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FORENSIC TESTING PROGRAM

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Adhesive Tape Analysis
Test No. 20-5471 Summary Report

Each sample set consisted of three separate cases each containing a known and questioned tape sample for examination. Participants were requested to compare the items within each set and report their findings. Data were returned from 41 participants and are compiled into the following tables:

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 pack consisted of three pairs of known and questioned tape samples for comparison (K1/Q1, K2/Q2, K3/Q3). Items K1 and Q1 were produced from the same roll of crème colored masking tape. Items K2 and Q2 were produced from the same roll of clear packing tape. Items K3 and Q3 were produced from two different rolls of black colored electrical tape of differing brands. For each item set, participants were requested to examine the adhesive tape samples and determine if both pieces were associated with a single source. Additionally, participants were asked to determine if a physical end match existed between the known item and the questioned item.

SAMPLE PREPARATION:
Each roll of tape was inspected and any debris removed.

Items K1 and Q1 were produced by hand-tearing each item from one roll. The paired items were produced in immediate succession to produce an end match.

Items K2 and Q2 were produced by using the cutting blade of a tape dispenser from one roll. The paired items were produced in immediate succession to produce an end match.

Items K3 and Q3 were produced scissors to cut each piece from two different rolls.

All questioned items were affixed to silicone release paper, and then packed in their respective pre-labeled questioned item envelopes. Each known item was affixed to silicone release paper and then packed in their respective pre-labeled known item envelopes.

SAMPLE SET ASSEMBLY: Following the completion of sample production, associated and non-associated items were placed within a pre-labeled envelope and sealed with invisible tape until all sample sets were prepared. Once verification was completed, all sample sets were further sealed with evidence tape and initialed “CTS”.

VERIFICATION: The expected association and elimination results were confirmed by predistribution laboratories.

Item	Color	Tape Type	Association	Physical End Match
K1 & Q1	Crème	Masking tape	Yes	Yes
K2 & Q2	Clear	Packing tape	Yes	Yes
K3 & Q3	Black	Electrical tape	No	N/A (no)

Summary Comments

This test was designed to allow participants to assess their proficiency in the examination and comparison of adhesive tape samples. Participants received three pairs of pressure sensitive tape samples, each containing one known sample and one questioned item (K1/Q1, K2/Q2, K3/Q3). Using their laboratory procedures, participants were asked to determine within each pair if the questioned item could have originated from the known sample and if a physical end match existed between the two items (Refer to Manufacturer's Information for preparation details).

For the sample pair K1 and Q1, there were 41 participants who reported examination results. All participants reported an association between the questioned tape sample (Q1) and the known sample (K1). With regards to a physical end match, 39 participants reported that Item Q1 exhibited a physical end match to Item K1. Of the remaining two participants, one reported that the physical end match between Q1 and K1 was inconclusive, and one reported that there was no physical match between the two.

For the sample pair K2 and Q2, there were 40 participants who reported examination results. Of these, all participants reported that there was an association between the questioned tape sample (Q2) and the known tape sample (K2). With regards to a physical end match, 36 participants reported that Item Q2 exhibited a physical end match to Item K2. Of the remaining four participants, two reported that the physical end match between Q2 and K2 was inconclusive, one reported that there was no physical match between the two, and one reported that a physical match was 'not applicable'.

For the sample pair K3 and Q3, there were 40 participants who reported examination results, all of whom confirmed that Q3 could not have originated from K3. With regards to a physical end match, all participants reported that there was either no physical end match, reported by 32 participants, or that a physical end match between the pair was not applicable, which was reported by 8 participants.

The most commonly reported methods included Stereo Microscopy, Macroscopic Examinations, and FTIR.

Examination Results

For each set of items, is the questioned material associated with the submitted known sample and is there a physical end match between the known sample and questioned item?

TABLE 1 - K1 and Q1					
WebCode	**Association**	**Physical End Match**	**WebCode**	**Association**	**Physical End Match**
2WHDG4	Yes	Yes	LAZXHL	Yes	Yes
3F6LQ4	Yes	Yes	MKVP4G	Yes	Yes
3PV8VG	Yes	No	N8ZV8E	Yes	Yes
3ZCU73	Yes	Yes	N9E3TV	Yes	Yes
7CY3GZ	Yes	Yes	PQ8KXG	Yes	Yes
7H6VBW	Yes	Yes	PRNHPF	Yes	Yes
7K9QVY	Yes	Yes	PXUD9F	Yes	Yes
834JFX	Yes	Yes	QG4PEC	Yes	Yes
9C9QVX	Yes	Yes	QUMFBT	Yes	Yes
A2NYKT	Yes	Yes	RZRCWE	Yes	Yes
AAY27T	Yes	Yes	T2LGQD	Yes	Yes
AQMCTV	Yes	Yes	TWRMTC	Yes	Yes
B7WMV9	Yes	Yes	UTLGQB	Yes	Yes
BAVXR9	Yes	Yes	VBLQB8	Yes	Yes
DJAUK6	Yes	Yes	VY67QB	Yes	Yes
DNQ296	Yes	Yes	WX9AEM	Yes	Inc
EAYRY6	Yes	Yes	XEUTA9	Yes	Yes
H2HGYZ	Yes	Yes	XHU669	Yes	Yes
JXCBYK	Yes	Yes	YLMKV8	Yes	Yes
K7LZBY	Yes	Yes	YMXMG7	Yes	Yes

TABLE 1 - K1 and Q1

WebCode	Association	Physical End Match	WebCode	Association	Physical End Match
YREV67	Yes	Yes			

K1 & Q1 - Summary Response

Participants: 41

Association		Physical End Match
41 *(100%)*	Yes	**39** *(95.1%)*
0 *(0%)*	No	**1** *(2.4%)*
0 *(0%)*	Inc	**1** *(2.4%)*
0 *(0%)*	N/A	**0** *(0%)*

TABLE 1 - K2 and Q2

WebCode	Association	Physical End Match	WebCode	Association	Physical End Match
2WHDG4	Yes	Yes	N8ZV8E	Yes	Yes
3F6LQ4	Yes	Yes	N9E3TV	Yes	Yes
3PV8VG	Yes	No	PQ8KXG	Yes	Yes
3ZCU73	Yes	Yes	PRNHPF	Yes	Yes
7CY3GZ	Yes	Yes	PXUD9F	Yes	Yes
7H6VBW	Yes	Inc	QG4PEC	Yes	Yes
7K9QVY	[Participant did not submit results for this item.]		QUMFBT	Yes	Yes
834JFX	Yes	Inc	RZRCWE	Yes	Yes
9C9QVX	Yes	Yes	T2LGQD	Yes	Yes
A2NYKT	Yes	Yes	TWRMTC	Yes	Yes
AAY27T	Yes	Yes	UTLGQB	Yes	Yes
AQMCTV	Yes	Yes	VBLQB8	Yes	Yes
B7WMV9	Yes	N/A	VY67QB	Yes	Yes
BAVXR9	Yes	Yes	WX9AEM	Yes	Yes
DJAUK6	Yes	Yes	XEUTA9	Yes	Yes
DNQ296	Yes	Yes	XHU669	Yes	Yes
EAYRY6	Yes	Yes	YLMKV8	Yes	Yes
H2HGYZ	Yes	Yes	YMXMG7	Yes	Yes
JXCBYK	Yes	Yes	YREV67	Yes	Yes
K7LZBY	Yes	Yes			
LAZXHL	Yes	Yes			
MKVP4G	Yes	Yes			

K2 & Q2 - Summary Response			Participants: 41
Association		Physical End Match	
40 *(97.6%)*	Yes	**36** *(87.8%)*	Totals may not add up as some participants did not report a response for this item.
0 *(0%)*	No	**1** *(2.4%)*	
0 *(0%)*	Inc	**2** *(4.9%)*	
0 *(0%)*	N/A	**1** *(2.4%)*	

TABLE 1 - K3 and Q3					
WebCode	**Association**	**Physical End Match**	**WebCode**	**Association**	**Physical End Match**
2WHDG4	No	N/A	N8ZV8E	No	No
3F6LQ4	No	No	N9E3TV	No	No
3PV8VG	No	No	PQ8KXG	No	No
3ZCU73	No	No	PRNHPF	No	No
7CY3GZ	No	N/A	PXUD9F	No	No
7H6VBW	No	N/A	QG4PEC	No	No
7K9QVY	[Participant did not submit results for this item.]		QUMFBT	No	No
834JFX	No	No	RZRCWE	No	No
9C9QVX	No	No	T2LGQD	No	No
A2NYKT	No	No	TWRMTC	No	N/A
AAY27T	No	No	UTLGQB	No	N/A
AQMCTV	No	No	VBLQB8	No	No
B7WMV9	No	No	VY67QB	No	No
BAVXR9	No	No	WX9AEM	No	N/A
DJAUK6	No	No	XEUTA9	No	No
DNQ296	No	N/A	XHU669	No	No
EAYRY6	No	No	YLMKV8	No	No
H2HGYZ	No	No	YMXMG7	No	N/A
JXCBYK	No	No	YREV67	No	No
K7LZBY	No	No			
LAZXHL	No	No			
MKVP4G	No	No			

K3 & Q3 - Summary Response			Participants: 41
Association		Physical End Match	
0 *(0%)*	Yes	**0** *(0%)*	Totals may not add up as some participants did not report a response for this item.
40 *(97.6%)*	No	**32** *(78.0%)*	
0 *(0%)*	Inc	**0** *(0%)*	
0 *(0%)*	N/A	**8** *(19.5%)*	

Examination Methods

TABLE 2 - K1 and Q1

WebCode	Stereo Microscope	Polarized Light	Comparison	Macroscopic Exam	Fluorescence	FTIR	XRD	XRS/XRF	SEM/EDX	LA-IC P-MS	Pyrolysis GC	Other
2WHDG4	✓		✓	✓		✓						TrasoScan
3F6LQ4	✓		✓	✓								
3PV8VG	✓			✓		✓		✓	✓		✓	Raman
3ZCU73	✓											
7CY3GZ	✓	✓		✓								
7H6VBW	✓											
7K9QVY	✓			✓								
834JFX	✓			✓								
9C9QVX	✓			✓		✓						width and thickness tests
A2NYKT				✓								
AAY27T	✓			✓								
AQMCTV	✓			✓		✓						
B7WMV9	✓		✓			✓			✓			
BAVXR9	✓					✓						Toolscan
DJAUK6	✓					✓		✓	✓			
DNQ296	✓			✓		✓						long and short wave UV light
EAYRY6	✓			✓		✓						
H2HGYZ	✓		✓	✓								
JXCBYK	✓			✓		✓						
K7LZBY	✓		✓									
LAZXHL	✓			✓								
MKVP4G	✓			✓		✓						
N8ZV8E	✓			✓								
N9E3TV	✓											
PQ8KXG	✓		✓	✓								
PRNHPF	✓					✓						
PXUD9F	✓			✓	✓							
QG4PEC	✓			✓								
QUMFBT	✓			✓								

TABLE 2 - K1 and Q1

WebCode	Stereo Microscope	Polarized Light	Comparison	Macroscopic Exam	Fluorescence	FTIR	XRD	XRS/XRF	SEM/EDX	LA-IC P-MS	Pyrolysis GC	Other
RZRCWE	✓			✓								
T2LGQD	✓		✓	✓								
TWRMTC	✓			✓								
UTLGQB	✓		✓	✓		✓			✓			
VBLQB8	✓			✓								
VY67QB	✓	✓		✓	✓	✓						microscopy Raman
WX9AEM				✓		✓						
XEUTA9	✓		✓	✓								
XHU669	✓			✓								
YLMKV8	✓			✓		✓			✓			
YMXMG7	✓	✓		✓	✓	✓						
YREV67	✓		✓	✓								

Response Summary **Participants: 41**

Stereo Microscope	Polarized Light	Comparison	Macroscopic Exam	Fluorescence	FTIR	XRD	XRS/XRF	SEM/EDX	LA-ICP-MS	Pyrolysis GC	
39	3	10	33	3	17	0	2	5	0	1	*Participants*
95%	*7%*	*24%*	80%	*7%*	*41%*	0%	*5%*	*12%*	0%	*2%*	*Percent*

TABLE 2 - K2 and Q2

WebCode	Stereo Microscope	Polarized Light	Comparison	Macroscopic Exam	Fluorescence	FTIR	XRD	XRS/XRF	SEM/EDX	LA-IC P-MS	Pyrolysis GC	Other
2WHDG4	✓		✓	✓		✓						TrasoScan
3F6LQ4	✓		✓	✓								
3PV8VG	✓			✓		✓		✓	✓		✓	Raman
3ZCU73	✓											
7CY3GZ	✓	✓		✓								
7H6VBW	✓			✓		✓						GC/MS, thickness, width and mass per unit area
7K9QVY												
834JFX	✓			✓		✓						
9C9QVX	✓			✓		✓						width and thickness tests
A2NYKT	✓			✓	✓	✓		✓			✓	
AAY27T	✓			✓								
AQMCTV	✓	✓		✓		✓						
B7WMV9	✓		✓			✓			✓			
BAVXR9	✓					✓						Toolscan
DJAUK6	✓					✓		✓	✓			
DNQ296	✓	✓		✓		✓						long wave and short wave UV light
EAYRY6	✓	✓		✓		✓						
H2HGYZ	✓		✓	✓								
JXCBYK	✓			✓		✓						
K7LZBY	✓		✓									
LAZXHL	✓			✓								
MKVP4G	✓			✓		✓						
N8ZV8E	✓	✓		✓								
N9E3TV	✓											
PQ8KXG	✓		✓	✓								
PRNHPF	✓					✓						
PXUD9F	✓	✓		✓								
QG4PEC	✓			✓	✓	✓						
QUMFBT	✓			✓								

TABLE 2 - K2 and Q2

WebCode	Stereo Microscope	Polarized Light	Comparison	Macroscopic Exam	Fluorescence	FTIR	XRD	XRS/XRF	SEM/EDX	LA-IC P-MS	Pyrolysis GC	Other
RZRCWE	✓	✓		✓								UV Light Box, Polarized Filters with Light Box
T2LGQD	✓		✓	✓								
TWRMTC	✓											
UTLGQB	✓	✓	✓	✓		✓			✓			
VBLQB8	✓	✓		✓								
VY67QB	✓	✓		✓	✓	✓						microscopy Raman
WX9AEM				✓								
XEUTA9	✓		✓	✓								
XHU669	✓			✓								
YLMKV8	✓	✓		✓		✓			✓			
YMXMG7	✓	✓		✓	✓	✓						
YREV67	✓		✓	✓								

Response Summary **Participants: 41**

Stereo Microscope	Polarized Light	Comparison	Macroscopic Exam	Fluorescence	FTIR	XRD	XRS/XRF	SEM/EDX	LA-ICP-MS	Pyrolysis GC	
39	12	10	32	4	20	0	3	5	0	2	*Participants*
95%	*29%*	*24%*	*78%*	*10%*	*49%*	0%	*7%*	*12%*	0%	*5%*	*Percent*

TABLE 2 - K3 and Q3

WebCode	Stereo Microscope	Polarized Light	Comparison	Macroscopic Exam	Fluorescence	FTIR	XRD	XRS/XRF	SEM/EDX	LA-IC P-MS	Pyrolysis GC	Other
2WHDG4	✓		✓			✓						
3F6LQ4	✓	✓	✓									
3PV8VG	✓		✓			✓		✓	✓		✓	Raman
3ZCU73	✓											
7CY3GZ	✓		✓									
7H6VBW	✓					✓						
7K9QVY												
834JFX	✓		✓			✓						
9C9QVX	✓		✓			✓						width and thickness tests
A2NYKT			✓									
AAY27T	✓		✓			✓						
AQMCTV	✓		✓			✓			✓			
B7WMV9	✓	✓				✓			✓			
BAVXR9	✓					✓						Toolscan
DJAUK6	✓					✓		✓	✓			
DNQ296	✓		✓									
EAYRY6	✓		✓			✓						
H2HGYZ	✓	✓	✓			✓			✓			
JXCBYK	✓		✓			✓						
K7LZBY	✓	✓										
LAZXHL	✓		✓									
MKVP4G	✓		✓			✓						
N8ZV8E	✓		✓									
N9E3TV	✓											
PQ8KXG	✓	✓	✓									
PRNHPF	✓					✓						
PXUD9F	✓		✓									Brighfield and Interference contrast microscopy
QG4PEC	✓		✓			✓						
QUMFBT	✓		✓	✓		✓						

TABLE 2 - K3 and Q3

WebCode	Stereo Microscope	Polarized Light	Comparison	Macroscopic Exam	Fluorescence	FTIR	XRD	XRS/XRF	SEM/EDX	LA-IC P-MS	Pyrolysis GC	Other
RZRCWE	✓			✓		✓						
T2LGQD	✓		✓	✓								
TWRMTC	✓											Micrometer
UTLGQB	✓			✓		✓			✓			
VBLQB8	✓			✓		✓						Physical dimensions
VY67QB	✓	✓		✓	✓	✓						microscopy Raman
WX9AEM				✓		✓						
XEUTA9	✓		✓	✓								
XHU669	✓	✓		✓								
YLMKV8	✓			✓		✓			✓			Digital Microscopy
YMXMG7	✓	✓		✓	✓	✓						
YREV67	✓		✓	✓								

Response Summary **Participants: 41**

Stereo Microscope	Polarized Light	Comparison	Macroscopic Exam	Fluorescence	FTIR	XRD	XRS/XRF	SEM/EDX	LA-ICP-MS	Pyrolysis GC	
38	3	8	31	3	24	0	2	7	0	1	*Participants*
93%	*7%*	*20%*	*76%*	*7%*	*59%*	0%	*5%*	*17%*	0%	*2%*	*Percent*

Conclusions

TABLE 3

WebCode	Conclusions
2WHDG4	Chemical composition (examined by FTIR) of Item Q1 and physical match of end of Item Q1 and Item K1 show that Item Q1 can originate from Item K1. Chemical composition (examined by FTIR) of Item Q2 and physical match of end of Item Q2 and Item K2 show that Item Q2 can originate from Item K2. Chemical composition (examined by FTIR) of Item Q3 show that Item Q3 can't originate from Item K3.
3F6LQ4	K1 and Q1 form a physical match and came from the same object. K2 and Q2 form a physical match and came from the same object. Q3 could not have come from K3.
3PV8VG	According to the results of above mentioned examination and analysis procedures, the adhesive tape in Item Q1 could have originated from the adhesive tape roll represented by Item K1, the adhesive tape in Item Q2 could have originated from the adhesive tape roll represented by Item K2, the adhesive tape in Item Q3 could have not originated from the adhesive tape roll represented by Item K3.
3ZCU73	Items 1-1 (K1) and 1-2 (Q1) constitute a physical match and at one time formed a single object. Items 1-3 (K2) and 1-4 (Q2) constitute a physical match and at one time formed a single object. Items 1-5 (K3) and 1-6 (Q3) do not constitute a physical match and did not at one time form a single object.
7CY3GZ	One end from each of the pieces of tape Q1 and K1 physically align. This alignment constitutes a physical match. These pieces were at one time a single piece of tape. One end from each of the pieces of tape Q2 and K2 physically align. This alignment constitutes a physical match. These pieces were at one time a single piece of tape. Q3 and K3 differ in overall thickness, overall width, and backing features. Q3 and K3 originated from different sources.
7H6VBW	The questioned sample of tape (Q1) was found to consist of a section of masking tape with a torn end. The known sample of tape (K1) was also found to consist of a section of masking tape with a torn end. The torn ends of the questioned masking tape and the known masking tape were found to be physical match. Therefore the questioned sample of masking tape and the known sample of masking tape must have originated from the same roll of masking tape. The questioned sample of tape (Q2) was found to consist of section of clear tape with serrated ends. The known sample of tape (K2) was also found to consist of a section of clear tape with a serrated end. In relation to appearance, width, thickness, chemical composition of the backing and chemical composition of the adhesive the questioned sample of clear tape was found to be indistinguishable to the known sample of clear tape. Therefore these two samples of tape may share a common origin. The questioned sample of tape (Q3) was found to consist of a section of black electrical tape. The known sample of tape (K3) was also found to consist of a section of black electrical tape. The backing of the questioned sample of electrical tape was found to have a different chemical composition to the backing of the known sample of electrical tape and therefore could not have originated from that source.
7K9QVY	The following methodologies were used in the examination of this case: visual examination and microscopy. Examination of Lab Item # 1-1 (K1 from Case 1) revealed the presence of one (1) strip of off-white masking tape. Examination of Lab Item # 1-2 (Q1 from Case 1) revealed the presence of one (1) strip of off-white masking tape. Lab Item # 1-2 has an edge that physically matched an edge on Lab Item # 1-1 (K1 from Case 1). Therefore, these pieces were once joined to form a single item. The remaining items were not examined by this analyst.
834JFX	The fractured edge of Q1 was examined and compared for a physical match to the fractured edge of K1. Item Q1 fits uniquely to item K1 such that it can be concluded that Q1 and K1 were once joined as a single object. The fractured edge of Q2 was examined and compared for a physical match to the fractured edge of K2. Item Q2 fits to item K2; however the fractured edges appear to be the result of a mechanical device (i.e. tape dispenser), so it cannot be determined if Q2 and K2 were once directly joined as a single object. Q2 was examined and compared to K2 using microscopy and fourier transform infrared spectroscopy (FTIR). Q2 and K2 are consistent in color, width and chemical properties. Thus Q2 could have come from the adhesive tape roll represented by K2 or another roll of tape exhibiting the same analyzed characteristics. The fractured edge of Q3 was examined and compared for a physical match to the fractured edge of K3. Item Q3 does not fit uniquely to K3. Q3 was examined and compared to K3 using microscopy and fourier transform infrared spectroscopy (FTIR). The FTIR and width examination reveal differences between Q3 and K3. Thus Q3 could not have come from the adhesive tape roll represented by K3.

TABLE 3

WebCode	Conclusions
9C9QVX	[No Conclusions Reported.]
A2NYKT	Item 1: One end of adhesive tape Q1 was able to be fitted back to one end of adhesive tape K1. In my opinion, Q1 and K1 originated from a single piece of adhesive tape. Item 2: One end of adhesive tape Q2 was able to be fitted back to one end of adhesive tape K2. In my opinion, Q2 and K2 originated from a single piece of adhesive tape. Item 3: The piece of adhesive tape Q3 was found to be different to the piece of adhesive tape K3.
AAY27T	Item 1: A unique physical fit was found between one end of the questioned tape Q1 and the outermost end of the partially used roll of the tape K1. Based on the unique physical fit observed, the questioned tape Q1 must have come from the partially used roll of tape K1. Item 2: A unique physical fit was found between one end of the questioned tape Q2 and the outermost end of the partially used roll of the tape K2. Based on the unique physical fit observed, the questioned tape Q2 must have come from the partially used roll of tape K2. Item 3: The questioned sample of tape Q3 was physically and chemically different from the known reference tape K3. Therefore, the questioned tape Q3 could not have originated from the roll of tape K3.
AQMCTV	Q1: Items Q1 and K1 constitute a physical match and at one time formed a single object. Q2: Items Q2 and K2 constitute a physical match and at one time formed a single object. Q3: Item Q3 is dissimilar to Item K3, therefore, they could not have originated from the same source
B7WMV9	1. The adhesive tape in Item Q1 agreed with the adhesive tape originated from the adhesive tape roll represented by Item K1 with regard to the examined characteristics. One end of the adhesive tape in Item Q1 physically match with the end of the adhesive tape roll represented by Item K1. 2. The adhesive tape in Item Q2 agreed with the adhesive tape originated from the adhesive tape roll represented by Item K2 with regard to the examined characteristics. One end of the adhesive tape in Item Q2 physically match with the end of the adhesive tape roll represented by Item K2. 3. The adhesive tape in Item Q3 was different from the adhesive tape originated from the adhesive tape roll represented by Item K3. No end of the adhesive tape in Item Q3 physically match with the end of the adhesive tape roll represented by Item K3.
BAVXR9	The questioned adhesive tape recovered Q1 was found to be consistent with respect to colour of adhesive, colour of backing, type of adhesive, type of backing and width measurement to the known adhesive tape K1. Examination of physical end match revealed that one end of the adhesive tape on the questioned adhesive tape Q1 match with the known adhesive tape K1. The questioned adhesive tape recovered Q2 was found to be consistent with respect to colour of adhesive, colour of backing, type of adhesive, type of backing and width measurement to the known adhesive tape K2. Examination of physical end match revealed that one end of the adhesive tape Q2 on the questioned adhesive tape match with the known adhesive tape K2. The questioned adhesive tape Q3 recovered was found to be consistent with respect to colour of adhesive, colour of backing to the known adhesive tape K3. However, the questioned adhesive tape Q3 was found to be inconsistent with respect to type of adhesive, type of backing and width measurement of the known adhesive tape K3 on the following characteristics. Examination of physical end match revealed that both ends of the questioned adhesive tape Q3 have no match with the known adhesive tape K3. Based on the above findings, in my professional opinion; i.) Item Q1 could have originated from the adhesive roll represented by item K1. Additionally, one end of the adhesive tape in item Q1 physically match with the adhesive tape roll represented by item K1. ii.) Item Q2 could have originated from the adhesive roll represented by item K2. Additionally, one end of the adhesive tape in item Q2 physically match with the adhesive tape roll represented by item K2. iii.) Item Q3 could not have originated from the adhesive roll represented by item K3. Additionally, both ends of the adhesive tape in item Q3 do not physically match with the adhesive tape roll represented by item K3.
DJAUK6	Chemical composition of K1 and K2 are similar with Q1 and Q2, respectively. But, chemical composition of K3 tape is different from Q3 tape and end of K3 does not match with Q3 tape.
DNQ296	Case 1 masking tape: The tape from Q1 and K1 are similar to each other in morphological features. The chemical composition of the adhesive from Q1 and K1 are also similar. Torn edge contours from Q1 align with the torn edge contours from one end of K1. In addition, alignment of ripples in the crepe texture that are perpendicular to the length of the tape correspond along the torn edges between K1 and Q1. The tape from Q1 and the tape from K1 were at one time a single continuous unit. Case 2 clear packing tape: The tape from Q2 and K2 are similar to each other in morphological features. The

TABLE 3

WebCode	Conclusions
	chemical composition of the tape backing and tape adhesive from Q2 and K2 are also similar, as well as microscopic features of the tape backing. The pinked edge contours from Q2 align with the pinked edge contours from K2. In addition, alignment of machine marks along the length of the tape corresponds between Q2 and K2. The tape from Q2 and the tape from K2 were at one time a single continuous unit. Case 3 black tape: The morphological features of the tape from Q3 differ from the tape from K3 in width, thickness, adhesive color, and morphological features. The tape from Q3 and the tape from K3 could not have come from the same tape roll.
EAYRY6	A physical match was achieved between the questioned item 1Q and the known item 1K. Item 1Q and Item 1K were once joined together as a single item. A physical match was achieved between the questioned item 2Q and the known item 2K. Item 2Q and Item 2K were once joined together as a single item. No physical match was achieved between the questioned item 3Q and the known item 3K. Item 3K is excluded as a possible source of unknown item 3Q, based on class characteristics, including microscopic and chemical properties.
H2HGYZ	The torn edge of Item Q1 physically fits with the torn edge of Item K1 indicating that Items Q1 and K1 at one time formed a single object. The torn edge of Item Q2 physically fits with the torn edge of Item K2 indicating that Items Q2 and K2 at one time formed a single object. Item Q3 is dissimilar to Item K3 and did not originate from the same source.
JXCBYK	The known sample and the questioned sample of case 1 share the same physical properties and are indistinguishable by infrared spectroscopy. The end of the known sample matches the end of the questined sample. There is nothing to oppose the theory that both samples share the same origin. The known sample and the questioned sample of case 2 share the same physical properties and are indistinguishable by infrared spectroscopy. The end of the known sample matches the end of the questined sample. There is nothing to oppose the theory that both samples share the same origin. The known sample and the questioned sample of case 3 do not match in width an thickness. It is therefore unlikely for the both samples to share the same origin.
K7LZBY	In my opinion, my findings provide conclusive support for the proposition that tape Q1 and tape K1 once formed a single piece of tape. In my opinion, my findings provide conclusive support for the proposition that tape Q2 and tape K2 once formed a single piece of tape. In my opinion, my findings provide conclusive support for the proposition that tape Q3 and tape K3 did not once form a single piece of tape.
LAZXHL	K1 and Q1 constitute a physical match and at one time formed a single object. K2 and Q2 constitute a physical match and at one time formed a single object. K3 and Q3 do not constitute a physical match and did not at one time form a single object.
MKVP4G	Item 1: There is a physical end match between samples K1 and Q1. The composition of the adhesive and backing of both tapes are indistinguishable. Also, the morphology and the width of K1 and Q1 is the same Therefore, K1 and Q1 have the same origin. Item 2: There is a physical end match between samples K2 and Q2. The composition of the adhesive and backing of both tapes are indistinguishable. Also, the morphology and the width of K2 and Q2 is the same. Therefore, K2 and Q2 have the same origin. Item 3: The morphology and the width of K3 and Q3 are different. There is not a physical end match between samples K3 and Q3. The composition of the backing and the adhesive is different. According to these results, K3 and Q3 have different origins.
N8ZV8E	I started the examination of the submitted evidence items on March 3, 2020. I compared the question masking tape, item 001-Q1, to the section of known masking tape, item 001-K1. I used stereo microscopy in this examination. I found that the question tape, item 001-Q1, exhibited the same physical features such as color, type, and size as the known tape, item 001-K1. Both tape sections have ends that are partially torn tangential to the edge and partially torn or cut perpendicular to the edge of the tape. I found that the torn end of item 001-Q1 physical fits to the torn end of item 001-K1. In addition, the lines in the crepe texture of the backing surface continue across the tear of item 001-Q1 and matches to lines in the crepe paper backing surface of the known tape item 001-K1. This comparison shows the item 001-Q1 was torn for item 001-K1. I compared the section of questioned clear tape, item 001-Q2, to the section of known clear tape, item 001-K2. I used stereo microscopy and polarized light microscopy in this examination. I found that the question tape, item 001-Q2, exhibits the same physical properties such as color, size, and type as the known tape, item 001-K2. In addition, the known tape section was cut on one end with a serrated cutter such as found in a tape

TABLE 3

WebCode	Conclusions
	dispenser and was cut on the other end with a straight edge cutter. The question tape, item 001-Q2, was cut on both ends with a serrated cutter. I compared the serrated cut ends and found that one end of item 001-Q2 matches the serrated end of the known tape, item 001-K2, in class features and in some irregularities in cutter edge length and shape. In addition, the manufacturing process left striated marks in the tape backing that continue across the cut end from item 001-Q2 and match up to similar striated marks on the tape backing of item 001-K2. These stria change along the length of the tape sections. These stria are in phase with the cutter features. This comparison shows the item 001-Q2 was cut from the section of known tape, item 001-K2, or a section of tape from the same roll in very close proximity to the section of tape, item 001-K2. I compared the questioned black electrical tape, item 001-Q3, to the section of known black electrical tape, item 001-K3. I used stereo microscopy in this examination. I found that item 001-Q3 was different in width, adhesive color, and backing surface texture when compared to the know tape section, item 001-K3. These tapes did not originate from the same roll. CONCLUSION: The masking tape section, item 001-Q1, was torn from the masking tape section, item 001-K1. The clear tape section, item 001-Q2, was cut from the same roll of clear tape as the known tape, item 001-K2, and likely is a sequential cut to item 001-K2. The black electrical tape section, item 001-Q3, is not from the same roll of black electrical tape as the known section, item 001-K3.
N9E3TV	Items K1 and Q1 constitute a physical match and at one time formed a single object. Items K2 and Q2 constitute a physical match and at one time formed a single object. Items K3 and Q3 do not constitute a physical match and did not at one time form a single object. Items K3 and Q3 have a similar class characteristic of width.
PQ8KXG	Items K1 and Q1 constitute a physical match and at one time formed a single object. Items K2 and Q2 constitute a physical match and at one time formed a single object. Items K3 and Q3 do not constitute a physical match and did not at one time form a single object.
PRNHPF	K1, Q1: Both tapes were adhesive tapes, there were no differences neither in adhesive layers nor in backing materials. The widths were equal to 25 mm. There was also a physical match with the end of the adhesive tape roll. So the questioned tape Q1 could have probably originated from the tape roll K1. K2, Q2: Both tapes were adhesive tapes, there were no differences neither in adhesive layers nor in backing materials. The widths were equal to 48 mm. There was also a totally physical match with the end of the adhesive tape roll. So the questioned tape Q2 could have probably originated from the tape roll K2. K3, Q3: The tapes were rubber tapes, which have different adhesive layers, different backing materials and different widths. The width of the questioned tape Q3 was 19.5 mm and the width of the known tape K3 was 18.5 mm. There was no physical match with the end of the adhesive tape roll. The questioned tape Q3 could not have originated from the tape roll K3.
PXUD9F	1. Exhibit 1 (item 1) contains two pieces of masking tape. Exhibit 1.1 (sample K1) and Exhibit 1.2 (sample Q1) constitute a fracture match and were once physically connected. 2. Exhibit 2 (item 2) contains two pieces of clear packing tape. Exhibit 2.1 (sample K2) and Exhibit 2.2 (sample Q2) constitute a fracture match and were once physically connected. 3. Exhibit 3 (item 3) contains two pieces of black electrical tape. Comparative examinations of Exhibit 3.1 (sample K3) and Exhibit 3.2 (sample Q3) disclosed them to be inconsistent in their physical properties, as a result of these findings Exhibit 3.2 could not have originated from the same source as the roll of tape represented in Exhibit 3.1. Also, due to differences in class characteristics no fracture match examinations were attempted.
QG4PEC	There was a complex, physical fit between the torn ends of the adhesive tapes, Q1 and K1. It is my opinion that the possibility that the correspondence between the torn edges is coincidental, is infinitesimally small. Consequently, the section of tape, Q1, had been connected to the current end of the tape roll, K1. There was a complex, physical fit between the serrated-cut ends of the clear, adhesive tapes, Q2 and K2, including corresponding draw marks extending across the serrated cuts of both pieces. It is my opinion that the possibility that the correspondence between the torn edges is coincidental, is infinitesimally small. Consequently, the section of tape, Q2, had been connected to the current end of the tape roll, K2. The piece of black electrical tape, Q3, was different to the black electrical tape, K3, in appearance and composition of both the backing and adhesive. Therefore, tape Q3 could not have originated from tape K3.
QUMFBT	Through examination and comparative analysis performed on the pieces of evidence, it was determined that: The end of the P-1 adhesive tape roll (known) and the A end of the P-2 adhesive tape piece

TABLE 3

WebCode	Conclusions
	(unknown) are physically pairing corresponding parts, indicating that at one point they formed a single object. The end of the roll of P-3 tape (known) and the A end of the piece of P-4 tape (unknown) are corresponding parts that physically match, indicating that at one point they formed a single object. The pieces of adhesive tape P-5 (known) and P-6 (unknown) have similar physical characteristics (color, texture, width, appearance) to each other but do not have similar chemical characteristics (FTIR, UV Light).
RZRCWE	Description of Evidence: Item #1: Two (2) small manila envelopes containing tan masking tape. Item #1-1: One (1) known section of tan masking tape (K1). Item #1-2: One (1) questioned section of tan masking tape (Q1). Item #2: Two (2) small manila envelopes containing clear packing tape. Item #2-1: One (1) known section of clear packing tape (K2). Item #2-2: One (1) questioned section of clear packing tape (Q2). Item #3: Two (2) small manila envelopes containing black electrical tape. Item #3-1: One (1) known section of black electrical tape (K3). Item #3-2: One (1) questioned section of black electrical tape (Q3). Test Method: The following analytical techniques were utilized in the examination of these items of evidence: Visual and Microscopic Analysis utilizing a Stereo Light Microscope – (All Items); Side by Side Visual and Microscopic Analysis utilizing a Stereo Light Microscope – (All Items); Visual Side-by-Side Comparison using a Light Box with Polarized Light Filters – (Items #2-1 & #2-2); Fourier Transform Infrared Spectroscopy (FTIR) – (Items #3-1 & #3-2); Conclusion: One of the torn ends of the questioned tan masking tape (Item #1-2 {Q1}) makes a physical fit to the torn end of the known tan masking tape (Item #1-1 {K1}) indicating that at one time they were a single unit. One of the cut ends of the questioned clear packing tape (Item #2-2 {Q2}) makes a physical fit to the suspected cut end of the known clear packing tape (Item #2-1 {K2}) indicating that at one time they were a single unit. The questioned black electrical tape (Item #3-2 {Q3}) does not compare physically or chemically with the known black electrical tape (Item #3-1 {K3}) indicating that they could not have a common origin. Disposition of Evidence: The examined evidence is being returned to the submitting agency.
T2LGQD	Item #K1 and Item #Q1 constitute a physical match and at one time formed a single object. Item #K2 and Item #Q2 constitute a physical match and at one time formed a single object. Item #K3 and Item #Q3 do not constitute a physical match and did not at one time form a single object.
TWRMTC	Item K1 and Item Q1 constitute a physical match and were at one time joined to form a single object. Item K2 and Item Q2 constitute a physical match and were at one time joined to form a single object. Item K3 and Item Q3 do not constitute a physical match and could not have been joined to form a single object due to significant differences in width.
UTLGQB	"Q1" and "K1" Based on physical fitting, and the comparison of the physical characteristics (appearance and width) and chemical compositions of the sampled backings and adhesive layers of the strips of tape, the strip of tape marked "Q1" originated from the tape roll marked "K1". "Q2" and "K2" Based on physical fitting, and the comparison of the physical characteristics (appearance and width) and chemical compositions of the sampled backings and adhesive layers of the strips of tape, the strip of tape marked "Q2" originated from the tape roll marked "K2". "Q3" and "K3" Based on differences in colour of adhesive, the strip of tape marked "Q3" did not originate from the roll of tape marked "K3".
VBLQB8	Results of examinations were as follows: numerous points of fit and correspondence were found between Known (K1) and Questioned (Q1) tape samples from case 1. These results provide unequivocal support for the proposition that K1 and Q1 both once formed part of the same roll of tape. Numerous points of fit and correspondence were found between Known (K2) and Questioned (Q2) tape samples from case 2. These results provide unequivocal support for the proposition that K2 and Q2 both once formed part of the same roll of tape. Macroscopic and microscopic examinations of Known (K3) and Questioned (Q3) tape samples from case 3 revealed substantial differences between the appearance of the two tapes, such that they could be readily differentiated. Based upon the above findings, I have formed the following opinions: Known (K1) and Questioned (Q1) tape samples from case 1 both once formed part of the same roll of tape. Known (K2) and Questioned (Q2) tape samples from case 2 both once formed part of the same roll of tape. Known (K3) and Questioned (Q3) tape samples from case 3 did not originate from the same roll of tape, nor were they the same tape product.
VY67QB	Material analysis: Case 1: Item K1, known tape and Item Q1, questioned tape from Case 1 were masking tapes. They had light yellow paper backing and colourless adhesive. The width of the tapes was 24 mm. Items K1 and Q1 were indistinguishable regarding colour and other physical properties

TABLE 3

WebCode	Conclusions
	and chemical composition of backing and adhesive. Therefore, the adhesive tape in Item Q1 could have originated from the adhesive tape roll represented by Item K1 or from tape rolls manufactured in the same manner. Case 2: Item K2, known tape and Item Q2, questioned tape from Case 2 were packaging tapes. They had colourless, transparent polypropylene backing and colourless adhesive. The width of the tapes was 48 mm. Items K2 and Q2 were indistinguishable regarding colour and other physical properties and chemical composition of backing and adhesive. Therefore, the adhesive tape in Item Q2 could have originated from the adhesive tape roll represented by Item K2 or from tape rolls manufactured in the same manner. Case 3: Item K3, known tape and Item Q3, questioned tape from Case 3 were electrical tapes. They had black PVC backing, but different adhesive materials. The width of the tapes was 18 mm. Items K3 and Q3 were inconsistent regarding surface texture and chemical composition of backing and adhesive. Therefore, Item Q3 could not have originated from the adhesive tape roll represented by Item K3. Physical end match analysis: Case 1: One of the tearing areas of the Item Q1 corresponds to width, form and individual features the tearing area of the Item K1. The Item Q1 has been torn off from the Item K1. The other tearing area of the Item Q1 does not correspond to form the tearing area of the Item K1. Case 2: The cut areas of the Item Q2 have been done with cut-off machines. One cut area of the Item Q2 corresponds to width, form and individual surface features the cut area of the Item K2. The Item Q2 has been cut from the Item K2. The other cut area of the Item Q2 does not correspond to form and individual features the cut area of the Item K2. Case 3: The cut areas of the Item Q3 do not correspond to form and individual features the cut areas of the Item K3. The Item Q3 has not been cut from the Item K3.
WX9AEM	The results very strongly support the proposition that the adhesive tape in Item Q1 is of the same type as the adhesive tape in Item K1. We are inconclusive whether the adhesive tape in Item Q1 could have originated from the adhesive tape in Item K1. The results very strongly support the proposition that the adhesive tape in Item Q2 is of the same type as the adhesive tape in Item K2. The results very strongly support the proposition that the adhesive tape in Item Q2 has originated from the adhesive tape in Item K2. The adhesive tape in Item Q3 is not of the same type as the adhesive tape in Item K3.
XEUTA9	Items K1 and Q1 constitute a physical match and at one time formed a single object. Items K2 and Q2 constitute a physical match and at one time formed a single object. Items K3 and Q3 do not constitute a physical match and did not at one time form a single object.
XHU669	Examinations of the piece of yellow masking tape in Exhibit 1.1 (known sample from Case 1) with the piece of yellow masking tape in Exhibit 1.2 (questioned sample from Case 1) revealed sufficient agreement in their class and individual characteristic to conclude that they were once physically connected. No additional examinations were conducted on these two pieces of yellow masking tape. Examinations of the piece of clear packing tape in Exhibit 2.1 (known sample from Case 2) with the piece of clear packing tape in Exhibit 2.2 (questioned sample from Case 2) revealed sufficient agreement in their class and individual characteristic to conclude that they were once physically connected. No additional examinations were conducted on these two pieces of clear packing tape. Examinations of the piece of black electrical tape in Exhibit 3.1 (known sample from Case 3) with the piece of black electrical tape in Exhibit 3.2 (questioned sample from Case 3) revealed sufficient disagreement in their class and individual characteristics to conclude that they could not have been physically connected. Additional comparative examinations disclosed them to be inconsistent in luster and microscopic surface characteristics. As a result of these findings, Exhibit 3.2 could not have originated from the same source of tape as represented by Exhibit 3.1.
YLMKV8	Item 1: An off white/beige in color pressure sensitive tape standard was analyzed for comparison to Item 1.1. Item 1.1: One piece of off white/beige in color pressure sensitive tape with a damaged end (Item 1, known tape) and one piece of off white/beige in color pressure sensitive tape with a damaged end (Item 1.1, questioned tape) were physically fitted together and were, at one time, a portion of a single unit. Item 2: A colorless and transparent pressure sensitive tape standard was analyzed for comparison to Item 2.1. Item 2.1: One piece of a colorless and transparent pressure sensitive tape with a tape dispenser cut end (Item 2, known tape) and one piece of a colorless and transparent pressure sensitive tape with a tape dispenser cut end (Item 2.1, questioned tape) were physically fitted together and were, at one time, a portion of a single unit. Item 3: A black pressure sensitive tape standard was analyzed for comparison to Item 3.1. Item 3.1: One piece of black pressure sensitive tape was analyzed. The unknown black pressure sensitive tape and the black pressure sensitive tape standard (Item 3, known tape) are not the same in physical and chemical characteristics. The unknown piece of

TABLE 3

WebCode	Conclusions
	black pressure sensitive tape could not have originated from the standard.
YMXMG7	Conclusions: The tape pairs in each case were examined for a physical match. Additionally, each tape was examined stereoscopically with polarized light, visually with short and long wave UV light, and instrumentally by Fourier Transform Infrared Spectrometry. Case 1: A physical match existed between Items 1A and 1B indicating they were once part of a single item.Items 1A and 1B were consistent to one another stereoscopically, visually and chemically. Case 2: A physical match existed between Items 2A and 2B indicating they were once part of a single item. Items 2A and 2B were consistent to one another stereoscopically, visually and chemically. Case 3: No physical match existed between Items 3A and 3B. Items 3A and 3B were not consistent to one another stereoscopically, visually or chemically. No statistical or numerical probabilities can be applied to the conclusions of this report.
YREV67	Q1 and K1 at one time formed a single object. Q2 and K2 at one time formed a single object. K3 can be eliminated as the source of Q3.

Additional Comments

TABLE 4

WebCode	Additional Comments
7K9QVY	Items 2 and 3 were not examined by this analyst so no conclusions could be rendered.
AQMCTV	Reported Findings: K1: Consists of masking tape - one end is torn. Used for comparison to Item Q1. Q1: Consists of masking tape - both ends are torn. A physical match was found between Item Q1 and Item K1. K2: Consists of colorless packing tape - one end is serrated cut. Used for comparison to Item Q2. Q2: Consists of colorless packing tape - one end is serrated cut. A physical match was found between Item Q2 and Item K2. K3: Consists of black electrical tape - both ends are cut. Used for comparison to Item Q3. Q3: Consists of black electrical tape - both ends are cut. No physical match was found. Comparisons of physical measurements and chemical tests reveal Items K3 and Q3 to be dissimilar.
WX9AEM	When evaluating/interpreting the result(s) of forensic examinations, we express our conclusions using a scale that reflects our level of certainty. The scale ranges from +4 through zero to -4, where we know +4 as the strongest conclusion up against common origin. At 0 we cannot draw any conclusion, and at -4 we are certain that the items compared do not have a common origin.
YLMKV8	A physical fit analysis and a tape analysis was conducted on all samples.

-End of Report-
(Appendix may follow)

Collaborative Testing Services ~ Forensic Testing Program

Test No. 20-5471: Adhesive Tape Analysis

DATA MUST BE SUBMITTED BY **June 29, 2020, 11:59 p.m.** TO BE INCLUDED IN THE REPORT

Participant Code: U1234J WebCode: N8KGXJ

The Accreditation Release section can be accessed by using the "Continue to Final Submission" button above. This information can be entered at any time prior to submitting to CTS.

Scenario:
In three unrelated cases, adhesive tape material was collected and submitted for analysis. Each Item (1-3) below represents a separate, independent case.

A Hole Punch located at one end of the silicone release paper housing a known item indicates the end of tape which was removed from the roll and is not intended for physical end match analysis.

Items Submitted (Sample Pack TAPE):
Item 1- (K1, Q1): A known and a questioned sample from Case 1
Item 2- (K2, Q2): A known and a questioned sample from Case 2
Item 3- (K3, Q3): A known and a questioned sample from Case 3

Item 1:

1.1) Could the adhesive tape in Item Q1 have originated from the adhesive tape roll represented by Item K1?

○ Yes ○ No ○ Inconclusive

1.2) Does either end of the adhesive tape in Item Q1 physically match with the end of the adhesive tape roll represented by Item K1?

○ Yes ○ No ○ Inconclusive ○ N/A

1.3) Indicate the procedure(s) used to examine the submitted items:

Please check all that apply.

Microscopic Exams:	☐ Stereo ☐ Polarized Light	☐ Comparison
☐ Macroscopic Exam	☐ Fluorescence	☐ FTIR
☐ XRD	☐ XRS/XRF	☐ SEM/EDX
☐ LA-ICP-MS	☐ Pyrolysis GC	

Other (specify):

Item 2:

2.1) Could the adhesive tape in Item Q2 have originated from the adhesive tape roll represented by Item K2?

○ Yes ○ No ○ Inconclusive

2.2) Does either end of the adhesive tape in Item Q2 physically match with the end of the adhesive tape roll represented by Item K2?

○ Yes ○ No ○ Inconclusive ○ N/A

2.3) Indicate the procedure(s) used to examine the submitted items:

Please check all that apply.

Microscopic Exams:	☐ Stereo	☐ Comparison
	☐ Polarized Light	
☐ Macroscopic Exam	☐ Fluorescence	☐ FTIR
☐ XRD	☐ XRS/XRF	☐ SEM/EDX
☐ LA-ICP-MS	☐ Pyrolysis GC	

Other (specify):

Item 3:

3.1) Could the adhesive tape in Item Q3 have originated from the adhesive tape roll represented by Item K3?

○ Yes ○ No ○ Inconclusive

3.2) Does either end of the adhesive tape in Item Q3 physically match with the end of the adhesive tape roll represented by Item K3?

○ Yes ○ No ○ Inconclusive ○ N/A

3.3) Indicate the procedure(s) used to examine the submitted items:

Please check all that apply.

Microscopic Exams:	☐ Stereo	☐ Comparison
	☐ Polarized Light	
☐ Macroscopic Exam	☐ Fluorescence	☐ FTIR
☐ XRD	☐ XRS/XRF	☐ SEM/EDX
☐ LA-ICP-MS	☐ Pyrolysis GC	

Other (specify):

Please note: *Any additional formatting applied in the free form space below will not transfer to the Summary Report and may cause your information to be illegible. This includes additional spacing and returns that present your responses in lists and tabular formats.*

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

5.) Additional Comments

Research Question

1: Would your laboratory find value in a proficiency test solely related to the concept of fracture match? If so, what types of objects does your laboratory typically encounter in casework.

RELEASE OF DATA TO ACCREDITATION BODIES

The Accreditation Release is accessed by pressing the "Continue to Final Submission" button online and can be completed at any time prior to submission to CTS.

CTS submits external proficiency test data directly to ASCLD/LAB, ANAB, and/or 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 below must be completed.)
○ This participant's data is **not** intended for submission to ASCLD/LAB, ANAB, and/or A2LA.

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

ANAB Certificate No.
(Include ASCLD/LAB Certificate here)

A2LA Certificate No.

Step 2: Complete the Laboratory Identifying Information in its entirety

Authorized Contact Person and Title

Laboratory Name

Location (City/State)