 and Q2 is observed under UV light at 365 mn. the reaction of the paper sheets K1 and K2 is observed under UV light at 365 mn. Fluorescence results or not visually compared in documents
8PNG9T	UV	A UV examination of the submitted items showed security features in the paper of items #K1 and #K2 but absent in items #Q1 and #Q2 (Docugard)
	Stereomicroscope	A microscopic examination of the signatures was used to determine that the signature lines in items #Q1 and #Q2 were comprised of toner, while the signature lines in items #K1 and #K2 were comprised of liquid ink (consistent with the manufacturer's statement of the K1 and K2 signatures being the product of a stamp). Microscopic examination also showed subtle differences in the font used in the address block on the questioned and known prescriptions.
	Acetate reproductions	In making acetate reproductions of the submitted items, it can be demonstrated that the signatures on all four submitted prescriptions are reproductions of a common signature. The acetate reproductions can also be utilized to show the difference in vertical alignment between the questioned and known prescriptions.
	Handwriting Examination	While not significant, it was noted that the placement of the handwritten date on the signature line in items #Q1 and #Q2 was different than that found in items #K1 and #K2.
8YRKBG	VSC	WAS USED FOR PAPER COMPARISON, TO DETERMINE IF THE PAPER IS A SECURITY PAPER OR NOT. WAS ALSO USED TO REVEAL THE SECURITY FEATURES OF THE PAPER. WAS ALSO USED TO REVEAL HOW THE "SIGNATURE STAMP" INK IS DISTRIBUTED IN THE PAPER, WHETHER IT SINKS IN UNEDERNEATH PAPER FIBRES OR IT SIT ON TOP OF THE PAPER.
	Stereomicroscope	WAS USED FOR PAPER COMPARISON. USED TO DETERMINE WHETHER THE INK (STAMP IMPRESSION) IS SIMILAR TO DOCUMENTS, KNOWN AND UNKNOWN. WAS ALSO USED TO DETERMINE HOW INK IS DISTRIBUTED IN THE PAPER (WHETHER IT SINKS IN OR SITS ON TOP OF THE PAPER) WAS ALSO USED TO DETERMINE THE TYPE OF INK USED.
8ZM4CH	UV	On the rear of "K1" and "K2" the word "DocuGard" is present, whereas absent on "Q1" and "Q2".
	Stereomicroscope	The signatures on "K1" and "K2" have been stamped on, whereas toner was used for the signatures on "Q1" and "Q2".
	Stereomicroscope	The font used on "K1" and "K2" differs to that found on "Q1" and "Q2".
96UZKP	ESDA	Negative

TABLE 2

WebCode	Methods/Techniques	Observations
	UV	Trans UV using the VSC6000 showed "DocuGard" on the back sides of the known documents and not on the questioned documents
	Stereomicroscope	[No observations reported.]
9GPZB8	Stereomicroscope	Examined K1, K2, Q1 and Q2 using a stereoscopic microscope to determine the printing processes used to produce these documents.
	Visual Examination	Examined K1, K2, Q1 and Q2 signatures using the VSC-6000HS at a magnification of 30.24x in order to image a magnified version of the signatures.
	UV	Examined the backs of K1, K2, Q1 and Q2 using the VSC-6000HS and UV energy to visualize whether or not the documents contained an artificial watermark.
	Oblique Lighting	Examined the backs of K1, K2, Q1 and Q2 with oblique lighting on the VSC-6000HS to visualize the impressions from the handwritten dates on those documents.
9KPC88	Stereomicroscope	type style fonts on Q1/Q2 differ from K1/K2. Q1/Q2 are similar to "Times New Roman", patient name/DOB/RX are similar to "Browallia New". K1/K2 are similar to Perpetua, with Patient Name, DOB & Rx entries in font similar to "Dotum" font, all fonts in Microsoft Word 2013.
	Stereomicroscope	prescribing Dr signatures: K1/K2 rubber stamp ink; Q1/Q2 are dry toner printing
	laser multifunction scanner on copy mode	made paper copies of Q1, Q2, K1/K2 are similar, as all reveal similar security visualized repeated text "COPY UNAUTHORIZED" across the full sheet of paper.
	Handwriting Examination	Insufficient date entries for authorship determination, but noted "4" on Q1 differs from the "4" on K1 and K2
9QV6YH	VSC	VSC-6000 Flood light: K1 and K2 have visible signature impression, while on Q1 and Q2 is not present. The width and length of the signature and date line for K1 & K2 is thicker and longer, while for Q1 & Q2 is thinner and shorter. The numerals "1 and 2", the letters "A, g and i" and symbol "&" on K1 and K2 are of different font type as compared to those of Q1 and Q2. The punctuation "-" on K1 and K2 have different size to Q1 and Q2. VSC-6000 UV light: The word "DocuGard TM" and the logo are revealed on K1 & K2, while on Q1 and Q2 is not present.
9XWCMX	Stereomicroscope	The printed, toner-based text (office info., prescription info., and signature line) of the questioned and known documents display character differences as well as alignment discrepancies. Also, the authorizing signature is composed of toner in Q-1 & Q-2, but is composed of ink in K-1 & K-2.
	VSC	Examination reveals that K-1 & K-2 contain a watermark and/or security feature in their respective documents, this feature is not found in either the Q-1 or Q-2 exhibits.
	ESDA	Q-1 & Q-2 documents examined with the ESDA, nothing of evidentiary value observed.
	Micrometer	Paper micrometer readings were approx. 0.005 in. for all documents.

TABLE 2

WebCode	Methods/Techniques	Observations
9YLMDQ	Other	PROJECTINA: THE WATERMARK THAT EXIST IN THE EXAMPLE PRESCRIPTIONS (k1 & K2) WHILE ON THE QUESTIONED DOCUMENTS (q1 & q2) DOES NOT CONTAIN IT. THE LETTER DESIGNS ON Q1 AND Q2 DIFFERS COMPLETELY FROM THE ONE ON EXAMPLE PRESCRIPTIONS THE SPACING BETWEEN THE ADDRESS AND THE INFORMATION ON THE PRESCRIPTIONS (Q1 AND Q2) DIFFERS COMPLETELY FROM THE ONE ON THE EXAMPLE PRESCRIPTIONS (K1 AND K2).
AFQGKQ	Visual Examination	K1, K2, Q1, Q2 are all same sized pages, none are standard sized paper. Front of paper. K1, 2 and Q1, 2 have tamper and copy resistant security printing in blue ink. Reverse of K1, K2 have security engraving "DocuGard"+logo. Q1, Q2 do not have security engraving. Boxed header and border on K1, 2 in exactly same position on page. Boxed header and border on Q1, 2 in exactly same position on page, but different to position of K1, 2. K1, K2 signatures in different relative positions. Q1, Q2 signatures in different relative positions. Black printing on K1, K2 produced via word processing program. Black printing on Q1, Q2 produced via word processing program.
	Stereomicroscope	K1, 2 black printing of heading by laser printer. K1, 2 black printing of prescription by laser printer. K1, 2 black ink printing of signature stamp. Q1, 2 black printing of heading by ink jet printer. Q1, 2 black printing of heading by ink jet printer. Q1, 2 black printing of signature by ink jet printer. Electronic signatures on K1, 2 and Q1, 2 of same signature source. Dates on K1, 2, Q1, 2 all handwritten.
	Transmitted light	Heading typeface K1, K2 different to that of Q1, Q2. K1, K2 Prescription printing same typeface, font size, spacing, pitch. Q1, Q2 Prescription printing same typeface, font size, spacing, pitch. Different to K1, K2.
	ink examination	Blue Security ink on K1, K2 not water soluble. Blue Security ink on Q1, Q2 not water soluble.
	Handwriting Examination	There is insufficient usefully comparable handwriting on these prescriptions to determine whether or not the entries were made by the same or different writers.
APHL3R	Stereomicroscope	The blue background print is produced in offset and the black text is produced with a laser printer (toner) on both Q1 and Q2 as well as K1 and K2.
	Stereomicroscope	The signature on Q1 and Q2 is also produced with a laser printer (toner), which differs from K1 and K2 which are signature stamped.
	Stereomicroscope	The dates are handwritten on all of the prescriptions (Q1, Q2, K1 and K2). We can, as document examiners, see that some of the figures differs in design between Q1/Q2 and K1/K2, but any proper handwriting investigation has not been done.
	UV	The prescriptions K1 and K2 are printed on security paper with UV-features on the reverse side. The paper on which the prescriptions Q1 and Q2 are printed lack these features.
AYMXTU	ESDA	No meaningful impressions observed.
	Handwriting Examination	Dissimilar in slant and form, but insufficient known samples to establish significance of the dissimilarities.

TABLE 2

WebCode	Methods/Techniques	Observations
	VSC	Examined with UV 365nm. Q documents did not exhibit the UV security printing found in the K documents.
	Oblique Lighting	No meaningful impressions observed.
	Stereomicroscope	Both Q and K documents printed with toner process. Both Q and K documents written with a black viscous ink. K documents contain an ink stamped signature but the Q documents doctors signature is printed with toner.
	Digital imaging techniques.	Scanned 1-1 images of the Q and K documents overlaid in Photoshop to show alignment differences.
	Photocopy	Q and K documents photocopied to compare the security panto graph. No differences noted.
	Visual Examination	Differences observed in fonts used to produce the Q and K documents.
B6TLCM	UV	A slight difference in fluorescence was noted between the front sides of Items Q1 and Q2 compared to Items K1 and K2. Differences were noted on the rear sides of Items Q1 and Q2, namely, a lack of security printing (latent) compared to Items K1 and K2. Slight fluorescent differences were also noted between the Q and K items.
	VSC	No differences were noted between the toner or ink entries on the front sides of Items Q1 and Q2 compared to Items K1 and K2 utilizing infrared reflectance or luminescence. There is a difference in luminescence between the Q and K items.
	ESDA	No discernible marks, characters, signs, or symbols were noted on Q1 or Q2 in indented form.
	Micrometer	No differences in paper thickness were noted between the Q and K items.
	Stereomicroscope	Application of toner appears to be different between the Q and K items. Overspray is especially noted on the Q items. The same "Copy Unauthorized" security printing is visible on both Q and K items.
	Oblique Lighting	No discernible marks, characters, signs, or symbols were noted on Q1 or Q2 in indented form.
	Macroscopic	Differences were noted in the fonts used as well as different line spacing of the address and phone number in the header information, and different line spacing of the "Patient & DOB" and "Rx" information. Differences also noted in the vertical placement of entries. The signature baselines differ in length between the Q and K items.
B8U29R	Stereomicroscope	Similarities were observed between the groups of questioned and known items in background printed pattern (offset lithography) and basic method of printed text (dry electrophotographic toner), however differences were observed between the groups of questioned and known items in 1. the toner deposition pattern and surface texture, 3. font type, 4. text line spacing, and 5. signature application method (rubber stamp (K) vs. toner (Q)).
	ESDA	No latent indentations were observed on any item.
	UV	UV-visible printing "DOCUGARD" was observed on the reverse side of the known items but was absent from the questioned items.
	Magnetic Toner	All items similarly bear toner with magnetic properties.

TABLE 2

WebCode	Methods/Techniques	Observations
BJJBW	Stereomicroscope	Toner characteristics were observed using the microscope in order to exam the questioned documents. This is not consistent with the inking that should have appeared with the use of a rubber stamp.
	ESDA	Nothing of evidentiary value was observed with the use of the ESDA.
	Micrometer	The thickness of the papers from the S-1/S-2 and Q-1/Q-2 were consistent with each other.
	Ruler	The signature lines of the S-1/S-2 were longer than the signature lines of the Q-1/Q-2.
	VSC	The security feature that is observed on the S-1 and S-2 is not observed on the Q-1 and Q-2. I used the UV, oblique and transmitted light settings.
	light box	The alignment of the S-1 and S-2 line up with each other. When viewing the Q-1 and Q-2 in comparison with the standard submissions, the alignment issues were observed. The "Dr." information at the top of the document does not line up. The font of the numbers of the "DOB" on the Q-1 and Q-2 are smaller than they are on the standard submission.
BK2RBY	Visual Examination	Distances between various printed portions different from questioned compared to known. Differences in distance between edge of prescriptions and printed border when comparing questioned to known. Fonts used on questioned different than known fonts. Inconsistencies in handwriting between writing observed on questioned vs. writing observed on known. questioned & known signatures overlay
	Stereomicroscope	Signatures on questioned produced with toner, NOT stamped impression as in known
	Oblique Lighting	Negative for indented writing
	ESDA	Negative for indented writing
	VSC	Differences in security features were observed (DocuGard security printing on known absent on questioned)
BKYXTE	Stereomicroscope	When documents in question and known documents exposed under microscopic analysis, difference in alignment, spacing, style, font, size and weight used throughout the layout of the documents could be revealed.
	Stereomicroscope	Analysis revealed that the dates on the documents have been written with ballpoint. But showed difference in construction of numerical i.e. vertical stroke of numerical "4" on document marked "Q1" is backward slant and in document marked "K1" is forward slant.
	Stereomicroscope	"Q1" and "Q2" signatures were revealed not to be original as toner particles have been deposited onto the paper, showing that they have been reproduced. Whereas "K1" and "K2" signatures were stamp impressions and original because there were no toner particles deposited onto the paper.
	VSC	By means of illumination technique used, no security features could be revealed on the entire questioned documents marked "Q1" & "Q2" (back & front). But security features were revealed at the back of the known documents marked "K1" and "K2" in the form of the word "DocuGard"

TABLE 2

WebCode	Methods/Techniques	Observations
BPVNZQ	Stereomicroscope	K1-K2 (Obverse side): Blue coloured offset printing in the background, with anti-copy screen printing. Electrophotographic black toner printing along borders, and machine printed text. Handwritten date entries with pen. Appearance of stamped signatures. K1-K2 (Reverse side): Lightly printed DocuGard on reverse side. Q1-Q2 (Obverse side): Blue coloured offset printing in the background, with anti-copy screen printing. Electrophotographic black toner printing along borders, and machine printed text, as well as signatures. Handwritten date entries with pen. Q1-Q2 (Reverse side): No printed entries. The toner on Q1/Q2 appears to differ from that on K1/K2; the questioned documents have more background toner and the surface appearance is different.
	Oblique Lighting	Raking light / illumination did not disclose impressions or indentations.
	X-ray cabinet (radiography)	K1-K2: Black toner appears on radiograph. Q1-Q2: Black toner appears on radiograph, this includes the signatures.
	UV	K1-K2: DocuGard trademark on reverse side is non reactive in UV (i.e. appears darker than the surrounding white paper) Q1-Q2: no DocuGard trademark or other trademark is visible. No fluorescent security fibres observed.
	Visual Examination	No watermark on any K1, K2, Q1 or Q2. Paper sizes are approximately 239mm x 198mm. The features seen in the stereomicroscope examination are also seen in visual examination, but at macroscopic view. Typography differences, the sans-serif and serif typefaces used in the corresponding areas of Q1/Q2 differ from those on K1/K2 in design, size and kerning.
	Magnetic mouse (Regula)	This detects and can measure if toner is magnetic, in this instance the toner was qualitatively assessed and determined to be magnetic on K1, K2, Q1 and Q2
	Imaging software	Imaging software was used to produce high resolution images that assist in the determination of typeface differences. They assist with the illustration of such differences.
	Confocal microscopy	Confocal microscopy can measure the toner pile height, the toner pile height on the questioned documents was not found to be different from the knowns. However the surface roughness of the paper is quite high, which precluded accurate assessments of pile height differences.
BZTPCU	Stereomicroscope	Signatures Q1 & Q2- machine produced K1 & K2- stamps
	ESDA	Negative results
	VSC	K1&K2- watermarks observed Q1 & Q2- no watermarks present
	Handwriting Examination	Indications different authors Q1 & Q2 vs K1 & K2
	Printed text	Different print sizes Q1 & Q2 vs K1 & K2
	paper	Different paper stock Q1 & Q2 vs K1 & K2
BZXREL	Stereomicroscope	Optical differences were observed between the questioned documents. The signature entries on the Q were produced with toner and the signature entries on the K were inked entries. Some visual differences in the fonts between the Q and K were also observed.

TABLE 2

WebCode	Methods/Techniques	Observations
	VSC	Exhibits 1-4 were examined using the VSC 6000. Optical differences were observed between the Q and the K using transmitted UV at 365 nm. The known documents K 1 & 2, show images of what appear to be shields and the words DocuGard which were not present visually on Q1 and Q2.
	ESDA	Examined Exhibits Q1 and Q2 for indented writing images using the ESDA 2. No indented writing images were detected.
CC4GGF	Stereomicroscope	The signature stamp on both Q1 and Q2 appear as part of the document as it is printed on there and toner partner are visible. K1 and K2 have paper fibres visible as the stamp ink sinks beneath the fibres.
	UV	the security paper on the Known prescriptions show wording while on the Q1 and Q2 the prescriptions are blank.
	Stereomicroscope	The ink on the K1 and K2 is liquid which as a result sinks beneath paper fibres. ink on Q1 and Q2 is of powder particles and blends in with the paper and rest on top of it with toner particles
CFY9NR	Microscopic Examination	K1 & K2 back - Docugard printed under UV light. Q1 & Q2 back, does not have under UV light. Q1 & Q2 font print similar, but differ from K1 & K2. Q1 & Q2 photocopied signatures whereas K1 & K2 are stamps.
	Handwriting	Q1 & Q2 dates appear to be same writer but different writer that wrote dates on K1 & K2.
CGABCB	Stereomicroscope	The font used on documents marked Q1 and Q2 differs from the font used on documents marked K1 and K2.
	VSC	The documents marked Q1 and Q2 DO NOT CONTAIN GENUINE UV FEATURES
	UV	The documents marked Q1 and Q2 DO NOT CONTAIN GENUINE UV FEATURES
CGXD77	Visual Examination	Paper size and printing documents similar fund between doubt and patterns. Shape and size of the different documents printed letters between doubt and patterns. Letter different issue dates between documents doubt and patterns
	UV	Obverse pattern formulas react to ultraviolet radiation, prescription certainly not react.
CQW9ZV	Microscopy and macroscopic / Stereomicroscope, Wild Herbrug brand	Detailed physical observation of each of the documents (reference and questioned) by using different magnifications and with adjustable episcopic light intensity. The confrontation and validation of the physical characteristics, as well as the systems and print qualities.
	Microspectrophotometer/ VSC 6000 video spectral comparator	Interaction between the incident luz and molecular structures of inks. Measuring the spectral response UV and IR, combined with the use of different filters. The confrontation and validation of the security features on documents, as well as the spectral responses of inks.

TABLE 2

WebCode	Methods/Techniques	Observations
CQZTQJ	Visual Examination	The following observations were made during the preliminary visual examination: 1) Differences between the distance of the printed text to the baseline of the header. 2) Differences in the length of the baseline at the footer between the known specimens and questioned documents. 3) Differences between the Text style/ font style (i.e. slant of the ampersand, construction of the numeral 2 and letters). 4) Differences in the printed colour of the signatures (i.e. lighter grey colour signatures in the known specimen whereas black in colour in the questioned documents).
	VSC	Utilizing the VSC 400 for magnification and measurements, using incident lighting illumination the following observations made during the preliminary visual examination were confirmed: 1) Differences between the distance of the printed text to the baseline of the header. 2) Differences of the length baseline at the footer between the known specimens and questioned documents. 3) Differences between the Text style/ font style (i.e. slant of the ampersand, construction of the numeral 2 and letters). 4) Differences in the printed colour of the signatures (i.e. lighter grey colour signatures in the known specimen whereas black in colour in the questioned documents).
	UV	UV exposure at 365nm revealed UV security printing ("emblems and the word DOCUGUARD") on the reverse side of the known specimens, whereas no UV security printing were observed on the reverse side of the questioned documents.
CWMNK	Stereomicroscope	Different magnifications on stereomicroscope, light sources VSC 400
	VSC	The following observations was made: The alignment (placements /and distances), the slant (font /text style) of the disputed documents differ from the specimen documents. The spacing and placement of the handwritten dates to the writing baseline; The spacing and placement between the signatures and the hand written dates; The ultraviolet security features (exposure at 365 nm) in the disputed documents are not present as they appear in the specimen documents.
	Micrometer	The written date (right of the signature) on the specimen documents compared with the signatures on the disputed documents show differences. final concltion not reached due to - not sufficient writing to compare
	Handwriting Examination	[No observations reported.]
CXLKKR	Oblique Light	Examination for Indented writings & impressions. (-) results.
	VSC 6000/HS	Multiple light sources used for examining security features within the documents. To examine the documents. To examine for watermark. To examine the ink used in the date portion of the documents.

TABLE 2

WebCode	Methods/Techniques	Observations
CZR3JM	Stereomicroscope	Similar production process used for background printing and printed entries between example prescriptions (K1 and K2) and questioned prescriptions (Q1 and Q2). Signature of doctor in K1 and K2 were made with non-toner ink. Signature of doctor in Q1 and Q2 were made with toner. The dates on K1, K2, Q1 and Q2 were all handwritten with black ball-point ink. Similar trash marks observed around the signature in K1 and K2. Some similar trash marks observed between questioned prescriptions (Q1 and Q2) and example prescriptions (K1 and K2). Differences in font design observed between the printed entries "Dr. Sarathi Harris", "266 Sterling Drive", "Gentry, VA 21331", "888-123-8809", "Patient & DOB:" and "Rx" on example prescriptions (K1 and K2) and questioned prescriptions (Q1 and Q2).
	Visual Examination	Measurements to examine alignment of printed text were done. Differences in relative position of the following entries to the border of the prescription between example prescriptions (K1 and K2) and questioned prescriptions (Q1 and Q2) : "888-123-8809", "Patient & DOB:" and "Rx."
	VSC	Latent background printing showing one logo and repeated words "DocuGard™" observed on example prescriptions (K1 and K2) on the reverse side, when viewed under UV. No latent background printing observed on questioned prescriptions (Q1 and Q2).
D2DFCP	Stereomicroscope	All forms utilize offset printing for the background artwork. The artwork is a dot pattern that incorporates an anti-copy feature that is visible with the unaided eye. The anti-copy feature says "UNAUTHORIZED COPY" in a repeated pattern. The form itself, including the lined borders and the data entry is printed using toner. The signatures on K1 and K2 are applied as expected, using a stamping device, and the dates are handwritten using a ballpoint pen. The signatures on Q1 and Q2 are applied using black toner and the dates are handwritten using a ballpoint pen.
	Transmitted light	No traditional watermarks present for any of the documents
	UV	All exhibits have a similar optical brightness. There is a UV printed feature on the reverse sides of K1 and K2 "DocuGard" that is absent from Exhibits Q1 and Q2.
	VSC	Infrared examinations found no evidence of significance.
	Oblique Lighting	Using the VSC (side light), captured images of the toner signatures on Q1 and Q2, and images of the stamped signatures on K1 and K2, to show the difference in the height of the toner versus the ink.
	Visual Examination	Observed differences in the font styles of K1 and K2 as compared to Q1 and Q2. I made notations of those characters that had more obvious differences on the scanned copies that I created.
	Handwriting Examination	Some dissimilarities were observed, but there is an insufficient amount of writing available for comparison. It was not possible to properly compare the K1 and K2 dates to the Q1 and Q2 dates.
D82V64	ESDA	EXAMINATION OF INDENTED IMPRESSIONS 1). No indented impressions were observed on K1, K2, Q1 and Q2.
	Visual Examination	EXAMINATION OF PAPERS 1). The papers of K1, K2, Q1 and Q2 had similar size and colour. 2). Holding K1 and K2 up to the light at certain angles, the words "DocuGard TM ", cream white in colour could be observed on the back of the papers. These were not observed on Q1 and Q2.

TABLE 2

WebCode	Methods/Techniques	Observations
VSC		EXAMINATION OF PAPERS 1). Under transmission light, no watermarks were observed on K1, K2, Q1 and Q2. 2). Under ultraviolet light, K1, K2, Q1 and Q2 fluoresced and latent words "DocuGard TM " could be observed on the back of K1 and K2 but not on Q1 and Q2. 3). When K1, K2, Q1 and Q2 were photocopied, the words "UNAUTHORIZED COPY" appeared and their font type and size and; letter and line spacing were similar.
VSC		EXAMINATION OF PRINTED DOCUMENTS 1). The page layout including the top margin size, the font type and size; and letter and line spacing were significantly similar between K1 and K2. 2). The page layout including the top margin size, the font type and size; and letter and line spacing were significantly similar between Q1 and Q2. 3). Except for the font type, the page layout including the top margin size, the font size and; letter and line spacing of K1 and K2 were significantly different to those of Q1 and Q2.
VSC		EXAMINATION OF SIGNATURES 1). The design and size of the signatures were significantly similar amongst K1, K2, Q1 and Q2. They were super-imposable when overlapped. 2). Signatures on K1 and K2 were greyish black in colour whereas those on Q1 and Q2 were black. 3). The positions of the signatures on K1, K2, Q1 and Q2 stamped above the printed lines were all different.
Handwriting Examination		EXAMINATION OF HANDWRITING (HANDWRITTEN DATES) 1). The handwritten dates were all fluently written and those on K1 and K2 were written in forward slant whereas those on Q1 and Q2 were in backward slant.
VSC		EXAMINATION OF INK (HANDWRITTEN DATES) 1). Under infrared light, the signatures on K1, K2, Q1 and Q2 started to disappear at a wavelength of around 628nm. K1 and K2 became invisible at 778nm whereas Q1 and Q2 became invisible at 1000nm.
Stereomicroscope		EXAMINATION OF PRINTING AND HANDWRITING 1). Under high magnifications, the printed texts on K1, K2, Q1 and Q2 were made up of tiny black dots, distributed throughout the paper (laser printing). 2). Under high magnifications, the printing of the background of all the four papers had uniform ink coverage (lithography offset printing). 3). Under high magnifications, signatures K1, K2, Q1 and Q2 were made up of tiny black dots. Those on Q1 and Q2 were more densely black than those on K1 and K2. 4). Under high magnifications, all the ink lines of the handwritten dates on K1, K2, Q1 and Q2 are black in colour, bearing striations and gooping. No fiber diffusions were observed.
DKVABR	Stereomicroscope	The signatures appearing on the Exhibit Q1 and Q2 items have been prepared with an office machine system that utilizes dry black toner. The signatures appearing on the Exhibit K1 and K2 items have been prepared with a rubber stamp as indicated in the Scenario.
	UV	The paper used to prepare the Exhibit Q1 and Q2 items does not have the Ultraviolet security feature that appears on the reverse side of the paper used to prepare the Exhibit K1 and K2 items.

TABLE 2

WebCode	Methods/Techniques	Observations
	Visual and E-Ruler	The general information printed on the Exhibit Q1 and Q2 prescription forms has a different location than the general information appearing on the Exhibit K1 and K2 forms and there is a difference in font style, size and overall spacing. The patient and drug information printed on the Exhibit Q1 and Q2 prescription forms has a difference in font style, size and overall spacing than the patient and drug information appearing on the Exhibit K1 and K2 forms.
DMF478	VSC	Security features include the words, AUTHORIZED COPY, imprinted on the front side and the logo and name, DocuGard, visible in the IR spectrum. The Q's have a repeating pattern of blotches on the reverse side. This difference may indicate that the paper manufacturer changed the security features between 1980 and 1982 or that different papers are made available to different vendors.
	Visual Examination	K's and Q's were comparable to each other but when comparing K's to Q's there was a difference in margins and line spacing in the printed matter.
	Stereomicroscope	Signature of K's appears to be ink absorbed into the paper fibers; whereas the Q's signature is toner. This is a very strong factor in support of the Q's being non-genuine.
	Oblique Lighting	All papers share a basket weave-like textured appearance on the front side when viewed on the diagonal with left or right oblique light.
	Research re: paper production	The differences found on the reverse side of the Q's were the subject of a request from the "paper manufacturer" to determine if the security features were produced differently during the time of their alleged production. No such differences were described by the "paper manufacturer" suggesting that the paper used for these documents was acquired from a different source.
DPP49T	Magnifying glass & visual examination	Type fonts in K1 & K2 are different than those in Q1 & Q2. Stamp in K1 and K2 is different than Q1 & Q2. Handwritten 4 ink is different than 4 in Q1.
	Microscopic Examination	Signatures in Q1 & Q2 are toner, K1 & K2 signatures are not toner.
	VSC	K1 & K2 have watermarks on back, Q1 & Q2 do not have watermarks.
	ESDA	Nothing significant.
DQWL8N	Microscopic Examination	In Q1 & Q2 the signatures were laser-printed with black toner, whereas in K1 & K2 the signatures are stamped.
	Microscopic Examination	The fonts on Q1 & Q2 are different than those on K1 & K2.
	UV	The backs of K1 & K2 have a UV security print that is not evident on Q1 & Q2. Use of different security papers.
	VSC (mix) transparencies comparison	The position of the printing of the headline and the rest of the document is different between Q1, Q2 and the samples in K1, K2.
	Macroscopic	On photocopying Q1, Q2, K1, K2, we found the void printing "unauthorized copy".
	Macroscopic	The relative position of the frame of the form on Q1, Q2 is different than its position on K1, K2.
	Macroscopic	Q1 & Q2 weighed 4.24g and 4.25g. Whereas K1 & K2 weighed 4.36g and 4.38g.

TABLE 2

WebCode	Methods/Techniques	Observations
DWKBL8	Visual Examination	Initially observed study elements (K1, K2, Q1, Q2), in order to appreciate the most relevant aspects of print
	UV	Then, each of the elements are exposed to UV rays, to locate possible seguridad characteristics of the substrate or paper, since both of the undoubted hold doubt as to its physical examination similarities or similar in their designs
	VSC	Complementing the documentary analysis, are presented individually the prescriptions to obtain more accurate of the identification aspects, especially those taken as patterns, then compare them to the two requirements in question and determine the differences which they have come as a result of technical analysis conducted
DZM8DM	Oblique Lighting	No indented writing was detected
	VSC	Q1 and Q2 do not contain any artificial or true watermarks K1 and K2 have an opaque artificial watermark contained on the back of the documents. The paper on Q1 and Q2 react consistently under IRR and IRL. The K1 and K2 paper react consistently under IRR and IRL. The Q's and the K's did not react consistently when compared to each other.
	Visual Examination	The text and Doctor's signature is printed via an electrophotographic process. Two different fonts used on K's, Perpetua or Lapidary 333 and Helvetica. Multiple font point sizes used throughout. Two different fonts used on Q's, Times New Roman family and Arial, with multiple font sizes used throughout. lithographic halftone printing process containing a pantograph is used for front of prescriptions and may be obtained commercially. On K1 and K2 there is an opaque artificial watermark on the reverse.
E2EHL	Macroscopic/Microscopic Examination	Different methods of printing the signature was observed between the questioned and known signatures. Q is toner instead of stamp. Different font style and size was observed between the questioned and known items.
	Videospectral Comparator (UV)	Different security feature (back watermark) was observed on the known items that is not present on the questioned items.
EG6DEK	Macroscope	[No observations reported.]
	Ultraviolet Fluo	[No observations reported.]
	ink examination	(optical)
EK4NAK	Microscopic Comparisons & Image comparisons in the mix mode VSC 6000	K1 and K2 signatures were made by use of the same facsimile. Q1 and Q2 signatures were printed by use laser jet technique.
	Ultraviolet & near infrared	K2 and K1 papers have the same optical properties. Q1 and Q2 papers have the same optical properties. K papers have different optical properties than Q papers.
	Microscopic Comparisons & ultraviolet	K2 and K1 papers have hidden imprints: DocuGard with logo, made with special paint on the other side, visible in the oblique light and UV. Q1 and Q2 papers do not have hidden imprints on the other side.
	Microscopic Analysis	Papers of all documents have a pantograph copy unauthorized on front side.

TABLE 2

WebCode	Methods/Techniques	Observations
	Microscopic Comparisons & image comparisons in the mix mode VSC 6000	K1 and K2 headlines have the same topography and the typeface of letters. Q1 and Q2 headlines have the same topography and the typeface of letters. Q headlines have different topography and the typeface of letters than K headlines.
EUBKV3	UV	Examination has been carried out on questioned documents Q1, Q2, and K1, K2, they have been examined separately and as well as in comparison with ordinary transmitted ultraviolet (365nm) and infrared light, equipment "VSC 6000/HS". The differences shown after the examination has been represented in the photo illustration.
	Infrared	The following examination revealed that at the back of the blanks of questioned documents K1, K2 we can see the logo image and recurring writings: "DocuGard tm "which is not represented on the examination questioned documents Q1 and Q2.
	Examination has been carried by "VS6000/HS"	[No observations reported.]
EWM63R	Stereomicroscope	Signatures on K1 & K2 made with a liquid ink and consistent with use of a stamp. Signatures on Q1 & Q2 produced in dry toner powder (laser printer or photocopier).
F7NVAK	Oblique Lighting	K1 & K2 reverse--watermark in white "DOCUGARD". Q1 & Q2 no watermark.
	UV	K1 & K2 reverse--watermark in white "DOCUGARD". Q1 & Q2 no watermark.
	Stereomicroscope	K1 & K2 sig = stamp. Q1 & Q2 Sig = Toner. Generally the laser quality of Q1 & Q2 looks poorer than K1, K2. Appears K1 & K2, Q1 and Q2 have face void pantograph blue dots printed offset. K1, K2 date = black ballpoint. Q1, Q2 date = ink.
	scan and photoshop	K1 and K2 reverses have watermarks. Q1, Q2 reverses do not have watermarks.
FDP87H	Oblique Lighting	No indentations observed
	ESDA	No indentations developed. Signatures reacted differently between Q1/Q2 and K1/K2.
	Stereomicroscope	Computer text is electrostatic toner. Toner morphology differences between Q1/Q2 and K1/K2. Handwritten dates are original black ballpoint pen ink. Consistent blue background printing. Q1/Q2 signatures are electrostatic toner. K1/K2 signatures are consistent with stamped impressions.
	Transmitted Light	No true watermark. No differences in paper morphology noted. Formatting and line spacing differences between Q1/Q2 and K1/K2. Difference in length of signature lines between Q1/Q2 and K1/K2. Similar sized boxes/borders.
	Visual Examination	Macroscopic examination. Form of signatures similar. Many font differences between Q1/Q2 and K1/K2. Printed artificial watermark present on the backs of K1/K2, but not on Q1/Q2.
	Photocopying	Same "void pantograph" present.
	UV	Using VSC and handheld. Artificial watermark on backs of K1/K2, but not on Q1/Q2.

TABLE 2

WebCode	Methods/Techniques	Observations
	Paper Measurements	No differences found in thickness. Pages all similar size, but with some irregularity in the cut.
	VSC	Infrared reflectance. No observed differences in ballpoint ink, signatures, or blue background ink.
	VSC	Infrared Luminescence. No observed differences in ballpoint ink, signatures, or blue background ink. Difference in background luminescence between Q1/Q2 and K1/K2.
	Handwriting Examination	Examination of dates. No conclusion. Some dissimilarities observed.
FMTC87	UV	UV features (the words DocuGard) were found on the back of the documents marked "K1" and "K2". No UV features were found on the back of the documents marked "Q1" and "Q2".
	Stereomicroscope	The signatures of "K1" and "K2" have been stamped whereas the signatures of "Q1" and "Q2" have been printed using toner.
	Stereomicroscope	The font used on "K1" and "K2" differs to the font used on "Q1" and "Q2".
FUUJVL	Visual Examination	Recordings of the data on documents Q1 and Q2 is other than on documents K1 and K2. The kind of types on documents Q1 and Q2 is other than on documents K1 and K2.
	Microscopic (Nikon Eclipse 80i C)	the signature (stamps) on documents Q1 and Q2 is toner, not ink like documents K1 and K2
	VSC	the lack of the overprint of the text "DocuGard™" and graphic elements on the revers of documents Q1 and Q2. other location of the frame box on documents Q1 and Q2 than on documents K1 and K2. other space and topography of texts on documents Q1 and Q2 than on documents K1 and K2.
FVKVLE	VSC	VSC-6000, Light source-UV light: At the back of K1 and K2: the word DocuGard™ and logo are present. At the of Q1 and Q2: the word DocuGard™ and logo are not present.
	VSC	VSC-6000, Light source-Flood light: The front side the construction of letters i and r on the word "Harris" on K1 and K2 differ from Q1 and Q2.
	VSC	VSC-6000, Light source-Flood light: At the back of K1 and K2 the signatures are readable. At the back of Q1 and Q2 the signatures are not readable.
G7H7EM	Visual Examination	Documents Q1 & Q2 have a different header font spacing from documents K1 & K2. When holding documents K1, K2 on angles, the word "DocuGuard" is visible as a security feature on back.
	Oblique Lighting Examination	Both documents Q1 & Q2 have no visible signs of indentations and are negative for indented writings.
	LEICA M60 Examination	Printed micro dots exhibit similarities in style, color, & thickness within documents K1, K2, Q1 & Q2.
	VSC 6000/HS Examination	Under bright flood lighting documents Q1 & Q2 have a difference in header font spacing from documents K1 & K2. I also noticed under 30.24 magnification a variation in font spacing between Q1 & Q2 from K1 & K2. Under 312nm Ultra Violet lighting the word "DocuGuard" is visible on the back of K1 & K2, but this is not present on Q1 or Q2.

TABLE 2

WebCode	Methods/Techniques	Observations
	Coin Reactive Ink Test	When conducting a coin reactive ink test, both documents Q1 & Q2 had no visible signs of coin reactive ink on back of documents. Document K1 & K2 both showed a positive reaction when scratching a coin on the back side of the known documents.
GDKDYG	Stereomicroscope	Items Q1 and Q2 black printed areas and signature were produced by toner technology. Edges are not crisp and clean. No water mark. Reverse side of Items Q1 and Q2 do not contain security water mark (DocuGard) as do Items K1 and K2. Signatures on Items K1 and K2 are stamp signatures. Original black ball point ink for dates on Items Q1, Q2, K1, and K2. Black printed areas in Items K1 and K2 are of toner technology as well. Edges of printed material on K1 and K2 are not crisp and clean. Font differences were observed between the material printed on Items Q1 and Q2 and the font appearing on Items K1 and K2.
	Photocopier	Items Q1, Q2, K1 and K2 have a "UNAUTHORIZED COPY" statement that becomes visible when photocopied.
	ESDA	Items Q1 and Q2 were examined for indented writing impressions on the ESDA2. Test strip was positive. No indentations of evidentiary value were observed.
	VSC	Items Q1, Q2, K1 and K2 were examined under infrared lighting. Performance test was positive for the VSC6000. No differentiation was observed under infrared lighting between the "toner" areas appearing on the items.
	UV	Items Q1, Q2, K1 and K2 were examined under UV light. Performance test was positive for the VSC6000. UV lighting revealed security printing on reverse sides of Items K1 and K2, "DocuGard" along with a crest type insignia, which was also visible under normal lighting. This security printing does not appear on the reverse of Items Q1 and Q2. No noticeable difference in optical brighteners between K1, K2, Q1 and Q2 under UV lighting.
	Measurement	Signature line on Item Q1 and Q2 measures approximately 5 5/16" and the signature line on Items K1 and K2 measures approximately 5 7/16".
GK4KGL	Visual Examination	K1 and K2: artificial watermark present on the backside of the document. Q1 and Q2: artificial watermark not present.
	Stereomicroscope	K1, K2, Q1, Q2: Front side of the document offset printed. Personalisation with monochrome laser printer. Dated by pen. K1 and K2: signature stamp present. Q1 and Q2: signature produced with laser printer.
	UV	K1, K2, Q1, Q2: Fluorescent paper material. K1 and K2: artificial watermark present on the backside of the document. Q1 and Q2: artificial watermark not present.
	Oblique Lighting	No significant findings.
	Copying	Documents K1, K2, Q1 and Q2 were copied. No significant differences were observed in the copies of the documents.
GKY4JM	Macroscopic, visual and UV	On the back of documents K1 and K2 we can observe a security logo that does not appear on documents Q1 and Q2

TABLE 2

WebCode	Methods/Techniques	Observations
GLTW9E	VSC	Under magnification and UV light, I observed that the back page of original documents (K1 and K2) show shield emblem with 'DocuGard' print features. Whereas on the questioned documents (Q1 and Q2) using same magnification and UV light NO features were observed, pages were blank.
	VSC	The back page of original documents (K1 and K2) show signature stamp impressions features, whereas for questioned documents (Q1 and Q2) there were no impressions observed, pages were clear. They were observed under the same magnification and flood light.
	VSC	During my examination I observed that printing on original documents (K1 and K2) and questioned documents (Q1 and Q2) differ in alignment. Example, for K1 and K2 'Patient & DOB' is printed at TOP of the background printed words 'Thori', whereas Q1 and Q2 Patient & DOB' is at BOTTOM of the background printed words 'Thori'. Same magnification and flood light were used.
	VSC	Different font types were used for both exemplar documents (K1 and K2) and questioned documents (Q1 and Q2). These were observed by same magnification and flood light. Examples are comparison of the following letters: 2, i, r and g.
	VSC	When the documents were superimposed using same magnification and flood light the following observations were found: exemplar documents (K1 and K2) matched each other. Also questioned documents (Q1 and Q2) matched each other. Original documents (K1 and K2) superimposed with and questioned documents (Q1 and Q2) revealed that they do not match. Example, the length of the line under the signature stamp and date are not equal.
GNZE7A	VSC	UV-LIGHT: The word "DocuGard" and the logo are revealed on K1 and K2 but not on Q1 and Q2.
	VSC	FLOOD LIGHT: 1. The font type used on K1 and K2 differs from that used on Q1 and Q2. 2. The length of the signature and date line for K1 and K2 differs from that on Q1 and Q2. 3. The starting point of the words and punctuation "Patient & DOB:" on K1 and K2 are at the top of the background printing words "THORI" while for Q1 and Q2 it is at the bottom. 4. The signature is visible at the back of K1 and K2 while on Q1 and Q2 there is no signature.
GWBFRB	VSC	On the known prescription (K1 & K2) on the doctor's date between the numbers, the forward slashes are slightly to the right and on the unknown prescription (Q1 & Q2) the backwards slashes are slightly to the left.
	VSC	The line underneath doctor's signature and the date is longer at (K1 & K2), and is shorter at (Q1 & Q2).
	VSC	The font size of letters at Q1 & Q2 are thicker than those at K1 & K2.
	VSC	The security wording "DocGardTm" is visible under Ultra Violet light at the back of K1 & K2 and it is not visible at Q1 & Q2.
	Handwriting Examination	Handwritten number "6" on the date of K1 & K2 terminates on the body and Q1 & Q2 does not in fact it terminates after the body.
H2MUXG	ESDA	No indentations detected on K1, K2, Q1, Q2. Roller marks more apparent on Q1 and Q2. Ink of signature on K1 and K2 are visible on foils.

TABLE 2

WebCode	Methods/Techniques	Observations
	Stereomicroscope	Signature on K1 & K2 is from an inked stamp, whereas signature on Q1 and Q2 is printed with toner. Similar printing methods used on K1, K2, Q1 and Q2.
	Handwriting Examination	Some dissimilarities observed in the date in slope, position relative to baseline and formation of the numerals 4 and 6, with K1, K2 and Q1, Q2. All numerals written in black ball pen.
	Hyperspectral imaging	Using UV lighting on the paper of K1 & K2, an image reading "DocuGard" and an emblem were visible. No image was observed under the same lighting conditions of the paper Q1 & Q2.
	Visual Examination	When paper of K1, K2, Q1 and Q2 were photocopied, a background image of "UNAUTHORISED COPY" was observed. Differences in fonts were observed between K1, K2 and Q1, Q2 ie serif and non-serif fonts. Similar measured font point size but spacing/size visually different when printed.
H3HCZH	Visual Examination	The Q1 & Q2 paper is different from the K1 & K2 paper. The back of the K1 & K2 paper show the logo and the inscription "DocuGard", the latter is absent on the back of the Q1 & Q2 paper documents.
	UV	Q1 & Q2 are different from K1 & K2. The back of the K1 & K2 paper show a luminescence for the logo and the inscription "DocuGard", the latter is absent on the back of the Q1 & Q2 paper documents.
	Macroscope	The recto of all the submitted documents, both Q & K, presents a blue offset printing background showing the words "COPY UNHAUTHORIZED". The Q1 & Q2 prescriptions, including the Dr Sarathi Harris signatures are printed using an electro-photographic (EPG) printing system using black toner, while the Dr Sarathi Harris signatures are affixed with a stamp on the K1 & K2 prescriptions. All the Dr Sarathi Harris signatures of all the submitted documents, both Q & K, are perfectly superimposable. The header and the "Patient & DOB:" inscriptions of the Q1 & Q2 documents are printed with a look alike Times New Roman font while using a look alike Perpetua font for the K1 & K2 prescriptions. Similarly, the body of the text is printed with a look alike Arial font for the Q1 & Q2 prescriptions and with a look alike Helvetica font for the K1 & K2 documents. The length of the bottom line, above the "Signature & Date" inscription for the Q1 & Q2 documents is shorter than the one visible on the K1 & K2 prescriptions.
	Regula Model 4197	The magnetic properties, particularly the magnetic flux (nWb) shows that all the black toners (Q1, Q2, K1 and K2) are magnetic, however the magnetic flux of the Q1 & Q2 prescriptions is lower than the one of the K1 & K2 documents.
	Keyence microscope	The Q1 & Q2 toner morphology, "toner satellites" around the printed text and the background toner particles distribution are different from the K1 & K2 documents.
	FTIR	The examination by micro ATR FTIR spectroscopy allows to separate the toner material into two groups: The 1st group consists of the questioned documents Q1 & Q2 and the 2nd group consists of the K1 & K2 documents.
H4R9GF	Visual Examination	1) Difference in paper colour. 2) Differences in the colour of the printed signature. The known signatures are lighter grey whereas the questioned signatures are black. 3) Differences in the length of the baseline at the footer of the page. 4) Difference in text style/ font style.

TABLE 2

WebCode	Methods/Techniques	Observations
	UV	1) UV exposure revealed UV security printing ("emblems and the word DOCUGARD") on the known specimens, whereas no UV security printing were present on the questioned documents.
	VSC	Using the VSC6000 for magnification using incident lighting illumination the following observations made during the visual examination were confirmed: 1) Difference in paper colour. 2) Differences in the colour of the printed signature. The known signatures are lighter grey whereas the questioned signatures are black. 3) Differences in the length of the baseline at the footer of the page. 4) Difference in text style/ font style.
H7CB8L	Indented Impression Examination	ESDA- Q1, Q2 - neg. Oblique light - Q1, Q2 - neg
	UV 365nm, 254nm	K1, K2 rev. sides positive UV responsive ink w/ "DocuGard" and logo. Q1, Q2 - neg on rev. side for UV responsive ink.
	Microscopic "Signature Stamp"	K1, K2 ink absorbed into paper fibers - consistent w/ a rubber stamp. Q1, Q2 - bead like, melted appearance adhering to surface therefore toner.
	Toner CPS Codes	Neg on all (K1, K2, Q1, Q2)
	"Signature Stamp"	Superimposable - all K1, K2, Q1, Q2 signature entries.
	Font Examination	For letterhead section: (which consists of "Dr... 888-123-8809") Q1 and Q2 have same font. K1 and K2 have same font. Q1, Q2 font different than K1, K2 font. For body of prescription: (remaining entries below letterhead section) Q1 and Q2 have same/similar font. K1 and K2 have same font. Q1, Q2 font different than K1, K2 font.
H92NQ4	Visual Examination	differences in proportions of some printed characters in documents encoentraron Q1 and Q2 against some characters of K1 and K2 documents. Differences in location of the documents signed between Q1 and Q2 against the K1 and K2 documents are also encoentraron.
	VSC	differences in proportions of some printed characters in documents encoentraron Q1 and Q2 against some characters of K1 and K2 documents. Differences in location of the documents signed between Q1 and Q2 against the K1 and K2 documents are also encoentraron.
	Stereomicroscope	differences in proportions of some printed characters in documents encoentraron Q1 and Q2 against some characters of K1 and K2 documents. Differences in location of the documents signed between Q1 and Q2 against the K1 and K2 documents are also encoentraron.
HLPPPJ	Stereomicroscope	The questioned signatures have been produced using an electrostatic (toner) printing process. The signatures on the exemplar forms are ink, consistent with being stamp impressions.
	UV	The exemplar forms contain UV reactive security printing ('DocuGard') on their rears. This is not present on the questioned forms.
	Digital Overlay	The typed text on the questioned forms has been produced using different fonts from those used on the exemplar forms.
	ESDA	Nil indentations
	Handwriting Examination	Some differences were observed between the handwritten dates on the questioned forms and those on the exemplars in such features as positioning, size, slope and individual character constructions.

TABLE 2

WebCode	Methods/Techniques	Observations
HLT7NH	General Observations	K1, K2, Q1 and Q2 have the same aspect; same dimensions, same colour and same text organization. However, printed mentions on Q1 et Q2 are shifted downwards. Same fonts on K1 and K2: Lapidary 333BT and helvetica. Same fonts on Q1 and Q2: Times New Roman and Arial. Same design "DocuGard" on K1 and K2 back which isn't printed on Q1 and Q2.
	ESDA	No indented writings on K1, K2, Q1 and Q2
	Microscopic Examination	Same printing technology for security printing on K1, K2, Q1 and Q2: halftone offset with "unauthorized copy" pattern. Same printing technology for texts on K1, K2, Q1 and Q2: laser printer using black magnetic toner. On K1 and K2, the signature is produced with black liquid ink, whereas, on Q1 and Q2, the signatures are laser printed.
	Docucenter	Ink dates on Q1 and Q2 have the same spectral properties. Under UV lights, K1, K2, Q1 and Q2 sheets of paper don't contain optical brighteners, but "DocuGard" design react on K1 and K2.
HMJGEB	VSC	Magnification and flood light, Documents marked "K1" and "Q1" did not match physically.
	UV	UV features reading "DocuGuard" were observed on "K1" and "K2".
	VSC	Transmitted light, signatures indentations were observed on "K1" and "K2".
	VSC	Flood light, Font types used on "K1" and "K2" are different from font types used on "Q1" and "Q2".
HNEZFC	VSC: Magnification and flood light for examination of printing	Specimen K1 and K2 vs Questioned Q1 and Q2: Font shape and spacing between the printed letters different.
	VSC: Magnification and flood light for examination of handwriting	The original handwriting on the specimen K1 and K2 is slanted to the right whilst the handwriting on the questioned Q1 and Q2 is slanted to the left.
	VSC: Magnification and flood light for examination of stamp impression	The signature stamp impressions on the specimen K1 and K2 is original whilst the signature stamp impressions on questioned Q1 and Q2 are not original but "Toner printing".
	VSC: UV light for examination of UV security features	UV ink printing at the back of the specimen K1 and K2: "DocuGuard" and Logo printed. No UV features at the back of questioned Q1 and Q2.
HXMP3M	Macroscopic: Ambient Lighting	The questioned documents, Q1 and Q2, and the known exemplars, K1 and K2, appear to be the same in size; however, the questioned documents, Q1 and Q2, do not contain the same margin measurements as the known exemplars, K1 and K2. Also, the questioned documents, Q1 and Q2, do not appear to be the same paper type as the known exemplars, K1 and K2.
	Ink Examination: Stereomicroscope Stemi 2000C	Q1, Q2, K1 and K2 were microscopically viewed to determine that the handwritten date appears to be black ink.

TABLE 2

WebCode	Methods/Techniques	Observations
	Microscopic & Comparison technique: Stereomicroscope Stemi 2000C	The questioned documents, Q1 and Q2, and the known exemplars, K1 and K2, were examined microscopically. The questioned documents and known exemplars appear to contain a similar security background pattern, printed prescription information in toner and handwritten date in black ink. The signatures on Q1, Q2, K1 and K2 are superimposable; however, the signatures on the questioned documents, Q1 and Q2, are toner, whereas the signatures on the known exemplars, K1 and K2 are stamped. The known exemplars, K1 and K2, contain stamped signatures that appear to have similar defects. These defects also appear in the toner signatures on the questioned documents, Q1 and Q2. This indicates the signatures may have been merged to the questioned documents, Q1 and Q2, from an authentic prescription by digital techniques.
	Microscopic & Comparison technique: Video Spectral Comparator (VSC6000/HS)	The ultraviolet characteristics of Q1, Q2, K1 and K2 were examined. The ultraviolet responses of the paper do not appear to be the same. The back side of the known documents, K1 and K2, has a "DocuGuard" security pattern that is not present on the questioned documents, Q1 and Q2. Magnification was used to capture images of the microscopic features present in Q1, Q2, K1 and K2- security background pattern, printed prescription information in toner, toner or stamped signatures, and handwritten dates in black ink.
	Indented Writing: Stereomicroscope Stemi 2000C	Fiber-optic oblique lighting was used to determine if apparent latent writing impressions were present on Q1, Q2, K1, and K2. There are apparent latent writing impressions on the back side of Q1, Q2, K1 and K2. The latent writing impressions appear to be the writing from the front side of Q1, Q2, K1 and K2, respectively.
	Indented Writing: Electrostatic Detection Apparatus (ESDA)	Latent writing impression restoration was performed using the ESDA on the front and back of the questioned documents, Q1 and Q2, and the front and back of the known documents, K1 and K2, at 0 minutes humidity. No latent writing impressions were developed on Q1 front and Q2 front. Latent writing impressions were developed on Q1 back, Q2 back, and K2 front and back.
J84J8N	Visual Examination	DESCRIBES AND COMPARES CHARACTERISTICS GENERAL AND SPECIFIC OF THE ELEMENT QUESTIONED.
	MACRO-MICROSCOPIA	DETAILED OBSERVATION WHIT APPLYING DIFFERENT INCREASES AND DIRECT ILLUMINATION.
JCH43G	Microscopic Examination	Not the same security paper. Different toner depositing on Q's. Not the same font on Q's. Some difference in the date (handwriting). Signatures on Q = toner, not stamp.
	USC 6000	No DocuGuard logo on Q (back). Same UV results on K and Q.

TABLE 2

WebCode	Methods/Techniques	Observations
JCXQCJ	Visual Examination	The paper used for K1 and K2 is approximately 7 3/4 inch by 9 3/8 inch, blue in background color, contains an "UNAUTHORIZED COPY" Pantograph security feature on the face, and also contains a latent image security feature "DocuGard" on the reverse side of the exemplar prescriptions. The paper used for Q1 and Q2 is approximately 7 3/4 inch by 9 3/8 inch, blue in background color and contains an "UNAUTHORIZED COPY" Pantograph security feature on the face of the questioned prescriptions. The paper used for Q1 and Q2 do not contain the latent image security feature "DocuGard" on the reverse side of the questioned prescriptions. The Q1, Q2, K1, and K2 contain handwritten dates to the right side of the signatures. There are differences with regard to the spacing between the signature and handwritten date on Q1 and Q2 compared with K1 and K2.
	Stereomicroscope	The K1 and K2 exemplar prescriptions utilize toner technology for printed text and lines only and a stamp for the signatures. The Q1 and Q2 questioned prescriptions utilize toner technology for printed text, lines, and signatures. The Q1 and Q2 printed text fonts are different from the printed text fonts on K1 and K2.
	VSC	The Q1 and Q2 toner signatures can be superimposed with the stamp signature from the known prescription exemplars. K1 and K2 contain the latent image security feature "DocuGard" on the reverse side of the exemplar prescriptions (UV). Q1 and Q2 do not contain the latent image security feature "DocuGard" on the reverse side of the questioned prescriptions.
	ESDA	Indentation examination for indented writing yielded negative results on Q1 and Q2. Indentation examination for printer machine characteristics yielded very faint impressions on the Q1, Q2, K1, and K2 documents.
JE4XUB	VSC	TYPE OF FONTS USED ON QUESTIONED PRESCRIPTIONS DIFFER FROM THE FONTS USED ON KNOWN PRESCRIPTION.
	UV	THERE ARE VISIBLE SECURITY FEATURES ON THE BACK OF K1 AND K2 WHILE NOTHING VISIBLE ON Q1 AND Q2. SECURITY FEATURE VISIBLE IS WORDING "DocuGARD"
	VSC	SLANTS OF SLASHES ON DOCTOR'S DATES FOR Q1 AND Q2 ARE SLIGHTLY TOWARDS LEFT(\) WHILE SLANTS OF SLASHES ON DOCTOR'S DATES FOR K1 AND K2 ARE SLIGHTLY TOWARDS RIGHT(/)
JE8HKY	UV	By projecting ultraviolet light reaction is observed on the back of the indubitable documents says DOCUGARD tm, whereas in the dubitados not present any reaction to this type of light.
	VSC	With the use of the methodology and instruments as well as the application of white, natural and visible light in the flush position (side) and incident (top-down) we proceeded to the physical - optical analysis (individual and comparative) of the security features of the substrates , morphology printed, size, topographic distribution and sharpness of q1 and q2 requirements as questioned documents, to subsequently compare them with the security features of the substrates, morphology printed, size, topographic distribution and sharpness K1 and K2 requirements as documents reference standards, in order to establish the authenticity or falseness thereof, which was established in Q1 and Q2 difference or mismatch with patterns k1 and k2, in size, topographic distribution and morphology of letters

TABLE 2

WebCode	Methods/Techniques	Observations
	Visual Examination	observed difference in size of the solid line is at the bottom of the signature and date, also was observed differences in morphology of printed texts.
JGTHJF	Visual Examination	There are differences in font as well as in the alignment of text and formatting. The ink from the prescriber signature is visible on the back of the known prescriptions.
	UV	The questioned prescriptions do not bear UV reactive printing on the back of the documents, but the known prescriptions do.
	Stereomicroscope	The prescriber signature on the known prescriptions were produced using an ink process; the prescriber signature on the questioned prescriptions were produced using toner technology.
	Oblique Lighting	Indentations from the hand written date are visible on the back of the questioned prescriptions; these indentations are not present on the known prescriptions.
	Handwriting Examination	It is noted that there are differences in the hand written date style of writing and placement on the signature line between the questioned and known prescriptions.
JLNCGG	ESDA	Indented writing on Items 6 and 7
	VSC	Items 4 through 7 Observed watermark docufard
	Stereomicroscope	Items 4 through 7 Printing Processes
JNVG9J	Visual/Microscopic examination in daylight or oblique light	Q1-Q2 = signatures produced by laser printer.
	Examination in UV light/infrared absorption reflection and lumiscence	Q1-Q2 = the UV printing is missing on the documents reverse side.
JRTUWA	VSC	magnification and flood light for printing and background printing. the font and background printing differs between the questioned doctors prescription and the specimens.
	VSC	magnification and uv light. uv security features are not present in the questioned doctors prescription. the specimen doctors prescriptions have security features.
	VSC	magnification and flood; the baseline under the signatures of k1 to k2 doesnt match with the base line of Q1 to Q2.
JUZCU6	VSC	VSC has revealed that the exemplar prescriptions (K1 and K2) are printed on a security paper, where as the questioned prescriptions (Q1 and Q2) does not contain any security features.
	VSC	VSC has also revealed that the exemplar prescriptions (K1 and K2) are printed on security paper with a latent printing, "DocuGuard".
	VSC	[No observations reported.]
K4MNHQ	UV - 254 + 365	K1 & K2, Q1 & Q2 fluoresced similarly.
	Oblique Light	No probative indented impressions noted. K1 & K2 have a "DocuGuard" logo on back. Q1 & Q2 do not.

TABLE 2

WebCode	Methods/Techniques	Observations
	Microscopic Examination	The signatures on K1 & K2 were produced using fluid ink. Q1 & Q2 are toner. There are extraneous dots produced around the K1, K2 signatures that superimpose. Some of these dots are noted in Q1 & Q2, but produced with toner. The signatures on K1, K2, Q1, & Q3 all superimpose. Same original source. Q1, Q2, K1, & K2 documents are produced with color toner.
K6C29Z	UV	Paper reaction of Q1 & Q2 and K1 & K2 are the same
	VSC	Show each signature on Q1 & Q2 is laser printing
	Handwriting Examination	Hand dates comparison
K6DWPL	Stereomicroscope	1. Analyzed signature blocks and noted that Items 4 and 5 were black ink (stamp) while Items 6 and 7 blocks were black toner. Signatures all overlaid. 2. Noted differences in the fonts found on Items 4 and 5 compared to Items 6 and 7.
	VSC	Noted differences in optical properties on paper security feature. Items 4 and 5 security pattern luminesced.
	ESDA	Items 4 through 7 negative.
KH3VH9	Visual Examination	The font on the two specimen prescriptions differ to the font of the two disputed prescriptions. The text alignment on the two disputed prescriptions differ to the text alignment of the specimen prescriptions.
	Projectina Nirvis	The signatures on the disputed prescriptions are printed on and the signatures on the specimen prescriptions are stamped impressions.
	UV	The word DOCUGARD is visible under 313 nm on the specimen prescriptions and absent on the disputed prescriptions.
KH4EVC	Stereomicroscope	The font used in Q(1-2) was different from that used in K(1-2). Toner produced Q(1-2) while K(1-2) were produced with ink.
	VSC	K(1-2) have a security feature "DocuGard" as a watermark and the Q's do not contain that same feature when viewed under UV light.
KHXEKA	VSC	Utilizing the VSC 6000 for magnification observation, using incident lighting illumination the following observations made during the preliminary visual examination were confirmed: 1) Differences were observed in respect of the placement/spacing and distance of the printed text to the baseline/bottom of the header-box; 2) Differences were observed in the slant (i.e. font style) of both the ampersands as contained in the printed text (i.e. italic ampersands were observed in the questioned documents); 3) Differences in the printed colour of the signatures (i.e. lighter/grey signatures in the known specimen material whereas darker/black in the questioned documents); 4) Differences in the placement of the handwritten date to the writing baseline (i.e. in the questioned document the dates are written on even through the baseline, whereas in the specimen material the dates are written above the baseline); 5) Difference in the 'inter-word' spacing between the printed signatures and the handwritten date (i.e. small space/distance between the signatures and the date observed in the questioned, whereas a larger space/distance is observed in the specimen material).

TABLE 2

WebCode	Methods/Techniques	Observations
	UV	Ultraviolet exposure at 365nm revealed ultraviolet security printing on the reverse side of the known specimen prescriptions, whereas no ultraviolet security printing were observed on the reverse side of the questioned prescriptions.
	Visual Examination	The following observations made during the preliminary visual examination: 1) Differences were observed in respect of the placement/spacing and distance of the printed text to the baseline/bottom of the header-box; 2) Differences were observed in the slant (i.e. font style) of both the ampersands as contained in the printed text (i.e. italic ampersands were observed in the questioned documents); 3) Differences in the printed colour of the signatures (i.e. lighter/grey signatures in the known specimen material whereas darker/black in the questioned documents); 4) Differences in the placement of the handwritten date to the writing baseline (i.e. in the questioned document the dates are written on even through the baseline, whereas in the specimen material the dates are written above the baseline); 5) Difference in the 'inter-word' spacing between the printed signatures and the handwritten date (i.e. small space/distance between the signatures and the date observed in the questioned, whereas a larger space/distance is observed in the specimen material).
KK4WH7	UV	Q1/Q2 and K1/K2 were examined with 365nm UV light. In Q1/Q2 no observation were made, but on K1/K2 (on their reverse sides), the words "DOCUGARD" together with a shield were observed
	Stereomicroscope	The printed header in "Q1"/"Q2" were printed higher above the baseline of the Headerbox than in "K1"/"K2". In "Q1" and "Q2" the placement of the handwritten dates is on the writing line, while in "K1" and "K2" it is higher above the writing line. The placement of the handwritten dates is closer to the printed signatures in "Q1"/"Q2" than in "K1"/"K2". In "Q1" and "Q2" the placement of the printed "SIGNATURE & DATE" is closer to the writing line than in "K1" and "K2". In "Q1" and "Q2" the ampersand ("&") in the "SIGNATURE & DATE" is printed in Italic, while it is printed normal in "K1" and "K2"-also observed in "Patient & DOB"
	VSC	Observations is same as with Stereomicroscope/Visual. Observations in Size/placement differences were confirmed by using VSC's Measurement Tool.
KXBMKE	Visual Examination	Differences are observed in systems printing signature. There are not the same result. Security sistema diferent.
	Stereomicroscope	Differences are observed in systems printing signature. There are not the same result. Security sistema diferent.
	UV	The legend "DocuGard" seen in know exemplar.
KY83XB	VSC	Slashes on the dates next to the doctors's signature on Q1 and Q2 slope slightly towards left while on K1 and K2 slope slightly towards the right.
	VSC	The fonts used on questioned prescriptions (Q1 and Q2) differ from that on the known prescriptions (K1 and K2)
	UV	Security features on the background printing of K1 and K2 are clearly visible while there is none on Q1 and Q2.
L8W28G	Visual Examination	Line measurements & fonts different between Q1 & Q2 with K1 & K2; K1 & K2 have an artificial watermark on reverse side Q1 & Q2 do not; Both Q & K exhibits have copying security feature on the face

TABLE 2

WebCode	Methods/Techniques	Observations
	Micrometer	Q & K exhibits have same paper thickness
	Stereomicroscope	Q1 & Q2 produced by toner except the handwritten date; K1 & K2 produced by toner except hand stamped signature and handwritten date; Trash marks observed in stamped known signatures; Some of these trash marks observed on the K are present on the toner copied questioned signatures
	VSC	Slight difference in UV luminescence between the Q1 & Q2 with K1 & K2; The Q1 & Q2 signature overlay the known stamped signature including the individualizing trash marks; Side lighting, no indented writing impressions observed on Q1, Q2, K1, and K2; Handwritten date on Q1 and Q2 heavier pressure than writing pressure on K1 and K2
	ESDA	No indented writing impressions observed on Q1 and Q2
L97F7A	VSC	VSC 6000- UV light: Q1 and Q2 does not reveal the logo and word "DocuGuard TM" while on K1 and k2 is revealed
	VSC	VSC 6000- Flood light revealed the following: i) The length and width of the signature line and date of Q1 and Q2 is shorter and thinner, as compared K1 and K2 wherein there are longer and thicker. ii) Q1 and Q2 does not have a signature impression at the back, while on K1 and K2 is present. iii) The font type on the Q1 and Q2 is different as compared to K1 and K2.
LBWC4G	Stereomicroscope	K1 and K2 have a background printing with a protection against copying. The background printing is offset printing. The black printing is toner printing with magnetic toner (mono-component toner/single developing). The signature is a stamp impression with fluid black ink. The date is black ballpoint ink. Q1 and Q2 resemble the microscopic characteristics as explained above. The difference is the signature. On Q1 and Q2 the signature is printed with magnetic toner.
	UV	K1 and K2 have printing on the backside which is visible using UV light. Q1 and Q2 do not have this printing on the backside.
	Visual Examination	The used font in the heading of the document is different between on one side K1/K2 and on the other side Q1/Q2.
LHTEFX	UV	The Q1 and Q2 does not contain the security element (DocuGard) on the back of the prescriptions.
	Stereomicroscope	The signatures on the Q1 and Q2 prescriptions are laser printed, however the genuine signatures are stamped.
	VSC	The position and the size of the printed text (including the frames and some letters, as well) is different from the K1 and K2.
LJNWYG	Visual Examination	measurements made indicate differences in margins/alignment/font with respect to the printing of K and Q docs. security paper differences noted between K and Q docs. handwriting/signature features observed.
	Stereomicroscope	Differences and similarities in various printing techniques observed on K and Q docs. Writing instrument features.
	VSC	Security paper differences between K and Q docs, Writing instruments
	ESDA	Differences in the signature portion of the K versus Q docs were observed (printing differences)

TABLE 2

WebCode	Methods/Techniques	Observations
	"mag-mouse"	Determine any magnetic properties of the printing/toners
LPF89E	Macroscopic examination (ruler/visual)	Page dimensions - Ks & Qs: ≈ 19.7 cm x ≈ 23.8 cm. Blue on one side (same side as the black printed variable info). White on reverse side.
	Security feature tests	Erasure resistant test (rubbed blue side with an eraser): Ks & Qs: Changed of appearance of blue colour - Positive. Coin reactive ink test (rubbed white side with coin): Ks: translucent ink revealed itself - Positive. Qs: no reaction - Negative. Copy proof test (by photocopying/scanning docs): Ks & Qs: repeated "Unauthorized Copy" messages show up - Positive.
	Stereomicroscope	Printing (blue background): Ks & Qs: Repeated "UNAUTHORIZED COPY" pantograph appears over entire surface of docs; half-tone printing with variable dot sizes. Printing (black variable data): Ks & Qs: Electrophotography (EP); Black, dry toner. Ks: No background noise/Uniform toner pile height deposit/Glossy melted surface with some "air bubble"-like appearance. Qs: low density background noise/variation in toner pile height deposit/Glossy melted surface appearance; Different than K1/K2. Signature (Doctor): Ks: Black, liquid ink. Qs: EP, black dry toner.
	Photoshop (Overlay)	Signature overlay: Ks & Qs: All superimposed - same origin. Font overlay: K1 & K2: Same font style & size. Q1 & Q2: Same font style & size, but different than K1/K2. Page layout overlay: K1 & K2: Same page layout (e.g. margin, line spacing). Q1 & Q2: Same page layout (e.g. margin, line spacing), but different than K1/K2.
	Video spectral comparator - incident UV365nm	White reverse side: Ks: Repeated "DocuGard" & logo printed watermark (translucent ink - security feature) over entire surface of docs. Qs: No luminescence - No printed watermark detected.
	Web search (DocuGard)	DocuGard made by Paris Corporation (makes DocuGard Medical & Multi-Purpose security paper). Variety of products available with different number & combination of security features. Products readily available at local office supplies or retail stores.
	Handwriting Examination	Handwritten date on all Ks & Qs prescriptions. Divergent writing features noted between Ks & Qs (eg different slope, alignment, letter forms). Limitation: quantity of writing and low number of specimens. No further comparison conducted; may warrant additional comparable specimens.
LQBMLC	VSC	UV features at the back of the paper with writing "DocuGard" appears under UV-light for K1 and K2 are not present on Q1 and Q2.
	VSC	The signature and date lines on K1 and K2 are different from the signature and date lines on Q1 and Q2.
	VSC	The font on K1 and K2 is different from the font on Q1 and Q2.
MAV44V	UV	VERIFY ASSURANCES TO THIS TYPE OF LIGHT
	VSC	COMPARE FEATURES AND EXPAND EXISTING BETWEEN DOCUMENTS OF DOUBT AND REFERENCE
	Stereomicroscope	COMPARE FEATURES AND EXPAND EXISTING BETWEEN DOCUMENTS OF DOUBT AND REFERENCE
MJMLH4	VSC	Under UV light and magnification back, there is UV security features on K1 and K2. Whereas on Q1 and Q2 the paper is UV bright with no security features.

TABLE 2

WebCode	Methods/Techniques	Observations
	VSC	Under Flood light and magnification back, there is background printing on K1 and K2. Whereas on Q1 and Q2 there is no printing.
	VSC	Under Transmitted UV 365 and magnification front, there is UV security features on K1 and K2. Whereas on Q1 and Q2 the paper is UV bright with no security features.
	VSC	Under Flood light and magnification front when K1 and K2 are mixed, the baseline under signature does not match with Q1 and Q2 lines.
	VSC	Under Flood light and magnification front, the signatures has different colors on K1, K2 and Q1, Q2
	VSC	Under Flood light and magnification front, the font on words on K1, K2 differs from the Q1, Q2.
MPGANB	Copier and scanner	The words "UNAUTHORIZED COPY" were visible when the document evidence was copied and scanned, which provided one possible security feature of the paper.
	Visual Examination	Paper appeared to be in good condition, with no apparent secondary impressions nor erasures.
	Stereomicroscope	Security features were visible throughout the paper - larger bluish-colored dots within the letters of the words "UNAUTHORIZED COPY" and smaller bluish-colored dots throughout the background. Printing of borders, physician name, address and phone number, prescription text, the words "Signature & Date," and signature and date line appear to be a toner-based process. Authorizing signatures of the questioned prescriptions (Q1 and Q2) were produced with a toner-based process as evidenced by the powdery appearance of the questioned signatures. In addition, the questioned signatures did not have fine detail and had blunt initial and terminal strokes. Authorizing signatures of the known prescriptions (K1 and K2) appeared to be produced with water-based ink, no bleed-through, possible feathering, and a stamp that produced a very light scattering of peripherally impressed dots of ink around the first name and a more concentrated scattering following the last name terminal. In addition, both signatures had letter forms that included 1) the initial stroke of the uppercase H appeared spurred and had an open-looped terminal; and 2) the staff of the lowercase t of the first name was open-looped.
	Handwriting Examination	Q1 and Q2 both handwritten in blackish-colored ink; both were written in a slightly back-slanted style, with some proportionally wide letter forms (numbers 3, 6, 8, narrow character spacing, fairly consistent baseline alignment, proportionally short slash marks; somewhat slowly written. K1 and K2 both handwritten in blackish-colored ink; both written in a forward-slanting style, relatively wide character spacing; somewhat proportionally tall; somewhat inconsistent baseline alignment; written with speed and fluidity (pen drags, tapered ends)
	Examination and comparison of typeface and arrangement	Typeface of patient name, date of birth, and prescribed medications and directions appear to be without serifs; all other typeface appear to have serifs. Slightly different typefaces were observed comparing the questioned prescriptions with the known prescriptions. In comparing arrangement, differences in line spacing and position of text, authorizing signatures and dates were observed in comparing the questioned prescriptions with the known prescriptions.
MUQM7A	Visual Examination	Both K1 and K2 are darker in appearance than Q1 and Q2.

TABLE 2

WebCode	Methods/Techniques	Observations
	Photocopier	When copied on a photocopier, all 4 items Q1, Q2, K1 and K2 exhibit a security feature in the paper that is visible when copied. "Unauthorized copy" becomes visible.
	VSC	Using the VSC light sources IR, UV, and spot no differentiation was observed between any documents. However when UV transmitted was used both Q1 and Q2 did not exhibit a security feature found in K1 and K2. K1 and K2 exhibit "Docuguard" that is visible under UV 365 transmitted light. This is not visible on Q1 or Q2.
	Micrometer	All 4 items were measured for paper thickness. The paper used in K1 and K2 was slightly thicker than the Q1 and Q2 paper.
	Stereomicroscope	Microprint security features were visible on all 4 items Q1, Q2, K1 and K2.
MZBZCJ	Naked eye comparison between K1, K2, Q1 and Q2	Focusing on the texts considered fixed (name of the doctor and address appearing on the upper area) it can be seen that different letter fonts have been used for K1 and K2 compared to Q1 and Q2. Consequently, the size of the letters are different, as well as the distance between letters and numbers. The position of the texts within the paper is similar in K1 and K2, but different from that of Q1 and Q2. Between Q1 and Q2 they are also coincident. Signatures are inserted in a different way in K1 and K2 compared to Q1 and Q2.
	Comparison using Leica microscope MZ16	The printing of prescriptions through laser printer has resulted in numerous toner particles being spread throughout the documents Q1 and Q2, while K1 and K2 are cleaner. On the reverse side of the docs Q1 and Q2 we can clearly see the traces of the pressure caused when filling in the dates (3/14/16 and 3/18/16). This does not appear in K1 and K2.
	Comparison using VSCc from Foster and Freeman	The paper for K1 and K2 appears to be of a higher grammage than that of Q1 and Q2. Under 365 nm UV light the text "Docugard" appears repeatedly on the reverse side of K1 and K2. This is missing in Q1 and Q2.
MZRUX7	VSC	Magnification and flood light-background printing K1 and K2 not the same as Q1 and Q2
	VSC	Magnification and flood light there are UV features front of back of K1 and K2, whereas there are no UV features on Q1 and Q2. Paper does not reflect the same on K1 and K2 as compared to the Q1 and Q2.
	VSC	Magnification and flood light the Font of K1 and K2 is not the same as that of Q1 and Q2
	VSC	Magnification and flood light the Horizontal line of K1 and K2 and that of Q1 and Q2 is not the same size
NAXXLG	OBSERVATION AND ANALYSIS	Analysis macro and micro describing aspects of the support and registration of documents of doubt and pattern . Verification of foreign materials and /or loss of mass of paper. Use of the VSC 600-HS with lighthing adjustable direct oblique and fush episcopic to analyze used printing systems, colour and tone of inks in addition to security features of the papper.
	COMPARISON	Analysis macro and micr, describing aspects os the sopport and registration of documents of doubt and pattern. Verificattion of differences or similarities found between disputed and authentics elements.
	CONCLUSION	Issuance of judgments has place assesment of the similarities and/or differences found.

TABLE 2

WebCode	Methods/Techniques	Observations
NH98WF	Paper Examinations	Paper examinations revealed that the front of Q1, Q2, K1, and K2 all bear a void pantograph which is a method of making copy-evident patterns in the background of documents utilizing very small dot patterns that are not usually visible with the unaided eye. Additional examinations of the back of the documents revealed that Q1 and Q2 did not have visible watermarks whereas the paper used to produce K1 and K2 contain artificial watermarks and coin scratch security features. Therefore, the paper used to produce Q1 and Q2 does not share a common source with the paper used to produce K1 and K2.
	Type Font / Formatting Examinations	Font examinations revealed that the Q1 and Q2 documents contained multiple fonts and font sizes. The font type and font sizes used to produce Q1 and Q2 were consistent across both documents. However, K1 and K2 had similar fonts and font sizes with each other, but were dissimilar with those used to produce Q1 and Q2. In addition to the font sizes, measurements of the line spacing were conducted on each of the documents. The line spacing used to produce the text on Q1 and Q2 were consistent across both documents. However, K1 and K2 had line spacing that was similar with each other, but were dissimilar with those used to produce Q1 and Q2.
	ESDA	The questioned and known documents were examined for the presence of any indented writing, typing or other identifying impressions. These are impressions sometimes left on paper from writing, typing, or other markings done on another page while it was superimposed over the questioned material. Impressions of what appear to be roller marks were located in the front and back of K1 and K2. These impressed roller marks are consistent with each other in regards to relative position, indicating that K1 and K2 may have been faxed, scanned, copied, or printed on the same device. No other meaningful impressions were located.
	Printing Process Examinations	The signature on K1 and K2 was printed with a machine/signature stamp that uses a process capable of producing black ink and is not consistent with the printing process used to produce the signature on Q1 and Q2. Similar trashmark constellations were observed around these signatures indicating that the same machine/signature stamp may have been used to produce these signatures. Also, the signatures on all of the questioned and known documents overlay each other precisely and therefore share a common source.
	VSC	Various microscopic, infrared, and ultraviolet examinations were performed on the ink(s) used to produce the written dates on Q1, Q2, K1, and K2. These examinations revealed that the ink(s) could not be differentiated and reacted similarly throughout the spectrum. These examinations do not provide a positive identification of the ink formulation, however further chemical testing may be deemed necessary to determine if the ink(s) are the same or different ink formulation.
	Handwriting Examination	The questioned writing on Q1 and Q2 can neither be identified nor eliminated with the known writing of Sarathi Harris. The limited amount of questioned writing, the lack of comparable writing (same date), and the lack of contemporaneous collected writing samples hindered my examinations and precludes a more conclusive opinion.
	Stereomicroscope	Q1 and Q2 (excluding the dates) were produced with an office machine system utilizing black toner. Toner, is utilized in some office machines such as laser printers, photocopiers, and facsimile devices. K1 and K2 (excluding the signature and dates) were produced with an office machine system utilizing black toner.

TABLE 2

WebCode	Methods/Techniques	Observations
NNEQAM	ESDA	Negative Results
	Visual Examination	Computer-generated fonts, rubber stamp impressions
	Oblique Lighting	Negative results
	Stereomicroscope	Computer-generated fonts, rubber stamp impressions
	VSC	UV watermark on back of CTS items K1 and K2
	Computer Fonts	Determined font styles most closely corresponding to questioned and known document fonts
	Counterfeit	Determination of genuineness/non-genuineness
NZQFP4	VSC	I OBSERVED THE FONT USED ON THE DOCUMENTS IN QUESTION MARKED "Q1" AND "Q2" DIFFERS FROM THE ONE USED ON THE DOCTOR'S SPECIMEN MARKED "K1" AND "K2".
	UV	THE WORD "DOCUGUARD" APPEARS ON THE DOCTOR'S SPRISCRPTIONS MARKED "K1" AND "K2" AND NOT ON THE DOCUMENTS IN QUESTION MARKED "Q1" AND "Q2"
	VSC	[No observations reported.]
P42QFD	Microscopy Comparison	Differences in font style and margins were observed on comparison between Q1-Q2 and K1-K2. Differences were observed in the substance used to produce signature on comparison between Q1-Q2 and K1-K2.
	Transmitted light comparison	No visible watermarks on either Q1-Q2 and K1-K2. When held up to light visible watermark observed on K1-K2. None on Q1-Q2.
	Ultraviolet (UV) Examination - 365nm, 312nm, 254nm	Watermarks "Docugard and symbol" were observed on the reverse side of K1-K2. None were observed on Q1-Q2.
	Ultraviolet (UV) Examination 365 T nm	Watermarks "Docugard and symbol" were observed on the front side of K1-K2. None observed on Q1-Q2.
	Infrared Fluorescence	The pen written date fluorescence in Q1-Q2 and K1-K2. Watermarks "Docugard and symbol" observed in K1-K2 when paper fluorescence. None was observed in Q1-Q2.
P86CDB	ESDA	No significant observations
	Visual examination (different light sources, eg. UV-light, transmitted light, IR-light (f&f – VSC 8000)	Paper/Substrate – Printing/Background: Different fluorescence (UV, IR) of K1 & K2 in relation to Q1 & Q2. Different optical appearance in transmitted light (e.g. fuzziness, paper structure) between K1 & K2 and Q1 & Q2. Endless print "Docu Gard TM + symbol" on the reverse (yellowish screen printing) covers the optical brightness of the paper (UV-light) on K1 & K2, not on Q1 & Q2.
	Comparison techniques – overlay	Paper/Substrate – Printing/Background: Endless text layout of background screen printing on the front differs in its horizontal width between Q1 & Q2 and K1 & K2. The layout of Q1 & Q2 is about 1.5% wider than the layout of K1 & K2. Digital Printing/Personalization: Two fonts types have been used for K1 & K2 – font 1: header/non-variable text, font 2: customized text. Both fonts of K1 & K2 are different to Q1 & Q2, additional outcome: different line spacing, tracking and type size on Q1 & Q2.

TABLE 2

WebCode	Methods/Techniques	Observations
	Stereomicroscope	Paper/Substrate – Printing/Background: Screen angle, dot size, dot shape (especially switchover from small to bigger modulation – half dots, dot artefacts) and optical appearance of the printing ink of the background screen printing correspond between Q1 & Q2 and K1 & K2. Digital Printing/Personalization: "Signature" is imitated by laser printer on Q1 & Q2 instead of the signature stamp on K1 & K2. Toner surface and ratio of black toner pollution differs between Q1 & Q2 and K1 & K2.
PADRKG	Visual Examination	Different text size/registration between the questioned and known
	Stereomicroscope	Signatures of questioned are toner not stamp ink.
	VSC	Lack of paper security feature on back of questioned prescriptions.
	ESDA	No impressions of evidentiary value.
PAVM64	VSC 6000, UV light	The word 'docuguard" appears on the back of "k1" and "k2", whereas on "Q1" & "Q2" nothing appears on the back.
	VSC 6000 flood light, microscope	fonts used on "Q1" and "Q2" differ from the one on "K1" and "k2". The numbers written below the address on "Q1" "Q2" are above the baseline and the ones on "k1" & "k2" rest on the baseline.
	Visual Examination	[No observations reported.]
PB264Y	VSC	security features of documents, stamp impressions, uv
	Stereomicroscope	different printing methods, handwritten dates on documents, ink, comparison of numbers and fonts
	ESDA	no latent images were found on documents.
PKC8NZ	VSC	When back of the questioned documents marked Q1 and Q2 were exposed under UV LIGHT SOURCE no UV security printing or features were revealed. When back of Exemplar prescriptions marked K1 and K2 were exposed under UV light source, the background security printing and logo which read as "Docuguard" were revealed.
	Stereomicroscope	When I zoom in closer using microscope I see that signatures on the documents marked Q1 and Q2 were copied as they toner particles on the paper and it prove the fact that questioned signatures are not original signatures. When I zoom in closer also using microscope I see that signatures on the documents marked K1 AND k2 are original signatures and they do not show toner particles. Font weight and size of the questioned documents marked Q1 and Q2 differ from the font weight and size of exemplar prescriptions marked K1 and K2. Background printing was also observed on documents marked Q1 and Q2 and also on documents marked K1 and K2 which read as "Unauthorized Copy".
PUKXBC	Scanned Exhibits	Scanned Exhibits K1, K2, Q1 and Q2 for documentation purposes.

TABLE 2

WebCode	Methods/Techniques	Observations
	Visual Examination	Microscopic examination of Exhibits K1 and K2- machine generated entries were prepared using toner technology. "Sarathi Harris" signatures were produced by using a rubber stamp. Dates produced by original black ballpoint ink. Microscopic examination of Exhibits Q1 and Q2-machine generated entries and "Sarathi Harris" signatures were prepared using toner technology. Dates produced by original black ballpoint ink. In addition, differences in the font style and font size were noted between Exhibits Q1, Q2 and K1, K2.
	ESDA	Exhibits Q1 and Q2 were examined for the presence of handwriting indentations using the Electrostatic Detection Apparatus (ESDA) with negative results.
	VSC	A macroscopic and microscopic examination of Exhibits Q1 and Q2 with ultraviolet, infrared and infrared luminescent light sources revealed the following: Differences in the paper composition were noted between Exhibits Q1, Q2 and Exhibit K1, K2. The date entries were prepared with original black ballpoint ink; however, at this level of analysis, the inks on Exhibits Q1 and Q2 were not distinguishable from the inks on Exhibits K1 and K2.
	Digital microscope	Documented differences in the font style and font size were noted between Exhibits Q1, Q2 and K1, K2, toner and ballpoint inks.
QBL9BZ	Visual Examination	Alignment of the telephone number at the top of the questioned scripts "Q1" and "Q2" does not correspond to the alignment of the telephone number at the top of the exemplar scripts "K1" and "K2"
	VSC	White light and magnification revealed that the small letter "a" and the figure "2" on exemplar scripts "K1" and "K2" are of different font type as compared to the font type of questioned scripts "Q1" and "Q2". The marks left by the stamp impression of the signatures on exemplar scripts "K1" and "K2" do not appear on the questioned scripts "Q1" and "Q2" as the signatures were not stamped but printed as indicated by toner particles visible in the background.
	UV	Under UV examination the security phrase visible on the reverse side of the exemplar scripts "K1" and "K2" as "DocuGard" does not appear on the reverse side of the questioned scripts "Q1" and "Q2"
QNPku7	Micrometer	The paper thickness of Exhibits 1(K1), 2(K2), 3(Q1), and 4(Q2) were all observed to be 0.005" and indistinguishable at this level of analysis. (Ames micrometer)
	UV	Exhibits 1(K1) and 2(K2) display similar UV light reactive properties. Exhibits 3(Q1) and 4(Q2) display similar UV light reactive properties. The UV light reactive properties of Exhibits 1(K1) and 2(K2) were indistinguishable at this level of analysis. The UV light reactive properties of Exhibits 3(Q1) and 4(Q2) were indistinguishable at this level of analysis. The UV light reactive properties between the Q and K exhibits are different. An artificial watermark ("DocuGard") observed on the back of Exhibits 1(K1) and 2(K2). This design/security feature was not present on Exhibits 3(Q1) and 4(Q2). (VSC 6000 HS: 254nm, 312nm, and 365nm; Chromato-vue UV light box: Long wave, short wave, and Long wave + short wave)

TABLE 2

WebCode	Methods/Techniques	Observations
	Stereomicroscope	The printed border and printed text on Exhibits 1(K1), 2(K2), 3(Q1), and 4(Q2) were all produced using toner technology (black toner). The "Sarathi Harris" signatures on Exhibits 3(Q1) and 4(Q2) were printed using toner technology (black). The "Sarathi Harris" signatures reproduced on Exhibits 1(K1) and 2(K2) were not produced using toner technology.
	Visual Examination	Arial and Times New Roman fonts were used to create the printed texts on Exhibits 1(K1) and 2(K2). The printed texts on Exhibits 3(Q1) and 4(Q2) were not created using either Arial or Times New Roman fonts.
	Oblique Lighting	Exhibits 1(K1), 2(K2), 3(Q1), and 4(Q2) all contain a hidden pantograph "unauthorized copy" that repeats throughout the document on the front side of each page.
QPHKJ4	VSC	When using transmitted and UV lights I observed that the questioned prescriptions "Q1" and "Q2" do not have UV features as on the known exemplars "K1" and "K2"
	VSC	When using magnification and flood lights I observed that the signatures on the questioned prescriptions "Q1" and "Q2" do not have indentations at the back as on the known exemplars "K1" and "K2"
	VSC	When using magnification and flood lights I observed that the font used on the questioned prescriptions "Q1" and "Q2" is different to the one used on the known exemplars "K1" and "K2".
QPK4W8	Visual Examination	K1 – Q2: Size – 7 3/4" wide by 9 3/8" tall; the original dates on all four were written in black ballpoint ink. K1, K2: No watermark in paper; artificial watermark on the reverse of the documents – reactive to coin, an image of a shield and printed text "DocuGard TM" repeat down and across the page that is visible under UV; Q1, Q2: No watermark in or on the paper – front or reverse.
	Handwriting Examination	Dates: K1 – Q2: the hand printed dates were of limited quantity and quality for comparison purposes. Signatures: K1, K2: Original Stamp Impression; Q1, Q2: Non-original Stamp Impression; the signatures on K1 – Q2 are from a common source.
	ESDA	K1, K2: None observed with side lighting; Q1, Q2: None observed with side lighting; No unsourced, decipherable indented impressions developed with EDD
	Print Process	Blue Printing: K1 – Q2: 2 sizes of half-tones in blue absorbed into paper; pantograph on the front of "UNAUTHORIZED COPY" repeating across/down the page; Black Printing: K1, K2: Toner except signature; Q1, Q2: Toner including signature; microscopic detail of toner appears more fused/melted in K1/K2 than Q1/Q2
	Font Comparison	K1 – Q2: 2 classes of font – Serif and San Serif – K1/K2 consistent; Q1/Q2 consistent; K1/K2 different fonts compared to Q1/Q2; actual fonts not classified.
QPZEKD	Microscopy	The signatures on Q1 and Q2 are not stamps. They were produced digitally with an electrophotographic printing technique (tonerbased system).
	Extravisual Examination	UV security features are absent on the back of Q1 and Q2.
	Visual Examination	The font on Q1 and Q2 differs from the one used on the example prescriptions.

TABLE 2

WebCode	Methods/Techniques	Observations
QQUZD6	VSC	UV light source- the form of radiation which is not visible to the human eye. It's in an invisible part of the electromagnetic spectrum. The word DocuGard™ and logo are present at the reverse side of K1 and K2. The word DocuGard™ and logo are not present at the reverse side of Q1 and Q2.
	VSC	Flood light. The construction of letter i on the word patient on K1 & K2 differ from Q1 & Q2.
	VSC	Flood light. Reverse side: K1 & K2- signatures can be read. Reverse side Q1 & Q2- signatures cannot be read.
QQXK3T	Stereomicroscope	It allowed us to identify digital signatures impresivos systems for the medical grantor in Q1 and Q2 samples when, in the indubitable samples K1 and K2 physician signatures were printed by wet seals.
	VSC	analysis of inks, plot points, overlapping images are developed, thus finding differences in font types and the distribution of information topografica Prescriber.
	UV	identifies the absence of reaction ultraviolet (UV) on the back of the samples Q1 and Q2, when, indubitable identifying characteristic of samples K1 and K2
QUE36B	Visual Examination	Date position different - also characters/slashes used also different - different handwriting stlyle to K1 & K2. Showned up differences in font/font size used - larger font size in K1 & K2 - y, g and & seen to be different - also spacing between lines different. Block lines around addressee and main block area - start further down paper in Q1 & Q2
	Stereomicroscope	Signatures in Q1 & Q2 is printed - pixelated - laser jet (fused toner) - not a handstamp as in K1 & K2.
	VSC	Security feature seen in K1 & K2 - not observed in Q1 or Q2.
QV6B4D	Visual Examination	[No observations reported.]
	VSC	[No observations reported.]
	Micrometer	[No observations reported.]
R2AAGP	Stereomicroscope	Signature: K1, K2: characteristic of rubber stamp impressions Q1, Q2: characteristic of toner (glossy, raised appearance, black dots)
	Visual Examination	Printing fonts: Similarities between K1 and K2; Similarities between Q1 and Q2; Differences observed between Q1, Q2 and K1, K2 for both the serif and non-serif fonts.
	Visual & Microscopic Examination	Paper: Front: background printing comprising repeats of the words "UNAUTHORIZED COPY" observed on K1, K2, Q1 and Q2. The printing was characteristic of offset lithography. Back: security printing comprising repeats of "DocuGard", a shield-like logo before the word and the trademark symbol after the word observed on K1 and K2, but not on Q1 and Q2.
R2B4XA	Stereomicroscope	The signature stamps of the questioned items (Q1, Q2) are printed by laser printer, while the signature stamps of the known exemplars are printed by inkjet printer.

TABLE 2

WebCode	Methods/Techniques	Observations
	VSC	There aren't any security patterns on the back of the questioned items (Q1, Q2) with different light sources.
	Visual Examination	The font of the letters on the questioned items (Q1, Q2) is different from that of the known exemplars.
R36EQB	VSC	different type of fonts and volume the letters and diggits, different manner of inks (toner) application to the substrate, which may indicate of using different printer
	Visual Examination	during the observation using microscope stated that signature of the person issuing document was printed
	UV	lack of overprint (print) visible in UV light on substrate - verso side of documents,
R73BGH	Stereomicroscope	Printing processes inconsistent between K1, K2 and Q1, Q2
	VSC	UV features absent on back of Q1-Q2 that are on K1-K2
RBW869	Visual Examination	Differences in design and fonts
	UV	Q1 and Q2 UV luminiscence does not correspond to samples K1 and K2 (DocuGard)
	Microscopic examination in coaxial light	Different morphology of the toner layer. Date records made by pen
	VSC	Coincidences in IR luminiscence, signature image configuration, IR reflectivity. Same signature overlay for Q and K (pictures of the same signature)
	Stereomicroscope	1) Different morphology of the toner layer. 2) Different type of signature picture (Q - electrophotography, K - signature stamp). 3) Differences in printing press form (general in specific features) 4) Different raster resolution
	Metric measurement (ruler, ImagePro+)	Differences in printing press form, eg. raster resolution.
	Magnetic properties (MagMouse Regula 4097)	Q and K printed with magnetic toner
RBZRVX	MICROSCOPE	THE FONT ON THE KNOWN EXEMPLARS K1 AND K2 DIFFERS FROM THE ONE ON QUESTIONED PRESCRIPTIONS Q1 AND Q2
	VSC	UV FEATURES FOUND ON K1 AND K2 BUT NOT ON Q1 AND Q2
	MICROSCOPE	THE PRINTING METHOD ON THE SIGNATURES OF KNOWN EXEMPLARS MARKED K1 AND K2 DIFFERS FROM THE ONE ON SIGNATURES OF QUESTIONED PRESCRIPTIONS MARKED Q1 AND Q2
REVLTY	Stereomicroscope	Signatures on "Q1" and "Q2" are printed in Laser, whereas the signatures on "K1" and "K2" differ
	Stereomicroscope	The font on "Q1" and "Q2" differs to the font of "K1" and "K2"
	VSC	"Q1" and "Q2" do not contain the "DocuGard" security feature (on the reverse of the document) "K1" and "K2" contain the "DocuGard" security feature (on the reverse of the document)

TABLE 2

WebCode	Methods/Techniques	Observations
RG34RU	Magnifier (15x)	Initial determination of print processes/document construction.
	Microscope	Further determination/confirmation of print processes/document construction.
	Comparison	Overlay of Q signatures with K signatures using Photoshop layers with reduced opacity to determine extent of pictorial alignment.
	Recording	All submitted documents recorded by photocopy, which allowed visualization of the Screen Angle Modulation to be assessed appropriately.
RG4X9E	ESDA	No indented writing observed on Item 6 (CTS Item Q1) and Item 7 (CTS Item Q2).
	VSC	Presence and absence of "Docugard" printed watermark, backside.
	Stereomicroscope	Printing processes.
	Stereomicroscope	Font styles.
	Transparency Film	Overlay of "Sarathi Harris" signatures.
RJC26C	ESDA	No observations.
	Transmitted light	K1+K2 are more cloudy and from a different color as Q1+Q2.
	UV	K1+K2: luminescent printing "DOCUGARD" on the back. Q1+Q2: both sides light.
	Stereomicroscope	K1+K2/Q1+Q2: Text is laser printed, K1+K2 less scattered toner particles and different appearance from Q1+Q2. K1+K2: signature is a stamp impression, Q1+Q2: signature is laser printed.
	Analysis of magnetic toner components	For all prescriptions magnetic toner is used.
	Paper thickness measuring	No significant differences in paper thickness.
	Visual Examination	K1+K2: other font than in Q1+Q2. Different lengths of signature line.
RNM688	Visual & Magnifier	The font on K-1 and K-2 was different than on Q-1 and Q-2.
	Microscope	The doctor's signature on K-1 and K-2 was made with rubber stamp ink. The signature on Q-1 and Q-2 were made with toner printed technology.
	UV Lamp	The UV activated printing on the security paper used for K1 and K2 illuminated "Docugard". The RX's in question did not have the same security feature.
T26CJX	VSC	1. Letter "O" constructed on oval shape on "Q1" and "Q1" while on "K1" and "K2" are round in shape. 2. letter "O" compressed inside on "Q1" and "Q2" and opened inside on "K1" and "K2". 3. The dash on "Q" is thicker and on "K" is thinner. 4. Number "2" on "Q" terminates facing upwards while on "K" terminates horizontally. 5. letter "i" and "n" commences facing downwards on "Q" while on "K" commences horizontally. 6. letter "a" on "Q" is thick on the head while it is thin on "K". 7. The height between letter "X" and the colon (:) is parallel to each other on "Q" while on "K" it is not parallel. 8. no spacing between letter "R" and "X" on "Q" while on "K" there is spacing. 9. writing on "Q" slant to the left while on "K" slant to the right.

TABLE 2

WebCode	Methods/Techniques	Observations
	UV	10 security features written "DocuGard" with the emblem not visible on "Q" while it is visible on "K"
T64MEX	UV	UV features observed on the front of the specimen documents marked "K1" and "K2" but could not be observed on the questioned documents marked "Q1" and "Q2"
	UV	UV features observed on the back of the specimen documents marked "K1" and "K2" but could not be observed on the questioned documents marked "Q1" and "Q2"
	VSC	No physical matching of signature and date baseline between the questioned documents marked ("Q1" and "Q2") and specimen documents marked ("K1" and "K2")
	VSC	There is an intra-word spacing between the letter "R" and "X" on the specimen documents and there is no intra-word spacing between letter "R" and "X" on the questioned documents.
TFM686	VSC	Shows that the capital letter "A" and figure "2" on the known exemplars "K1" & "K2" is different font type to items "Q1" & "Q2"
	VSC	On items "K1" & "K2" the impression of a signature is visible while in the "Q1" & "Q2" is invisible.
	UV	Shows the word "DocuGard TM" and "Logo" on K1 & K2 but invisible on Q1 & Q2. Both documents are UV bright
U7V7U6	Microscopic Comparison	1. Differences were observed in font style on Q1-Q2 compared to K1-K2. 2. No differences were observed in letter formation of the numbers '6' and '1' on Q1-Q2 compared to K1-K2. 3. All the signatures 'Sarathi Harris' were scanned and similar on Q1-Q2 and K1-K2.
	Ink Examination: a. Ultraviolet (UV) - light - 254, 312, 365 nm	Watermarks 'DocuGard and a symbol' were observed on the reverse side of K1-K2. None were observed on Q1-Q2.
	Ink Examination: b. Ultraviolet (UV) - Transmitted light	Watermarks 'Docugard and a symbol' were observed on the front side of K1-K2. None were observed on Q1-Q2.
	Ink Examination: c. Transmitted light	No watermark was observed on K1-K2 as well as Q1-Q2.
UELN9D	PRINTING SYSTEMS	STUDY OF SUBSTRATE AND / OR RECORDS MANUSCRIPTS AND / OR PRINT MAKING PART OF THE QUESTIONED DOCUMENTS
	MICROSCOPIA	DETAILED OBSERVATION INCREASES WITH DIFFERENT INTENSITY AND LIGHTING ADJUSTABLE
	MICROESPECTROFOMETRIA	MEASURING SPECTRAL RESPONSE IN THE UV REGION (200-400 nm) AND INFRARED (above 700 nm)
UJ2YLG	Stereomicroscope	Font differences, toner printing versus ink stamp signatures, ball point ink writing medium determination, toner formatting, lithography background
	VSC	Ultraviolet light reactive "DocuGard" presence and absence
	Ruler	Formatting differences/measurement, characters per inch measurements/spacing
	Overlays	Signatures overlay, font differences, spacing differences

TABLE 2

WebCode	Methods/Techniques	Observations
UVVLG4	Stereomicroscope	Identification of production processes - Signatures produced on Q1 and Q2 were observed to be produced using a different method to the K1 and K2 documents
	VSC	UV and transmitted light images taken of documents. Printed UV security feature observed on reverse of K1 and K2 documents - not present on Q1 and Q2. Some differences observed in transmitted light images - may have originated from the paper or be due to the UV security feature on the reverse of K1 and K2.
UYY4Z7	Indented writing	No unaccountable indented writing was observed on Q1 or Q2 document.
	Ink & Paper Examination	The paper stock used by Q1 & Q2 documents was not same as paper stock used to create K1 & K2 shown by security watermark on K1 & K2. (Watermark not present on Q1 & Q2.)
	Microscopic Comparison	Difference in fonts & formatting were observed between Q1 & Q2 documents to the known exemplars K1 & K2.
	Microscopic Comparison	Dr signatures on Q1 & Q2 produced with dry toner while K1 & K2 produced with ink.
V7NDET	Stereomicroscope	Magnification (k1 and k2) are stamped impressions and Q1 and Q2 are printed stamps
	UV	Ultra violet light: K1 and K2 contain security features - uv dull whereas Q1 and Q2 contain no security deatures(uv bright)
	VSC	flood light: Font used differs e.g numerals 2,3 and letters "e" and punctaution: colin. Enlargments Q1 and Q2 are printed stamps and K1 and K2 are stamped impressions
V7TVDR	UV	The reverse sides of Q1 and Q2 did not display the UV features that K1 and K2 displayed.
	Stereomicroscope	The signatures on Q1 and Q2 were printed and not stamp impressions.
	Stereomicroscope	The font used on Q1 and Q2 differed from the font used on K1 and K2.
VFCAEA	Copied K1, K2, Q1 and Q2	Revealed pantograph on K1, K2, Q1 and Q2 which read "UNAUTHORIZED COPY"
	VSC with UV	Q1 and Q2 have no watermark (however DocuGard does manufacture without watermark); K1 and K2 have the watermark "DocuGard TM"
	VSC with Flood Mix	Signatures on K1, K2, Q1 and Q2 are all superimposable
	VSC with Flood	Reverse sides of K1 and K2 showed ink bled through; Q1 and Q2 had no bleed through
	Stereomicroscope	K1 and K2 - liquid ink; Q1 and Q2 - dry toner process
	Regula	Printing on K1, K2, Q1 and Q2 magnetic toner; signatures on Q1 and Q2 magnetic toner
	VSC with IR and LUM	Dates on K1, K2, Q1 and Q2 - using LUM and IR disappeared at about 715-725

TABLE 2

WebCode	Methods/Techniques	Observations
	Visual, microscopic and computer font search	Font K1 and K2 Heading, Patient and DOB: RX; printed signature and date appear to be same font Font K1 and K2 Heading, etc. may be Lapidary 333 or Perpetua; do not have complete number of characters for comparison; Body of K1 and K2 may be Helvetica Font Q1 and Q2 Heading, etc. appear to be same font may be Times New Roman; body of Q1 and Q2 may be Arial; do not have a complete set of characters for comparison
	ESDA	Q1 and Q2 - no decipherable indentations were developed
VGBEXN	Scan the K1, K2, Q1, Q2 into Photoshop w/ Epson V700 scanner at 800 ppi	[No observations reported.]
	overlay K1 on to Q1 compare fonts	The fonts are different between K1 & K2 in the numbers and text in header.
	Compare alignment of text	Vertical & horizontal spacing in the header differs Q1-K1. The left alignment differs. The vertical alignment of the signature line differs.
	Overlay K1 onto Q2	The fonts are different between K1 & K2 in numbers & text.
	Compare alignment of text	Vertical and horizontal spacing differs between Q2 and K1 in the header. The left alignment differs when the header is aligned.
	Compare K1 & K2	The alignments comport.
	Compare Q1 & Q2	The alignments comport.
W7BYT6	Visual Examination	The layout of Q1 and Q2 is slightly different from K1 and K2. The paper of Q1 and Q2 is not secured.
	FFT2D	Their wire marks (paper structure) are different.
	ESDA	No marks was revealed on prescriptions except the mentions already present on documents.
	VSC	The text as well as the signature on Q1 and Q2 were produced by electrophotography while on K1 and K2 only the text was produced by electrophotography. The visual aspect of the toner is similar.
	Chemical examination (raman, FTIR, X ray fluorescence)	Toners on prescriptions are differentiated. They contain some magnetite and different polymere. No defect are observed. Pen's inks and offset's inks are not either differentiated.
W828T9	VSC	image overlaying
	Visual Examination	[No observations reported.]
	Handwriting Examination	[No observations reported.]
W8GT3A	Stereomicroscope	Increases and appropriate lights applied to printed texts of medical prescription. Dubitadas Q1 and Q2 indicate and impression of lower quality concerning the original features seen in thje genuine for example : edges irregular, blur in the contour, different tonality,the ink has lower density in the printing.

TABLE 2

WebCode	Methods/Techniques	Observations
	Equipment VSC600-HS	Is made use of aids of verification: Exposing the documents discussed Q1 and Q2 to ultraviolet light do not fluoresce the phrase "DocuGard" and the adjacent logo in the documents original K1 and K2 if present. The text of the formulas K1 and K2 original confronted with Q1 and Q2 in disputed, the results show discrepancies in Q1 and Q2 regarding: print quality, ink tonality, size, distribution the text, the coupling, form and structure different of some signs such as "2" . "g" . "r" and "&" . The rubrics questioned have a perfect coupling with the original what it shows alternative maneuver by the reproduction of signature original.
W8ZDCN	VSC	Determining optical differences in ink. The Ultraviolet fluorescence on Q1 and Q2 are different from K1 and K2.
	Visual Examination	The font types on Q1 and Q2 are different from K1 and K2.
	Stereomicroscope	Q1 and Q2 exhibit print characteristics of which came from a laser printer; K1 and K2 are indicative of ink jet printer.
WBKCB4	Stereomicroscope	Printing processes used to prepare the questioned and known signatures were different.
	Visual Examination	Different fonts (size & design) were utilized to prepare portions of the questioned and known text.
	VSC	Security features/printing on reverse side of known were not present on the questioned documents
	ESDA	negative
	stamped impression comparisons	Questioned and known signatures were the same (overlay). Purported stamped signatures were not inked.
WGQVQW	VSC 6000: UV LIGHT SOURCE	K1 and K2: reverse side under UV light source the word DocuGard and logo are present on the prescriptions. Q1 and Q2: reverse side under UV light the word DocuGard and logo are not present on the prescriptions.
	VSC 6000: FLOOD LIGHT	Front: K1 and K2 the construction of the letters a and i differ from that of Q1 and Q2
	VSC 6000: FLOOD LIGHT	Reverse side: K1 and K2: under flood light signatures can be read through the prescriptions. Reverse side: Q1 and Q2 under flood light the signatures cannot be read through the prescriptions
WMR8LT	Stereomicroscope	Signatures of K1 & K2 are stamped impressions. Signatures of Q1 & Q2 are printed. The dates after the signatures of the questioned and the comparison standards are written with a ball point pen (original penned ink). Re the font: the font of K1 & K2 differs to the font of Q1 & Q2.
	ESDA	No latent indentations identified on the questioned.
	VSC	By means of illumination techniques, K1 & K2 display a logo accompanied with the name "DocuGard" repeated continuously on the rear of the documents. No such security feature could be identified on the rear of Q1 & Q2.

TABLE 2

WebCode	Methods/Techniques	Observations
WVPQB4	VSC	Signatures overlay exactly b/w Q & K docs indicating from the same source but signatures on questioned docs made by EP print while Known docs they are made by Liquid ink. No UV dead 'Secure Guard' watermark on rear of Q documents. Papers have similar texture and fibre spread between K & Q docs. Overlay of printed entries shows slightly different font with different leading, margins and spacing.
	ESDA	No significant indentations detected on either K or Q documents. No significant rollermarks from printer detected that could be compared. 'SecureGuard' print shows up on rear of K documents. Differences seen in the signature between the K and the Q documents.
	Handwriting Examination	Handwritten dates compared and dissimilarity noted between the date slashes on the K & Q docs but IMO there is insufficient quantity of material available for any meaningful comparison to be performed.
	Stereomicroscope	EP print on the Questioned documents shows more toner overspray on the base of entries as compared to the Known documents.
X7KBZ9	VSC	On the VSC I observed security features of the paper on both the questioned and known documents. This included using UV light to observe and image a UV printed watermark as well as imaging the printed security feature on the front of the document "Copy Unauthorized".
	Stereomicroscope	With the stereomicroscope I determined the printing process of all the documents, including the method of application as an inked impression for the signature on the known documents and a toner printed signature on the questioned documents. I also determined that the dates were originally prepared and the writing instrument used.
	Oblique Lighting	I used oblique lighting to look for any indented writing which may be present on the documents.
	Visual Examination	I conducted a visual examination to record basic description of the items of evidence and take physical measurements of the documents. I also did a quick assessment of the suitability of the handwritten dates for handwriting comparisons. Although it was determined that the dates were too limited for comparison, there were a few inconsistencies observed.
	Alteration Examinations	I used an alterations methodology to compare the questioned and known documents. This involved creating overlays of the questioned documents to compare to the known items. Observations included differences in font as well as the format, spacing and alignment of the prescriptions between the questioned and known documents.
	Graphic Arts Examinations	I used our graphic arts methodology to compare the inked impression of the signature on the known documents with the toner printed signatures located on the questioned documents. I was able to observe several additional inking areas on the stamps which were observed on the toner printed documents, indicating that the questioned and known signatures shared a common source at some point in time.
X8VFEX	UV	The "Q1" and "Q2" does not have a background printing whereas "K1" and "K2" has a background printing
	VSC	The line on a signature on the documents marked as "Q1" and "Q2" is smaller than the line on a signature on the documents marked as "K1" and "K2"
	VSC	The font on the documents marked as "Q1" and "Q2" is not the same font on the documents marked as "K1" and "K2"

TABLE 2

WebCode	Methods/Techniques	Observations
XBVNH8	Leica S8APO Stereoscopic Microscope & Keyence Digital Microscope	Examination of K1 and K2 revealed that the documents were produced using offset lithography for the background printing (and therefore, the anti-copy pattern), toner for the personalized information (all black printing excluding the signature and date), stamp impression for the signature, and a hand printed date. Examination of Q1 and Q2 differ from K1 and K2 in that the signature is not a stamp impression, but was printed using toner.
	VSC	Examination of K1 and K2 revealed that the documents are UV bright, and contain no sophisticated security features. The documents contain an anti-copy pattern on the front (UNAUTHORIZED COPY), and the word 'DocuGard' with a logo on the reverse. The word 'DocuGard' and logo were best viewed using infrared luminescence. Examination of Q1 and Q2 revealed that the documents are UV bright, and contain no sophisticated security features. The documents contain an anti-copy pattern on the front (UNAUTHORIZED COPY). Q1 and Q2 lack the word 'DocuGard' and logo as found in K1 and K2. Overlays of the K documents (K1 and K2) and Q documents (Q1 and Q2) revealed that the toner printed text (excluding the signature) is smaller on the Q documents than the K documents.
	ESDA	ESDAs of K1 and K2 revealed that the toner portions of the document (raised) appeared lighter than the majority of the document, and the stamp impression on K1 appeared darker than the majority of the document (impressed). ESDAs of Q1 and Q2 revealed that the toner portions, as well as the signature (expected stamp impression) all appeared lighter than the remainder of the document. No indented writing from other documents was observed.
	X-Ray (Kubtec)	Examination of K1 and K2 revealed that only areas of toner appeared when using the X-ray. Examination of Q1 and Q2 revealed that the areas of toner (including the purported signature/stamp impression) appeared when using the X-ray.
	Micrometer	The following measurements of paper thickness were taken using the Mitutoyo Digimatic Micrometer. The first point was in the lower right portion of the document, the second point in the upper right portion of the document, and the third was on the toner header. The micrometer was used in analog mode and was zeroed out manually. Measurements are reported in thousandths of an inch with an uncertainty of +/- one thousandth of an inch. K1 - 47, 45, 48; K2 - 45, 44, 48; Q1 - 47, 48, 49; Q2 - 46, 45, 47.
	Visual Examination	There is a difference in fonts between the K(1-2) and Q(1-2) printed texts. Coin-reactive ink was present on the reverse of K1 and K2 but not Q1 or Q2.
XR4HC3	VSC	UV Light (VSC 6000). The background printing under Ultra Violet light (UV) is observed at the back of K1 and K2, and on Q1 and Q2 the background is not present
	VSC	Flood Light (VSC 6000). The font style of Q1 and Q2 is not the same as the one on K1 and K2.
	VSC	Flood Light (VSC 6000). Under Flood light the signature at the back of Q1 and Q2 is not present while on K1 and K2 the signature is visible.
XX7RGA	Microscopia	Análisis of systems of impression
	Microespectrometria	Physical Análisis of inks

TABLE 2

WebCode	Methods/Techniques	Observations
XXAB7X	VSC	When exposed to UV light the words "DocuGard™" and "logo" were observed on "K1" and "K2". The words "DocuGard™" and "logo" are not present on "Q1" and "Q2".
	VSC	When exposed to Flood light the signature on "K1" and "K2" is readable from the reverse side. When exposed to Flood light the signature on "Q1" and "Q2" is not readable from the reverse side.
	VSC	When exposed to Flood light the letter "r" from the abbreviation "Dr" on "K1" reveals similar character with the letter "r" from the abbreviation "Dr" on "K2". When exposed to Flood light the letter "r" from the abbreviation "Dr" on "Q1" and "Q2" reveal different character with the letter "r" from the abbreviation "Dr" on "K1" and "K2".
	VSC	When "K2" is superimposed over "K1" under Flood light, the letter heads on both "K1" and "K2" match. When "Q1" and "Q2" are superimposed over "K1" under Flood light, the letter heads do not match.
XY4WZP	VSC	1.The questioned and known prescriptions have different UV fluorescence of paper samples. 2.The watermark images were showed on the known documents when held at to the ultraviolet and infrared luminescence. The custom watermarks were not visible on the reverse side of the questioned prescriptions. 3.The questioned and known paper samples did not originate from or share the same source.
	ESDA	No decipherable or unexplainable indented impressions were observed on the questioned and known paper samples.
	Visual Examination	1.Inconsistent handwriting characteristics were presented on the questioned and known prescriptions. The date was written by the different individual. 2.The questioned and known prescriptions have different printing image quality of the paper samples, for example margins, alignment, spacing, fonts, sizes, and styles.
	Stereomicroscope	1.Different printing processes, the majority of the questioned prescriptions were printed with toner. The signature on the known prescription was stamp image. 2.There are differences in toner type and toner fusion between the questioned and known prescriptions.
Y23VNM	Vacuum box examination for indented writing/printing latent marks	Tools's marks exist on items K1 and K2 but not on items Q1 and Q2. These latent marks are similar and are probably left by the printer. K1=K2 and Q1=Q2 and K≠Q.
	VSC 6000 (video spectral)	Under UV light: K1 and K2 paper secured on the back with photochromic ink. Q1 and Q2; any UV security K1 = K2 and Q1 = Q2 and K≠Q. Under transmitted light: any watermarks on K1, K2 and Q1 and Q2. Under white light illumination: K1 and K2 : offset security and safety monochrome laser imprints, handwritten date and liquid ink signature print Q1 and Q2: offset security and safety monochrome laser imprint signature, handwritten date. K1 = K2 and Q1 = Q2 and K≠Q. The signatures are stackable but not located at the same place. The prescription names are not located at the same place on items K and Q. The fonts are different on Q and K.
Y3XDPN	Visual Examination	Visual examination with natural and side light. Examining the entire document, front and reverse, for spacing, alignment, fonts, printing processes, etc.

TABLE 2

WebCode	Methods/Techniques	Observations
	Stereomicroscope	Provide more magnification to identify print process, review handwriting, stamps, etc.
	VSC	Infrared and UV used on the handwritten portions and the printed text to see reaction to various light sources.
Y3Y879	Stereomicroscope	The lines and the text on the authentic prescriptions K1 and K2 are manufactured with a laser printer. Background printing is made with an offset technology. In the background printing is a hidden image based on a special raster pattern. The signature is probably made with stamping ink. The handwritten date on the right side of the signature line was put on the document with a black colouring ball pen.
	Stereomicroscope	The printed lines and text on the questioned prescriptions Q1 and Q2 are manufactured with a laser printer. Background printing is made with an offset technology. In the background printing is a hidden image based on a special raster pattern. The signature is a product of a Laser printer or Copier. The handwritten date on the right side of the signature line was put on the document with a black colouring ball pen.
	VSC	The papers of the prescriptions (K1 and K2) each show the presence of optical brighteners and a special UV- visible printing on the backside "Docu Gard". The prescriptions Q1 and Q2 appear very similar, but there is each no UV- visible printing on the backside
	Visual Examination	When superimposed on a light table the signatures on the prescriptions K1, K2, Q1 and Q2 show a different positioning on each prescription but correspond with typographical congruence among each other.
YCKCFT	VSC	The signature printing on exemplars is visible when observing it on the reverse side or back-side of the document while on the questioned documents (Q1&Q2) is not.
	UV	The exemplars (K1&K2) consists of security printing while the questioned documents (Q1&Q2) do not.
	VSC	Exemplars (K1&K2) are superimposable with each other while the questioned items (Q1&Q2) are not superimposable with the known documents (K1&K2).
	VSC	The numerical four (4) is hand written differently when comparing both exemplars (K1&K2) with the number four (4) on the questioned item (Q1).
YNDVUY	ESDA	without indentation Q1, Q2, Q3 and Q4.
	VSC	Under transmittance light observed watermark in K1 and K2. K1 and K2: lights= transmittance UV, Long pass = off, Watermark: DocuGard (logo). Q1 and Q2: without watermark. All superficies (front) have watermark UNAUTHORIZED COPY. When measurement the letter, I observe the letter in Q is smaller than K. Different in space between line to line (Header), with the square.
	Stereomicroscope	The font in Q it has different to K. Different characteristics in handwriting (date), between Q and K.
	Visual Examination	I observed the color of signature in Q is most darkness than K.
YPT7XX	VSC	A "DocuGard" logo artificial watermark was found on the back side of K1 and K2 under 254nm. No artificial watermark was found on Q1 or Q2. Images were captured of the signatures, dates, security screen, and UV reaction on Q1, Q2, K1, and K2.

TABLE 2

WebCode	Methods/Techniques	Observations
	Stereomicroscope	The signature on K1 and K2 is a black inked stamp impression. The signatures on Q1 and Q2 were generated using electrophotographic (toner-based) technology.
	Visual Examination	The text on K1 and K2 was printed using Perpetua and Helvetica type fonts or very similar. The text on Q1 and Q2 was printed using Times New Roman and Arial type fonts or very similar.
YX3JRM	Visual Examination	K1 and K2 - security paper (on the back side of the sheet inscription "DocuGard" and logotype are visible). Q1 and Q2 - not security paper (no inscription "DocuGard" and logotype on the back side of the sheet).
	UV	K1 and K2 - security paper (on the back side of the sheet inscription "DocuGard" and logotype are visible). Q1 and Q2 - not security paper (no inscription "DocuGard" and logotype on the back side of the sheet).
	Oblique Lighting	No visible indented writing on K1, K2, Q1 and Q2.
	ESDA	No results on Q1 and Q2.
	Stereomicroscope	K1, K2, Q1 and Q2 - offset printing background. K1 and K2 - black text printed with laser printer (toner), except signature and date; signature is made with a stamp; date is hand written with black ball-point pen. Q1 and Q2 - black text printed with laser printer (toner), including the signature; date is hand written with black ball-point pen.
	VSC	Superimposing K1 and K2 - Text in the header of K1 is completely (fully) covered (superimposed) by text in the header of K2. Q1 and Q2 - Text in the header of Q1 is completely (fully) covered (superimposed) by text in the header of Q2. Text in the header of K1 and K2 is not covered (superimposed) with the text in the header of Q1 and Q2. There are difference in relative size of the relations and the spatial positioning of text in the header of K1 and K2 in comparison with text in the header of Q1 and Q2.
YXMZ8P	UV	The paper of the known exemplar prescriptions differ from the paper of the questioned prescriptions in that a security feature "DocuGard" can be observed under Ultra violet light on the known exemplars, which is absent in the questioned prescriptions.
	Stereomicroscope	The font of the type printing found on the exemplars differs from the font used in the questioned type printing.
	Stereomicroscope	The ink of the stamped signature (which penetrated the paper fibres on the exemplars) differ from the medium of the signature on the questioned prescription in that it is powder based and on top of the paper fibres.
Z24P68	Stereomicroscope	observed printing processes, writing instruments, security features, font styles
	Visual Examination	overall observation of documents, layout/format, security features, font styles
	VSC	examined paper to determine if the questioned and known items reacted differently or similarly with different lights and filters. No differences were observed.
	Oblique Lighting	used to visualize artificial watermarks. Artificial/chemical watermarks observed on the known items but not the questioned items.
	ESDA	used to detect any indentations. Nothing of significance was observed.

TABLE 2

WebCode	Methods/Techniques	Observations
	Mechanical Impressions	Compared the questioned signatures to the known signatures visually and with overlays and determined that the questioned signatures originated from the known stamped signatures (either directly or indirectly)
	Typewriting/Font Examination	Compared the fonts on the questioned and known items. Observed differences between the fonts on the questioned items and the fonts on the known items.
	Alterations Examination	Compared the known standards to the questioned items for genuineness. Differences in the fonts, printing processes, and watermarks were observed between the questioned and known items. Also the signatures on the questioned items were overlays of the stamped signatures of the known items. It was determined that the questioned items were not genuine.
Z6JBYZ	Stereomicroscope	A. Printed texts i. Font type: Differences noted in font type of letterhead and printed texts "Patient & DOB", "Rx" and "Signature & Date" between specimens and questioned items. ii. Printing process: Similarities in printing process used between specimens and questioned items. B. Anti-copying feature on front page: Similarities in general design of characters "COPY UNAUTHORIZED" and printing process used between specimens and questioned items. C. Signature: Different production process used between signatures in specimens and those in questioned items. "Q1" and "Q2" were produced by toners. D. Date • Dates were made with ballpoint pen ink in all specimens and question items.
	VSC	Absence of DocuGard logo on the reverse page of questioned "Q1" and "Q2". No differences found in toners between specimens and questioned items when examined using various wavelengths of light. No differences noted in paper weave pattern between specimens and questioned items under transmitted light.
Z7ET22	Scan	For documentation
	VSC	For documentation. Differences noted in the paper between the questioned documents (Exhibits Q1 and Q2) and the known exemplars (Exhibit K1 and K2). Exhibits K1 and K2 contained a chemical watermark on the reverse side that reacted under the Ultraviolet light source. Exhibits Q1 and Q2 did not contain this watermark. Please see images. [Images not included in this report.]
	ESDA	Exhibits Q1, Q2, K1, and K2 were negative for indentations.
	Stereomicroscope	Exhibits K1 & K2: All of the entries on Exhibits K1 and K2 except the Sarathi Harris signature and "4/2/16" date entries were produced with toner technology. The Sarathi Harris signatures were produced with a liquid-based ink and contained evidence of being produced with a rubber stamp. The original "4/2/16" date entries were produced with a ballpoint pen. Please see images Exhibits Q1 & Q2: All of the entries including the Sarathi Harris signatures were produced with toner technology. The original "3/14/16" and "3/18/16" date entries were produced with a ballpoint pen. The original ink "3/14/16" and "3/18/16" date entries on Exhibits Q1 and Q2 were compared to the original ink "4/2/16" date entries on Exhibits K1 and K2. These original ink entries were not distinguishable at this level of analysis. In addition, difference in the font were noted in the machine generated entries between the questioned documents (Exhibits Q1 and Q2) and the purported known standards (Exhibits K1 and K2). Please see images. [Images not included in this report.]

TABLE 2

WebCode	Methods/Techniques	Observations
	Magnetic Ink Optical Magnifier	The questioned Sarathi Harris signatures on Exhibits Q1 and Q2 were positive for magnetic properties. The Sarathi Harris signatures on Exhibits K1 and K2 were negative for magnetic properties. Please see images. [Images not included in this report.]
ZGH4CW	Visual Examination	Signature different color
	Microscopic Examination	Signature different color
	Photo shop	Signature color different
	VSC	Security paper different
	Indented writing	No new indented writing
ZXH3CJ	Visual Examination	Preliminary observations on the substances of the text, signatures, dates and rulings. Search for visible indented impressions. Presence or not of watermark and "printed watermark".
	Stereomicroscope	Detailed observation of substances of text, signatures, dates and rulings. Detailed observation of background printing (blue dot patterns). Detailed observation of typefaces.
	ESDA	No indented impressions of handwriting found. (Indentations on any of the four items caused by writing the date on any of the others would have been a significant connection.)
	30cm ruler	Overall sizes of the documents and lengths of rulings in the designs. Length of line occupied by text in the different items.
	Overlaying of photocopy transparency of item K2 onto other items.	Confirm close fit of signatures.
	Plain paper photocopying.	Confirmed visibility of "Copy Unauthorized" in the copies of both Known and Questioned items.
	Measuring magnifier.	Observation and measurement of typed text.
	UV	Nothing of obvious significance observed.

Response Summary

Participants: 215

Methods Utilized

ESDA	58	Stereomicroscope	138
Handwriting Examination	33	UV	81
Micrometer	15	Visual Examination	97
Oblique Light	31	VSC	217

****Note:** Methods listed are the preloaded options for selection via the CTS Portal and do not reflect all answers provided by participants.

Conclusions

TABLE 3

WebCode	Conclusions
2BKVG2	The Q1 and Q2 documents contain significant difference with the known K1 & K2 specimens. These difference are in the security marker on the back of the genuine specimens, the ink used to sign the date & the difference of the ink (toner) used in the preparation of the signature.
2HR9NZ	On the basis of my observations and assuming that the K documents are representative of all prescriptions produced by Dr Harris, the Q1 and Q2 documents are not authentic prescriptions. No conclusion can be expressed as to who produced the Q documents and the possibility must be considered that the Q documents may have been produced by Dr Harris but using a different method to that represented by the K documents.
2KTMJ6	<p>ALTERATION EXAMINATIONS: It was determined that Item 6 (CTS Item Q1) and Item 7 (CTS Item Q2) are not genuine due to sufficient disagreements with Item 4 (CTS Item K1) and Item 5 (CTS Item K2). The paper security information "DocuGard" on the back of Items 4 (CTS Item K1) and 5 (CTS Item K2) is not present on the back of Items 6 (CTS Item Q1) and 7 (CTS Item Q2). This information was revealed using alternate light sources. COMPUTER- GENERATED TEXT EXAMINATIONS: The font styles on Items 6 (CTS Item Q1) and 7 (CTS Item Q2) and Items 4 (CTS Item K1) and 5 (CTS Item K2) are different in style and design. The header information on Items 6 (CTS Item Q1) and 7 (CTS Item Q2) most closely corresponds to a "Times New Roman" style of font and possibly others. The header information on Items 4 (CTS Item K1) and 5 (CTS Item K2) most closely corresponds to a "Lapidary 333" style of font, a Perpetua style of font, and possibly others. These font styles can be found on numerous brand name computer-generated text software. The text located on the body of Item 6 (CTS Item Q1) and Item 7 (CTS Item Q2) most closely corresponds to an Arial style of font found on numerous brand name computer-generated text software. The text located on the body of Item 4 (CTS Item K1) and Item 5 (CTS Item K2) most closely corresponds to a Helvetica style of font found on numerous brand name computer-generated text software. STAMPED IMPRESSION EXAMINATIONS: The signature on Items 6 (CTS Item Q1) and 7 (CTS Item Q2) were produced utilizing a toner based technology. Toner based technology can be found on numerous brand name printers or photocopiers. The questioned toner produced signatures on Item 6 (CTS Item Q1) and Item 7 (CTS Item Q2) share a common source to the original stamped impressions used on the Item 4 (CTS Item K1) and Item 5 (CTS Item K2). Disagreements were observed on the baseline spacing between the signatures on Items 6 (CTS Item Q1) and 7 (CTS Item Q2) and Items 4 (CTS Item K1) and 5 (CTS Item K2). INDENTED WRITING EXAMINATIONS: No indented writing of value was observed on Items 6 (CTS Item Q1) and 7 (CTS Item Q2) which might indicate their immediate source(s).</p>
2T7ECM	I would like to conclude based on my analysis that the questioned documents namely "Q1 and Q2" are not authentic and that the specimens are forged. There is no watermark that appears on the specimens in questioned as that on a genuine document. In light of the observations provided, I found the evidence to support the proposition that the document in question is a forged document. Above conclusion was reached by using processes which require proficiency in the examination of questioned documents.
2WMUNZ	The questioned Q1 and Q2 prescriptions are not authentic when compared to the genuine prescriptions K1 and K2. The genuine prescriptions are on artificially watermarked paper, have a stamped signature, and were printed with fonts different than those found on the questioned prescriptions. Q1 and Q2 were not printed on artificially watermarked paper and the signatures were made with a toner process.
2ZJQ4E	Based on the examination, it is determined that the questioned prescriptions Q1 and Q2 are not authentic to the known prescriptions K1 and K2.
33NF63	[No Conclusions Reported.]
34ZE2W	In my opinion, there is conclusive evidence that Q1 and Q2 are not genuine prescriptions.
3BK7W6	Lab Items 3 and 4 (Q1 and Q2) are not authentic prescriptions issued by Dr. Sarathi Harris. These eliminations are based on the below listed differences between Lab Items 3 and 4 (Q1 and Q2) and the two known prescriptions listed as Lab Items 1 and 2 (K1 and K2): Lab Items 3 and 4 (Q1 and Q2) lack

TABLE 3

WebCode	Conclusions
	<p>the "DocuGard" security watermark found on the white side of Lab Items 1 and 2 (K1 and K2). The "Sarathi Harris" signatures on Lab Items 3 and 4 (Q1 and Q2) are toner-based and were produced by a laser printer or toner copier. The "Sarathi Harris" signatures on Lab Items 1 and 2 (K1 and K2) are rubber stamp facsimiles. Signature baselines on Lab Items 3 and 4 (Q1 and Q2) are 4mm shorter than the signature baselines on Lab Items 1 and 2 (K1 and K2). "Dr. Sarathi Harris" letterhead on Lab Items 3 and 4 (Q1 and Q2) are not in alignment with the letterhead on Lab Items 1 and 2 (K1 and K2). The black rectangle borders on Lab Items 3 and 4 (Q1 and Q2) are smaller than the borders on Lab Items 1 and 2 (K1 and K2). The medication text on Lab Items 3 and 4 (Q1 and Q2) are a different font style and size than medication text on Lab Items 1 and 2 (K1 and K2). Electro-Static Detection Apparatus (ESDA²) The prescriptions listed as Lab Items 3 and 4 (Q1 and Q2) were examined for indented writing using the Electro-Static Detection Apparatus (ESDA²). The results for Lab Items 3 and 4 (Q1 and Q2) were negative as no discernible indentations were recovered. Examination of Numerals: It is inconclusive as to the number of authors of the dates on the prescriptions listed as Lab Items 1 through 4 (K1, K2, Q1, AND Q2). Comparison of the numerals could not be conducted due to the following: the lack of comparability and the brevity of the numerals.</p>
3CBGMX	<p>The questioned prescriptions Q1 and Q2 have been compared to the known prescriptions K1 and K2. We have found differences concerning the paper, the uv security feature on the back of the known papers (K1 and K2) are absent in the questioned documents Q1 and Q2. The signature is made by stamp in the known prescriptions K1 and K2, the signature on Q1 and Q2 is a toner printing. The handwritten date in the known documents K1 and K2 is separated by slashes, in the questioned documents Q1 and Q2 it is separated by backslashes. Our findings lead us to the conclusion that the questioned prescriptions Q1 and Q2 are not authentic to the known prescriptions K1 and K2.</p>
3CW2HW	<p>As a result of the observed difference in paper security features, font alignment, printing and signature production between the specimen items K1 and K2 and the questioned items Q1 and Q2, I have concluded that items Q1 and Q2 are not authentic.</p>
3FVCDW	<p>The questioned documents are not genuine when compared to the known documents.</p>
3GQVFX	<p>The two questioned documents were not created in the same manner as the known documents. They contain production elements that are profoundly different from the known documents. The known documents are consistent between themselves. The questioned documents are consistent between themselves. The differences between these two sets of documents include: Fonts, in both the serif and sans serif designs, Spacing, Paper, Signature production method. No determination could be made as to whether or not the questioned dates were produced by the writer of the exemplar dates. No examination was possible because the minimal characters that are available for comparison do not provide a foundation for a handwriting comparison.</p>
3JQFUG	<p>Analyzed the prescriptions questioned Q1 and Q2, determined to be not authentic compared to k1 and k2 prescriptions provided by the pharmacy.</p>
3JXDET	<p>[No Conclusions Reported.]</p>
44E2BY	<p>On comparison and further examination, I found that the questioned documents (prescriptions) "Q1" and "Q2" showed different characteristics from the specimen documents (prescriptions) "K1" and "K2". Hence, I am of the opinion that these questioned prescriptions ("Q1" and "Q2") are not authentic to the known documents ("K1" and "K2").</p>
44TMML	<p>After an examination and comparison, I made the following observations: The font used on the questioned prescriptions marked "Q1" and "Q2" differs from the font used on the known exemplar prescriptions marked "K1" and "K2". The signatures on the questioned prescriptions marked "Q1" and "Q2" (printed by means of "laser" printing technology) differ from the signature found on the known exemplar prescriptions marked "K1" and "K2". There is a "DocuGard" security feature on the reverse side of the known exemplar prescriptions marked "K1" and "K2", which is absent on the documents marked "Q1" and "Q2". Based on the aforementioned observations, I came to the conclusion that the questioned prescriptions marked "Q1" and "Q2" are forgeries.</p>

TABLE 3

WebCode	Conclusions
4N2PKQ	AFTER AN EXAMINATION AND COMPARISON OF ITEM "K1", "K2", 'Q1" AND "Q2" I REACHED THE CONCLUSION THAT THE QUESTIONED ITEMS "Q1' AND "Q2" ARE NOT AUTHENTIC PRESCRIPTIONS AS REPRESENTED BY THE KNOWN EXEMPLARS ITEMS "K1' AND "K2"
4TVMAG	Based on the statement made by Doctor Harris that all prescriptions are "hand stamped" originals, the following examination was performed to determine authenticity of Q-1 and Q2. All specimens were enlarged to 200% and printed on a halogen printer for comparative purposes. Q1, Q2, K1, K2 were examined under 40-140x magnification using a MiScope digital microscope. Photocopies on K1 and K2 were created illustrating the embedded security features in the paper. Using a light box, IR & UV alternate light sources, the handwritten dates were examined. The handwritten dates are 'wet ink' originals. Utilizing an HP scanner, K1 and K2 were scanned into my HP computer and opened using Adobe Acrobat application. The words "unauthorized copy" appear in light gray. When converted to a "Word" document, the embedded security features become invisible. I was then able to remove the signatures on K-1 & K2 leaving a blank signature block. Providing for the forger being privy to blank prescriptions format and security paper, I performed an experiment to duplicate the process. I photo copied the rubber stamp signature (from K-1, K-2), scanned it into Adobe, converted it to a portable signature in "Word" and placed it on the blank K-1. Had I been provided a blank security prescription sheet, I then would simply have created the prescription form by printing it out on my printer.
4TWGQ3	Due to sufficient disagreement with the known Items 4 and 5 (CTS Items K1 and K2), it was determined that the questioned Items 6 and 7 (CTS Items Q1 and Q2) are not genuine. The disagreement observed between the known Items 4 and 5 (CTS Items K1 and K2) and the questioned Items 6 and 7 (CTS Items Q1 and Q2) include the lack of the "DocuGard" UV pattern on the back of the questioned items, the difference in fonts between the questioned and known items, and the toner produced signatures on the questioned items. It should also be noted that the toner signatures on items 6 and 7 (CTS Items Q1 and Q2) overlay on to the stamped ink signatures on Items 4 and 5 (CTS Items K1 and K2). No indented writing or watermarks were observed on items 6 and 7 (CTS Items Q1 and Q2).
4UQ3ME	After careful examination and comparison of questioned prescriptions Q1 & Q2 using Video Spectral Comparator (VSC6000) and stereo-microscope (Leica EZ4D) with reference prescriptions K1 & K2, it is concluded that the questioned prescriptions Q1 & Q2 are not authentic to the known prescriptions.
4WE8AY	visually observing the documentos Q1 and Q2 was established that handwritten dates of each doctor's prescription do not identify with those embodied in the authentic.
68TVQV	Based on the doctor using the same print format & font and using a signature stamp as evidenced in K-1 and K-2; it is my opinion that the James Denver prescription dated March 14, 2016 (Q-1) and the Amanda Miller prescription dated March 18, 2016 (Q-2) are fraudulent prescriptions and were not generated from the doctor's signature stamp.
6AWTZ4	Due to the absence of the security watermark DocuGard in Q1 and Q2, it was determined that the prescriptions Q1 and Q2 were written on different paper, than the paper used to write the prescriptions, K1 and K2.
6AZDPR	After an examination and comparison i came to the conclusion that the documents marked "Q1" and "Q2" are forged prescriptions.
6BUYHH	Based upon a comparative examination of the documents submitted, it is my professional opinion that Q1 and Q2 (questioned prescription forms) are not authentic to K1 and K2 (known prescription forms). Though Q1, Q2, K1 and K2 had hidden pantographs, microtext printing on the front of the prescription forms as security features, there were some differences between the questioned and known prescription forms. One fundamental difference was the lack of the "DocuGard" watermark on the back of the questioned prescription forms. Another difference is a stamped signature of Dr. Sarathi Harris on each of the known (K1-K2) forms, but a machine reproduced signature was utilized on the questioned (Q1-Q2) prescription forms.
6E9UYF	In consideration of the findings it is concluded that Q1 and Q2 are not authentic, Q1 and Q2 are

TABLE 3

WebCode	Conclusions
	counterfeited.
6GFW87	It was determined that Items 6 and 7 (CTS Items Q1 and Q2) are not genuine due to disagreement in security features, format and alignment of template, signature preparation method and size and design of fonts, with Items 4 and 5 (CTS Items K1 and K2), which were submitted as reference material. No indented writing was observed on Items 6 and 7 (CTS Items Q1 and Q2). Additional assessments and observations were made and recorded for possible future comparisons.
6U4YPX	The questioned prescriptions (Q1 and Q2) are not authentic to the known documents (K1 and K2).
6U8JEL	The questioned prescriptions "Q1" and "Q2" are not authentic as represented by the known exemplar prescriptions "K1" and "K2" due to the following: 3.1 "Q1" and "Q2" do not have security features while "K1" and "K2" have security features. 3.2 Font types and letter design on Q1 and Q2 differs from that of "K1" and "K2". 3.3 The slant of the handwriting on "Q1" and "Q2" is different from that of "K1" and "K2".
6UL8FD	Once we receive the questioned documents and respective employers, is to make a documentologico study, taking into account the following instrumental optical: Spectral comparator video VSC6000 Foster+Freeman, which allows the observation and comparison of documents with different types of lighting, filters and obtaining of images. Stereoscopic Microscope SMZ1500 of Nikon, for detailed viewing of documents and images. Digital still camera to capture images in the field. Portable magnifiers with adequate lighting, allowing to magnify documents detail areas. Note: The instruments used are in good working condition. Then of having carried out a detailed study documentologico Q1, Q2 and K1 and K2 respectively where discussed: systems of printing, topographical distribution, morphology, size of characters, we found discrepancies between the disputed and disputed, entered to describe the most notable differences: Q1: E, Q2: E. The morphology of the characters: see the digit 2, showing a grace or small hook in its horizontal stroke at the end, as opposed to the authentic ones that lack the same. For example the letter n, i, r in its vertical stroke to observe it at the top is oblique, unlike the patterns which is straight. In documents disputed the script or horizontal stroke that separates the digits seen as phone number is thicker than the disputed. The disputed documents do not have any reaction to ultraviolet light, unlike of the you authentic than if reacting in its back. CONCLUSION: The documents questioned as Q1 and Q2, lack the characteristics of printing and, securities that boast authentic documents K1 and K2.
6UM3XX	Visual, microscopic, and instrumental examination/comparison of the questioned prescriptions (Q1 and Q2) with the known prescriptions (K1 and K2) revealed that the questioned prescriptions are not authentic. This finding is based on differences noted between the questioned and known prescriptions including: the paper, fonts, spacing, layout, and signatures.
79HJNG	1.- It is not possible to determine if the documents "Q1" and "Q2" are authentic, in spite of the fact that they differ of "Q1" and "Q2".
79KD73	It was determined that security features and text details of Q-1 and Q-2 were not consistent with the security features and text details of K-1 and K-2.
7C6CNQ	Forensic examination (Electrostatic Detection Apparatus, Video Spectral Comparator, and Macro/Microscopic Examination) of the Questioned prescriptions appearing on Items Q-1 and Q-2 with the prescription exemplars provided by Dr. Sarathi Harris appearing on Items K-1 and K-2 revealed the following dissimilarities: 1. The signatures appearing on Items Q-1 and Q-2 failed to hold the negatively charged toner particles when subjected to the Electrostatic Detection Apparatus as opposed to the prescription exemplars provided by Dr. Sarathi Harris appearing on Items K-1 and K-2. 2. Macroscopic and microscopic examination of the documents discovered dissimilar font styles between Items Q-1 and Q-2 and the prescription exemplars provided by Dr. Sarathi Harris appearing on Items K-1 and K-2. 3. Inter-comparison examination and analysis between the Questioned handwritten entries appearing on Questioned prescriptions appearing on Items Q-1 and Q-2 with the prescription exemplars provided by Dr. Sarathi Harris appearing on Items K-1 and K-2 revealed a few dissimilarities in handwriting characteristics and habits. Based on the dissimilarities in the documents presented for comparison, it is the opinion of the undersigned that the Questioned prescriptions appearing on Items Q-1 and Q-2 are

TABLE 3

WebCode	Conclusions
	not authentic to the prescription exemplars provided by Dr. Sarathi Harris appearing on Items K-1 and K-2.
7DZUQR	K1 and K2 were examined and compared to Q1 and Q2 to determine whether or not they were alike in all respects. Visual, optical, and instrumental examinations were conducted. A stereomicroscope, a controlled light video spectral examination device known as the VSC, and an electrostatic detection apparatus known as the ESDA were used in these examinations and comparisons. Items K1 and K2 were determined to be alike in methods of production, and were used as standards for comparison. It is the conclusion of this examiner that Items Q1 and Q2 differ from Items K1 and K2 in significant aspects of production of the documents, and therefore cannot be considered to be authentic prescriptions of Dr. Sarathi Harris. Differences between Items K1 and K2 and both Q items include: 1) The fonts used for the letterheads and field headers are different. 2) The font size of the body of the prescriptions are different. 3) The signature field of the known prescriptions is created with a stamp and on both questioned documents it is created with toner. 4) spacing differences exist at the header to outline aspects, and the signature field underline to outline aspects. 5) the known documents have a security feature printed on the backs whereas the questioned documents do not.
7KB34M	The evidence supports the proposition that the disputed "DR. Sarathi Harris" medical certificate documents marked "Q1" and "Q2" are not authentic.
7U3LGV	[No Conclusions Reported.]
7X3WDV	On comparison, I found that document Q1 and Q2 lacked a security feature observed in K1 and K2. Q1 and Q2 also exhibited signatures which were printed using a different printing process compared to the stamped signatures on K1 and K2. As such, I am of the opinion that these questioned prescriptions were not authentic to the known documents.
7YXFEW	On the basis that genuine prescriptions from the doctor's office are produced using the materials and methods represented by the example documents K1 and K2, my findings show that the questioned prescriptions, Q1 and Q2, are counterfeits and are not genuine prescriptions.
7Z4XDT	Ultraviolet light revealed that Q1 and Q2 were not printed on the same safety paper as was K1 and K2. Long range ultraviolet light revealed repetition of the "DocuGard" printed words and Logo on the reverse side of K1 and K2 but this security feature was not present on the reverse side of Q1 or of Q2. Consequently, the Q1 and Q2 prescriptions are probably not authentic. The presence of one of the K1 and K2 security features (on faces of K1 and K2) which is also present on the faces of Q1 and Q2 raises a question as to why one of the security features of the knowns also appears on the questioned prescriptions. The lack of any answer to this question at this time is the reason for a qualified opinion.
844EET	The two control prescriptions in K1 and K2 were examined. The background printing of the two prescriptions were printed by offset printing method. The signatures were stamped and the dates were handwritten. All other contents including the headings, patient's particulars and prescriptions were printed by toner deposition printing method. Under UV light, repeated logos and words "DocuGard" were found on the rear sides of the two control prescriptions. The two questioned prescriptions in Q1 and Q2 were examined. The background printing of the two prescriptions were printed by offset printing method. The dates were handwritten. All other contents including the headings, patient's particulars, prescriptions and signatures were printed by toner deposition printing method. Under UV light, no UV security printing was found on both sides of the two questioned prescriptions. Comparison between the two questioned prescriptions in Q1 and Q2 and the two control prescriptions in K1 and K2 revealed differences in (i) the printing method of the signatures, (ii) the font design details in relation to English letters (such as r, a, i, l, e, t, R and x), symbols (such as & and -), and numerals (such as 1, 2, 3) and (iii) the writing characteristic features in relation to design (numerals 4 and 6) and slanting (slashes) of the dates. In addition, the rear sides of the two questioned prescriptions in Q1 and Q2 were devoid of UV security printing as found in the two control prescriptions in K1 and K2. In view of the above findings, I am of the opinion that the two questioned prescriptions in Q1 and Q2 were forged.
879UYD	CONCLUSION OF THE REPORT. The documents questioned Q1 and Q2, to be compared in its

TABLE 3

WebCode	Conclusions
	intrinsic qualities do not react to UV light. The document questioned, Q1 and Q2, presented differences in morphological order in alphanumeric characters contained in your (full) front. The Q1 and Q2, documents are not authentic documents Q1 y Q2.
87DDMG	After an analysis and comparison of the respective material, the following observations were made: 3.1 The Font that has been used throughout the documents marked "Q1" and "Q2" differs to the type of font that was used on the documents marked "K1" and "K2". 3.2 The signatures on the documents marked "Q1" and "Q2" have been generated by a laser printer as opposed to those generated by a stamp on the documents marked "K1" and "K2". 3.3 The UV (Ultra Violet) features found on the rear surface of the documents "K1" and "K2" are absent from the rear surface of the documents marked "Q1" and "Q2". 3.4 Features printed in "Coin Reactive Ink" were revealed when a destructive method was used by exposing a portion of the rear of the documents marked "K1" and "K2" to the surface of a coin. These features were absent when the rear of the documents marked "Q1" and "Q2" was exposed to the surface of that same coin. In light of the aforementioned observations, I came to the conclusion that the documents marked "Q1" and "Q2" are forgeries.
8K766W	Laboratory item #s 1-2 (K1 and K2) were visually examined utilizing oblique/side lighting for the possible presence of indented impressions; no impressions of investigative value were found. Laboratory item #s 3-4 (Q1 and Q2) were visually examined utilizing oblique/side lighting and utilizing the ESDA (Electrostatic Detection Apparatus) for the possible presence of indented impressions; no impressions of investigative value were found. Visual and microscopic examination of laboratory item #s 1-2 (K1 and K2) revealed the following: printed material has the presence on non-impact print process -toner/laser; original handwritten date has the characteristics of a black ballpoint pen; signature of "Sarathi Harris" has the characteristics of liquid ink; printed material has characteristics of the font --Perpetua. See pages 3 and 4. Visual and microscopic examination of laboratory item #s 3-4 (Q1 and Q2) revealed the following: printed material has the presence on non-impact print process -toner/laser; original handwritten date has the characteristics of a black ballpoint pen; reproduced signature of "Sarathi Harris" has the characteristics of non-impact print process --toner/laser; printed material has characteristics of the font --Times New Roman. See pages 3 and 4. Utilizing the VSC (Video Spectral Comparator, revealed security features (DocuGard) appearing on the back of each document, laboratory item #s 1-2 (K1 and K2). See page 5. Utilizing the VSC (Video Spectral Comparator, revealed no security features present on the back of each document, laboratory item #s 3-4 (Q1 and Q2). See page 5. Examination, comparison and evaluation of the questioned documents and known documents resulted in the following opinion: Laboratory item #s 3-4 (Q 1 and Q2) are not authentic prescriptions.
8MZGXX	The following differences were noted in the preparation methods of the questioned prescriptions (Exhibits Q1 and Q2) and the known prescriptions (Exhibits K1 and K2) indicating that Exhibits Q1 and Q2 are not genuine prescriptions. 1. The paper used in the preparation of the known prescriptions (Exhibits K1 and K2) contained a light-colored, ultraviolet-reactive repeated printing of the DocuGard name and logo on the reverse, but the questioned prescriptions (Exhibits Q1 and Q2) did not have any discernible printing on the reverse. 2. The signatures were placed on Exhibits K1 and K2 with a rubber stamp using liquid ink, while the signatures on Exhibits Q1 and Q2 were printed using a toner technology. Exhibits Q1 and Q2 were examined for the presence of handwriting indentations, but the results were negative. Due to the limited amount of comparable handwriting, no conclusion could be rendered regarding whether or not the writer of the dates on Exhibits K1 and K2 wrote the questioned handwritten dated entries on Exhibits Q1 and Q2.
8N7G2W	THE QUESTIONED PRESCRIPTIONS (Q1 AND Q2) ARE A COUNTERFEIT DUE TO THEY LACK THE SECURITY FEATURES AND PERSONALIZATION TECHNIQUES THAN THE AUTHENTIC SAMPLES.
8P4LKC	results: 2.1 Macroscopic observation. 2.1.1 The leaves Q1 and Q2 correspond to k1 and k2 as to paper sheets, size and security printing background. 2.1.2 The printed documents Q1 and Q2 correspond in the laser printing system but not in the same font and font patterns documents K1 and K2. 2.1.3 Facsimile printing stamp or signature seen in documents Q1 and Q2 is not a seal impression, it is laser printing. 2.2 UV light Q1 and Q2 documents react as the K1 and K2, under UV light.

TABLE 3

WebCode	Conclusions
8PNG9T	Items #Q1 and #Q2 are NOT authentic prescriptions of Dr. Sarathi Harris. Note: This conclusion is based on the premise that the item #K1 and #K2 prescriptions are accurate representations of all of the prescriptions issued by Dr. Sarathi Harris.
8YRKBG	IN CONCLUSION, I FOUND EVIDENCE TO SUPPORT THAT THE "PRESCRIPTION IN QUESTION" MARKED Q1 AND Q2, ARE NOT AUTHENTIC TO THE KNOWN DOCUMENTS MARKED K1 AND K2. I FOUND EVIDENCE TO SUPPORT THAT THE PRESCRIPTIONS MARKED Q1 AND Q2 ARE FORGED (FORGERIES).
8ZM4CH	The questioned documents marked "Q1" and "Q2" are forgeries.
96UZKP	Q1 is not authentic to the known documents. Q2 is not authentic to the known documents.
9GPZB8	Physical examinations were conducted on the Exhibit Q1 and Q2 prescriptions. The Exhibit Q1 and Q2 prescriptions lack printing processes and a security feature found on the comparable genuine Exhibit K1 and K2 prescriptions and were therefore, determined to be counterfeit. The Exhibit Q1 and Q2 prescriptions were produced using a combination of offset lithography and a toner printing technology and are absent of a stamped "Sarathi Harris" signature and an artificial "DocuGard™" watermark that are present in the Exhibit K1 and K2 prescriptions. The comparable genuine Exhibit K1 and K2 prescriptions, however, were produced using a combination of offset lithography, toner printing technology, a stamped "Sarathi Harris" signature and an artificial "DocuGard™" watermark.
9KPC88	Q1 and Q2 are not genuine, as compared to Known samples K1 and K2. The Q1 and Q2 documents were not created with the same printer font styles. Too, the Dr signatures of K1/K2 are rubber stamp ink but the Q1 & Q2 signatures are copies of genuine rubber stamp signatures, but are printed by dry toner process. Though the handwritten date entries are insufficient in features for a comparison examination, it was noted that the "4" on Q1 is different from the "4" on K1 and K2.
9QV6YH	The examination resulted in the finding that the questioned items (Q1 and Q2) are not authentic to the known exemplars (K1 and K2).
9XWCMX	Upon completion of an examination and comparison of the exhibits and standards submitted in this case, it is the opinion of this examiner that the Q-1 and Q-2 exhibits are not authentic documents as compared to the K-1 and K-2 standards.
9YLMDQ	AFTER EXAMINATION AND COMPARISON, I REACHED THE CONCLUSION THAT THE QUESTIONED PRESCRIPTIONS (Q1 AND Q2) ARE NOT AUTHENTIC TO THE EXAMPLE PRESCRIPTION (K1 AND K2).
AFQGKQ	Q1 and Q2 are closely similar. Even though they have been issued to different named patients and for different prescribed drugs I have concluded that Q1 and Q2 have come from a common source. I have found that, although Q1 and Q2 superficially appear similar to K1 and K2, there are significant differences in the security features of the paper, as well as the printing processes and the layout of the two questioned prescriptions. Although the two prescriptions K1 and K2 have a series of security devices only the handwriting of the date is unique to each prescription. In this matter there is insufficient handwriting to determine whether or not the issuing doctor wrote the dates on either known example. Nor is it possible to carry out handwriting comparisons between the four prescriptions. The four signatures have all been produced from the same original handwriting source.
APHL3R	The results of the examination extremely strongly support that the questioned items (Q1, Q2) are not authentic prescriptions as represented by the known exemplars (K1, K2) (Level -4)
AYMXTU	It is my opinion that the questioned prescription forms Q1 and Q2 are not authentic prescription forms as demonstrated in the K1 and K2 documents. The printing on the questioned documents was examined microscopically and found to have been printed with a different font than exhibited in the known documents. The questioned and known documents were examined with ultraviolet (UV) light. The UV security printing found in the known documents is not present in the questioned documents. The

TABLE 3

WebCode	Conclusions
	<p>physician signature on Q1 and Q2 were examined microscopically and were found to be printed with a toner process. Therefore, the signatures are not genuine stamped impressions as exhibited in the known documents. The questioned writing on Q1 and Q2 can neither be identified nor eliminated with the known writing on K1 and K2. The limited amount of known writing submitted for comparison precludes a more conclusive opinion. The questioned documents were examined for the presence of any indented writing, typing, or other identifying impressions. These are impressions sometimes left on paper from writing, typing, or other markings done on another page while it was superimposed over the questioned material. There were no meaningful impressions located.</p>
B6TLCM	<p>Based on comparison with the K1 and K2 standards, the Q1 and Q2 prescriptions are not genuine. This opinion is based on the notation of toner produced signatures in the questioned items compared to stamp impressions in the known standards, and the absence of a "DocuGard™" symbol and logo on the rear sides of the Q1 and Q2 prescriptions when viewed in the ultraviolet spectrum. A different fluorescent and luminescent reaction was noted between the Q and K documents. Further, the following were found in the Q1 and Q2 documents when compared to the known exemplars: different fonts, different line spacing of the address and phone number in the header information, different line spacing of the "Patient & DOB" and "Rx" information, different vertical placement of entries, and different length in the signature baselines. No conclusion could be reached as to whether Dr. Harris prepared the date entries on Items Q1 and Q2. This opinion is based on the number of known standards and, consequently, absent characteristics with which to compare. Spectral examination of the Questioned and Known forms revealed no readily discernible differences in reactions between the toner or ink (dates) entries of the forms. No differences in paper thickness were found. An examination for indentations revealed no decipherable marks, signs, or characters in indented form. Should an additional examination be desired, standards reflecting the exact dates of the questioned prescriptions as well as collected hand printed standards containing numerals and dates from any suspects in the case should be submitted for comparison purposes.</p>
B8U29R	<p>The questioned Items Q1 and Q2 are not authentic as represented by the known Items K1 and K2.</p>
BJJBW	<p>Upon completion of this examination, this examiner has concluded that the Q-1 and Q-2 documents are not authentic to the S-1 and S-2 documents. This conclusion was reached by using the above described instruments in order to illustrate the differences in the documents. The standard documents are printed on security paper that under UV transmitted light are shown to have watermarks that the questioned documents do not contain. Further differences that were noted between the standard and questioned documents are the alignment issues, the use of toner to complete the questioned documents and font differences. This examiner also made note of the differences in the number formation of the hand printed dates on the signature line, the base line alignment of the numbers and the ending strokes of the "stamped" signature. There is also a larger amount of space between the signature and the hand printed dates on the standards in comparison to the questioned documents.</p>
BK2RBY	<p>Item 4 John Doe example prescription, dated April 2, 2016 (CTS Item K1). Item 5 Jane Doe example prescription, dated April 2, 2016 (CTS Item K2). Item 6 James Denver prescription, dated March 14, 2016 (CTS Item Q1). Item 7 Amanda Miller prescription, dated March 18, 2016 (CTS Item Q2). Results of Examinations: Based on the Item 4 (CTS Item K1) and Item 5 (CTS Item K2) known prescriptions submitted for comparison, the Item 6 (CTS Item Q1) and Item 7 (CTS Item Q2) questioned documents are not genuine prescriptions. Differences in security features were observed between the questioned and known items. Furthermore, the Item 6 (CTS Item Q1) and Item 7 (CTS Item Q2) signatures were produced using a toner printing process; this is not the same process/technique used to produce the signatures on the known prescriptions. It should also be noted that differences in fonts were observed between the questioned Item 6 (CTS Item Q1) and Item 7 (CTS Item Q2) and known Item 4 (CTS Item K1) and Item 5 (CTS Item K2) prescriptions. No indented writing was observed on the questioned items. Additional assessments and observations have been made and recorded for future reference.</p>
BKYXTE	<p>After a detailed analysis, it has been established that the questioned documents marked "Q1" & "Q2" has been reproduced. The layout of the verifiable information and address section differs to the verifiable information of the specimen documents marked "K1" & "K2" in terms of alignment, style, font, size and</p>

TABLE 3

WebCode	Conclusions
	weight. No security features has been identified at the reverse of the documents in questioned whereas there is a security feature on specimen documents marked "K1" & "K2" in the form of a word "DocuGard". The signatures have been printed onto the questioned documents marked "Q1" & "Q2" whereas specimen documents marked "K1" & "K2" has original signatures. Furthermore, I came to the conclusion that the questioned documents marked "Q1" & "Q2" are forged.
BPVNZQ	Given the propositions: H1 =the questioned prescription is authentic to the known documents, and, H2=the questioned prescription is not authentic to the known documents For Q1 and Q2, the evaluation and interpretation of the evidence has disclosed that the evidence provides very strong support for proposition H2 (not authentic) compared to proposition H1 (authentic). Should different propositions be considered the conclusions stated may differ from those above.
BZTPCU	Based on the comparison of the prescription forms in K1 and K2 to the prescription forms in Q1 and Q2 it is highly probable the prescription forms in Q1 and Q2 are not authentic documents.
BZXREL	The questioned prescription form, Q1 and Q2 are not authentic when compared to the known samples.
CC4GGF	after the examinations the documents Q1 and Q2 are not authentic as they do not present the same features as the K1 and K2, hence these questioned documents are forgeries.
CFY9NR	It was determined that Q1 and Q2 are not authentic when compared to K1 and K2 known documents.
CGABCB	The documents marked Q1 and Q2 are forged.
CGXD77	The questioned prescription Q1 and Q2, is not authentic to the known documents
CQW9ZV	The documents in question, Denver's prescription and Miller's Prescription, ARE NOT AUTHENTIC compared with security physical characteristics and content of the reference prescription.
CQZTQJ	An examination and comparison revealed several significant differences between the questioned prescriptions marked as "Q1" and "Q2" and the known specimen prescriptions marked as "K1" and "K2". Subsequently I found sufficient evidence to support the proposition that the questioned prescriptions marked as "Q1" and "Q2" are counterfeit prescriptions as they are forgeries of the known specimen prescriptions marked as "K1" and "K2".
CWMNK	After an examination and comparison of questioned documents marked "Q1" and "Q2" with the specimen documents marked "K1" and "K2" I reached a conclusion that the exhibits are counterfeit. They differ from the known specimen documents (prescriptions) in respect of the following: The alignment (placements/and distances), the slant (font /text style) of the disputed documents differ from the specimen documents. The spacing and placement of the handwritten dates to the writing baseline; The spacing and placement between the signatures and the hand written dates; The ultraviolet security features (exposure at 365 nm) in the disputed documents are not present as they appear in the specimen documents.
CXLKKR	With the absent of the security feature within the paper document Q1 and Q2, it is determined that they are indeed fraudulent.
CZR3JM	I compared the questioned prescriptions "Q1" and "Q2" with the genuine prescriptions "K1" and "K2" and observed the following significant differences between them: a.production process used for the signatures; b.font design of printed entries; and c.absence of latent background printing on the reverse side of the prescriptions "Q1" and "Q2". In view of the above differences, the prescriptions "Q1" and "Q2" are not genuine.
D2DFCP	Forensic comparative examination using magnification and specialized lighting revealed that Exhibits Q1 and Q2 do not conform to the genuine K1 and K2 exemplars submitted for comparison and are not authentic. Exhibits Q1 and Q2 bear simulated signature stamps that have been created through the use of the electrostatic (toner) printing process. Additionally, the font style of Exhibits Q1 and Q2 is different

TABLE 3

WebCode	Conclusions
	from the font style on the known K1 and K2 forms. Lastly, Exhibits Q1 and Q2 lack a printed ultraviolet responsive security feature that is found on the reverse sides of Exhibits K1 and K2.
D82V64	(a). Based on the examinations and comparisons carried out on K1, K2, Q1 and Q2, I am of the opinion that: (i). The papers used to produce Q1 and Q2 were different to those used to produce K1, K2. (ii). K1, K2, Q1 and Q2 had the same printing methods used to print the background printing, text and signatures respectively. (iii). The signatures on K1, K2, Q1 and Q2 originated from a same source signature. (iv). There is evidence which indicates that the black ballpoint pen used to write the dates on Q1 and Q2 may have been different to that used to write the dates on K1 and K2. (v). There is evidence which indicates that the writer of the dates on Q1 and Q2 may have been different to that of the writer of the dates on K1 and K2. (b). Based on the above findings, I am of the opinion that the questioned prescriptions Q1 and Q2 ARE NOT AUTHENTIC to the known documents K1 and K2.
DKVABR	It has been concluded that the Exhibit Q1 and Q2 items are not authentic prescriptions. Differences were noted between the submitted questioned (Q1 and Q2) prescriptions and the known (K1 and K2) prescriptions. The significant differences are as follows: The signatures appearing on the Exhibit Q1 and Q2 items have been prepared with an office machine system that utilizes dry black toner. The signatures appearing on the Exhibit K1 and K2 items have been prepared with a rubber stamp. The paper used to prepare the Exhibit Q1 and Q2 items does not have the Ultraviolet security feature that appears on the reverse side of the paper used to prepare the Exhibit K1 and K2 items. The general information printed on the Exhibit Q1 and Q2 prescription forms has a different location than the general information appearing on the Exhibit K1 and K2 forms and there is a difference in font style, size and overall spacing. The patient and drug information printed on the Exhibit Q1 and Q2 prescription forms has a difference in font style, size and overall spacing than the patient and drug information appearing on the Exhibit K1 and K2 forms.
DMF478	It is my considered expert opinion that Q1 and Q2 are probably non-genuine.
DPP49T	The item Q1 and Q2 prescriptions are counterfeit reproductions of the item K1 and K2 prescriptions.
DQWL8N	On examination of the questioned documents Q1, Q2, I have found that they are counterfeit. Amongst other findings, I have found that: The paper of the questioned documents Q1, Q2 is different than the paper of the sample documents K1, K2, and does not contain UV security printing that is present in the samples. The doctor's signatures in the questioned documents Q1, Q2 are laser printed with black toner and not stamped as in the sample documents K1, K2. The fonts and positions of the printing in the questioned documents Q1, Q2 are different than in the sample documents K1, K2.
DWKBL8	According to comparative analysis made to the requirements in question against AA provided as patterns, it is concluded that the requirements on behalf of houses Denver dated March 14, 2016 and the corresponding Amado Miller March 18, 2016 they are not authentic to the known documents.
DZM8DM	As a result of examination and comparison based solely on the material submitted, the following conclusions and observations are opinions based upon my experience, education and training and are as follows: 1. The questioned prescriptions in exhibits Q1 and Q2 when compared to exhibits K1 and K2 are inconsistent and are not genuine prescriptions. 2. Exhibits Q1 and Q2 were examined and it was determined that the printing process on the paper is a lithographic halftone containing a pantogram depicting "UNAUTHORIZED COPY" on the front side of the documents. The DocuGard security paper is 9 6/16" X 7 12/16" (237mm X 196mm) and is .005 thick and can be purchased at a number of stores. However, this particular size of paper could not be found and may be a special order through DocuGard. The text and Doctor's signature were printed via an electrophotographic process and the date was written in black ball point ink. a. Exhibits Q1 and Q2 contain two sets of fonts within the documents and at different point sizes. The first is a Times New Roman family font measured at 24, 15 and 11 points at various places within the document. The second is an Arial font measured at 11 points. The font type, placement and point sizes of the fonts are consistent between exhibits Q1 and Q2. 3. Exhibits K1 and K2 were examined and it was determined that the printing process on the paper is a lithographic halftone containing a pantogram depicting "UNAUTHORIZED COPY" on the front side of

TABLE 3

WebCode	Conclusions
	<p>the documents and an opaque artificial watermark (DocuGard w/a symbol) on the reverse side of the documents. The DocuGard security paper is 9 6/16" X 7 12/16" (237mm X 196mm) and is .005 thick and can be purchased at a number of stores. However, this particular size of paper could not be found and may be a special order through DocuGard. The text on the front was printed via an electrophotographic process and the Doctor's signature is a rubber stamp impression and the date was written in black ball point ink. a. Exhibits K1 and K2 contain two sets of fonts within the documents and at different point sizes. The first is a Perpetua or Lapidary 333 font measured at 24, 15 and 11 points. The second is a Helvetica font measured at 11 points. The font type, placement and point sizes of the fonts are consistent between exhibits K1 and K2. 4. Exhibits Q1 and Q2 were scanned for preservation. 5. An ESDA (ElectroStatic Detection Apparatus) examination for the detection and reading of indented writing, typing or other identifying impressions was not performed on the questioned exhibits. 6. Oblique light was utilized to examine for indentations on exhibits Q1, Q2, K1 and K2 and none were found. 7. A video spectral comparator was utilized to examine the toner on exhibits Q1, Q2, K1 and K2 and the toner reacted similarly between the exhibits. 8. The video spectral comparator was also utilized to examine the paper with an ultra violet light source and on exhibits Q1 and Q2 they do not contain any artificial or true watermarks. Exhibits K1 and K2 have an opaque artificial watermark contained on the back of the documents. 9. Exhibits Q1 and Q2 were processed for latent prints with liquid ninhydrin. The evidence was forwarded to the Latent Print Section for evaluation. 10. Exhibits Q1 and Q2 were processed for DNA evidence and the evidence sealed and placed into property.</p>
E2EHRL	Q1 and Q2 are not authentic prescriptions as represented by the known exemplars K1 and K2.
EG6DEK	Both signatures in documents Q1 & Q2 are printed with toner not with signature stamps. Backside of Q1 & Q2 without secure printing like K1 & K2. Different positions in header Q1/Q2 to K1/K2.
EK4NAK	The questioned prescriptions Q1, Q2 are not authentic to the known documents.
EUBKV3	The examination revealed that at the back of the represented questioned documents K1 K2 there are protecting signs, which are not visible on the blank of the documents Q1 and Q2. This proves that questioned documents: Q1 and Q2 are not made with the same way as represented questioned documents K1 K2.
EWM63R	There is conclusive evidence that the signatures on Q1 and Q2 were not produced on these documents by the same method as used for the signatures on K1 and K2.
F7NVAK	The Q1 and Q2 prescriptions are not authentic prescriptions as presented by the K1 and K2 standards.
FDP87H	<p>Items Q1 and Q2 are not authentic prescription documents as represented by Items K1 and K2. This opinion assumes that Items K1 and K2 are known samples that fully represent the type of prescription forms produced in the office of Dr. Sarathi Harris. This opinion is based on a number of significant differences in Items Q1 and Q2 when they are compared to Items K1 and K2. These findings include: a. A similar security paper was used for Items Q1 and Q2. A different security paper was used for Items K1 and K2. There are some similarities in the security paper used for all four documents. No differences were found in the blue background printing used for all four documents. All four documents have the same "void pantograph" (a security feature that appears when a document is copied or scanned), which reads, "UNAUTHORIZED COPY". This pantograph is repeated numerous times on the fronts of the documents. There are slight positioning differences between the questioned and known documents; however, this difference could be attributable to the print run. On the reverse sides of Items K1 and K2, a printed semi-hidden artificial watermark is present. The watermark reads, "DocuGard™". The watermark is accompanied by a depiction of a shield. This watermark is repeated a number of times on the document. The watermark can be viewed when the back of the paper is positioned at an angle to a light source or an ultraviolet light source is used. This watermark is not present on the reverse sides of Items Q1 and Q2. The similarities and differences suggest the security paper for both the questioned and known documents was produced by the same manufacturer, but a different type of security paper was used for the known documents than what was used for the questioned documents. Research disclosed that "DocuGard" is a trademark of Paris Business Products (Paris Corporation) of New Jersey.</p>

TABLE 3

WebCode	Conclusions
	<p>Further research disclosed that the paper used for the known documents is most consistent with their Item Number 04546, although the possibility that Item Number 04541 may have been used cannot be ruled out. The paper used for the questioned documents is most consistent with Item Number 04540. All of these items are sold in sheets of 8.5 x 11 inches in size (for the smallest size). Items Q1, Q2, K1, and K2 are smaller in width and height (approximately 196 mm x 247 mm or approximately 7.7 x 9.4 inches). This finding, along with irregularities in the cut edges, suggests that the sheets of paper used for both the questioned and known documents were cut down from their original size. The trimming of the paper used for the known documents may have removed some security features. b. The computer text for all four documents is made from black electrostatic toner such as that used in laser printers, some photocopiers, and some other office machines. When examined microscopically, the appearance of the toner (i.e., toner morphology) differs between the questioned and known documents. This suggests a likelihood that different machines were used to print the questioned and known documents. If necessary, chemical testing may confirm that different toner was used for the questioned and known documents; however, that type of examination is not currently performed in this laboratory. Chemical testing is also somewhat destructive to the document. c. The signatures on Items Q1 and Q2 were printed onto Items Q1 and Q2 using electrostatic toner. This differs from the signatures on the known documents. The signatures on the Items K1 and K2 were reportedly made by signature stamps and the signatures on these documents are consistent with a stamped impression. Since the signatures on all of the documents are consistent in form, this indicates that a stamped signature could have been copied and reproduced to create the signatures on Items Q1 and Q2. Alternately, a scanned image of the original signature utilized in the production of the signature stamp used for Items K1 and K2, could have been used to print the signature onto Items Q1 and Q2. d. Different fonts were used to produce the computer-printed text on Items Q1 and Q2 than what was used on Items K1 and K2. The fonts on Items Q1 and Q2 have a general pictorial similarity to the Item K1 and K2 fonts; however, there are many subtle differences. In addition, the computer-printed text differs in placement (i.e., left margin and line spacing) between the questioned and known documents. The computer-printed signature lines on the Items Q1 and Q2 are a different length than the signature lines on Items K1 and K2. The positioning of the computer-printed date is different between the questioned and known documents. The heights and widths of the computer-printed borders and boxes are similar between the questioned and known documents. Items Q1, Q2, K1, and K2 were processed for indented writing images using an Electrostatic Detection Apparatus (ESDA). None were found. The documents were also examined for indented writing images using oblique lighting. None were found. It is noteworthy that the signatures on Items Q1 and Q2 reacted differently to the ESDA processing than the signatures on Items K1 and K2. A black toner is used during ESDA processing. The questioned signatures repelled the toner while the known signatures attracted the toner. The handwritten dates on Items Q1, Q2, K1, and K2 were all written with black ballpoint pen ink. Nondestructive testing using various lighting techniques disclosed no differences in the ink. While no differences were found, this does not necessarily mean the same pen or ink of the same chemical formulation was used. Chemical testing could determine if an ink of the same formulation was used, but cannot determine whether the same pen was used. Chemical testing of inks is not currently being performed in this laboratory. Chemical testing is also somewhat destructive to the document. No conclusion was reached as to whether the writer of the handwritten dates on Items K1 and K2 (Dr. Sarathi Harris) also wrote the handwritten dates on Items Q1 and Q2. Some dissimilarities were noted; however, there was insufficient evidence to base an opinion of authorship. Limiting factors that precluded an opinion of authorship include the very small amount of known writing available for comparison, as well as known writing that was not fully comparable to the questioned writing. To be fully comparable, the known writing must include all of the numbers used in the questioned date entries. If a larger sampling of fully comparable known writing becomes available for examination, reexamination may lead to a more conclusive opinion.</p>
FMTC87	<p>After an examination and comparison, I found the following: 1. The font used on the specimen documents marked "K1" and "K2" differs to that used on the questioned documents marked "Q1" and "Q2". 2. The ultraviolet features found on the back of the specimen documents marked "K1" and "K2" differs from that found on the questioned documents marked "Q1" and "Q2". 3. The signatures on the specimen documents marked "K1" and "K2" have been stamped, whereas the signatures on the questioned documents marked "Q1" and "Q2" have been printed. Based on the aforementioned</p>

TABLE 3

WebCode	Conclusions
	observations, I came to the conclusion that the questioned documents marked "Q1" and "Q2" are not authentic.
FUUJVL	Documents Q1 and Q2 aren't authentic, because: doctor's signature (stamps) on documents Q1 and Q2 is reproduced form, no signature stamps, was produced on no security paper.
FVKYLE	The questioned prescriptions marked (Q1 & Q2) are not authentic to the known prescriptions marked (K1 & K2).
G7H7EM	An examination was performed on four (4) documents. Two (2) documents are known example prescriptions from Dr. Sarathi Harris's office and are listed as K1 & K2. Two (2) documents are submitted as Q1 & Q2 which are both questionable documents/prescriptions from Dr. Sarathi Harris's office. While conducting my examinations I have noticed numerous security features missing from both Q1 & Q2, but were positive in both documents K1 & K2. During the course of my examinations I also contacted Forensics Program Coordinator. As I was informed that the Doctor's office always uses one (1) type of paper as represented as documents K1, K2. There are numerous differences between Q1 & Q2 when compared to K1 & K2. My conclusion is that documents Q1, Q2 are not authentic to the known documents of K1 & K2.
GDKDYG	Items Q1 and Q2 are counterfeit prescription forms. This was evidenced by the lack of security printing on the reverse side of Items Q1 and Q2 along with signatures that have been produced by a toner technology. Differences were also observed between the font style appearing on Items Q1 and Q2 and the font style appearing on Items K1 and K2. Items Q1 and Q2 were examined for indented writing impressions. No indentations of evidentiary value were observed. Due to a lack of quantity of comparable known numerals, it could not be determined whether or not the hand printed dates appearing on Items Q1 and Q2 and the hand printed dates appearing on Items K1 and K2 were written by the same person. The submission of multiple repetitions of the questioned hand printed numerals may prove beneficial.
GK4KGL	Questioned document forms Q1 and Q2 as well as known exemplar document forms K1 and K2 are offset printed. Artificial watermark was observed on the backside of known exemplars. It was observed that the artificial watermark was not present on Q1 and Q2. The signature on known exemplars K1 and K2 was observed to be a stamp impression. On Q1 and Q2, the signature was observed to be made with a laser printer.
GKY4JM	[No Conclusions Reported.]
GLTW9E	Base on the findings observed using VSC, the questioned documents are not authentic to the known exemplars.
GNZE7A	The questioned prescriptions (Q1 and Q2) are not authentic to the example prescriptions (K1 and K2).
GWBFBR	After and examination and comparism of K1 & K2 with Q1 & Q2,I found that Q1 & Q2 are not authentic. The conclusion is based on the following grounds: i.K1 & K2 on the date the docter used forward slashes but on Q1 & Q2 backwards slashes are used. ii)The underneath line of date and signature is longer at K1 & K2 and shorter at Q1 & Q2. iii)Font size for letters at Q1 & Q2 are thicker than those at K1 & K2. iv)Handwritten number "6" on the date of K1 & K2 terminates on the body while at Q1 & Q2 does not terminates at the body but terminates after the body. v)Security wording "DocGardTm" is visible under Ultra violet light at the back of K1 & K2 and it is not visible at Q1 & Q2.
H2MUXG	In my opinion, the evidence provides very strong support for the proposition that the questioned prescriptions Q1 and Q2 are not authentic to the known documents K1 and K2.
H3HCZH	The findings show that the Q1 & Q2 prescriptions are different from the K1 & K2 comparison prescriptions. If the reference material, i.e. the digital file, the paper and the toner used to print the K1 & K2 prescriptions reflects the global variance of the Dr Sarathi Harris printing habits, the findings very strongly support the proposition that the Q1 & Q2 prescriptions are not authentic.

TABLE 3

WebCode	Conclusions
H4R9GF	After an examination and comparison of questioned prescriptions marked as "Q1" and "Q2" with the specimen prescriptions marked as "K1" and "K2" I reached a conclusion that the documents in question marked "Q1" and "Q2" are counterfeit.
H7CB8L	3.1) Visual (visible and ultraviolet) and microscopic examination revealed differences in paper stock, font and signature "stamp" physical composition between the questioned items - Q1 and Q2 as compared to the known items - K1 and K2 and thus items Q1 and Q2 are not authentic prescriptions as compared to the K1, K2 authentic prescription standards. 3.2) Items Q1 and Q2 were examined visually (oblique lighting, electro static detection device (ESDA) for the possible presence of indented impressions; no impressions of investigative value were found. 3.3) The indented impression lifts (ESDA lifts) are being returned as item #01.01 for your safekeeping.
H92NQ4	E. Questioned the prescription in not known authenticates documents.
HLPPPJ	The questioned prescription forms contain a number of differences to the submitted exemplars. These differences include: the printing process of the authorizing signature, the security paper that the prescriptions are printed on, the fonts used to produce both the letterhead and the prescription details. If the submitted exemplars represent the usual practice of Dr Harris then the questioned forms are not genuine.
HLT7NH	Q1 and Q2 are counterfeit documents produced on security paper different from K1 and K2 one. Q1 and Q2 have very probably the same origin.
HMJGEB	Documents marked "Q1" and "Q2" are not authentic.
HNEZFC	In light of the observations mentioned in paragraph "2", I reached the conclusion that the questioned prescription documents marked "Q1" and "Q2" are forgeries.
HXMP3M	The questioned documents, Q1 and Q2, were compared to the known exemplars, K1 and K2. They were all viewed macroscopically, microscopically and with the aid of various light sources and filters. It has been determined that the questioned documents, Q1 and Q2 are not authentic prescriptions as represented by the known exemplars, K1 and K2. Copies of the images will be mailed to you under a separate cover for your review and interpretation. As is routine in some cases, we processed the questioned and known items for latent writing impressions. Latent writing impressions may be made when writing is performed on one sheet of paper and leaves indentations on the pages below. The ESDA sheet provides a restoration or partial restoration of the original writing which created the impressions. Latent writing impressions were developed on Q1 back, Q2 back, K1 front and back, and K2 front and back. Copies of the ESDA lifts will be mailed to you under a separate cover for your review and interpretation.
J84J8N	THE DOCUMENT QUESTIONED IS NOT AUTHENTIC WHIT CHARACTERISTICS INDIVIDUALIZING OF DOCUMENTS K1 AND K2
JCH43G	Questioned documents Q1 and Q2 are not authentic prescriptions. They are considered as forgeries.
JCXQCJ	The questioned prescriptions Q1 and Q2 are not authentic documents as represented by the known exemplar prescriptions.
JE4XUB	After examination and comparison with known prescriptions (K1 and K2), I found that the questioned prescriptions (Q1 and Q2) are not authentic prescriptions. The conclusion is based on the following: 3.1 Type of fonts used on the questioned prescriptions differ from the fonts used on the known prescriptions. 3.2 Security wording "DocuGARD" visible under ultraviolet light on the back of known prescriptions while nothing is visible on the back of the questioned prescriptions. Meaning that the questioned prescriptions have been printed on the plain normal paper with no security features. 3.3 Slants of slashes for doctor's dates on Q1 & Q2 are slightly towards left (\) while the slants of slashes for doctor's dates on K1 & K2 are towards right (/).

TABLE 3

WebCode	Conclusions
JE8HKY	Q1 and Q2, requirements differ and does not correspond to the indubitable or patterns (K1 and K2) .
JGTHJF	The questioned prescriptions, 001-A1 and 001-A2, were compared with the known prescription standards, 001-A3 and 001-A4. Several differences, including different fonts, different paper, differences in the the alignment of text and formatting, and differences in the style of handwritten date entries, were noted between the questioned and known items. It is also noted that the prescriber signature on the questioned prescriptions were produced using toner technology, whereas the known prescriptions were produced using an ink process.
JLNCGG	The Item 6 (CTS Item Q1) and Item 7 (CTS Item Q2) questioned prescriptions are not genuine with the Item 4 (CTS Item K1 and Item 5 (CTS Item K2) known prescriptions.
JNVG9J	Document Q1 and Q2 are in all probability counterfeits.
JRTUWA	The doctors prescriptions marked as Q1 to Q2 are not authentic to the known documents marked as K1 to K2. The background printing at the back of of the known documents differs from the questioned documets. The uv security features are not present present in the questioned documents. the baselines under the signatures of the known documents do not physically match with that of the questioned documents. the font on the words of the known documents differs from the questioned documents.
JUZCU6	Based on the observations and comparisons of the exemplar prescriptions and the disputed prescription, I came to a conclusion that the prescriptions in question (Q1 and Q2) are not authentic to the exemplar prescriptions (K1 and K2).
K4MNQH	An examination and comparison of exhibits Q1 and Q2 with K1 and K2 have disclosed that there are class differences between the questioned and known documents. In particular, the methodology used to produce the signatures on exhibit Q1 and Q2 is different than that used to produce the signatures on exhibits K1 and K2. There are significant class differences between the questioned prescriptions Q1 and Q2 and the known prescriptions K1 and K2.
K6C29Z	The security paper of the two questioned prescription Q1 & Q2 and the two exemplar prescription K1 & K2 are of the same manufacture source. the doctor signatures on the two questioned prescription Q1 & Q2 are digitally printed, while the doctor signatures on the two exemplar prescription are stamp printed. The hand who wrote the dates on each questioned prescription Q1 & Q2, is not the same hand who wrote the dates on each exemplar prescription K1 & K2. From above, i conclude that the two questioned prescription Q1 & Q2 are not authentic to the known documents.
K6DWPL	It was determined that the Items 6 (CTS Item Q1) and 7 (CTS Item Q2) prescriptions are not authentic. Ultraviolet paper security features were observed on the Items 4 (CTS Item K1) and 5 (CTS Item K2) prescriptions that were not present on Items 6 (CTS Item Q1) and 7 (CTS Item Q2). Additionally, the "Sarathi Harris" signatures on Items 4 (CTS Item K1) and 5 (CTS Item K2) are inked whereas the signatures on Items 6 (CTS Item Q1) and 7 (CTS Item Q2) were prepared using a black toner process. The handwritten numerals on Items 4 (CTS Item K1) through 7 (CTS Item Q2) are too limited for a meaningful handwriting examination. No indented writing was observed on Items 4 (CTS Item K1) through 7 (CTS Item Q2). Additional assessments were made and recorded for future reference.
KH3VH9	3.1 The disputed prescriptions are not authentic documents as compared to the specimen prescriptions.
KH4EVC	Q(1-2) were not authentic to the known documents in K(1-2).
KHXEKA	An examination and comparison revealed several significant differences between the questioned prescriptions marked as "Q1" and "Q2" and the known specimen prescriptions marked as "K1" and "K2". Subsequently I found sufficient evidence to support the proposition that the questioned prescriptions marked as "Q1" and "Q2" are counterfeit prescriptions as they are forgeries of the known specimen prescriptions marked as "K1" and "K2".

TABLE 3

WebCode	Conclusions
KK4WH7	After examination and comparison of the questioned documents marked as "Q1" and "Q2" with the specimen documents marked "K1" and "K2", I reached a conclusion that the exhibits mentioned in paragraphs 3.1.3 and 3.1.4 supra are forgeries.
KXBMKE	The questioned prescription are diferent to the know exemplar, therefore they are not authentic.
KY83XB	After examination and comparison with K1 & K2 I found that the questioned prescriptions marked Q1 & Q2 are fraudulent. Conclusion is based on the following: Slashes on Q1 & Q2 next to doctor's signature date slope slightly towards left while on K1 & K2 slope slightly towards right. Fonts on questionoed prescriptions (Q1 & Q2) differ from the one on the known prescriptions (K1 & K2). Security paper had wording "DocuGard" visible under UV light on known prescriptions (K1 & K2) while there is none on the questioned prescriptions (Q1 & Q2).
L8W28G	Based on visual and instrumental examinations of Exhibits Q1 and Q2 with Exhibits K1 and K2, it was determined Exhibits Q1 and Q2 are non-genuine prescriptions due to the following: Exhibits Q1 and Q2 do not contain the artificial watermark on the reverse side of the paper which is observed on Exhibits K1 and K2. The machine printed fonts used on Exhibits Q1 and Q2 are different from the fonts on Exhibits K1 and K2. The measurements of the lines (black border and signature/date) on Exhibits Q1 and Q2 are different from the lines on Exhibits K1 and K2. The Doctor's signature on Exhibits Q1 and Q2 is produced by toner technology (e.g., photocopier, laser printer) and is a reproduction of a signature, including some of the individualizing trash marks, produced by the Doctor's signature stamp which produced the signature observed on Exhibits K1 and K2. Based on visual and instrumental examinations of Exhibits Q1, Q2, K1, and K2, it was determined no discernible indented writing impressions were observed.
L97F7A	After examination and comparison, i reached the conclusion that the questioned items Q1 and Q2 are not authentic to the known exemplars K1 and K2.
LBWC4G	hypothesis 1: The document (Q1/2) is authentic, compared to K1 and K2. hypothesis 2: The document (Q1/2) is counterfeit, compared to K1 and K2. For both documents Q1 and Q2, the findings of the examination exclude hypothesis 1. Hypothesis 2 is true.
LHTEFX	The questioned prescriptions printed by offset containig the "Non authorized copy" anti copy pattern. The black text and frames printed by laser printer but the position and the size are different from the K1 and K2. The signature is also laser printed in contrast with the stamped samples.
LJNWYG	Items Q1 and Q2 were examined independently; the evaluations were conducted using the following set of propositions: H1: Item Qx (where x=1 or 2) is not an authentic prescription, versus H2: Item Qx (where x=1 or 2) is an authentic prescription (as defined in the submission and represented in the K samples). Conclusion: There is very strong support for proposition H1, rather than H2.
LPF89E	As a result of my examinations and comparisons, I determined that both questioned prescriptions Q1 & Q2 were produced in a different manner than the known exemplars K1 & K2 provided (e.g. different types of paper, printed vs stamp Doctor's signature). If the known exemplars provided represent the business practice of the issuing doctor: at the time indicated on the questioned prescriptions; and there is no deviation in the manner the prescriptions are prepared (e.g.using different brand/grade of secure paper); then Q1 and Q2 are not authentic to the known prescriptions (K1 & K2).
LQBMLC	The questioned prescriptions Q1 and Q2 are not authentic compared to the exemplar prescriptions K1 and K2.
MAV44V	Performed the analysis and comparison between documents doubt Q1 and Q2 versus those reference K1 k2 you had of this, it is determined that conclusion "E". Reply. This takes into account that questioned document Q1 and Q2 are made in similar substrate or format, but no correlation was found against the reference among other characteristics such as reaction to ultraviolet light, react in reference texts do not have the background of doubt, the provision in the graphic space not only the box that borders but also the content in general. The morphology of alphanumeric characters that hold the questioned documents

TABLE 3

WebCode	Conclusions
	not identified versus present in the reference, highlighting for example the letters "r" "a", "&" and several figures such as "1", " 2 "and" 9 ", among others. Likewise we can highlight other inconsistencies such as the location of firms in formulas doubt. In conclusion it is determined that the documents Q1 and Q2 do not correspond to the patterns provided.
MJMLH4	The questioned items (Q1 and Q2) is not authentic to the exemplars (K1 and K2).
MPGANB	Conclusions 1) Questioned prescription-James Denver, dated 3/14/16, is not an authentic prescription as represented by the known exemplars (known prescription-John Doe, dated 4/2/16, and known prescription-Jane Doe, dated 4/2/16). 2) Questioned prescription-Amanda Miller, dated 3/18/16, is not an authentic prescription as represented by the known exemplars (known prescription-John Doe, dated 4/2/16, and known prescription-Jane Doe, dated 4/2/16).
MUQM7A	It was determined that the James Denver prescription, Q1, and the Amanda Miller prescription, Q2, are not authentic to the known documents.
MZBZCJ	The two questioned prescriptions do not satisfy all the technical characteristics nor the filling of the genuine ones.
MZRUX7	The questioned prescriptions marked as Q1 and Q2 are not authentic to the known prescriptions marked as K1 and K2.
NAXXLG	Q1 and Q2, medical prescription do not have the characteristics of medical prescription K1 and K2 in items of paper and printing systems is concerned . The differences found are: 1.The role and K1 and K2 react to ultraviolet light, while Q1 and Q2 lack this. 2.The tagging of k1 and k2 coincide perfectly, while the letter head of Q1 and Q2 do not match to overlap K1 and K2. 3.The printed text of K1 and K2, are different to those of Q1 and Q2 on morphology size and sparing of signs. 4. The signatures of k1 and k2 denote characteristics of a wet seal impression, while Q1 and Q2 are a source printer printing. 5.Manual numbers that make up the date on k1 and k2 are graphic identity with digits of Q1 and Q2.
NH98WF	On the basis of all the examinations and the numerous inconsistencies between both the questioned and known documents, it is my opinion that the questioned prescription forms identified as Q1 and Q2 are not authentic as represented by the known documents submitted and identified as K1 and K2.
NNEQAM	It was determined that the Item 6 (CTS Item Q1) and Item 7 (CTS Item Q2) questioned prescriptions are not authentic to the Item 4 (CTS Item K1) and Item 5 (CTS Item K2) known prescriptions for the following reasons: Items 6 (CTS Item Q1) and 7 (CTS Item Q2) were not prepared using the same computer fonts as those used in Items 4 (CTS Item K1) and 5 (CTS Item K2). The doctor's name, address and phone number, the "Patient & DOB", the "Rx" and the "Signature & Date" on the Items 4 (CTS Item K1) and 5 (CTS Item K2) known prescriptions were prepared using a font which most closely corresponds to Perpetua, Lapidary 333, or other similar computer-generated fonts. The doctor's name, address and phone number, the "Patient & DOB", the "Rx" and the "Signature & Date" on the Items 6 (CTS Item Q1) and 7 (CTS Item Q2) questioned prescriptions were prepared using a font which most closely corresponds to Times New Roman or possibly other similar computer-generated fonts. The individual names, dates of birth, and drug information on the Items 4 (CTS Item K1) and 5 (CTS Item K2) known prescriptions were prepared using a font which most closely corresponds to Helvetica or other similar computer-generated fonts. The individual names, dates of birth, and drug information on the Items 6 (CTS Item Q1) and 7 (CTS Item Q2) questioned prescriptions were prepared using a font which most closely corresponds to Arial or possibly other similar computer-generated fonts. The "Sarathi Harris" signatures on Items 6 (CTS Item Q1) and 7 (CTS Item Q2) were produced using a toner technology process, and are images that share a common source to the original stamped impressions used as the signatures for Items 4 (CTS Item K1) and 5 (CTS Item K2). Items 4 (CTS Item K1) and 5 (CTS Item K2) bear a "DocuGard" printed watermark on the back of each document. Items 6 (CTS Item Q1) and 7 (CTS Item Q2) do not have any watermarks on the back of those documents. No indented writing, watermarks, or other physical characteristics were observed during the examinations of Items 6 (CTS Item Q1) and 7 (CTS Item Q2) which might indicate their immediate source(s). The printing on Items 4 (CTS Item K1), 5 (CTS Item K2), 6 (CTS Item Q1), and 7 (CTS Item Q2) was prepared using toner

TABLE 3

WebCode	Conclusions
	technology, which is commonly available on computer printers and photocopiers.
NZQFP4	(A).AFTER AN EXAMINATION AND COMPARISON I FOUND THAT THE TWO QUESTIONED DOCUMENTS MARKED "Q1" AND "Q2" ARE NOT AUTHETIC PRISRIPTIONS BASE ON THE FOLLOWING: 1. NON SECURITY PAPER WAS USED TO PRODUCE THE ABOVE MENTIONED DOCUMENTS. 2. THE FONT USED FOR THE QUESTIONED IS DIFFERENT TO THE ONE USED FOR THE KNOWN. (B). THE AUTHOR OF THE SPECIMEN "K1" AND "K2" DID NOT WRITE "Q1" AND "Q2".
P42QFD	It has been concluded that the two (2) questioned prescriptions Q1-Q2 are not authentic when compared to the two (2) exemplar prescriptions K1-K2. Therefore Q1-Q2 are not genuine prescriptions.
P86CDB	The questioned prescriptions Q1 & Q2 are not authentic to the provided exemplar prescriptions K1 & K2. During the examination it was determined that different paper was used to produce K1 & K2 and Q1 & Q2. For K1 & K2 security paper with secure printing on the reverse was used which causes a noticeable appearance under UV and IR light. Q1 & Q2 do not show this secure printing on the reverse. All four prescriptions are printed digitally by a laser printer. Q1 & Q2 and K1 & K2 are printed with different printer. The signatures on Q1 & Q2 are forged by using a laser printer and not using a signature stamp like K1 & K2. The secure blue background print of prescriptions Q1 & Q2 is not congruent with the background print of prescriptions K1 & K2 and therefore not printed with the same printing plate. On the basis of the facts that all details of the blue background print (dot size, dot shape, . .) especially in the areas of the switchover from small to bigger modulation it is possible that the digital print layout (prepress) for K1 & K2 as well was used to produce Q1 & Q2 but was stretched in horizontal direction before the printing plate was produced. Further investigation at the printing house is recommended.
PADRKG	An examination and comparison of the items submitted was conducted. As a result, it is this examiner's opinion that the Q1 and Q2 items are not authentic prescriptions as represented by the known exemplars.
PAVM64	The questioned prescriptions "Q1" and "Q2" are not authentic prescriptions. My results are based on the folowing observations: 1."k1" and "k2" are printed on a security paper and "Q1" and "Q2" are printed on a non-security paper. 2.The font used on "Q1" and "Q2" differ with the one on "k1" and "k2"
PB264Y	After an analysis and comparison, the following observations were made: Pertaining to the documents marked "Q1" and "Q2": Both documents are computer generated "lazer printed" excluding the handwritten dates. The documents contain no security features when exposed to ultra violet light. The stamp impressions are not real stamp impressions, but have been printed. The font does not conform to those of "K1" and "K2". Pertaining to the documents marked "K1" and "K2": The documents are computer generated. The documents contain some security features when exposed to ultra violet light. The documents signatures are stamp impressions. Based on the aforementioned observations I came to the conclusion that the documents marked "Q1" and "Q2" are forgeries.
PKC8NZ	Due to the fact that the back of the Questioned documents marked Q1 and Q2, when exposed to UV light source do not reveal any security printing and the signatures on the questioned documents were not original signatures as they were copied on paper and it proves that the questioned documents are forgeries. Furthermore the font weight, size and style of the questioned documents differ from the font weight, size and style of exemplar prescriptions marked K1 and K2. The observations mentioned above led to my conclusion that the questioned documents marked Q1 and Q2 are forgeries.
PUKXBC	A macroscopic and microscopic examination of Exhibits Q1 and Q2 revealed that the machine generated entries and the "Sarathi Harris" signatures were produced by using toner technology. In addition, differences in the font style and font size were noted between Exhibits Q1, Q2 and K1, K2. A macroscopic and microscopic examination of Exhibits Q1 and Q2 with ultraviolet, infrared and infrared luminescent light sources revealed the following: Differences in the paper composition were noted between Exhibits Q1, Q2 and Exhibit K1, K2. The date entries were prepared with original black ballpoint ink; however, at this level of analysis, the inks on Exhibits Q1 and Q2 were not distinguishable from the inks on Exhibits K1 and K2. Exhibits Q1 and Q2 were examined for the presence of handwriting indentations using the Electrostatic Detection Apparatus (ESDA) with negative results. The

TABLE 3

WebCode	Conclusions
	questioned handwritten dates on Exhibits Q1 and Q2 appear to be naturally written and contain a sufficient amount of identifiable characteristics for comparison with submitted known writing. Exhibits K1, K2, Q1 and Q2 were digitally scanned and a CD of the digital images, designated as Exhibit QDCD1, will be retained by this laboratory as evidence.
QBL9BZ	After examination and comparison the following finding was reached that the questioned items "Q1" and "Q2" are not authentic to the known exemplars "K1" and "K2" due to the following aspects: 6.1 The alignment of the telephone number at the top of the questioned scripts to the line beneath the number does not correspond to the alignment of the telephone number at the top of the exemplar scripts to the line beneath the number. 6.2 Under UV examination the Security phrase visible on the reverse side of the exemplar scripts as 'DocuGard' does not appear on the questioned scripts 'Q1' and 'Q2'. 6.3 The marks left by the stamp used on exemplar scripts "K1" and "K2" do not appear on the questioned scripts as the signature mark was not stamped but printed on as indicated by the toner particles visible in the background. 6.4 The small letter "a" and figure "2" on "K1" and "K2" are of different font types as compared to those of "Q1" and "Q2".
QNPku7	1. Exhibit 3 (Q1) and Exhibit 4 (Q2) are not authentic to the known prescriptions (Exhibits 1 (K1) and 2 (K2)). This finding is based upon the presence of multiple significant differences between the questioned and known prescriptions to include, but not limited to the following observations: a. The fonts used to produce the printed text on the questioned prescriptions (Exhibits 3 and 4) are internally consistent but differ from the fonts used to produce the printed text on the known prescriptions (Exhibits 1 and 2). b. An artificial watermark (i.e., DocuGard) is present on the back of the known prescriptions (Exhibits 1 and 2). This security/design feature is not present on either of the questioned prescriptions (Exhibits 3 and 4).
QPHKJ4	The questioned prescriptions "Q1" and "Q2" are not authentic. They differ from the known exemplar prescriptions "K1" and "K2" in respect of the following: 1. The questioned prescriptions "Q1" and "Q2" do not have the UV feathers as on the known exemplars "K1" and "K2". 2. The signatures on the questioned prescriptions "Q1" and "Q2" do not have indentations at the back as on the known exemplars "K1" and "K2". 3. The font used on the questioned prescriptions "Q1" and "Q2" is different to the one used on the known exemplars "K1" and "K2"
QPK4W8	The questioned prescriptions in Items Q1 and Q2 were compared to the known prescriptions in Items K1 and K2. Differences were observed between the questioned and known items. The fonts used to produce the printed text on the prescriptions in Items Q1 and Q2 were not consistent with the fonts used to produce the printed text on the prescriptions in Items K1 and K2. The signatures at the bottom of the prescriptions in Items Q1 and Q2 were produced with toner technology whereas the signatures at the bottom of the prescriptions in Items K1 and K2 were original stamp impressions. Furthermore, the security features on the paper in Items Q1 and Q2 were not consistent with security features on the paper in Items K1 and K2, such as the lack of the coin-reactive watermark on the reverse of the paper in Items Q1 and Q2. If Items K1 and K2 were produced in the only manner used by the doctor's office, then Items Q1 and Q2 are not authentic. The hand printed dates at the bottom of each prescription in Items K1 – Q2 were evaluated to determine if they were suitable for comparison. Due to the limited quantity and quality of the questioned and known writing, these dates are not suitable for comparison. Therefore, no conclusion is given regarding common authorship of these dates. The prescriptions in Items Q1 and Q2 were also examined for the presence of indented impressions. Indented impressions are, generally, left on a document which has been in contact with another document during the writing process. Indented impressions are subject to more than one interpretation when deciphered. The EDD lifts that were produced during the indented impression examination of the prescriptions in Items Q1 and Q2 were uniquely identified as Q1A1, Q1A2, Q2A1, and Q2A2. The lifts may be viewed upon request. No unsourced, decipherable indented impressions developed on the lifts in Items Q1A and Q2A.
QPZEKD	Q1 and Q2 differ from the example prescriptions concerning production (signature, font) and used materials (security papers).
QQUZD6	The exhibits marked "Q1" and "Q2" are not authentic to the exhibits marked "K1" and "K2".

TABLE 3

WebCode	Conclusions
QQXK3T	The disputed recipes (Q1 and Q2), do not correspond to the type of paper, reaction in the ultraviolet (UV), topographical layout of the information the grantor doctor as well, the impresivos systems with which their signatures are stamped respect of authentic samples that provided the doctor.
QUE36B	Due to the major differences between the questioned and sample prescriptions, the questioned prescriptions, items Q1 and Q2, are not authentic to the known documents and are, in my opinion, forgeries.
QV6B4D	[No Conclusions Reported.]
R2AAGP	In view of the significant differences observed, it was concluded that the questioned prescriptions "Q1" and "Q2" were not authentic compared to the known prescriptions "K1" and "K2" provided. In particular, the "signature stamp impressions" on "Q1" and "Q2" were found to be printed instead of produced with a stamp, and differences in printing fonts and paper were also observed between the questioned and known prescriptions.
R2B4XA	The questioned prescriptions(Q1, Q2) are NOT AUTHENTIC to the known documents(K1, K2).
R36EQB	[No Conclusions Reported.]
R73BGH	It was determined that Item 6 (CTS Item Q1) and Item 7 (CTS Item Q2) are not genuine prescriptions due to the absence of UV security features on the questioned prescriptions that appear on the Item 4 (CTS Item K1) and Item 5 (CTS Item K2) known prescriptions, the inconsistencies in font style and design between the questioned and known prescriptions, and the lack of a stamped impression signature on the Item 6 (CTS Item Q1) and Item 7 (CTS Item Q2) questioned prescriptions. The signatures on Item 6 (CTS Item Q1) and Item 7 (CTS Item Q2) were prepared using toner printing technology. This technology is available on numerous brand name computer printers, photocopiers, and other office machines. Additional assessments and observations have been made regarding the submitted items and recorded for possible future comparisons.
RBW869	The questioned prescriptions Q1 an Q2 are not authentic to the known documents K1 and K2
RBZRVX	IN LIGHT OF THE ABOVE OBSERVATIONS I CAME TO THE CONCLUSION THAT THE PRESCRIPTIONS IN QUESTION Q1 AND Q2 ARE FORGED.
REVLTY	Pertaining to the documents marked "Q1" and "Q2": The documents do not contain a "DocuGard" security feature. The signatures on the documents have been printed in Laser. The font used differs to the font used in documents marked "K1" and "K2". Pertaining to the documents marked "K1" and "K2": The documents contain a "DocuGard" security feature. The signatures on the documents differ to that of "Q1" and "Q2". Based on the aforementioned observations, I came to the conclusion that the documents marked "Q1" and "Q2" are forgeries.
RG34RU	I have examined the Q1 and Q2 documents and determined the following: 1. They exhibit the Screen Angle Modulation print characteristic of the specimen documents. 2. The security characteristic introduced during the document issuing process has been introduced by toner process, not wet ink as per the specimen. 3. The header and personalisation text has been printed on the document in a different font to that demonstrated by the specimen. It is my opinion that the documents Q1 and Q2 are not authentic.
RG4X9E	Using non-destructive methods, it was determined that Item 6 (CTS Item Q1) and Item 7 (CTS Item Q2) are not genuine when compared with the Item 4 (CTS Item K1) and Item 5 (CTS Item K2) prescriptions. The following observations were made: A printed "Docugard" watermark was observed on Item 4 (CTS Item K1) and Item 5 (CTS Item K2), and absent on Item 6 (CTS Item Q1) and Item 7 (CTS Item Q2). The "Sarathi Harris" signatures on Item 6 (CTS Item Q1) and Item 7 (CTS Item Q2) were prepared using toner technology. This technology is available on numerous brand name printers and copiers. In addition, "Sarathi Harris" signature stamps similar to Item 4 (CTS Item K1) and Item 5 (CTS Item K2)

TABLE 3

WebCode	Conclusions
	<p>were used directly or indirectly to prepare the "Sarathi Harris" signatures on Item 6 (CTS Item Q1) and Item 7 (CTS Item Q2). The computer font used to prepare the top portion of the prescriptions beginning "Dr. Sarathi Harris", and ending "...888-123-8809", and the formatted titles "Patient & DOB:", "Rx:", and "Signature & Date" are the same for Item 4 (CTS Item K1) and Item 5 (CTS Item K2), most closely corresponding to Perpetua and Lapidary 333, and possibly others, and different for Item 6 (CTS Item Q1) and Item 7 (CTS Item Q2), most closely corresponding to Times New Roman, and possibly others. The computer font used to prepare the individual names, date of birth, and drug information is the same for Item 4 (CTS Item K1) and Item 5 (CTS Item K2), most closely corresponding to Helvetica, and possibly others, and different for Item 6 (CTS Item Q1) and Item 7 (CTS Item Q2), most closely corresponding to Arial, and possibly others. The Item 4 (CTS Item K1) and Item 5 (CTS Item K2) signature lines are longer in length than the Item 6 (CTS Item Q1) and Item 7 (CTS Item Q2) signature lines. No indented writing was observed on Item 6 (CTS Item Q1) and Item 7 (CTS Item Q2). Additional assessments and observations have been made on the submitted items.</p>
RJC26C	The results of the forensic examination of the example prescriptions K1+K2 and the prescriptions Q1+Q2 prove that the questioned prescriptions are not authentic to the known documents K1+K2.
RNM688	Both of the questioned prescription forms in question were determined to be non-genuine. The following significant differences were identified between the questioned and known prescription forms: 1. A different font was used. 2. The signature of Dr. Harris on the questioned prescriptions were not made with a rubber stamp. They were printed with toner technology. 3. The questioned prescriptions did not have the security image on the back side, reading, "DocuGard". Although marginally visible to the naked eye, the image was quite vivid when viewed with ultraviolet light.
T26CJX	After examination of the questioned prescriptions marked "Q1" and "Q2" and comparison with the specimen prescriptions marked "K1" and "K2" I reached the conclusion that the questioned prescriptions are fraudulent.
T64MEX	After analysis and comparison with the specimen documents it has proven that the disputed "Dr. Sarathi Harris" medical certificate documents marked "Q1" and "Q2" are not authentic
TFM686	The finding that the questioned items "Q1" and "Q2" are not authentic to the known exemplars "K1" and "K2".
U7V7U6	It has been concluded that the two (2) questioned prescriptions Q1-Q2 are not authentic when compared with the two (2) exemplar prescriptions K1-K2. The two (2) questioned prescriptions are not genuine.
UELN9D	Q1 (prescription of James Denver dated March 14, 2016) and Q2 (prescription of Amanda Miller dated March 18, 2016) is not authentic in relation to the reference samples (K1 y K2)
UJ2YLG	It was determined that Items 6 (CTS Item Q1) and 7 (CTS Item Q2) are not genuine due to the following observed differences with Items 4 (CTS Item K1) and 5 (CTS Item K2): Items 4 (CTS Item K1) and 5 (CTS Item K2) contain a ultra-violet reactive "DocuGard" feature on the back of each document while Items 6 (CTS Item Q1) and 7 (CTS Item Q2) do not contain this feature. Items 4 (CTS Item K1) and 5 (CTS Item K2) contain a stamped ink signature while Items 6 (CTS Item Q1) and 7 (CTS Item Q2) have a toner printed signature. Items 4 (CTS Item K1) and 5 (CTS Item K2) contain differences in printed formatting as well as differences in the spacing and design of the font than those found in Items 6 (CTS Item Q1) and 7 (CTS Item Q2). Additional assessments and observations have been made regarding the submitted specimens and are recorded for possible future comparison.
UWLG4	Based on the observed differences between the K and the Q documents, in my opinion, Q1 and Q2 are not genuine prescriptions.
UYY4Z7	Based on the side by side comparisons of the questioned documents located in items Q1 & Q2 to the known submitted exemplars (K1 & K2) located in Item K1 & K2 it is my opinion that: The Q1 James Denver prescription located in Item Q1 and the Q2 Amanda Miller prescription located in Item #Q2 are not authentic prescriptions to the known documents.

TABLE 3

WebCode	Conclusions
V7NDET	After an examination and comparison, the following observations were made: Pertaining to the documents marked "K1" and "K2": The documents contain certain security features. The signatures are created by using a signature stamp. Pertaining to the documents marked "Q1" and "Q2": The documents do not contain all of the security features that are contained in "K1" and "K2". The signatures have been printed by means of using the "laser" printing process and are not stamp impressions as they are on "K1" and "K2". The font used differs to the documents marked "K1" and "K2". Based on the aforementioned observations, I came to the conclusion that the documents marked "Q1" and "Q2" are forgeries.
V7TVDR	After an examination and comparison the following observations were made: When exposed to ultraviolet illumination the reverse sides of the documents marked Q1 and Q2 do not display the security features found on the documents marked K1 and K2. The font type used for the variable and permanent information in the documents marked Q1 and Q2 differs from the font type used for the variable and permanent information in the documents marked K1 and K2. The "signatures" in the documents marked Q1 and Q2 are not actual stamp impressions, but have been printed. Based on the aforementioned observations, I came to the conclusion that the documents marked Q1 and Q2 are forgeries.
VFCAEA	The known exemplars Items K1 and K2 were compared visually, microscopically, instrumentally and with various light sources to Items Q1 and Q2 with the following results: The questioned prescriptions, Items Q1 and Q2, are not authentic to the known prescriptions Items K1 and K2. Items Q1 and Q2 were examined for the presence of indented writings. Indentations of this sort are commonly caused when writing is performed on a document on top of it. No decipherable indentations were developed on Exhibits Q1 and Q2.
VGBEXN	The questioned prescriptions were created using software that differs from that which created the known prescriptions. The vertical and horizontal spacing is similar between the known prescriptions. The spacing is similar between the questioned prescriptions. My opinion is the questioned prescriptions were printed on the same printer which differs from the printer used to print the known prescriptions. There are indications that the dates on the questioned prescriptions were written by someone other than the person who wrote the dates on the known prescriptions.
W7BYT6	The paper of Q1 and Q2 is different of K1 and K2. It is not secured and the wire marks are not the same. The signature on Q1 and Q2 is printed differently to K1 and K2. The layout is slightly different and toners too. Provided there has not been a change in prescription's manufacturing between march and april, Q1 and Q2 are not authentic to the known documents (K1 and K2). They are forgeries.
W828T9	[No Conclusions Reported.]
W8GT3A	The paper and the characteristics of impressions exhibited in the medical prescriptions of James Denver (Q1) and Amanda Miller (Q2) not correspond the paper security and type impression exhibited in authentic documents envoys of John Doe (K1) and Jane Doe (K2).
W8ZDCN	The questioned prescriptions Q1 and Q2 are not authentic to the known documents.
WBKCB4	Based on differences in physical, optical, and printing characteristics with Item 4 (CTS Item K1) and Item 5 (CTS Item K2), it was determined that the Item 6 (CTS Item Q1) and Item 7 (CTS Item Q2) prescription documents are not genuine. No indented writing was observed on items 6 (CTS Item Q1) and Item 7 (CTS Item Q2).
WGQVQW	The questioned prescription "Q1" and "Q2" are not authentic to the known documents "K1" and "K2".
WMR8LT	The comparison of the respective material revealed to me the following: 1 The numerals overall amongst the "questioned" and the "specimen" documents do not display any strong individual characteristics in terms of style and execution (including, inter alia, design, size, dimension, spacing, slope and any ornamentation or intricate unique feature), except for the numeral "4". The numeral "4" on the "questioned" documents marked as "Q1" and "Q2" and the "specimen" documents marked as "K1" and "K2" display differences regarding construction and design suggesting that the dates were not

TABLE 3

WebCode	Conclusions
	written by the same author. 2 The signatures on the "questioned" documents marked as "Q1" and "Q2" are printed whereas the signatures on the "specimen" documents marked as "K1" and "K2" are stamped impressions. 3 Differences regarding the font of the "questioned" documents marked as "Q1" and "Q2" and the font of "specimen" documents marked as "K1" and "K2" can be identified. 4 The paper of the "questioned" documents marked as "Q1" and "Q2" bear no security feature like that of the security feature found to be on the paper of the "specimen" documents marked as "K1" and "K2". Based on the aforementioned observations, I came to the conclusion that the documents in question are counterfeit.
WVPQB4	For the purposes of this examination, it is assumed that the Known prescriptions, items 1.1 (K1) & 1.2 (K2), are a true and accurate representative sample of the genuine documents. It is my opinion that the evidence provides very strong support for the proposition that the questioned prescriptions, items 1.3 (Q1) & 1.4 (Q2), are not genuine documents as compared to the specimen sample prescriptions, items 1.1 (K1) & 1.2 (K2).
X7KBZ9	Results of Examinations: It was determined that the Item 6 (CTS Item Q1) and Item 7 (CTS Item Q2) questioned documents are not genuine based on the following characteristics observed when compared to the submitted known documents, Item 4 (CTS Item K1) and Item 5 (CTS Item K2): Differences in font; Differences in the preparation of the signatures; Differences in alignment of text in relationship to the format of the prescriptions and differences in the length of signature and date line; Differences in security features of the paper. The signatures located on Item 6 (CTS Item Q1) and Item 7 (CTS Item Q2) are printed using toner technology. These signatures have characteristics in common with the known stamped signatures on Item 4 (CTS Item K1) and Item 5 (CTS Item K2) which indicate that the questioned signatures on Item 6 (CTS Item Q1) and Item 7 (CTS Item Q2) share a common source at some point in time with the known stamped signatures on Items 4 (CTS Item K1) and 5 (CTS Item K2). Additional observations and assessments were made on the submitted items for possible future examinations.
X8VFEX	After examination and comparison with the sample documents I conclude that the documents in question "Q1" and "Q2" are not authentic, they differ from the sample document "K1" and "K2". The documents in question "Q1" and "Q2" does not have background printing whereas the sample documents "K1" and "K2" have background printing. The on a signature on the documents in question "Q1" and "Q2" is smaller than the one on signature on the sample documents "K1" and "K2". The font of the documents in question "Q1" and "Q2" is not the same as of the sample documents "K1" and "K2".
XBVNH8	Physical, microscopic, instrumental, and comparative examination resulted in the following findings: The Exhibit Q1 and Q2 questioned prescriptions do not conform to the submitted K1 and K2 known prescriptions, and are counterfeit. This finding is based on a lack of security features and incorrect production methods. No evidence of alteration was noted.
XR4HC3	The questioned prescriptions (Q1 and Q2) are not authentic to the known prescriptions.
XX7RGA	It is very probable that the prescriptions mèdicas (Q1) James Denver y (Q2) Amanda Miller is not authentic.
XXAB7X	The questioned prescriptions "Q1" and "Q2" are not authentic to the known documents "K1" and "K2".
XY4WZP	In my opinion, the questioned prescription (Q1, Q2) is not authentic to the known documents (K1, K2).
Y23VNM	Items Q1 and Q2 are fraudulent (forgeries).
Y3XDPN	Characteristics were observed in the Q1 and Q2 specimens that are not consistent to the K1 and K2 specimens indicating the Q1 and Q2 specimens are not authentic to the known specimens submitted.
Y3Y879	The results of the document examination indicate that the questioned prescriptions Q1 and Q2 are not authentic to the known documents (K1 and K2). Basic evidence for this is: The typographical coincidence but different positioning among the signatures printed on Q1, Q2 and K1, K2. A different printing

TABLE 3

WebCode	Conclusions
	technology between the signatures printed on Q1, Q2 (laser printer) and those on K1, K2 (inkjet printer). Security printing "Docu Gard" on the backside on K1 and K2. In comparison with K1, K2 there is no printing pattern on the back sides of Q1 and Q2. The paper of K1 and K2 and the paper of Q1 and Q2 show similar characteristics in the UV-range among each other but they have for each group a different allocation of optical brighteners.
YCKCFT	The analysis and comparison of known exemplars (K1 & K2) with the questioned documents (Q1 & Q2) give evidence that they are not from the same source.
YNDVUY	After examined Q and K observed dissimilarity between size, space (line to line), area of letter (toner), process to stamp the signature. Documents K have watermark "DocuGard" and logo, but documents Q don't have watermark and logo. When examined a date in Q and K, I see indication of two writing.
YPT7XX	Q1 has been identified as a non-genuine prescription. This is a definitive opinion on non-genuineness with the highest degree of certainty. Q2 has been identified as a non-genuine prescription. This is a definitive opinion on non-genuineness with the highest degree of certainty.
YX3JRM	Based on the findings of the examination we can conclude that the questioned prescriptions Q1 and Q2 are counterfeited. The known prescriptions K1 and K2 are printed on security paper, while the questioned prescriptions Q1 and Q2 are not. Furthermore the signature on the known prescriptions K1 and K2 is made with a stamp, while on the questioned prescriptions Q1 and Q2 the signature is printed with toner (laser printer).
YXMZ8P	In light of the above analysis and results I came to the conclusion that the questioned prescriptions marked Q1 and Q2 differs from the exemplars marked K1 and K2 and are thus not authentic documents.
Z24P68	The Item 6 (CTS Item Q1) and Item 7 (CTS Item Q2) prescriptions are not genuine due to the following significant disagreement with the known documents Item 4 (CTS Item K1) and Item 5 (CTS Item K2): The absence of an artificial watermark on the questioned items which is present on the known items. The signatures on the questioned items were produced with toner technology rather than an inked impression produced by a mechanical stamping device. The font appearing on the questioned items is different than the font appearing on the known items. The signatures on the Item 6 (CTS Item Q1) and Item 7 (CTS Item Q2) questioned items, which were produced with toner technology, originated from the same stamping device used to produce the Item 4 (CTS Item K1) and Item 5 (CTS Item K2) known signatures, either directly or indirectly. No indented writing of significance or other physical characteristics were observed on Item 6 (CTS Item Q1) or Item 7 (CTS Item Q2) which would further assist in determining their immediate origin.
Z6JBYZ	When I compared specimens "K1" and "K2" with questioned "Q1" and "Q2", I found: i. difference in font type used in letterhead and in printed texts "Patient & DOB", "Rx" and "Signature & Date"; ii. difference in production process for the signature; and iii. absence of "DocuGard" logo on the reverse page of questioned "Q1" and "Q2". In view of the above findings, the questioned "Q1" and "Q2" are not genuine as compared to the specimens "K1" and "K2".
Z7ET22	Exhibits K1, K2, Q1, and Q2 were examined visually, microscopically, under transmitted, ultraviolet, infrared, and infrared luminescent light sources in conjunction with a magnetic ink optical magnifier and the results are as follows: Differences in the paper were noted between the questioned prescriptions (Exhibits Q1 and Q2) and the purported known standards (Exhibits K1 and K2). Please see the attached images for details. Differences in the font used in the machine-generated entries were also noted between the questioned prescriptions and the purported known standards. Please see the attached images for details. Additionally, the Sarathi Harris signature entries on the questioned prescriptions were produced with toner technology whereas the Sarathi Harris signature entries on the known standards were produced with a liquid-based ink. The original ink "3/14/16" and "3/18/16" date entries on Exhibits Q1 and Q2 were compared to the original ink "4/2/16" date entries on Exhibits K1 and K2. These original ink entries were not distinguishable at this level of analysis. Exhibits K1, K2, Q1, and Q2 were also examined for the presence of handwriting indentations using an Electrostatic Detection Apparatus (ESDA) but the results were negative. No conclusion could be rendered regarding the

TABLE 3

WebCode	Conclusions
ZGH4CW	<p>authorship of the questioned handwritten date entries on Exhibits Q1 and Q2 due to an insufficient amount of comparable known writing submitted for comparison. [Images not included in this report.]</p> <p>The questioned and genuine documents were evaluated visually, microscopically, with the aid of a scanner, and with a video spectral comparator, and were processed for indented writing using an electrostatic detection apparatus. Differences were observed between the security paper used to produce the questioned samples versus the known samples. Differences were observed between the toner used to create the signature on the questioned samples versus the known samples indicating they were produced from different files or on different printers. If the known samples completely represent authentic documents, the questioned samples are not authentic.</p>
ZXH3CJ	<p>5. The differences between the questioned and genuine prescriptions are significant and show that the questioned prescriptions were not prepared in the manner used for the genuine examples. The fact that the questioned prescriptions closely mimic the style and format of the known examples indicates that they were prepared by someone familiar with genuine prescriptions of that form. 6. My observations do not indicate who was responsible for the preparation of the questioned prescriptions. They could have been prepared by the doctor using different methods for reasons innocent or otherwise; they could have been prepared by another person or persons to obtain the pharmaceuticals without a legitimate prescription.</p>

Additional Comments

TABLE 4

WebCode	Additional Comments
2T7ECM	A forgery is a process of making, adapting of imitating objects, statistics or documents with the intent to deceive for the sake of altering the public perception or to earn profit by selling the forged item.
34ZE2W	It would have been beneficial to have had some more known prescriptions which post-dated the questioned prescriptions or which were more contemporaneous in date to the questioned prescriptions.
3CBGMX	The questioned documents Q1 and Q2 could not be differentiated from each other. It is highly probable, that they have come from the same source.
3FVCDW	Using multiple examination methods, several fundamental dissimilarities between the construction of the known and questioned documents were observed between the two. There is evidence to show that the questioned documents are not authentic to the known documents with: Differences between the two can be observed in font size and type. Security paper has been used in the known documents. Suspected Signature forgery: Upon physically overlaying the signatures, both Q and S sigs appear to be an exact match. This indicates that a digital cut and paste forgery may have occurred or some may have had access to the model electronic sig.
6AZDPR	1. A physical match was conducted between the question documents marked "Q1" and "Q2" and the example documents marked "K1" and "K2". "Q1" and "Q2" differ in type of font and the layout on documents marked "K1" and "K2". 2. The ultra violet light reveal the wording "DOCUGARD" on the back of documents "K1" and "K2", could not be seen on documents "Q1" and "Q2". 3. No indentations could be found on the documents marked "Q1" and "Q2". 4. The signatures on "Q1" and "Q2" is in size and design the same as on "K1" and "K2" although when the signatures on "Q1" and "Q2" are enlarged, a toner offset could be seen, and differ in the way it was transfer on documents "K1" and "K2".
79HJNG	The signatures that appear in "K1" and "K2" should be original. It is not possible to determine if the handwritten dates have been realized by the same hand. In spite of the fact that we have observed differences between " K1 - K2 " and "Q1-Q2" (different response to an ultraviolet light source, signatures "K1-K2" printed with inkjet and "Q1-Q2" printed with laser, etc.), IT IS NOT POSSIBLE TO DETERMINE IF "K1" and "K2" ARE AUTHENTIC DUE TO THE FACT THAT THE CHARACTERISTICS DO NOT ASSEMBLE TO BE ABLE TO CONSIDER THEM TO BE UNMISTAKABLES.
7C6CNQ	All documents submitted for examination and analysis have been scanned and photocopied and will be returned with a copy of this report. This report reflects the conclusions, opinions and/or interpretations of the analyst and technical reviewers as indicated by their signatures below.
7X3WDV	Examination using ESDA was also performed but no significant information was observed.
7YXFEW	The signatures on Q1 and Q2 are images of a handstamp impression that have originated from the same source as those on K1 and K2. Q1 and Q2 are printed on a security paper but it contains fewer features than that used for K1 and K2.
8K766W	If court testimony is required, please notify this examiner at least two weeks prior to such so that court demonstrative charts can be prepared. Evidence listed on Invoice # Q111717 will be forwarded to Evidence Control Section.
8PNG9T	If this was an actual case submitted to the lab it is unlikely a conclusion like the one stated above would be issued. A report would likely contain the observations made during the examination. An assumption that all prescriptions from a particular office are created the same would not be made.
8YRKBG	THE FINDINGS WERE MADE THROUGH THE APPLICATION OF THE 'LAW OF ACE' (ANALYSIS,COMPARISON AND EVALUATION), THE FUNDIMENTAL PRINCIPLE UNDERLYING HANDWRITING AND SIGNATURES EXAMINATION, AND THE USED OF RELEVANT EQUIPMENTS SUCH AS VSC AND MICROSCOPE FOR COMPARISONS.
9GPZB8	Per the [Laboratory] Operations Manual - Section 6.5, "References related to a manufacturer's data shall only be referenced in the test report if the information is provided on the manufacturer's letterhead or

TABLE 4

WebCode	Additional Comments
	through the manufacturer's official correspondence." Thus, the [Laboratory] does not use websites to obtain manufacturer's information per CTS' suggestion. The [Laboratory] reached out unsuccessfully to the manufacturer and received no response by the deadline of this test.
AFQGKQ	There are two alternative explanations for the similarities and the differences between the known and questioned prescriptions. Either a) the prescribing Doctor (for whatever reason) has a second parallel or backup system for the issue of prescriptions that would resemble the provided genuine prescriptions, but differ in the actual detail of production because of using different paper, typeface and printer. This has not been demonstrated in the small sample of only two supplied genuine prescriptions, but cannot be entirely excluded. Or b) both Q1 and Q2 are close copies of genuine prescriptions made by someone with close (but not exact) knowledge of genuine prescriptions. If the possibility of a legitimate different version of the prescriptions can be eliminated I would be certain that the Q1 and Q2 prescriptions are not genuine documents.
APHL3R	Since we found such clear other discrepancies between Q1/Q2 and K1/K2 we did not find it necessary to do a proper hand-writing examination. Scale of conclusions (for [Laboratory]) The scale of conclusions is based on the logical approach and is constructed exclusively for evidence evaluation at [Laboratory]. Level +4 The results of the examination extremely strongly support that ... The results are extremely more probable if the main hypothesis is true compared to if the alternative hypothesis is true. Level +3 The results of the examination strongly support that ... The results are much more probable if the main hypothesis is true compared to if the alternative hypothesis is true. Level +2 The results of the examination support that ... The results are more probable if the main hypothesis is true compared to if the alternative hypothesis is true. Level +1 The results of the examination support to some extent that ... The results are somewhat more probable if the main hypothesis is true compared to if the alternative hypothesis is true. Level 0 The results of the examination support neither ... nor ... The results are equally probable if the main hypothesis is true compared to if the alternative hypothesis is true. Level -1 The results of the examination support to some extent that ... was not ... The results are more probable if the alternative hypothesis is true compared to if the main hypothesis is true. Level -2 The results of the examination support that ... was not ... The results are more probable if the alternative hypothesis is true compared to if the main hypothesis is true. Level -3 The results of the examination strongly support that ... was not ... The results are much more probable if the alternative hypothesis is true compared to if the main hypothesis is true. Level -4 The results of the examination extremely strongly support that ... was not ... The results are extremely more probable if the alternative hypothesis is true compared to if the main hypothesis is true. If one of the hypotheses can be excluded other terms are used, such as "it is", "it is not" or "it can be excluded that".
AYMXTU	Submission of two types of additional known writing samples by the known writer could enhance a subsequent examination of this case and may result in a more conclusive opinion. These samples are: Requested - These samples should be taken on twenty (20) to thirty (30) sheets of paper, duplicating the questioned document(s) in size, shape, and format. The text of the questioned document(s) should be written verbatim, at the dictation of the investigating officer. Do not allow the writer to see the questioned writing prior to producing the samples, and remove each exemplar from view after it is written. Collected - Provable writing samples that were produced in the past during the course of the subject's normal daily affairs, such as legitimate canceled checks, job applications, court records, etc. These samples help verify that the writing samples taken at the request of the investigating officer are normally written. These samples also offer a broader range of an individual's writing for examination. In the event of a refusal to provide writing exemplars, the investigating officer should contact the Questioned Document Unit for information on how to obtain compelled writing exemplars.
B8U29R	Due to the given wording of the purpose, it was necessarily taken to be that K1 and K2 are indicative of all possible authentic instances of prescription generation, with no consideration given to other scenarios involving multiple printers or doctor's office protocols. Consideration of the various features of each of these four documents was undertaken in order to assess the following pair of hypotheses: 1) The documents Q1 and Q2 are not authentic as represented by the known documents K1 and K2. 2) The documents Q1 and Q2 are authentic as represented by the known documents K1 and K2. The features present on each of the four items were assessed and several inconsistencies were observed that were not able to be readily explained. Accordingly this evidence provides strong support for the hypothesis that the

TABLE 4

WebCode	Additional Comments
	documents Q1 and Q2 are not authentic (hypothesis 1) as represented by the known exemplars, rather than the alternative hypothesis (2) above.
BPVNZQ	The evaluations and interpretations of the evidence are dependent upon the known documents being representative of the documents and materials used for the production of prescriptions.
CGABCB	The font used on documents marked Q1 and Q2 differs from the font used on documents marked K1 and K2.
CGXD77	The two forms observed in the K1 and K2 formulas, have full similarity, so the inquietude of whether they are digitized forms arises, although the exercise we are informed that the physician after signing the document has been printed
CQW9ZV	The documents in question have the same quality and the same text in background printing of the front side. The documents in question have not fluorescent printing (observable to UV light) on the back side of the reference prescription. The font and the size used in the body of the documents in question are different compared with the reference prescription. The printing system of the signature in the documents in question (granules toner) is different to that used in reference prescription (wet seal).
CQZTQJ	After an examination and comparison of questioned prescriptions marked as "Q1" and "Q2" with the specimen prescriptions marked as "K1" and "K2" I reached a conclusion that the questioned exhibits are counterfeit. They differ from the known specimen prescriptions in respect of the following: 8.1 The distance of the printed text to the baseline of the header; 8.2 The length baseline at the footer of the page; 8.2 Text style/ font style (i.e. slant of the ampersand, construction of the numeral 2 and letters); 8.5 None of the ultraviolet security features as contained in the known specimen prescriptions ("emblems and the word DOCUGUARD") are present during ultraviolet exposure at 365nm.
CVMNKK	The above conclusion was reached by using methods of examination which requires proficiency in the examination of disputed documents and the following instruments and techniques were used. Stereo Microscopy used for visual magnification observation, VSC 400 using Ultraviolet exposure at 365nm. The careful and systematic analysis of all facts of document examination, which is common to the many discipline of forensic science, is directed towards the identification of the unknown. The process underlying such identification involves three distinct phases namely: analysis, comparison and evaluation (also referred to as the Law of ACEs). Analysis: The "unknown" (or disputed) and the "known" (or specimen) material must, by analysis, examination or study, be reduced to a matter of their discriminating elements. These are the features and characteristics that serve to differentiate between the respective materials; Comparison: The discriminating elements of the "unknown" material are compared with those of the "known" material; Evaluation: Similarities and/or dissimilarities in the discriminating elements will each have certain significance for discrimination purpose, determined by their cause, independence or likelihood of occurrence.
CZR3JM	Handwriting examination of the date entries on K1, K2, Q1 and Q2 was not done as the entries were found to be limited for effective comparison.
D2DFCP	It may be possible to conduct a proper forensic comparative handwriting examination of the dates found on Q1 and Q2 if a suspect writer could provide 10 to 20 known exemplars in the exact text of the questioned writing (dates). Also, known regular course of business writing containing the numbers in question should be submitted for comparison.
DMF478	This opinion is based mainly on the absence of an ink stamped signature. Differences in layout and spacing and the difference in security paper used to produce the Q1 and Q2 documents may also be contributing factors. The differences in layout and spacing is not conclusive proof of non-genuineness because there could be other explanations for them, such as a different person entering the information used different spacing. I was unable to determine if Dr. Harris purchased security paper from a different source than the one used to produce the K's. Therefore, the paper difference may also be explainable. It has been established that each original prescription is stamped and hand-dated. The toner signatures on the Q's support the opinion that Q1 and Q2 are probably non-genuine.
DQWL8N	In order to do a handwriting examination of the hand printed dates on the questioned and known documents, we would require further samples of dictated and course of business handwriting.

TABLE 4

WebCode	Additional Comments
DWKBL8	UV differences, seen on the back of the documents were found confronted; in the known reaction and no water marks printed with the text "DocuGard" preceded by a symbol or logo can be seen. Also differences in alphanumeric characters including the morphologies of the letter " n ", "r", "A" and the letter " y" and the numbers "2" at the base, among the most highlighted.
GK4KGL	Differences observed in details of the laser printed features between questioned documents and known exemplars. Had it been necessary, ESDA, handwriting examination, toner analysis and VSC analysis could have been utilized. They were chosen not to since the authenticity of Q1 and Q2 was discovered to a sufficient degree by methods listed on previous page.
HLPPPJ	Similarities were noted in the printing process and artwork for the anti-copy background printing on the front of the questioned and exemplar forms. While not necessary to answer the question of authenticity of the questioned forms, inquiries with the manufacturer of the exemplar paper may provide investigative assistance in identifying the source of the paper used for the questioned forms. While differences in handwriting characteristics were noted between the handwritten dates on the questioned and specimen forms, the very limited nature of the entries means that a comparison with samples from any suspects is unlikely to result in any meaningful opinion regarding authorship.
JUZCU6	VSC has also revealed that the exemplar prescriptions (K1 and K2) are printed on security paper with a latent printing, "DocuGuard".
K4MNQH	More information about the "signature stamp" used to produce the signatures on exhibits K1 and K2 would be requested. It would have been preferable to have several more known documents.
KHXEKA	After an examination and comparison of questioned prescriptions marked as "Q1" and "Q2" with the specimen prescriptions marked as "K1" and "K2" I reached a conclusion that the questioned exhibits are counterfeit. They differ from the known specimen prescriptions in respect of the following: 8.1. The placement and distance of the printed text to the baseline of the header; 8.2 The slant (i.e. text style/ font style) of the ampersands contained in the text (i.e. italic ampersands observed in the questioned); 8.3 The placement of the handwritten dates to the writing baseline; 8.4 The spacing between the signatures and the handwritten dates; 8.5 None of the ultraviolet security features as contained in the known specimen prescriptions are present during ultraviolet exposure at 365nm.
KK4WH7	They differ from the specimen in respect of the following: 1.1 In "Q1" and "Q2" the placement of the printed header is higher in the header box than in "K1" and "K2"; 1.2 In "Q1" and "Q2" the placement of the handwritten dates is on the writing line, while in "K1" and "K2" it is higher above the writing line; 1.3 In "Q1" and "Q2" the placement of the printed "SIGNATURE & DATE" is closer to the writing line than in "K1" and "K2"; 1.4 In "Q1" and "Q2" the ampersand ("&") in the "SIGNATURE & DATE" is printed in Italic, while it is printed.
LHTEFX	The handwritten dates should be examined by handwriting experts.
LJNWYG	The conclusion is based upon the information and exhibits provided to the examiner, as well as the specific propositions outlined above. Should the information, exhibit materials or the propositions change, the opinion may also change.
MPGANB	VSC, ESDA, examination of authorizing stamp, examination of additional exemplars and collected handwriting to determine range of variation as well as typeface and arrangement, and inquiry to the security paper manufacturer to establish specific paper characteristics were not necessary to complete the work requested. If necessary for investigative purposes, additional examinations would be considered and implemented.
MZBZCJ	In order to be able to reach answer E, it would have been necessary to have a larger number of genuine prescriptions, filled out before and after the questioned ones (or even on the same day). It is understood that having the same date and person on the genuine prescriptions pose a limitation. Such a wider sample group would have allowed us to discard the possibility that the doctor would have had two different models of prescription paper.
NAXXLG	A. k1, k2, Q1 and Q2 documents presented similar characteristics of printed background composed of

TABLE 4

WebCode	Additional Comments
	micro points by of set or planografico system, however, Q1 and Q2 denote differences in ultraviolet reaction presenting K1 and K2 whit logos an text "DocuGard". B. To substantiate the differences found in the manual numbers that make up the date of Q1 and Q2 documents, it is necessary to take calligraphic samples supposedly made them who.
NNEQAM	Additional assessments and observations have been made regarding the submitted items and recorded for possible future comparisons.
PUKXBC	If a handwriting comparison is needed, please submit fifteen to twenty samples of exact-text exemplars and/or normal-course-of-business known writings.
QBL9BZ	<p>CTS TEST NO. 16-521(24) 2.3.2 Identification of forgeries, erasures and additions; 2.3.3 Examination of [Country] and foreign banknotes; 2.3.4 Deciphering of obscured writing and indentation; 2.4 I was declared competent and proficient in forensic examination of banknotes. 2.5 I am currently examining approximately 5 cases per month in which disputed documents are involved. 3 On 2016-05-30, during the course of my official duties, I received the following exhibit pertaining to CTS TEST NO. 16- 521(24) from Exhibit Administration of the Questioned Document Section of the Forensic Science Laboratory: 3.1 An envelope marked "2016 CTS Forensic Testing Program Test No. 16-521: Questioned Documents Sample Pack: QD" containing the following: 3.1.1 One envelope marked "Test No. 16-521 Item "Q1" containing a James Denver prescription, dated 3/14/16. 3.1.2 One envelope marked "Test No. 16-521 Item "Q2" containing an Amanda Miller prescription, dated 3/18/16. 3.1.3 One envelope marked "Test No. 16-521 Item "K1" containing a John Doe example prescription, dated 4/2/16. 3.1.4 One envelope marked "Test No. 16-521 Item "K2" containing a Jane Doe example prescription, dated 4/2/16. The abovementioned exhibits were sealed in an official [Laboratory] evidence bag with serial number [Number]. The exhibit bag, envelope and seal were undamaged at receipt. 4. I was requested to determine whether the questioned items "Q1" and "Q2" described in paragraph 3.1.1 and 3.1.2, could be authentic prescriptions as represented by known exemplars "K1" and "K2" described in paragraph 3.1.3 and 3.1.4 or not. 5. 5.1 I, during the execution of my official duties examined the exhibit materials with processes requiring skills in Questioned Documents analysis. The following technique was used: 5.1.1 Video Spectral Comparator, a technique used to characterise the physical properties of a substance such as geometry morphology, colour, size, etc. 5.2 The instrument used was serviced and/ or calibrated and evaluated and deemed suitable for use. 5.3 The careful and systematic analysis of all facets of document examination, which is common to the many disciplines of forensic science, is directed towards the identification of the unknown. The fundamental principle underlying forensic document examination is the universally-accepted Principle of Analysis, Comparison and Evaluation (also referred to as the Law of ACE): 5.3.1 Analysis: The questioned or disputed ("unknown") and the specimen or sample ("known") material is, by analysis, examination or study, involving the application of microscopy and various illumination methods, reduced to a matter of their discriminating elements. 5.3.2 Comparison: The discriminating elements of the questioned or disputed ("unknown") material, which are determined thorough analysis, examination or study, are compared with those of the specimen or sample ("known") material. 5.3.3 Evaluation: Similarities and/or dissimilarities in the discriminating elements will each have certain significance for discrimination purposes, determined by their cause, independence or likelihood of occurrence. 6. After examination and comparison the following finding was reached that the questioned items "Q1" and "Q2" are not authentic to the known exemplars "K1" and "K2" due to the following aspects: 6.1 The alignment of the telephone number at the top of the questioned scripts to the line beneath the number does not correspond to the alignment of the telephone number at the top of the exemplar scripts to the line beneath the number. 6.2 Under UV examination the Security phrase visible on the reverse side of the exemplar scripts as 'DocuGard' does not appear on the questioned scripts 'Q1' and 'Q2'. 6.3 The marks left by the stamp used on exemplar scripts "K1" and "K2" do not appear on the questioned scripts as the signature mark was not stamped but printed on as indicated by the toner particles visible in the background. 6.4 The small letter "a" and figure "2" on "K1" and "K2" are of different font types as compared to those of "Q1" and "Q2". 7. Above conclusions were reached by using methods of examination which requires proficiency in the examination of disputed documents. 8. The abovementioned exhibits were kept under my exclusive control for the duration of my examination until I personally sealed it in an official [Laboratory] evidence bag with serial number [Number] and an envelope with seal number [Number] for returning purposes. 9. I know and understand the contents of this declaration. I have no objection to taking the prescribed</p>

TABLE 4

WebCode	Additional Comments
	oath. I consider the prescribed oath to be binding on my conscience.
QPK4W8	Images of the submitted items are being retained by the Forensic Document Unit. The EDD lifts in Items Q1A and Q2A are considered secondary evidence and will be retained by the Forensic Document Unit for future reference. More definitive handwriting opinions regarding the hand printed dates at the bottom of the prescriptions on Items Q1 and Q2 may be possible with the submission of comparable known writing from the subjects of interest in this investigation. However, this opinion may be qualified due to the limited quantity of questioned writing. Contact the Forensic Document Unit for assistance prior to the collection of known writing. Definition of Handwriting Opinion: The opinion "no conclusion" means that the evidence contained in the handwriting possesses significant limiting factors that hinder analysis.
QPZEKD	Other examination techniques could have been used for this test but would have no significant influence on the results made by the mentioned examination methods.
R2AAGP	Based on the information on DocuGard security papers from the Internet, a. the features observed in "K1" and "K2" suggest that the paper could be #04546 (multi-purpose, blue, 1-sided). b. the features observed in "Q1" and "Q2" suggest that the paper could be #04540 (multi-purpose, blue, 1-sided). More information from the manufacturer is required to confirm the above.
RBW869	To provide more detailed answers in real case work we would ask additional comparison material (templates and fulfilled documents) dated by March and February 2016 and would ask for information on template production and rules of filling. In order to preserve the objects of examination (eg Q1 and Q2) in routine work we do not continue the study with all possible destructive methods, if the complex of findings is sufficient to answer the question.
RG34RU	There are a number of static 'trash marks' associated with the signatures on K1 and K2 which are reproduced with the signatures from Q1 and Q2. This would indicate a common source.
RG4X9E	Most font styles are similar, sharing similarities with different font names.
VFCAEA	There appears to be differences in the written dates on K1 and K2 and the written dates on Q1 and Q2. However the writing is far too limited for a comparison of dates on K1 and K2 and the dates on Q1 and Q2. I would submit Q1 and Q2 for latent print examination.
WVPQB4	I believe it has to be acknowledged that for the purposes of this examination the specimen prescriptions are a true and accurate representative sample of the genuine documents to allow for the possibility that the doctor issuing the prescriptions may have changed papers &/or printers and neglected to tell the investigators. It is probably one of the first things I would raise if I were the defence attorney.
YNDVUY	Documents Identify Q was produced before documents identify K (according to date). It's recommended to obtained known documents before the documents Q was produced, to verify the watermark and other finding.
YPT7XX	No conclusion as to the authorship of the handwritten date on Q1 or Q2 is being rendered due to the limited amount of known writing submitted. If examination and comparison of the handwritten dates to determine authorship is required, an adequate quantity of known specimen writing from the suspect(s) and/or victim(s) that is similar in content and format to that seen on Q1 and Q2 (handwritten dates) must be submitted.
Z7ET22	Exhibits K1, K2, Q1, and Q2 were digitally scanned and a DVD of these digital scans will be retained by the laboratory as evidence. The submission of known writing in the form of exact-text exemplars may provide the basis for a conclusion. All submitted exhibits will be returned.
ZXH3CJ	The only feature that would conveniently demonstrate that a prescription was genuinely issued by a doctor would be the presence on it of a practised, fluent, stylised, lengthy, consistent, handwritten, signature made by the doctor. The very purpose of a signature is to be a security device personal to the writer of it. Its presence confirms variously "I have read this", "I agree to this", "these are my instructions", "I have received the described item", and so on.

Appendix: Data Sheet

Collaborative Testing Services ~ Forensic Testing Program

Test No. 16-521: Questioned Documents Examination

DATA MUST BE RECEIVED BY June 06, 2016 TO BE INCLUDED IN THE REPORT

Participant Code:

WebCode:

Accreditation Release Statement

CTS submits external proficiency test data directly to ASCLD/LAB, ANAB, and A2LA. Please select one of the following statements to ensure your data is handled appropriately.

- This participant's data is intended for submission to ASCLD/LAB, ANAB, and/or A2LA. (Accreditation Release section on the last page must be completed and submitted.)
- This participant's data is NOT intended for submission to ASCLD/LAB, ANAB, or A2LA.

Scenario:

A pharmacy has notified police that they have received possibly forged prescriptions from a local doctor's office. The doctor produces all of her prescriptions digitally and prints them on security paper. She then signature stamps and hand dates each prescription after it is printed. For comparison purposes, the doctor has provided investigators with two exemplar prescriptions depicting the features of authentic documents. Investigators are asking you to compare the known exemplar prescriptions with the suspected forgeries recovered from the pharmacy to determine whether the questioned items are authentic prescriptions as represented by the known exemplars.

Please follow your laboratory's standard protocol for examining questioned document evidence. Any inquiries that would be submitted to the paper manufacturer should be sent to QD521@cts-interlab.com.

CTS Item labels have been affixed to the documents for clarification of item numbers and should not be considered for analysis.

Items Submitted (Sample Pack QD):

- K1: John Doe example prescription, dated April 2, 2016.
 K2: Jane Doe example prescription, dated April 2, 2016.
 Q1: James Denver prescription, dated March 14, 2016.
 Q2: Amanda Miller prescription, dated March 18, 2016.

1.) Based on the findings of your examination, could the questioned items (Q1, Q2) be authentic prescriptions as represented by the known exemplars?

(Select from the following list of conclusions and insert the appropriate letter in the spaces provided. If the wording below differs from the normal wording of your conclusions, adapt these conclusions as best you can and use your preferred wording for question 3.)

- A. The questioned prescription IS AUTHENTIC to the known documents.
- B. The questioned prescription IS PROBABLY AUTHENTIC to the known documents.
- C. CANNOT DETERMINE whether or not the questioned prescription is authentic to the known documents.
- D. The questioned prescription IS PROBABLY NOT AUTHENTIC to the known documents.
- E. The questioned prescription IS NOT AUTHENTIC to the known documents.

**Should the response "C" be used, please document the reason in the Additional Comments section of this data sheet.*

Q1: _____

Q2: _____

Please return all pages of this data sheet.

Participant Code:

WebCode:

3.) What would be the wording of the Conclusions in your report?

4.) Additional Comments

<p>Return Instructions: Data must be received via online data entry, fax (please include a cover sheet), or mail by June 06, 2016 to be included in the report. Emailed data sheets are not accepted.</p> <p>QUESTIONS? TEL: +1-571-434-1925 (8 am - 4:30 pm EST) EMAIL: forensics@cts-interlab.com www.ctsforensics.com</p>	<p>Participant Code: ONLINE DATA ENTRY: www.cts-portal.com FAX: +1-571-434-1937 MAIL: Collaborative Testing Services, Inc. P.O. Box 650820 Sterling, VA 20165-0820 USA</p>
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Please return all pages of this data sheet.

Collaborative Testing Services ~ Forensic Testing Program

RELEASE OF DATA TO ACCREDITATION BODIES

The following Accreditation Releases will apply only to:

Participant Code:

WebCode:

for Test No. **16-521: Questioned Documents Examination**

This release page must be completed and received by **June 6, 2016** to have this participant's submitted data included in the reports forwarded to the respective Accreditation Bodies.

Have the laboratory's designated individual complete the following steps **only if your laboratory is accredited in this testing/calibration discipline** by one or more of the following Accreditation Bodies.

Step 1: Provide the applicable Accreditation Certificate Number(s) for your laboratory

ASCLD/LAB Certificate No. _____

ANAB Certificate No. _____

A2LA Certificate No. _____

Step 2: Complete the Laboratory Identifying Information in its entirety

Signature and Title _____

Laboratory Name _____

Location (City/State) _____

Return Instructions

Please submit the completed Accreditation Release at the same time as your full data sheet. See Data Sheet Return Instructions on the previous page.

Accreditation Release

*Questions? Contact us 8 am-4:30 pm EST
Telephone: +1-571-434-1925
email: forensics@cts-interlab.com*

Please return all pages of this data sheet.