



Bloodstain Pattern Analysis

Test No. 23-5601/5 Summary Report

Each sample set consisted of digitally produced photographs (23-5601) or directly downloadable digital images (23-5605) of bloodstains for Angle of Impact Determination and Pattern Description. Data were returned from 181 participants: 67 for 23-5601 and 114 for 23-5605 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 the following images: Angle of Impact Determination Stains A - E (Item 1), Pattern Description: Single Pattern Recognition (Items 2, 3, and 4), and Pattern Description: Recognition and Description (Item 5) provided in photographic (5601) or digital download (5605) form. Participants were requested to determine the angle of impact of Stains A - E (Item 1), identify the pattern for Items 2 - 4, and write a brief description of the pattern(s) for Item 5.

SAMPLE SET ASSEMBLY: Photographs were produced for the photographic test, placed into a pre-labeled sample set envelope and sealed. Digital download media were provided as a zipped file on the CTS Portal.

VERIFICATION: The laboratories that conducted the predistribution examination of the Angle of Impact stains reported consistent results for each of the Angle of Impact Stains A - E, and their findings were comparable to the preparation angles. The pattern descriptions reported by predistribution laboratories correlated to the descriptions of how the patterns were created for Items 2-5.

ANGLE OF IMPACT DETERMINATION

Item 1: For each angle of impact stain, human whole blood was released from a pipette at a height of approximately thirty-six inches above the impact surface. White poster board targets were placed on an inclined plane at the following predetermined angles from the vertical:

<u>Stain</u>	<u>Preparation Angle</u>
A	15.4°
B	18.1°
C	23.1°
D	20.9°
E	26.1°

Please note that the Preparation Angle is the value used for the test preparation phase and may not necessarily represent the final angle of the drops. It is advised to use the Grand Mean statistics available in the Summary and Individual Reports to evaluate performance.

Manufacturer's Information, continued

PATTERN DESCRIPTION

- Item 2: A gloved hand, coated in human whole blood, was pressed in the center of the target and then lifted.
- Item 3: A small volume of human whole blood was deposited onto the target, and a closed, gloved fist hit the pool of blood.
- Item 4: A screwdriver coated in human whole blood was swung downward toward the target.
- Item 5: The blade of a knife was coated in human whole blood and then swung toward the target. The stains were allowed to partially dry before a gloved finger moved through several stains. Then the bottom of a sandal coated in blood was placed in the corner of the target.

Summary Comments

Introduction

This test consisted of two sections: Angle of Impact Determination and Pattern Description. Participants had the option of receiving the stains and patterns for examination in the form of photographs or directly downloadable digital images. A digital supplemental that showed the entirety of the target substrate for each item in the Pattern Description section (Items 2-5) was also made available to all participants via the customer portal. Use of these supplemental images was optional and meant to bolster participants' confidence in their conclusions.

Angle of Impact

For angle of impact determination, participants were provided with images of five impact stains prepared at known angles from the vertical (see table below). Results marked with an "X" in Table 1 are greater than or equal to ± 3 standard deviations (STD) from the grand mean (GM). These results have been excluded from the statistical calculations presented at the end of each Stain table. Each exclusion was determined independently of other values (i.e. Length exclusion based only on Length GM; CalcAng exclusion based only on CalcAng GM). For some participants, significantly discrepant length/width measurements provided for magnified drops were excluded from calculations while their angle was not; this is due to an appropriate length/width ratio being achieved to result in an angle value within the ± 3 STD range. The Grand Mean and Standard Deviation are shown below, based on each Calculated Angle.

<u>Stain</u>	<u>Preparation Angle</u>	<u>Grand Mean</u>	<u>Standard Deviation</u>
A	15.4°	14.47°	0.83
B	18.1°	16.63°	1.16
C	23.1°	19.78°	1.90
D	20.9°	19.06°	1.36
E	26.1°	22.86°	1.24

Pattern Description

The pattern description section was divided into two separate parts. The first part of the pattern description section consisted of single pattern targets and participants were asked to select the single pattern type that best described the pattern contained in the image. The second part of the pattern description section consisted of one target, and participants were asked to provide a detailed description of the possible bloodstain patterns or events that created the final result. Please refer to the Manufacturer's Information for detailed explanations of how the patterns were created.

For part one, Item 2, 100% of participants reported "Transfer." For Item 3, 86.2% of participants reported a "Impact Pattern." For Item 4, 90.1% of participants reported "Cast-off Pattern."

For part two, Item 5, the majority of participants reported the following distinct pattern types: 1) Cast-Off (others classified it as a drip stain or drip trail), 2) Transfer stain, and 3) Wipe stain."

Angle of Impact Determination

TABLE 1

Table Explanation

The following table presents participants' reported Width and Length measurements for each bloodstain (A-E), along with Angle of Impact calculations. Several comparison statistics computed by CTS are presented as well. A brief explanation of each appears below:

CalcAng - Calculated Angle of Impact: This value was calculated by CTS using the width and length of the bloodstain reported by the participant and the formula: $\sin \theta = \text{width}/\text{length}$, where θ is the angle of impact. This calculation can only be performed when the reported width is less than or equal to the reported length.

Diff - Difference: The numerical difference between the participant's measurement and the Grand Mean.

GM - Grand Mean: The average of the measurements submitted by all the participants, not including any data specifically excluded (marked with X).

SD - Between Participant Standard Deviation : For each measurement, the standard deviation of the participant data about the Grand Mean, not including those participants excluded from the Grand Mean. The Between Participant Standard Deviation is an indication of the precision of measurement between participants.

CPV - Comparative Performance Value: For each value not excluded from statistical calculations, the CPV is the *Difference* divided by the *Between Participant Standard Deviation*. The *Difference* and *Between Participant Standard Deviation* values given below are rounded values, and as such, there may be a slight variation between the CPV provided in the chart and a CPV calculated by hand with the rounded values. The CPV is an indication of how well a participant's measurement agrees with the measurements submitted by other participants. The CPV is a (unitless) ratio indicating the number of standard deviations a participant's results are from the Grand Mean. The closer a participant's CPV is to zero, the more consistent their results are with the other participants' data. The CPV is a specific type of Z-score.

When a participant reports data that gives a CPV above 3.00 or below -3.00 the result is "flagged" ("X"). The use of this criterion is well accepted as a performance indicator and ensures in excess of 99% confidence that flagged results are different from the other participants'.

TABLE 1
Stain A

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
2GTQB3-5605	6.70	0.05	0.22	26.75	0.05	0.03	14.00	-0.48	-0.54	14.51
2PG6WF-5601	6.50	-0.15	-0.58	25.50	-1.20	-0.76	14.76	0.28	0.31	14.77
2W4G6V-5601	6.60	-0.05	-0.18	26.10	-0.60	-0.38	14.65	0.17	0.19	14.65
2XTX6V-5605	6.70	0.05	0.22	25.80	-0.90	-0.57	15.00	0.52	0.58	15.05
2Z7CWB-5601	6.70	0.05	0.22	30.00	3.30	2.10	12.90	-1.58	-1.78	12.90
36RD83-5605	6.80	0.15	0.62	26.00	-0.70	-0.44	15.20	0.72	0.80	15.16
3DLUZY-5605	2.91	-3.74	-14.89 X	11.95	-14.75	-9.38 X	14.10	-0.38	-0.43	14.09
3EXRBV-5605	6.40	-0.25	-0.98	26.00	-0.70	-0.44	14.30	-0.18	-0.20	14.25
3HGNZK-5605	6.74	0.09	0.38	26.84	0.14	0.09	14.54	0.06	0.06	14.54
3KM83M-5601	6.80	0.15	0.62	27.00	0.30	0.19	14.58	0.10	0.11	14.59
3QNKGW-5605	0.92	-5.73	-22.82 X	3.60	-23.10	-14.70 X	14.80	0.32	0.36	14.81
3RJ4LJ-5605	6.10	-0.55	-2.17	26.00	-0.70	-0.44	14.30	-0.18	-0.20	13.57
48U7HX-5601	6.60	-0.05	-0.18	25.10	-1.60	-1.01	15.25	0.77	0.86	15.25
4KDWDU-5601	6.60	-0.05	-0.18	26.10	-0.60	-0.38	14.65	0.17	0.19	14.65
4KY34L-5605	6.73	0.08	0.34	26.11	-0.59	-0.37	15.00	0.52	0.58	14.94
4LWLTU-5605	7.00	0.35	1.41	24.00	-2.70	-1.71	16.96	2.48	2.78	16.96
4RK9NY-5601	6.60	-0.05	-0.18	25.80	-0.90	-0.57	14.80	0.32	0.36	14.82
4TV3FT-5601	6.80	0.15	0.62	26.50	-0.20	-0.12	14.90	0.42	0.47	14.87
4V3FYF-5605	6.77	0.12	0.50	26.22	-0.48	-0.30	14.96	0.48	0.54	14.96

TABLE 1
Stain A, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
6643RC-5601	6.50	-0.15	-0.58	26.17	-0.53	-0.33	14.40	-0.08	-0.09	14.38
68TDH6-5601	7.00	0.35	1.41	28.00	1.30	0.83	14.00	-0.48	-0.54	14.48
6ACTL6-5605	6.80	0.15	0.62	26.00	-0.70	-0.44	15.20	0.72	0.80	15.16
6BTMNZ-5605	6.70	0.05	0.22	28.00	1.30	0.83	13.80	-0.68	-0.77	13.84
6MNUTW-5605	6.70	0.05	0.22	26.80	0.10	0.07	14.50	0.02	0.02	14.48
6NGPBY-5601	6.50	-0.15	-0.58	26.10	-0.60	-0.38	14.40	-0.08	-0.09	14.42
6RX89A-5605	6.50	-0.15	-0.58	27.00	0.30	0.19	13.90	-0.58	-0.65	13.93
6UKQA8-5601	6.72	0.08	0.30	25.72	-0.97	-0.62	15.00	0.52	0.58	15.15
6V2T9U-5601	6.50	-0.15	-0.58	28.00	1.30	0.83	13.40	-1.08	-1.21	13.42
6ZWPVY-5605	3.89	-2.76	-10.98 X	15.93	-10.77	-6.85 X	14.00	-0.48	-0.54	14.13
7APM27-5605	7.00	0.35	1.41	30.00	3.30	2.10	13.50	-0.98	-1.10	13.49
7ZQRZU-5601	6.80	0.15	0.62	24.40	-2.30	-1.46	16.00	1.52	1.70	16.18
89T3FD-5601	6.50	-0.15	-0.58	25.64	-1.06	-0.67	14.68	0.20	0.22	14.69
89YLR2-5601	6.66	0.01	0.06	27.67	0.97	0.62	13.90	-0.58	-0.65	13.93
8JVADX-5605	6.80	0.15	0.62	27.00	0.30	0.19	15.00	0.52	0.58	14.59
8UDC2P-5605	6.67	0.02	0.10	26.77	0.07	0.05	14.00	-0.48	-0.54	14.43
8V6ZXX-5601	7.00	0.35	1.41	30.00	3.30	2.10	13.49	-0.99	-1.11	13.49
8VTTZP-5601	6.50	-0.15	-0.58	25.30	-1.40	-0.89	14.90	0.42	0.47	14.89
8Z6GYZ-5601	6.84	0.19	0.78	29.65	2.95	1.88	13.00	-1.48	-1.66	13.34

TABLE 1
Stain A, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
98FDPQ- 5601	6.70	0.05	0.22	28.00	1.30	0.83	13.80	-0.68	-0.77	13.84
9K9NMX- 5605	6.70	0.05	0.22	25.70	-1.00	-0.63	15.00	0.52	0.58	15.11
9KLA9T- 5601	6.70	0.05	0.22	28.00	1.30	0.83	13.89	-0.59	-0.66	13.84
9LWCUR- 5601	7.00	0.35	1.41	27.20	0.50	0.32	14.90	0.42	0.47	14.91
A8XFHK- 5605	6.70	0.05	0.22	28.00	1.30	0.83	14.40	-0.08	-0.09	13.84
ABD4ZW- 5605	7.00	0.35	1.41	26.00	-0.70	-0.44	15.60	1.12	1.25	15.62
ARHLL2- 5601	6.87	0.22	0.90	25.00	-1.70	-1.08	16.20	1.72	1.93	15.95
BU77CQ- 5605	6.80	0.15	0.62	26.10	-0.60	-0.38	15.10	0.62	0.69	15.10
BXDKAB- 5605	6.81	0.16	0.66	28.07	1.37	0.87	14.00	-0.48	-0.54	14.04
C2ZV6E- 5601	6.90	0.25	1.02	26.50	-0.20	-0.12	15.10	0.62	0.69	15.09
C86LMK- 5601	6.60	-0.05	-0.18	26.00	-0.70	-0.44	14.71	0.23	0.26	14.71
CAT94E- 5605	6.70	0.05	0.22	26.20	-0.50	-0.32	15.00	0.52	0.58	14.82
CBQC4G- 5601	7.50	0.85	3.41 X	26.20	-0.50	-0.32	16.60	2.12	2.38	16.63
CK7T83- 5605	6.60	-0.05	-0.18	25.40	-1.30	-0.82	15.00	0.52	0.58	15.06
CL7D9P- 5605	19.10	12.45	49.65 X	75.00	48.30	30.74 X	14.80	0.32	0.36	14.75
CXWQA2- 5601	6.00	-0.65	-2.57	30.00	3.30	2.10	12.00	-2.48	-2.78	11.54 X
DEJZTM- 5605	6.60	-0.05	-0.18	27.50	0.80	0.51	14.00	-0.48	-0.54	13.89
DG7LFJ- 5605	6.63	-0.02	-0.06	26.68	-0.02	-0.01	14.00	-0.48	-0.54	14.39
DYCJ6A- 5605	6.80	0.15	0.62	28.90	2.20	1.40	14.00	-0.48	-0.54	13.61

TABLE 1
Stain A, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
E4KGWT-5601	6.43	-0.22	-0.86	26.75	0.05	0.03	13.90	-0.58	-0.65	13.91
EGJ26Y-5605	6.00	-0.65	-2.57	25.00	-1.70	-1.08	14.00	-0.48	-0.54	13.89
EGL3DW-5605	6.70	0.05	0.22	30.20	3.50	2.23	12.81	-1.67	-1.88	12.82
EHW4YV-5605	7.00	0.35	1.41	27.00	0.30	0.19	15.03	0.55	0.61	15.03
EM9RW8-5605	6.90	0.25	1.02	23.00	-3.70	-2.35	17.40	2.92	3.27 X	17.46 X
EPD7YZ-5605	6.80	0.15	0.62	26.50	-0.20	-0.12	14.87	0.39	0.43	14.87
F4F7UV-5605	7.00	0.35	1.41	30.00	3.30	2.10	13.49	-0.99	-1.11	13.49
FGLFJP-5601	6.75	0.10	0.42	27.17	0.47	0.30	14.40	-0.08	-0.09	14.38
FJHUF9-5605	6.74	0.09	0.38	28.74	2.04	1.30	13.56	-0.92	-1.03	13.56
FKGDNM-5605	6.80	0.15	0.62	26.70	0.00	0.00	14.70	0.22	0.24	14.75
FKHDGV-5601	0.70	-5.95	-23.70 X	2.70	-24.00	-15.27 X	15.00	0.52	0.58	15.03
FPQV2C-5605	6.65	0.00	0.02	26.59	-0.11	-0.07	14.48	0.00	0.00	14.48
FTBJGN-5605	6.40	-0.25	-0.98	27.30	0.60	0.38	14.00	-0.48	-0.54	13.56
FVYGRV-5605	6.00	-0.65	-2.57	26.50	-0.20	-0.12	13.08	-1.40	-1.57	13.09
FWAHDU-5601	6.50	-0.15	-0.58	25.00	-1.70	-1.08	15.07	0.59	0.66	15.07
G8NU6W-5601	6.50	-0.15	-0.58	27.00	0.30	0.19	13.93	-0.55	-0.62	13.93
GGUHG4-5601	6.50	-0.15	-0.58	25.00	-1.70	-1.08	15.10	0.62	0.69	15.07
GQLCWR-5605	5.00	-1.65	-6.56 X	20.00	-6.70	-4.26 X	14.48	0.00	0.00	14.48
H7B239-5605	6.76	0.11	0.46	27.66	0.96	0.61	14.10	-0.38	-0.43	14.15

TABLE 1
Stain A, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
HJKFQZ-5605	6.58	-0.07	-0.26	28.13	1.43	0.91	13.53	-0.95	-1.07	13.53
HWTBRH-5605	6.80	0.15	0.62	26.00	-0.70	-0.44	15.20	0.72	0.80	15.16
HXGYB-5605	7.00	0.35	1.41	28.00	1.30	0.83	15.00	0.52	0.58	14.48
J2FKAE-5605	6.80	0.15	0.62	25.50	-1.20	-0.76	15.00	0.52	0.58	15.47
J4XGAJ-5605	6.60	-0.05	-0.18	22.40	-4.30	-2.73	17.00	2.52	2.82	17.14 X
J8JYWB-5601	6.40	-0.25	-0.98	25.20	-1.50	-0.95	14.71	0.23	0.26	14.71
K9633M-5605	6.40	-0.25	-0.98	25.30	-1.40	-0.89	14.70	0.22	0.24	14.65
KBYAJJ-5605	5.80	-0.85	-3.37 X	25.50	-1.20	-0.76	13.14	-1.34	-1.51	13.15
KG7WCM-5605	0.86	-5.79	-23.06 X	3.46	-23.24	-14.78 X	14.00	-0.48	-0.54	14.39
KMUEU6-5605	6.73	0.08	0.34	27.13	0.43	0.28	14.40	-0.08	-0.09	14.36
KPUDKJ-5605	6.70	0.05	0.22	27.13	0.43	0.28	14.29	-0.19	-0.22	14.30
KVMRRJ-5605							16.00	1.52	1.70	
L3BQFP-5605	6.00	-0.65	-2.57	26.00	-0.70	-0.44	13.00	-1.48	-1.66	13.34
L7YJQD-5601	6.70	0.05	0.22	25.20	-1.50	-0.95	15.40	0.92	1.03	15.42
L98EPN-5605	6.60	-0.05	-0.18	26.00	-0.70	-0.44	14.70	0.22	0.24	14.71
L9NPBA-5601	6.50	-0.15	-0.58	25.00	-1.70	-1.08	15.07	0.59	0.66	15.07
LD4DTL-5605	6.76	0.11	0.46	28.04	1.34	0.86	14.00	-0.48	-0.54	13.95
LGGXL-5605	0.93	-5.72	-22.78 X	3.52	-23.18	-14.75 X	15.30	0.82	0.92	15.32
LQMVNB-5605	6.80	0.15	0.62	27.00	0.30	0.19	15.00	0.52	0.58	14.59

TABLE 1
Stain A, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
MLDYGF-5605	6.80	0.15	0.62	26.20	-0.50	-0.32	15.00	0.52	0.58	15.04
MRVE2C-5605	6.20	-0.45	-1.78	27.00	0.30	0.19	13.30	-1.18	-1.33	13.28
MYVBPX-5605	6.50	-0.15	-0.58	25.50	-1.20	-0.76	14.80	0.32	0.36	14.77
N793RL-5605	7.00	0.35	1.41	40.00	13.30	8.47 X	10.08	-4.40	-4.94 X	10.08 X
NBKBVC-5605	2.51	-4.14	-16.48 X	10.08	-16.62	-10.57 X	14.40	-0.08	-0.09	14.42
ND8UWA-5601	6.70	0.05	0.22	25.80	-0.90	-0.57	15.05	0.57	0.64	15.05
NTY9Y4-5605	6.76	0.11	0.46	26.12	-0.58	-0.37	14.99	0.51	0.57	15.00
PUWC9B-5605	6.80	0.15	0.62	24.00	-2.70	-1.71	16.50	2.02	2.26	16.46
Q29V29-5605	34.00	27.35	109.04 X	131.60	104.90	66.75 X	15.00	0.52	0.58	14.97
QGL9DE-5601	6.70	0.05	0.22	26.00	-0.70	-0.44	14.90	0.42	0.47	14.93
QMTU84-5605	6.52	-0.13	-0.50	27.60	0.90	0.58	13.70	-0.78	-0.88	13.66
R6NHFE-5605	6.80	0.15	0.62	24.40	-2.30	-1.46	16.00	1.52	1.70	16.18
RANKQA-5605	7.00	0.35	1.41	24.00	-2.70	-1.71	17.00	2.52	2.82	16.96
RF6TNY-5605	6.71	0.06	0.26	26.32	-0.38	-0.24	14.70	0.22	0.24	14.77
RHBPCE-5605	6.80	0.15	0.62	26.00	-0.70	-0.44	15.10	0.62	0.69	15.16
RNEGYC-5605	6.60	-0.05	-0.18	25.70	-1.00	-0.63	14.90	0.42	0.47	14.88
RTU4FG-5605	6.50	-0.15	-0.58	25.00	-1.70	-1.08	15.00	0.52	0.58	15.07
RVJN88-5605	6.80	0.15	0.62	26.00	-0.70	-0.44	15.20	0.72	0.80	15.16
RX9YXZ-5605	6.70	0.05	0.22	25.10	-1.60	-1.01	15.60	1.12	1.25	15.48

TABLE 1
Stain A, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
T3GHWT-5601	6.30	-0.35	-1.38	28.00	1.30	0.83	13.00	-1.48	-1.66	13.00
T69J73-5605	7.00	0.35	1.41	30.00	3.30	2.10	13.49	-0.99	-1.11	13.49
TE4XCD-5605	6.00	-0.65	-2.57	27.00	0.30	0.19	12.80	-1.68	-1.89	12.84
TH6KTH-5605	6.43	-0.22	-0.86	27.83	1.13	0.72	13.36	-1.12	-1.26	13.36
TJNUA4-5601	6.30	-0.35	-1.38	26.20	-0.50	-0.32	14.00	-0.48	-0.54	13.91
TNCLDQ-5605	6.80	0.15	0.62	27.10	0.40	0.26	15.00	0.52	0.58	14.53
TPMV2C-5605	6.00	-0.65	-2.57	24.00	-2.70	-1.71	14.40	-0.08	-0.09	14.48
TYCFQH-5601	6.00	-0.65	-2.57	30.00	3.30	2.10	11.54	-2.94	-3.30 X	11.54 X
U3AJTP-5605	6.60	-0.05	-0.18	24.50	-2.20	-1.40	15.60	1.12	1.25	15.63
UBHZJA-5605	6.80	0.15	0.62	26.50	-0.20	-0.12	15.00	0.52	0.58	14.87
UDPW4J-5605	6.70	0.05	0.22	27.80	1.10	0.70	14.00	-0.48	-0.54	13.95
UXGTQ6-5605	6.80	0.15	0.62	30.00	3.30	2.10	13.10	-1.38	-1.55	13.10
UXXUP2-5605	6.50	-0.15	-0.58	28.50	1.80	1.15	13.18	-1.30	-1.46	13.18
VFQXAU-5605	6.75	0.10	0.42	30.00	3.30	2.10	13.00	-1.48	-1.66	13.00
VJENYJ-5605	6.90	0.25	1.02	29.00	2.30	1.47	13.80	-0.68	-0.77	13.76
VXUNR4-5605	0.75	-5.90	-23.50 X	3.00	-23.70	-15.08 X	14.50	0.02	0.02	14.48
W6BKAJ-5601	7.00	0.35	1.41	27.00	0.30	0.19	15.00	0.52	0.58	15.03
WBLLG9-5605	6.70	0.05	0.22	26.00	-0.70	-0.44	14.90	0.42	0.47	14.93
WXPP7U-5605	6.70	0.05	0.22	25.70	-1.00	-0.63	15.10	0.62	0.69	15.11

TABLE 1
Stain A, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
X2J6U8-5605	3.00	-3.65	-14.53 X	12.00	-14.70	-9.35 X	14.50	0.02	0.02	14.48
X6H37E-5601	6.00	-0.65	-2.57	26.00	-0.70	-0.44	13.00	-1.48	-1.66	13.34
XMQ9Y4-5605	6.60	-0.05	-0.18	26.50	-0.20	-0.12	14.40	-0.08	-0.09	14.42
XVKGJV-5605	6.70	0.05	0.22	27.40	0.70	0.45	14.20	-0.28	-0.32	14.15
XYZV6F-5605	6.50	-0.15	-0.58	25.70	-1.00	-0.63	14.70	0.22	0.24	14.65
Y6XJYM-5605	6.86	0.21	0.85	26.16	-0.53	-0.34	15.19	0.71	0.79	15.20
YADYNE-5605	6.70	0.05	0.22	30.20	3.50	2.23	12.82	-1.66	-1.86	12.82
YMF3Q6-5605	6.00	-0.65	-2.57	24.00	-2.70	-1.71	14.00	-0.48	-0.54	14.48
YQYFWG-5605	6.75	0.10	0.42	28.25	1.55	0.99	13.82	-0.66	-0.74	13.82
YUHUZG-5605	6.50	-0.15	-0.58	26.80	0.10	0.07	14.00	-0.48	-0.54	14.04
YUXTGL-5601	6.60	-0.05	-0.18	27.90	1.20	0.77	13.70	-0.78	-0.88	13.68
Z44UBQ-5605	6.80	0.15	0.62	25.10	-1.60	-1.01	16.00	1.52	1.70	15.72
Z86Q37-5601	6.83	0.18	0.74	27.16	0.46	0.30	14.56	0.08	0.09	14.56
Z8HTME-5605	6.90	0.25	1.02	26.20	-0.50	-0.32	15.27	0.79	0.88	15.27
Z9J4M9-5605	6.00	-0.65	-2.57	27.00	0.30	0.19	13.00	-1.48	-1.66	12.84
Z9MLQY-5605	6.71	0.06	0.26	29.80	3.10	1.98	13.00	-1.48	-1.66	13.01
ZBNRZD-5605	6.40	-0.25	-0.98	25.00	-1.70	-1.08	14.80	0.32	0.36	14.83
ZGGRKZ-5605	6.70	0.05	0.22	28.30	1.60	1.02	13.70	-0.78	-0.88	13.69
ZKTJQT-5605	6.60	-0.05	-0.18	27.14	0.44	0.28	14.07	-0.41	-0.46	14.07

TABLE 1
Stain A, continued

WebCode- Test	Width			Length			Angle			<i>CalcAng</i>
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
ZLCEHU-5601	7.00	0.35	1.41	27.00	0.30	0.19	15.00	0.52	0.58	15.03
Grand Mean	6.65			26.70			14.48			14.47
Standard Deviation	0.25			1.57			0.89			0.83
Participants Included in calculations		138			139			150		147
Participants excluded from calculations (indicated by X)		14			13			3		5

Stain A Preparation Angle: 15.4°

TABLE 1
Stain B

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
2GTQB3-5605	4.75	0.16	0.65	16.25	0.09	0.10	17.00	0.41	0.33	17.00
2PG6WF-5601	4.40	-0.19	-0.81	14.80	-1.36	-1.54	17.29	0.70	0.56	17.30
2W4G6V-5601	4.60	0.01	0.03	16.30	0.14	0.16	16.39	-0.20	-0.16	16.39
2XTX6V-5605	4.60	0.01	0.03	16.20	0.04	0.05	16.00	-0.59	-0.48	16.50
2Z7CWB-5601	4.70	0.11	0.44	17.50	1.34	1.52	15.58	-1.01	-0.81	15.58
36RD83-5605	4.70	0.11	0.44	16.00	-0.16	-0.18	17.10	0.51	0.41	17.08
3DLUZY-5605	3.51	-1.08	-4.54 X	12.34	-3.82	-4.33 X	16.50	-0.09	-0.07	16.53
3EXRBV-5605	4.40	-0.19	-0.81	17.60	1.44	1.63	14.40	-2.19	-1.76	14.48
3HGNZK-5605	4.49	-0.10	-0.44	16.39	0.23	0.26	15.90	-0.69	-0.56	15.90
3KM83M-5601	4.80	0.21	0.86	17.00	0.84	0.95	16.40	-0.19	-0.15	16.40
3QNKGW-5605	0.92	-3.67	-15.39 X	3.15	-13.01	-14.76 X	17.00	0.41	0.33	16.98
3RJ4LJ-5605	11.50	6.91	28.93 X	37.00	20.84	23.64 X	18.10	1.51	1.22	18.11
48U7HX-5601	4.70	0.11	0.44	15.50	-0.66	-0.75	17.65	1.06	0.85	17.65
4KDWDU-5601	4.60	0.01	0.03	16.30	0.14	0.16	16.39	-0.20	-0.16	16.39
4KY34L-5605	4.62	0.03	0.11	16.38	0.22	0.25	16.38	-0.21	-0.17	16.38
4LWLTU-5605	4.50	-0.09	-0.39	15.00	-1.16	-1.31	17.46	0.87	0.70	17.46
4RK9NY-5601	4.60	0.01	0.03	15.80	-0.36	-0.41	16.90	0.31	0.25	16.93
4TV3FT-5601	4.70	0.11	0.44	16.10	-0.06	-0.07	17.00	0.41	0.33	16.97
4V3FYF-5605	4.70	0.11	0.44	16.24	0.08	0.09	16.82	0.23	0.19	16.82

TABLE 1
Stain B, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
6643RC- 5601	4.42	-0.17	-0.73	16.33	0.17	0.19	15.70	-0.89	-0.72	15.70
68TDH6- 5601	4.00	-0.59	-2.49	15.00	-1.16	-1.31	15.00	-1.59	-1.28	15.47
6ACTL6- 5605	4.70	0.11	0.44	15.60	-0.56	-0.63	17.50	0.91	0.73	17.53
6BTMNZ- 5605	4.70	0.11	0.44	17.00	0.84	0.95	16.00	-0.59	-0.48	16.05
6MNUTW- 5605	4.60	0.01	0.03	16.20	0.04	0.05	16.50	-0.09	-0.07	16.50
6NGPBY- 5601	4.60	0.01	0.03	15.00	-1.16	-1.31	17.90	1.31	1.06	17.86
6RX89A- 5605	4.75	0.16	0.65	15.50	-0.66	-0.75	17.80	1.21	0.97	17.85
6UKQA8- 5601	4.66	0.06	0.26	16.63	0.47	0.53	16.00	-0.59	-0.48	16.26
6V2T9U- 5601	4.50	-0.09	-0.39	16.00	-0.16	-0.18	16.30	-0.29	-0.23	16.33
6ZWPVY- 5605	4.02	-0.57	-2.40	11.38	-4.78	-5.42 X	20.00	3.41	2.75	20.69 X
7APM27- 5605	5.00	0.41	1.70	19.00	2.84	3.22 X	15.20	-1.39	-1.12	15.26
7ZQRZU- 5601	4.60	0.01	0.03	14.40	-1.76	-2.00	19.00	2.41	1.94	18.63
89T3FD- 5601	4.42	-0.17	-0.73	16.10	-0.06	-0.07	15.93	-0.66	-0.53	15.93
89YLR2- 5601	4.70	0.11	0.44	17.13	0.97	1.10	15.90	-0.69	-0.56	15.92
8JVADX- 5605	4.80	0.21	0.86	16.10	-0.06	-0.07	17.00	0.41	0.33	17.35
8UDC2P- 5605	4.72	0.13	0.53	15.82	-0.34	-0.38	17.00	0.41	0.33	17.36
8V6Z XK- 5601	5.00	0.41	1.70	18.00	1.84	2.09	16.13	-0.46	-0.37	16.13
8VTTZP- 5601	4.30	-0.29	-1.23	14.50	-1.66	-1.88	17.25	0.66	0.53	17.25
8Z6GYZ- 5601	4.78	0.19	0.78	17.38	1.22	1.38	16.00	-0.59	-0.48	15.96

TABLE 1
Stain B, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
98FDPQ- 5601	4.60	0.01	0.03	17.50	1.34	1.52	15.20	-1.39	-1.12	15.24
9K9NMX- 5605	4.70	0.11	0.44	16.20	0.04	0.05	17.00	0.41	0.33	16.87
9KLA9T- 5601	4.60	0.01	0.03	17.00	0.84	0.95	15.66	-0.93	-0.75	15.70
9LWCUR- 5601	4.60	0.01	0.03	16.00	-0.16	-0.18	16.70	0.11	0.09	16.71
A8XFHK- 5605	4.80	0.21	0.86	15.60	-0.56	-0.63	17.90	1.31	1.06	17.92
ABD4ZW- 5605	4.90	0.31	1.28	15.00	-1.16	-1.31	19.08	2.49	2.01	19.07
ARHLL2- 5601	4.50	-0.09	-0.39	15.00	-1.16	-1.31	17.40	0.81	0.65	17.46
BU77CQ- 5605	4.60	0.01	0.03	16.40	0.24	0.27	16.20	-0.39	-0.31	16.29
BXDKAB- 5605	4.74	0.15	0.61	17.08	0.92	1.04	16.00	-0.59	-0.48	16.11
C2ZV6E- 5601	4.80	0.21	0.86	16.50	0.34	0.39	16.90	0.31	0.25	16.91
C86LMK- 5601	4.60	0.01	0.03	16.20	0.04	0.05	16.50	-0.09	-0.07	16.50
CAT94E- 5605	4.70	0.11	0.44	15.70	-0.46	-0.52	17.00	0.41	0.33	17.42
CBQC4G- 5601	5.50	0.91	3.80 X	17.60	1.44	1.63	18.20	1.61	1.30	18.21
CK7T83- 5605	4.10	-0.49	-2.07	16.80	0.64	0.73	14.00	-2.59	-2.09	14.13
CL7D9P- 5605	13.60	9.01	37.73 X	46.60	30.44	34.53 X	17.00	0.41	0.33	16.97
CXWQA2- 5601	4.00	-0.59	-2.49	18.00	1.84	2.09	13.00	-3.59	-2.89	12.84 X
DEJZTM- 5605	4.80	0.21	0.86	16.50	0.34	0.39	16.80	0.21	0.17	16.91
DG7LFJ- 5605	4.58	-0.01	-0.06	15.90	-0.26	-0.29	17.00	0.41	0.33	16.74
DYCJ6A- 5605	4.80	0.21	0.86	17.20	1.04	1.18	16.00	-0.59	-0.48	16.20

TABLE 1
Stain B, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
E4KGWT-5601	4.50	-0.09	-0.39	17.53	1.37	1.55	14.90	-1.69	-1.36	14.87
EGJ26Y-5605	4.00	-0.59	-2.49	16.00	-0.16	-0.18	14.00	-2.59	-2.09	14.48
EGL3DW-5605	4.65	0.06	0.23	17.43	1.27	1.44	15.47	-1.12	-0.90	15.47
EHW4YV-5605	5.00	0.41	1.70	16.00	-0.16	-0.18	18.21	1.62	1.30	18.21
EM9RW8-5605	4.70	0.11	0.44	15.00	-1.16	-1.31	18.30	1.71	1.38	18.26
EPD7YZ-5605	4.60	0.01	0.03	16.50	0.34	0.39	16.12	-0.47	-0.38	16.19
F4F7UV-5605	5.00	0.41	1.70	18.00	1.84	2.09	16.13	-0.46	-0.37	16.13
FGLFJP-5601	4.77	0.18	0.74	16.07	-0.09	-0.10	17.30	0.71	0.57	17.27
FJHUF9-5605	4.48	-0.11	-0.48	17.37	1.21	1.37	14.95	-1.64	-1.32	14.95
FKGDNM-5605	4.80	0.21	0.86	15.70	-0.46	-0.52	17.70	1.11	0.89	17.80
FKHDGV-5601	0.40	-4.19	-17.57 X	1.50	-14.66	-16.63 X	16.00	-0.59	-0.48	15.47
FPQV2C-5605	4.62	0.03	0.11	16.30	0.14	0.16	16.40	-0.19	-0.15	16.47
FTBJGN-5605	4.50	-0.09	-0.39	16.20	0.04	0.05	16.00	-0.59	-0.48	16.13
FVYGRV-5605	4.25	-0.34	-1.44	15.50	-0.66	-0.75	15.91	-0.68	-0.55	15.91
FWAHDU-5601	4.00	-0.59	-2.49	15.00	-1.16	-1.31	15.46	-1.13	-0.91	15.47
G8NU6W-5601	4.50	-0.09	-0.39	16.00	-0.16	-0.18	16.33	-0.26	-0.21	16.33
GGUHG4-5601	4.50	-0.09	-0.39	15.30	-0.86	-0.97	17.10	0.51	0.41	17.10
GQLCWR-5605	3.50	-1.09	-4.58 X	12.00	-4.16	-4.72 X	16.96	0.37	0.30	16.96
H7B239-5605	4.72	0.13	0.53	16.54	0.38	0.43	16.60	0.01	0.01	16.58

TABLE 1
Stain B, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
HJKFQZ-5605	4.67	0.08	0.32	16.70	0.54	0.61	16.24	-0.35	-0.28	16.24
HWTBRH-5605	4.90	0.31	1.28	16.30	0.14	0.16	17.50	0.91	0.73	17.49
HXGYB-5605	4.50	-0.09	-0.39	16.00	-0.16	-0.18	16.00	-0.59	-0.48	16.33
J2FKAE-5605	4.80	0.21	0.86	15.80	-0.36	-0.41	18.00	1.41	1.14	17.69
J4XGAJ-5605	4.80	0.21	0.86	14.10	-2.06	-2.34	20.00	3.41	2.75	19.90
J8JYWB-5601	4.80	0.21	0.86	16.00	-0.16	-0.18	17.45	0.86	0.69	17.46
K9633M-5605	4.60	0.01	0.03	15.50	-0.66	-0.75	17.30	0.71	0.57	17.26
KBYAJJ-5605	4.10	-0.49	-2.07	15.00	-1.16	-1.31	15.86	-0.73	-0.59	15.86
KG7WCM-5605	0.81	-3.78	-15.85 X	2.88	-13.28	-15.06 X	16.00	-0.59	-0.48	16.33
KMUEU6-5605	4.75	0.16	0.65	16.28	0.12	0.14	17.00	0.41	0.33	16.96
KPUDKJ-5605	4.68	0.09	0.36	16.06	-0.10	-0.11	16.94	0.35	0.28	16.94
KVMRRJ-5605							16.00	-0.59	-0.48	
L3BQFP-5605	5.00	0.41	1.70	15.00	-1.16	-1.31	20.00	3.41	2.75	19.47
L7YJQD-5601	4.60	0.01	0.03	16.00	-0.16	-0.18	16.70	0.11	0.09	16.71
L98EPN-5605	4.50	-0.09	-0.39	15.70	-0.46	-0.52	16.70	0.11	0.09	16.66
L9NPBA-5601	4.50	-0.09	-0.39	15.00	-1.16	-1.31	17.46	0.87	0.70	17.46
LD4DTL-5605	4.54	-0.05	-0.23	16.71	0.55	0.62	16.00	-0.59	-0.48	15.77
LGGXXL-5605	0.88	-3.71	-15.56 X	2.93	-13.23	-15.01 X	17.50	0.91	0.73	17.48
LQMVNB-5605	4.80	0.21	0.86	16.00	-0.16	-0.18	17.00	0.41	0.33	17.46

TABLE 1
Stain B, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
MLDYGF-5605	4.70	0.11	0.44	18.00	1.84	2.09	15.10	-1.49	-1.20	15.14
MRVE2C-5605	4.20	-0.39	-1.65	16.00	-0.16	-0.18	15.20	-1.39	-1.12	15.22
MYVBPX-5605	4.60	0.01	0.03	15.40	-0.76	-0.86	17.40	0.81	0.65	17.38
N793RL-5605	5.00	0.41	1.70	25.00	8.84	10.03 X	11.54	-5.05	-4.07 X	11.54 X
NBKBVC-5605	2.74	-1.85	-7.77 X	8.90	-7.26	-8.23 X	17.90	1.31	1.06	17.93
ND8UWA-5601	4.70	0.11	0.44	16.40	0.24	0.27	16.65	0.06	0.05	16.65
NTY9Y4-5605	4.68	0.09	0.36	15.68	-0.48	-0.54	17.37	0.78	0.63	17.37
PUWC9B-5605	4.40	-0.19	-0.81	17.20	1.04	1.18	14.80	-1.79	-1.44	14.82
Q29V29-5605	47.20	42.61	178.47X	156.00	139.84	158.62X	17.60	1.01	0.81	17.61
QGL9DE-5601	4.80	0.21	0.86	14.20	-1.96	-2.22	19.70	3.11	2.50	19.76
QMTU84-5605	4.64	0.05	0.19	16.52	0.36	0.41	16.34	-0.25	-0.20	16.31
R6NHFE-5605	4.50	-0.09	-0.39	14.50	-1.66	-1.88	18.00	1.41	1.14	18.08
RANKQA-5605	4.50	-0.09	-0.39	11.50	-4.66	-5.28 X	23.00	6.41	5.16 X	23.04 X
RF6TNY-5605	4.67	0.08	0.32	15.24	-0.92	-1.04	17.80	1.21	0.97	17.84
RHBPCE-5605	4.60	0.01	0.03	16.30	0.14	0.16	16.40	-0.19	-0.15	16.39
RNEGYC-5605	4.60	0.01	0.03	16.60	0.44	0.50	16.10	-0.49	-0.39	16.09
RTU4FG-5605	4.50	-0.09	-0.39	17.00	0.84	0.95	15.00	-1.59	-1.28	15.35
RVJN88-5605	4.80	0.21	0.86	15.20	-0.96	-1.09	18.40	1.81	1.46	18.41
RX9YXZ-5605	4.70	0.11	0.44	16.10	-0.06	-0.07	17.00	0.41	0.33	16.97

TABLE 1
Stain B, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
T3GHWT-5601	4.40	-0.19	-0.81	17.00	0.84	0.95	15.00	-1.59	-1.28	15.00
T69J73-5605	4.00	-0.59	-2.49	17.00	0.84	0.95	13.60	-2.99	-2.41	13.61
TE4XCD-5605	4.00	-0.59	-2.49	17.00	0.84	0.95	13.60	-2.99	-2.41	13.61
TH6KTH-5605	4.22	-0.37	-1.57	16.42	0.26	0.30	14.89	-1.70	-1.37	14.89
TJNUA4-5601	4.20	-0.39	-1.65	16.20	0.04	0.05	15.00	-1.59	-1.28	15.03
TNCLDQ-5605	4.80	0.21	0.86	16.10	-0.06	-0.07	17.00	0.41	0.33	17.35
TPMV2C-5605	4.00	-0.59	-2.49	14.00	-2.16	-2.45	16.60	0.01	0.01	16.60
TYCFQH-5601	4.00	-0.59	-2.49	17.00	0.84	0.95	13.61	-2.98	-2.40	13.61
U3AJTP-5605	4.70	0.11	0.44	15.00	-1.16	-1.31	18.20	1.61	1.30	18.26
UBHZJA-5605	4.80	0.21	0.86	15.90	-0.26	-0.29	18.00	1.41	1.14	17.57
UDPW4J-5605	4.60	0.01	0.03	16.70	0.54	0.61	16.00	-0.59	-0.48	15.99
UXGTQ6-5605	4.50	-0.09	-0.39	17.50	1.34	1.52	14.90	-1.69	-1.36	14.90
UXXUP2-5605	4.50	-0.09	-0.39	17.00	0.84	0.95	15.35	-1.24	-1.00	15.35
VFQXAU-5605	4.75	0.16	0.65	18.00	1.84	2.09	15.30	-1.29	-1.04	15.30
VJENYJ-5605	4.90	0.31	1.28	7.50	-8.66	-9.82 X	16.00	-0.59	-0.48	40.79 X
VXUNR4-5605	0.54	-4.05	-16.98 X	1.76	-14.40	-16.33 X	17.90	1.31	1.06	17.87
W6BKAJ-5601	5.00	0.41	1.70	16.00	-0.16	-0.18	18.00	1.41	1.14	18.21
WBLLG9-5605	4.70	0.11	0.44	16.00	-0.16	-0.18	17.10	0.51	0.41	17.08
WXPP7U-5605	4.60	0.01	0.03	15.60	-0.56	-0.63	17.10	0.51	0.41	17.15

TABLE 1
Stain B, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
X2J6U8-5605	3.70	-0.89	-3.74 X	13.00	-3.16	-3.58 X	16.50	-0.09	-0.07	16.54
X6H37E-5601	4.00	-0.59	-2.49	15.00	-1.16	-1.31	15.00	-1.59	-1.28	15.47
XMQ9Y4-5605	4.65	0.06	0.23	16.20	0.04	0.05	16.70	0.11	0.09	16.68
XVKGJV-5605	4.70	0.11	0.44	16.20	0.04	0.05	16.90	0.31	0.25	16.87
XYZV6F-5605	4.60	0.01	0.03	15.50	-0.66	-0.75	17.30	0.71	0.57	17.26
Y6XJYM-5605	4.57	-0.02	-0.09	16.00	-0.16	-0.18	16.60	0.01	0.01	16.60
YADYNE-5605	4.70	0.11	0.44	18.00	1.84	2.09	15.14	-1.45	-1.17	15.14
YMF3Q6-5605	5.00	0.41	1.70	15.00	-1.16	-1.31	19.00	2.41	1.94	19.47
YQYFWG-5605	4.50	-0.09	-0.39	16.30	0.14	0.16	16.03	-0.56	-0.45	16.03
YUHUZG-5605	4.60	0.01	0.03	15.80	-0.36	-0.41	17.00	0.41	0.33	16.93
YUXTGL-5601	4.50	-0.09	-0.39	16.10	-0.06	-0.07	16.20	-0.39	-0.31	16.23
Z44UBQ-5605	4.70	0.11	0.44	15.00	-1.16	-1.31	18.00	1.41	1.14	18.26
Z86Q37-5601	4.73	0.14	0.57	16.75	0.59	0.67	16.40	-0.19	-0.15	16.40
Z8HTME-5605	4.80	0.21	0.86	16.30	0.14	0.16	17.27	0.68	0.55	17.13
Z9J4M9-5605	4.50	-0.09	-0.39	15.00	-1.16	-1.31	17.00	0.41	0.33	17.46
Z9MLQY-5605	4.58	-0.01	-0.06	17.42	1.26	1.43	15.00	-1.59	-1.28	15.24
ZBNRZD-5605	4.50	-0.09	-0.39	15.70	-0.46	-0.52	16.60	0.01	0.01	16.66
ZGGRKZ-5605	4.60	0.01	0.03	16.20	0.04	0.05	16.50	-0.09	-0.07	16.50
ZKTJQT-5605	4.60	0.01	0.03	16.25	0.09	0.10	16.44	-0.15	-0.12	16.44

TABLE 1
Stain B, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
ZLCEHU-5601	4.80	0.21	0.86	17.20	1.04	1.18	16.20	-0.39	-0.31	16.20
Grand Mean	4.59			16.16			16.59			16.63
Standard Deviation	0.24			0.88			1.24			1.16
Participants Included in calculations		139			135			151		147
Participants excluded from calculations (indicated by X)		13			17			2		5

Stain B Preparation Angle: 18.1°

TABLE 1
Stain C

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
2GTQB3-5605	2.30	0.10	0.70	6.60	0.02	0.05	20.00	0.15	0.08	20.39
2PG6WF-5601	2.10	-0.10	-0.65	6.20	-0.38	-0.97	19.79	-0.06	-0.03	19.80
2W4G6V-5601	2.10	-0.10	-0.65	6.80	0.22	0.56	17.98	-1.87	-0.97	17.99
2XTX6V-5605	2.20	0.00	0.02	7.00	0.42	1.07	18.00	-1.85	-0.96	18.32
2Z7CWB-5601	2.30	0.10	0.70	7.20	0.62	1.58	18.63	-1.22	-0.63	18.63
36RD83-5605	2.30	0.10	0.70	6.40	-0.18	-0.46	21.00	1.15	0.60	21.06
3DLUZY-5605	2.93	0.73	4.97 X	8.57	1.99	5.08 X	20.00	0.15	0.08	19.99
3EXRBV-5605	2.10	-0.10	-0.65	6.60	0.02	0.05	19.20	-0.65	-0.34	18.55
3HGNZK-5605	2.35	0.15	1.04	6.48	-0.10	-0.26	21.26	1.41	0.73	21.26
3KM83M-5601	2.20	0.00	0.02	7.00	0.42	1.07	18.32	-1.53	-0.80	18.32
3QNKGW-5605	1.27	-0.93	-6.28 X	3.47	-3.11	-7.94 X	21.50	1.65	0.86	21.47
3RJ4LJ-5605	6.00	3.80	25.77 X	17.00	10.42	26.60 X	20.60	0.75	0.39	20.67
48U7HX-5601	2.30	0.10	0.70	6.60	0.02	0.05	20.39	0.54	0.28	20.39
4KDWDU-5601	2.10	-0.10	-0.65	6.80	0.22	0.56	17.98	-1.87	-0.97	17.99
4KY34L-5605	2.24	0.04	0.29	6.55	-0.03	-0.08	20.00	0.15	0.08	20.00
4LWLTU-5605	2.00	-0.20	-1.33	6.50	-0.08	-0.21	17.92	-1.93	-1.00	17.92
4RK9NY-5601	2.20	0.00	0.02	6.20	-0.38	-0.97	20.80	0.95	0.49	20.78
4TV3FT-5601	2.20	0.00	0.02	6.20	-0.38	-0.97	20.80	0.95	0.49	20.78
4V3FYF-5605	2.31	0.11	0.77	6.62	0.04	0.10	20.42	0.57	0.30	20.42

TABLE 1
Stain C, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
6643RC- 5601	2.17	-0.03	-0.18	6.58	0.00	0.00	19.20	-0.65	-0.34	19.26
68TDH6- 5601	2.00	-0.20	-1.33	7.00	0.42	1.07	17.00	-2.85	-1.48	16.60
6ACTL6- 5605	2.30	0.10	0.70	6.00	-0.58	-1.48	22.50	2.65	1.38	22.54
6BTMNZ- 5605	2.20	0.00	0.02	6.70	0.12	0.30	19.00	-0.85	-0.44	19.17
6MNUTW- 5605	2.30	0.10	0.70	6.60	0.02	0.05	20.40	0.55	0.29	20.39
6NGPBY- 5601	2.20	0.00	0.02	6.40	-0.18	-0.46	20.10	0.25	0.13	20.11
6RX89A- 5605	2.00	-0.20	-1.33	7.00	0.42	1.07	16.60	-3.25	-1.69	16.60
6UKQA8- 5601	2.19	0.00	-0.03	6.60	0.02	0.05	19.00	-0.85	-0.44	19.39
6V2T9U- 5601	2.00	-0.20	-1.33	6.00	-0.58	-1.48	19.50	-0.35	-0.18	19.47
6ZWPVY- 5605	3.86	1.66	11.27 X	10.43	3.85	9.83 X	22.00	2.15	1.12	21.72
7APM27- 5605	2.00	-0.20	-1.33	7.00	0.42	1.07	16.60	-3.25	-1.69	16.60
7ZQRZU- 5601	2.00	-0.20	-1.33	6.00	-0.58	-1.48	19.00	-0.85	-0.44	19.47
89T3FD- 5601	2.07	-0.13	-0.86	6.82	0.24	0.61	17.66	-2.19	-1.14	17.67
89YLR2- 5601	2.27	0.07	0.50	6.53	-0.05	-0.13	20.30	0.45	0.23	20.34
8JVADX- 5605	2.40	0.20	1.38	6.60	0.02	0.05	21.00	1.15	0.60	21.32
8UDC2P- 5605	2.30	0.10	0.70	6.40	-0.18	-0.46	21.00	1.15	0.60	21.06
8V6ZXX- 5601	2.00	-0.20	-1.33	7.00	0.42	1.07	16.60	-3.25	-1.69	16.60
8VTTZP- 5601	2.30	0.10	0.70	6.70	0.12	0.30	20.00	0.15	0.08	20.08
8Z6GYZ- 5601	2.40	0.20	1.38	6.91	0.33	0.84	20.00	0.15	0.08	20.32

TABLE 1
Stain C, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
98FDPQ- 5601	2.20	0.00	0.02	7.40	0.82	2.09	17.29	-2.56	-1.33	17.30
9K9NMX- 5605	2.30	0.10	0.70	6.10	-0.48	-1.23	22.00	2.15	1.12	22.15
9KLA9T- 5601	2.20	0.00	0.02	7.40	0.82	2.09	17.46	-2.39	-1.24	17.30
9LWCUR- 5601	2.30	0.10	0.70	7.00	0.42	1.07	19.10	-0.75	-0.39	19.18
A8XFHK- 5605	2.30	0.10	0.70	6.60	0.02	0.05	20.30	0.45	0.23	20.39
ABD4ZW- 5605	2.10	-0.10	-0.65	6.40	-0.18	-0.46	19.15	-0.70	-0.36	19.16
ARHLL2- 5601	2.00	-0.20	-1.33	7.00	0.42	1.07	16.60	-3.25	-1.69	16.60
BU77CQ- 5605	2.30	0.10	0.70	6.50	-0.08	-0.21	20.70	0.85	0.44	20.72
BXDKAB- 5605	2.19	-0.01	-0.04	7.11	0.53	1.35	18.00	-1.85	-0.96	17.94
C2ZV6E- 5601	2.20	0.00	0.02	6.50	-0.08	-0.21	19.80	-0.05	-0.03	19.78
C86LMK- 5601	2.20	0.00	0.02	6.30	-0.28	-0.72	20.44	0.59	0.31	20.44
CAT94E- 5605	2.30	0.10	0.70	6.40	-0.18	-0.46	21.00	1.15	0.60	21.06
CBQC4G- 5601	2.70	0.50	3.41 X	7.10	0.52	1.33	22.40	2.55	1.33	22.35
CK7T83- 5605	2.00	-0.20	-1.33	6.80	0.22	0.56	17.00	-2.85	-1.48	17.10
CL7D9P- 5605	11.50	9.30	63.03 X	33.70	27.12	69.24 X	20.00	0.15	0.08	19.95
CXWQA2- 5601	2.00	-0.20	-1.33	7.00	0.42	1.07	17.00	-2.85	-1.48	16.60
DEJZTM- 5605	2.30	0.10	0.70	6.50	-0.08	-0.21	21.00	1.15	0.60	20.72
DG7LFJ- 5605	2.33	0.13	0.90	6.58	0.00	0.00	21.00	1.15	0.60	20.74
DYCJ6A- 5605	2.30	0.10	0.70	7.00	0.42	1.07	19.00	-0.85	-0.44	19.18

TABLE 1
Stain C, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
E4KGWT-5601	2.08	-0.12	-0.79	6.80	0.22	0.56	17.80	-2.05	-1.07	17.81
EGJ26Y-5605	2.00	-0.20	-1.33	6.00	-0.58	-1.48	19.00	-0.85	-0.44	19.47
EGL3DW-5605	2.30	0.10	0.70	7.25	0.67	1.71	18.50	-1.35	-0.70	18.50
EHW4YV-5605	2.00	-0.20	-1.33	6.00	-0.58	-1.48	19.47	-0.38	-0.20	19.47
EM9RW8-5605	2.20	0.00	0.02	6.40	-0.18	-0.46	20.10	0.25	0.13	20.11
EPD7YZ-5605	2.30	0.10	0.70	6.50	-0.08	-0.21	20.72	0.87	0.45	20.72
F4F7UV-5605	2.20	0.00	0.02	7.00	0.42	1.07	18.32	-1.53	-0.80	18.32
FGLFJP-5601	2.14	-0.06	-0.38	6.32	-0.26	-0.67	19.80	-0.05	-0.03	19.79
FJHUF9-5605	2.20	0.00	0.02	6.82	0.24	0.61	18.82	-1.03	-0.54	18.82
FKGDNM-5605	2.40	0.20	1.38	6.40	-0.18	-0.46	21.70	1.85	0.96	22.02
FKHDGV-5601	0.20	-2.00	-13.53 X	0.70	-5.88	-15.01 X	17.00	-2.85	-1.48	16.60
FPQV2C-5605	2.23	0.03	0.23	6.47	-0.11	-0.28	20.10	0.25	0.13	20.16
FTBJGN-5605	2.20	0.00	0.02	6.60	0.02	0.05	19.00	-0.85	-0.44	19.47
FVYGRV-5605	2.25	0.05	0.36	6.25	-0.33	-0.84	21.10	1.25	0.65	21.10
FWAHDU-5601	2.00	-0.20	-1.33	6.00	-0.58	-1.48	19.47	-0.38	-0.20	19.47
G8NU6W-5601	2.00	-0.20	-1.33	6.00	-0.58	-1.48	19.47	-0.38	-0.20	19.47
GGUHG4-5601	2.00	-0.20	-1.33	6.00	-0.58	-1.48	19.50	-0.35	-0.18	19.47
GQLCWR-5605	2.00	-0.20	-1.33	5.00	-1.58	-4.04 X	23.58	3.73	1.94	23.58
H7B239-5605	2.31	0.11	0.77	6.87	0.29	0.74	19.60	-0.25	-0.13	19.65

TABLE 1
Stain C, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
HJKFQZ-5605	2.45	0.25	1.72	7.05	0.47	1.20	20.34	0.49	0.26	20.34
HWTBRH-5605	2.40	0.20	1.38	6.30	-0.28	-0.72	22.40	2.55	1.33	22.39
HXGYB-5605	2.50	0.30	2.06	7.00	0.42	1.07	21.00	1.15	0.60	20.92
J2FKAE-5605	2.40	0.20	1.38	6.40	-0.18	-0.46	23.00	3.15	1.64	22.02
J4XGAJ-5605	2.40	0.20	1.38	5.80	-0.78	-1.99	25.00	5.15	2.68	24.44
J8JYWB-5601	1.80	-0.40	-2.69	6.80	0.22	0.56	6.46	-13.39	-6.97 X	15.35
K9633M-5605	2.20	0.00	0.02	6.30	-0.28	-0.72	20.40	0.55	0.29	20.44
KBYAJJ-5605	1.80	-0.40	-2.69	6.00	-0.58	-1.48	17.45	-2.40	-1.25	17.46
KG7WCM-5605	0.54	-1.66	-11.22 X	1.47	-5.11	-13.05 X	22.00	2.15	1.12	21.55
KMUEU6-5605	2.31	0.11	0.77	6.55	-0.03	-0.08	20.70	0.85	0.44	20.65
KPUDKJ-5605	2.31	0.11	0.77	6.54	-0.04	-0.10	20.68	0.83	0.43	20.68
KVMRRJ-5605							21.00	1.15	0.60	
L3BQFP-5605	2.50	0.30	2.06	6.00	-0.58	-1.48	25.00	5.15	2.68	24.62
L7YJQD-5601	2.30	0.10	0.70	7.00	0.42	1.07	19.10	-0.75	-0.39	19.18
L98EPN-5605	2.20	0.00	0.02	6.90	0.32	0.82	18.60	-1.25	-0.65	18.59
L9NPBA-5601	2.20	0.00	0.02	6.50	-0.08	-0.21	19.78	-0.07	-0.04	19.78
LD4DTL-5605	2.30	0.10	0.70	6.52	-0.06	-0.16	21.00	1.15	0.60	20.66
LGGXXL-5605	0.54	-1.66	-11.22 X	1.54	-5.04	-12.87 X	20.50	0.65	0.34	20.53
LQMVNB-5605	2.40	0.20	1.38	6.40	-0.18	-0.46	22.00	2.15	1.12	22.02

TABLE 1
Stain C, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
MLDYGF-5605	2.20	0.00	0.02	6.70	0.12	0.30	19.20	-0.65	-0.34	19.17
MRVE2C-5605	2.00	-0.20	-1.33	6.60	0.02	0.05	17.60	-2.25	-1.17	17.64
MYVBPX-5605	2.30	0.10	0.70	6.20	-0.38	-0.97	21.80	1.95	1.01	21.78
N793RL-5605	3.00	0.80	5.44 X	13.00	6.42	16.39 X	13.34	-6.51	-3.39 X	13.34 X
NBKBVC-5605	2.56	0.36	2.46	7.16	0.58	1.48	20.90	1.05	0.55	20.95
ND8UWA-5601	2.10	-0.10	-0.65	6.90	0.32	0.82	17.71	-2.14	-1.11	17.72
NTY9Y4-5605	2.20	0.00	0.02	6.24	-0.34	-0.87	20.64	0.79	0.41	20.64
PUWC9B-5605	2.20	0.00	0.02	6.70	0.12	0.30	19.20	-0.65	-0.34	19.17
Q29V29-5605	46.30	44.10	298.81 X	114.50	107.92	275.53 X	23.90	4.05	2.11	23.85
QGL9DE-5601	2.30	0.10	0.70	6.00	-0.58	-1.48	22.50	2.65	1.38	22.54
QMTU84-5605	2.24	0.04	0.29	6.75	0.17	0.43	19.47	-0.38	-0.20	19.38
R6NHFE-5605	2.30	0.10	0.70	6.00	-0.58	-1.48	22.00	2.15	1.12	22.54
RANKQA-5605	2.00	-0.20	-1.33	4.00	-2.58	-6.59 X	30.00	10.15	5.28 X	30.00 X
RF6TNY-5605	2.26	0.06	0.43	6.56	-0.02	-0.05	20.10	0.25	0.13	20.15
RHBPCE-5605	2.30	0.10	0.70	6.30	-0.28	-0.72	21.40	1.55	0.81	21.41
RNEGYC-5605	2.30	0.10	0.70	6.90	0.32	0.82	19.50	-0.35	-0.18	19.47
RTU4FG-5605	2.20	0.00	0.02	6.50	-0.08	-0.21	20.00	0.15	0.08	19.78
RVJN88-5605	2.10	-0.10	-0.65	6.30	-0.28	-0.72	19.50	-0.35	-0.18	19.47
RX9YXZ-5605	2.30	0.10	0.70	6.70	0.12	0.30	20.30	0.45	0.23	20.08

TABLE 1
Stain C, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
T3GHWT-5601	2.00	-0.20	-1.33	6.80	0.22	0.56	17.10	-2.75	-1.43	17.10
T69J73-5605	3.00	0.80	5.44 X	7.00	0.42	1.07	25.37	5.52	2.87	25.38
TE4XCD-5605	2.00	-0.20	-1.33	6.00	-0.58	-1.48	19.50	-0.35	-0.18	19.47
TH6KTH-5605	2.04	-0.16	-1.06	6.89	0.31	0.79	17.22	-2.63	-1.37	17.22
TJNUA4-5601	2.10	-0.10	-0.65	6.50	-0.08	-0.21	19.00	-0.85	-0.44	18.85
TNCLDQ-5605	2.40	0.20	1.38	6.50	-0.08	-0.21	22.00	2.15	1.12	21.67
TPMV2C-5605	2.00	-0.20	-1.33	6.00	-0.58	-1.48	19.40	-0.45	-0.23	19.47
TYCFQH-5601	2.00	-0.20	-1.33	8.00	1.42	3.62 X	14.47	-5.38	-2.80	14.48
U3AJTP-5605	2.20	0.00	0.02	6.10	-0.48	-1.23	21.10	1.25	0.65	21.14
UBHZJA-5605	2.00	-0.20	-1.33	6.80	0.22	0.56	17.00	-2.85	-1.48	17.10
UDPW4J-5605	2.30	0.10	0.70	6.70	0.12	0.30	20.00	0.15	0.08	20.08
UXGTQ6-5605	2.00	-0.20	-1.33	7.50	0.92	2.35	15.50	-4.35	-2.26	15.47
UXXUP2-5605	2.00	-0.20	-1.33	6.50	-0.08	-0.21	17.92	-1.93	-1.00	17.92
VFQXAU-5605	2.38	0.18	1.24	7.38	0.80	2.04	18.80	-1.05	-0.55	18.81
VJENYJ-5605	2.50	0.30	2.06	7.20	0.62	1.58	20.00	0.15	0.08	20.32
VXUNR4-5605	0.40	-1.80	-12.17 X	1.18	-5.40	-13.79 X	19.80	-0.05	-0.03	19.81
W6BKAJ-5601	3.00	0.80	5.44 X	6.00	-0.58	-1.48	25.00	5.15	2.68	30.00 X
WBLLG9-5605	2.30	0.10	0.70	6.40	-0.18	-0.46	21.10	1.25	0.65	21.06
WXPP7U-5605	2.30	0.10	0.70	5.80	-0.78	-1.99	23.40	3.55	1.85	23.36

TABLE 1
Stain C, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
X2J6U8-5605	2.20	0.00	0.02	6.30	-0.28	-0.72	20.40	0.55	0.29	20.44
X6H37E-5601	2.00	-0.20	-1.33	6.00	-0.58	-1.48	19.00	-0.85	-0.44	19.47
XMQ9Y4-5605	2.30	0.10	0.70	7.00	0.42	1.07	19.20	-0.65	-0.34	19.18
XVKGJV-5605	2.40	0.20	1.38	6.70	0.12	0.30	20.70	0.85	0.44	20.99
XYZV6F-5605	2.10	-0.10	-0.65	6.20	-0.38	-0.97	19.80	-0.05	-0.03	19.80
Y6XJYM-5605	2.29	0.09	0.61	6.60	0.02	0.06	20.26	0.41	0.21	20.25
YADYNE-5605	2.30	0.10	0.70	7.40	0.82	2.09	18.11	-1.74	-0.91	18.11
YMF3Q6-5605	3.00	0.80	5.44 X	7.00	0.42	1.07	25.00	5.15	2.68	25.38
YQYFWG-5605	2.00	-0.20	-1.33	7.00	0.42	1.07	16.60	-3.25	-1.69	16.60
YUHUZG-5605	2.20	0.00	0.02	6.40	-0.18	-0.46	20.00	0.15	0.08	20.11
YUXTGL-5601	2.15	-0.05	-0.32	6.50	-0.08	-0.21	19.30	-0.55	-0.29	19.32
Z44UBQ-5605	2.20	0.00	0.02	6.20	-0.38	-0.97	21.00	1.15	0.60	20.78
Z86Q37-5601	2.27	0.07	0.50	6.58	0.00	0.00	20.18	0.33	0.17	20.18
Z8HTME-5605	2.29	0.09	0.63	6.35	-0.23	-0.59	21.14	1.29	0.67	21.14
Z9J4M9-5605	2.00	-0.20	-1.33	5.50	-1.08	-2.76	21.00	1.15	0.60	21.32
Z9MLQY-5605	2.15	-0.05	-0.32	6.96	0.38	0.97	18.00	-1.85	-0.96	17.99
ZBNRZD-5605	2.20	0.00	0.02	6.50	-0.08	-0.21	19.80	-0.05	-0.03	19.78
ZGGRKZ-5605	2.30	0.10	0.70	6.80	0.22	0.56	19.80	-0.05	-0.03	19.77
ZKTJQT-5605	2.00	-0.20	-1.33	6.35	-0.23	-0.59	18.36	-1.49	-0.77	18.36

TABLE 1
Stain C, continued

WebCode- Test	Width			Length			Angle			<i>CalcAng</i>
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
ZLCEHU-5601	2.00	-0.20	-1.33	7.20	0.62	1.58	16.10	-3.75	-1.95	16.13
Grand Mean	2.20			6.58			19.85			19.78
Standard Deviation	0.15			0.39			1.92			1.90
Participants Included in calculations		137			138			150		149
Participants excluded from calculations (indicated by X)		15			14			3		3

Stain C Preparation Angle: 23.1°

TABLE 1
Stain D

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
2GTQB3-5605	2.25	0.10	0.77	6.75	0.13	0.35	19.00	-0.03	-0.02	19.47
2PG6WF-5601	2.10	-0.05	-0.40	6.40	-0.22	-0.58	19.15	0.12	0.09	19.16
2W4G6V-5601	2.10	-0.05	-0.40	6.50	-0.12	-0.32	18.85	-0.18	-0.13	18.85
2XTX6V-5605	2.20	0.05	0.38	7.00	0.38	1.01	18.00	-1.03	-0.74	18.32
2Z7CWB-5601	2.10	-0.05	-0.40	7.10	0.48	1.27	17.20	-1.83	-1.32	17.20
36RD83-5605	2.10	-0.05	-0.40	6.60	-0.02	-0.05	18.50	-0.53	-0.38	18.55
3DLUZY-5605	2.99	0.84	6.53 X	8.56	1.94	5.15 X	20.40	1.37	0.98	20.44
3EXRBV-5605	2.00	-0.15	-1.18	6.40	-0.22	-0.58	18.20	-0.83	-0.60	18.21
3HGNZK-5605	2.30	0.15	1.16	6.57	-0.05	-0.13	20.49	1.46	1.05	20.49
3KM83M-5601	2.20	0.05	0.38	7.00	0.38	1.01	18.32	-0.71	-0.51	18.32
3QNKGW-5605	0.93	-1.22	-9.52 X	2.62	-4.00	-10.61 X	20.80	1.77	1.27	20.79
3RJ4LJ-5605	5.80	3.65	28.44 X	17.00	10.38	27.54 X	20.00	0.97	0.70	19.95
48U7HX-5601	2.20	0.05	0.38	6.50	-0.12	-0.32	19.78	0.75	0.54	19.78
4KDWDU-5601	2.10	-0.05	-0.40	6.50	-0.12	-0.32	18.85	-0.18	-0.13	18.85
4KY34L-5605	2.36	0.21	1.62	6.17	-0.45	-1.19	22.49	3.46	2.48	22.49
4LWLTU-5605	2.00	-0.15	-1.18	6.50	-0.12	-0.32	17.92	-1.11	-0.80	17.92
4RK9NY-5601	2.20	0.05	0.38	6.60	-0.02	-0.05	19.50	0.47	0.34	19.47
4TV3FT-5601	2.10	-0.05	-0.40	6.50	-0.12	-0.32	18.80	-0.23	-0.17	18.85
4V3FYF-5605	2.25	0.10	0.77	6.75	0.13	0.35	19.47	0.44	0.31	19.47

TABLE 1
Stain D, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
6643RC-5601	2.17	0.02	0.14	6.33	-0.29	-0.77	20.00	0.97	0.70	20.05
68TDH6-5601	2.00	-0.15	-1.18	6.00	-0.62	-1.64	19.00	-0.03	-0.02	19.47
6ACTL6-5605	1.80	-0.35	-2.74	6.80	0.18	0.48	15.40	-3.63	-2.61	15.35
6BTMNZ-5605	2.20	0.05	0.38	6.80	0.18	0.48	18.80	-0.23	-0.17	18.88
6MNUTW-5605	2.20	0.05	0.38	6.60	-0.02	-0.05	19.50	0.47	0.34	19.47
6NGPBY-5601	2.10	-0.05	-0.40	6.40	-0.22	-0.58	19.20	0.17	0.12	19.16
6RX89A-5605	2.00	-0.15	-1.18	6.75	0.13	0.35	17.20	-1.83	-1.32	17.24
6UKQA8-5601	2.14	-0.01	-0.06	6.75	0.13	0.35	19.00	-0.03	-0.02	18.51
6V2T9U-5601	2.00	-0.15	-1.18	6.00	-0.62	-1.64	19.50	0.47	0.34	19.47
6ZWPVY-5605	2.99	0.84	6.53 X	8.64	2.02	5.36 X	20.00	0.97	0.70	20.25
7APM27-5605	2.00	-0.15	-1.18	7.00	0.38	1.01	16.60	-2.43	-1.75	16.60
7ZQRZU-5601	2.20	0.05	0.38	6.40	-0.22	-0.58	20.00	0.97	0.70	20.11
89T3FD-5601	1.98	-0.17	-1.34	6.24	-0.38	-1.01	18.50	-0.53	-0.38	18.50
89YLR2-5601	2.11	-0.04	-0.32	7.00	0.38	1.01	17.50	-1.53	-1.10	17.54
8JVADX-5605	2.30	0.15	1.16	6.50	-0.12	-0.32	20.00	0.97	0.70	20.72
8UDC2P-5605	2.20	0.05	0.38	6.40	-0.22	-0.58	20.00	0.97	0.70	20.11
8V6ZXX-5601	2.00	-0.15	-1.18	7.00	0.38	1.01	16.60	-2.43	-1.75	16.60
8VTTZP-5601	2.20	0.05	0.38	6.70	0.08	0.21	19.00	-0.03	-0.02	19.17
8Z6GYZ-5601	2.15	0.00	-0.01	7.01	0.39	1.04	18.00	-1.03	-0.74	17.86

TABLE 1
Stain D, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
98FDPQ- 5601	2.20	0.05	0.38	7.20	0.58	1.54	17.79	-1.24	-0.89	17.79
9K9NMX- 5605	2.30	0.15	1.16	6.60	-0.02	-0.05	20.00	0.97	0.70	20.39
9KLA9T- 5601	2.20	0.05	0.38	7.30	0.68	1.81	17.46	-1.57	-1.13	17.54
9LWCUR- 5601	2.20	0.05	0.38	7.00	0.38	1.01	18.30	-0.73	-0.53	18.32
A8XFHK- 5605	2.10	-0.05	-0.40	6.60	-0.02	-0.05	18.90	-0.13	-0.09	18.55
ABD4ZW- 5605	2.10	-0.05	-0.40	7.00	0.38	1.01	17.46	-1.57	-1.13	17.46
ARHLL2- 5601	2.20	0.05	0.38	7.00	0.38	1.01	18.30	-0.73	-0.53	18.32
BU77CQ- 5605	2.20	0.05	0.38	6.40	-0.22	-0.58	20.10	1.07	0.77	20.11
BXDKAB- 5605	2.18	0.03	0.22	7.12	0.50	1.33	18.00	-1.03	-0.74	17.83
C2ZV6E- 5601	2.10	-0.05	-0.40	6.80	0.18	0.48	18.00	-1.03	-0.74	17.99
C86LMK- 5601	2.20	0.05	0.38	6.50	-0.12	-0.32	19.78	0.75	0.54	19.78
CAT94E- 5605	2.20	0.05	0.38	6.50	-0.12	-0.32	20.00	0.97	0.70	19.78
CBQC4G- 5601	2.40	0.25	1.94	7.00	0.38	1.01	20.00	0.97	0.70	20.05
CK7T83- 5605	2.10	-0.05	-0.40	6.90	0.28	0.74	18.00	-1.03	-0.74	17.72
CL7D9P- 5605	11.40	9.25	72.08 X	33.90	27.28	72.37 X	19.70	0.67	0.48	19.65
CXWQA2- 5601	2.00	-0.15	-1.18	7.00	0.38	1.01	17.00	-2.03	-1.46	16.60
DEJZTM- 5605	2.10	-0.05	-0.40	6.70	0.08	0.21	18.70	-0.33	-0.24	18.27
DG7LFJ- 5605	2.28	0.13	1.00	6.43	-0.19	-0.50	21.00	1.97	1.41	20.77
DYCJ6A- 5605	2.30	0.15	1.16	7.10	0.48	1.27	19.00	-0.03	-0.02	18.90

TABLE 1
Stain D, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
E4KGWT-5601	2.12	-0.03	-0.25	6.93	0.31	0.82	17.80	-1.23	-0.88	17.81
EGJ26Y-5605	2.00	-0.15	-1.18	6.00	-0.62	-1.64	19.00	-0.03	-0.02	19.47
EGL3DW-5605	2.33	0.18	1.39	7.10	0.48	1.27	19.16	0.13	0.09	19.16
EHW4YV-5605	2.00	-0.15	-1.18	6.00	-0.62	-1.64	19.47	0.44	0.31	19.47
EM9RW8-5605	2.10	-0.05	-0.40	6.00	-0.62	-1.64	20.40	1.37	0.98	20.49
EPD7YZ-5605	2.10	-0.05	-0.40	6.40	-0.22	-0.58	19.15	0.12	0.09	19.16
F4F7UV-5605	2.20	0.05	0.38	7.00	0.38	1.01	18.32	-0.71	-0.51	18.32
FGLFJP-5601	2.20	0.05	0.38	6.25	-0.37	-0.98	20.60	1.57	1.13	20.61
FJHUF9-5605	2.10	-0.05	-0.40	7.00	0.38	1.01	17.46	-1.57	-1.13	17.46
FKGDNM-5605	2.30	0.15	1.16	6.70	0.08	0.21	20.00	0.97	0.70	20.08
FKHDGV-5601	0.20	-1.95	-15.21 X	0.70	-5.92	-15.70 X	17.00	-2.03	-1.46	16.60
FPQV2C-5605	2.09	-0.06	-0.48	6.60	-0.02	-0.05	18.40	-0.63	-0.45	18.46
FTBJGN-5605	2.20	0.05	0.38	6.70	0.08	0.21	19.00	-0.03	-0.02	19.17
FVYGRV-5605	2.25	0.10	0.77	6.25	-0.37	-0.98	21.10	2.07	1.49	21.10
FWAHDU-5601	2.00	-0.15	-1.18	6.00	-0.62	-1.64	19.47	0.44	0.31	19.47
G8NU6W-5601	2.00	-0.15	-1.18	6.00	-0.62	-1.64	19.47	0.44	0.31	19.47
GGUHG4-5601	2.00	-0.15	-1.18	6.50	-0.12	-0.32	17.90	-1.13	-0.81	17.92
GQLCWR-5605	2.00	-0.15	-1.18	5.00	-1.62	-4.30 X	23.58	4.55	3.27 X	23.58 X
H7B239-5605	2.27	0.12	0.92	7.12	0.50	1.33	18.60	-0.43	-0.31	18.59

TABLE 1
Stain D, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
HJKFQZ-5605	2.11	-0.04	-0.32	6.42	-0.20	-0.53	19.19	0.16	0.11	19.19
HWTBRH-5605	2.30	0.15	1.16	6.50	-0.12	-0.32	21.00	1.97	1.41	20.72
HXGYB-5605	2.50	0.35	2.71	7.00	0.38	1.01	21.00	1.97	1.41	20.92
J2FKAE-5605	2.30	0.15	1.16	6.50	-0.12	-0.32	21.00	1.97	1.41	20.72
J4XGAJ-5605	2.20	0.05	0.38	5.90	-0.72	-1.91	23.00	3.97	2.85	21.89
J8JYWB-5601	2.00	-0.15	-1.18	6.60	-0.02	-0.05	17.64	-1.39	-1.00	17.64
K9633M-5605	2.30	0.15	1.16	6.20	-0.42	-1.11	21.80	2.77	1.99	21.78
KBYAJJ-5605	1.80	-0.35	-2.74	5.80	-0.82	-2.17	18.07	-0.96	-0.69	18.08
KG7WCM-5605	0.52	-1.63	-12.72 X	1.58	-5.04	-13.37 X	19.00	-0.03	-0.02	19.22
KMUEU6-5605	2.34	0.19	1.47	6.70	0.08	0.21	20.40	1.37	0.98	20.44
KPUDKJ-5605	2.20	0.05	0.38	6.60	-0.02	-0.05	19.47	0.44	0.31	19.47
KVMRRJ-5605							19.00	-0.03	-0.02	
L3BQFP-5605	2.50	0.35	2.71	6.00	-0.62	-1.64	25.00	5.97	4.29 X	24.62 X
L7YJQD-5601	2.30	0.15	1.16	7.20	0.58	1.54	18.60	-0.43	-0.31	18.63
L98EPN-5605	2.10	-0.05	-0.40	6.70	0.08	0.21	18.30	-0.73	-0.53	18.27
L9NPBA-5601	2.10	-0.05	-0.40	6.10	-0.52	-1.38	20.14	1.11	0.80	20.14
LD4DTL-5605	2.26	0.11	0.84	7.05	0.43	1.14	19.00	-0.03	-0.02	18.70
LGGXXL-5605	0.54	-1.61	-12.56 X	1.63	-4.99	-13.24 X	19.30	0.27	0.19	19.35
LQMVNB-5605	2.40	0.25	1.94	6.60	-0.02	-0.05	21.00	1.97	1.41	21.32

TABLE 1
Stain D, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
MLDYGF-5605	2.10	-0.05	-0.40	6.80	0.18	0.48	18.00	-1.03	-0.74	17.99
MRVE2C-5605	2.00	-0.15	-1.18	6.60	-0.02	-0.05	17.60	-1.43	-1.03	17.64
MYVBPX-5605	2.20	0.05	0.38	6.20	-0.42	-1.11	20.80	1.77	1.27	20.78
N793RL-5605	3.00	0.85	6.61 X	12.00	5.38	14.27 X	14.98	-4.05	-2.91	14.48 X
NBKBVC-5605	2.64	0.49	3.81 X	7.54	0.92	2.44	20.50	1.47	1.05	20.50
ND8UWA-5601	2.00	-0.15	-1.18	6.50	-0.12	-0.32	17.90	-1.13	-0.81	17.92
NTY9Y4-5605	2.10	-0.05	-0.40	6.26	-0.36	-0.95	19.60	0.57	0.41	19.60
PUWC9B-5605	2.20	0.05	0.38	6.60	-0.02	-0.05	19.50	0.47	0.34	19.47
Q29V29-5605	41.10	38.95	303.58X	116.90	110.28	292.56X	20.60	1.57	1.13	20.58
QGL9DE-5601	2.20	0.05	0.38	6.30	-0.32	-0.85	20.40	1.37	0.98	20.44
QMTU84-5605	2.20	0.05	0.38	6.74	0.12	0.32	19.10	0.07	0.05	19.05
R6NHFE-5605	2.20	0.05	0.38	6.10	-0.52	-1.38	21.00	1.97	1.41	21.14
RANKQA-5605	3.00	0.85	6.61 X	6.00	-0.62	-1.64	30.00	10.97	7.88 X	30.00 X
RF6TNY-5605	2.21	0.06	0.45	6.36	-0.26	-0.69	20.30	1.27	0.91	20.33
RHBPCE-5605	2.20	0.05	0.38	6.80	0.18	0.48	18.90	-0.13	-0.09	18.88
RNEGYC-5605	2.30	0.15	1.16	7.10	0.48	1.27	18.90	-0.13	-0.09	18.90
RTU4FG-5605	2.20	0.05	0.38	6.50	-0.12	-0.32	20.00	0.97	0.70	19.78
RVJN88-5605	2.00	-0.15	-1.18	6.70	0.08	0.21	17.40	-1.63	-1.17	17.37
RX9YXZ-5605	2.30	0.15	1.16	6.60	-0.02	-0.05	20.10	1.07	0.77	20.39

TABLE 1
Stain D, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
T3GHWT-5601	1.90	-0.25	-1.96	6.90	0.28	0.74	15.98	-3.05	-2.19	15.98
T69J73-5605	3.00	0.85	6.61 X	7.00	0.38	1.01	25.37	6.34	4.55 X	25.38 X
TE4XCD-5605	2.00	-0.15	-1.18	6.00	-0.62	-1.64	19.50	0.47	0.34	19.47
TH6KTH-5605	2.04	-0.11	-0.87	6.75	0.13	0.35	17.59	-1.44	-1.03	17.59
TJNUA4-5601	1.80	-0.35	-2.74	6.80	0.18	0.48	15.00	-4.03	-2.89	15.35
TNCLDQ-5605	2.30	0.15	1.16	6.60	-0.02	-0.05	20.00	0.97	0.70	20.39
TPMV2C-5605	2.00	-0.15	-1.18	6.00	-0.62	-1.64	19.40	0.37	0.26	19.47
TYCFQH-5601	2.00	-0.15	-1.18	7.00	0.38	1.01	16.60	-2.43	-1.75	16.60
U3AJTP-5605	2.10	-0.05	-0.40	6.30	-0.32	-0.85	19.50	0.47	0.34	19.47
UBHZJA-5605	2.10	-0.05	-0.40	6.60	-0.02	-0.05	19.00	-0.03	-0.02	18.55
UDPW4J-5605	2.20	0.05	0.38	6.80	0.18	0.48	19.00	-0.03	-0.02	18.88
UXGTQ6-5605	2.00	-0.15	-1.18	7.00	0.38	1.01	16.60	-2.43	-1.75	16.60
UXXUP2-5605	2.00	-0.15	-1.18	7.20	0.58	1.54	16.13	-2.90	-2.08	16.13
VFQXAU-5605	2.15	0.00	-0.01	7.38	0.76	2.02	17.00	-2.03	-1.46	16.94
VJENYJ-5605	2.30	0.15	1.16	7.20	0.58	1.54	18.60	-0.43	-0.31	18.63
VXUNR4-5605	0.53	-1.62	-12.64 X	1.48	-5.14	-13.63 X	21.00	1.97	1.41	20.98
W6BKAJ-5601	3.00	0.85	6.61 X	6.00	-0.62	-1.64	25.00	5.97	4.29 X	30.00 X
WBLLG9-5605	2.20	0.05	0.38	6.70	0.08	0.21	19.20	0.17	0.12	19.17
WXPP7U-5605	2.20	0.05	0.38	6.40	-0.22	-0.58	20.10	1.07	0.77	20.11

TABLE 1
Stain D, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
X2J6U8-5605	2.20	0.05	0.38	6.60	-0.02	-0.05	19.50	0.47	0.34	19.47
X6H37E-5601	2.00	-0.15	-1.18	6.00	-0.62	-1.64	19.00	-0.03	-0.02	19.47
XMQ9Y4-5605	2.30	0.15	1.16	7.00	0.38	1.01	19.20	0.17	0.12	19.18
XVKGJV-5605	2.20	0.05	0.38	6.60	-0.02	-0.05	19.40	0.37	0.26	19.47
XYZV6F-5605	2.10	-0.05	-0.40	6.30	-0.32	-0.85	19.50	0.47	0.34	19.47
Y6XJYM-5605	2.29	0.13	1.05	6.86	0.24	0.63	19.47	0.44	0.31	19.47
YADYNE-5605	2.20	0.05	0.38	7.20	0.58	1.54	17.79	-1.24	-0.89	17.79
YMF3Q6-5605	3.00	0.85	6.61 X	7.00	0.38	1.01	25.00	5.97	4.29 X	25.38 X
YQYFWG-5605	2.30	0.15	1.16	6.50	-0.12	-0.32	20.72	1.69	1.21	20.72
YUHUZG-5605	2.20	0.05	0.38	6.80	0.18	0.48	19.00	-0.03	-0.02	18.88
YUXTGL-5601	2.30	0.15	1.16	6.20	-0.42	-1.11	21.80	2.77	1.99	21.78
Z44UBQ-5605	2.10	-0.05	-0.40	6.50	-0.12	-0.32	19.00	-0.03	-0.02	18.85
Z86Q37-5601	2.18	0.03	0.22	7.00	0.38	1.01	18.15	-0.88	-0.63	18.15
Z8HTME-5605	2.29	0.14	1.08	6.60	-0.02	-0.05	20.30	1.27	0.91	20.30
Z9J4M9-5605	2.00	-0.15	-1.18	5.50	-1.12	-2.97	21.00	1.97	1.41	21.32
Z9MLQY-5605	2.23	0.08	0.61	7.04	0.42	1.12	18.00	-1.03	-0.74	18.47
ZBNRZD-5605	2.10	-0.05	-0.40	6.30	-0.32	-0.85	19.50	0.47	0.34	19.47
ZGGRKZ-5605	2.30	0.15	1.16	6.90	0.28	0.74	19.50	0.47	0.34	19.47
ZKTJQT-5605	2.00	-0.15	-1.18	7.00	0.38	1.01	16.60	-2.43	-1.75	16.60

TABLE 1
Stain D, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
ZLCEHU- 5601	2.00	-0.15	-1.18	6.40	-0.22	-0.58	18.20	-0.83	-0.60	18.21
Grand Mean	2.15			6.62			19.03			19.06
Standard Deviation	0.13			0.38			1.39			1.36
Participants Included in calculations	136			140			147			145
Participants excluded from calculations (indicated by X)	16			12			6			7

Stain D Preparation Angle: 20.9°

TABLE 1
Stain E

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
2GTQB3-5605	6.60	0.04	0.17	17.30	0.38	0.45	22.00	-0.88	-0.69	22.43
2PG6WF-5601	6.30	-0.26	-1.18	15.50	-1.42	-1.68	23.98	1.10	0.87	23.98
2W4G6V-5601	6.60	0.04	0.17	16.50	-0.42	-0.50	23.58	0.70	0.56	23.58
2XTX6V-5605	6.50	-0.06	-0.28	17.00	0.08	0.09	22.00	-0.88	-0.69	22.48
2Z7CWB-5601	6.70	0.14	0.62	18.50	1.58	1.87	21.23	-1.65	-1.30	21.23
36RD83-5605	6.60	0.04	0.17	16.70	-0.22	-0.26	23.30	0.42	0.34	23.28
3DLUZY-5605	4.11	-2.45	-11.02 X	10.74	-6.18	-7.32 X	22.50	-0.38	-0.30	22.50
3EXRBV-5605	6.40	-0.16	-0.73	16.40	-0.52	-0.62	23.00	0.12	0.10	22.97
3HGNZK-5605	6.64	0.08	0.35	16.21	-0.71	-0.84	24.18	1.30	1.03	24.18
3KM83M-5601	6.60	0.04	0.17	17.80	0.88	1.04	21.76	-1.12	-0.88	21.76
3QNKGW-5605	1.15	-5.41	-24.32 X	2.83	-14.09	-16.68 X	24.00	1.12	0.89	23.98
3RJ4LJ-5605	17.00	10.44	46.90 X	42.00	25.08	29.68 X	23.90	1.02	0.81	23.88
48U7HX-5601	6.60	0.04	0.17	16.40	-0.52	-0.62	23.73	0.85	0.68	23.73
4KDWDU-5601	6.60	0.04	0.17	16.50	-0.42	-0.50	23.58	0.70	0.56	23.58
4KY34L-5605	6.50	-0.06	-0.28	16.10	-0.82	-0.97	23.81	0.93	0.74	23.81
4LWLTU-5605	7.00	0.44	1.97	16.50	-0.42	-0.50	25.10	2.22	1.76	25.10
4RK9NY-5601	6.60	0.04	0.17	16.40	-0.52	-0.62	23.70	0.82	0.65	23.73
4TV3FT-5601	6.70	0.14	0.62	16.50	-0.42	-0.50	24.00	1.12	0.89	23.96
4V3FYF-5605	6.45	-0.11	-0.50	16.93	0.01	0.01	22.39	-0.49	-0.39	22.39

TABLE 1
Stain E, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
6643RC- 5601	6.42	-0.14	-0.64	16.00	-0.92	-1.09	23.60	0.72	0.57	23.66
68TDH6- 5601	6.50	-0.06	-0.28	17.00	0.08	0.09	22.00	-0.88	-0.69	22.48
6ACTL6- 5605	6.80	0.24	1.07	17.60	0.68	0.80	22.70	-0.18	-0.14	22.73
6BTMNZ- 5605	6.60	0.04	0.17	18.20	1.28	1.51	21.30	-1.58	-1.25	21.26
6MNUTW- 5605	6.60	0.04	0.17	16.80	-0.12	-0.14	23.10	0.22	0.18	23.13
6NGPBY- 5601	6.60	0.04	0.17	16.00	-0.92	-1.09	24.40	1.52	1.21	24.36
6RX89A- 5605	6.75	0.19	0.84	17.00	0.08	0.09	23.40	0.52	0.41	23.39
6UKQA8- 5601	6.44	-0.12	-0.54	16.71	-0.21	-0.25	23.00	0.12	0.10	22.67
6V2T9U- 5601	6.50	-0.06	-0.28	16.50	-0.42	-0.50	23.20	0.32	0.26	23.20
6ZWPVY- 5605	4.87	-1.69	-7.60 X	11.91	-5.01	-5.93 X	24.00	1.12	0.89	24.14
7APM27- 5605	6.50	-0.06	-0.28	19.00	2.08	2.46	19.90	-2.98	-2.36	20.01
7ZQRZU- 5601	6.60	0.04	0.17	15.60	-1.32	-1.56	25.00	2.12	1.68	25.03
89T3FD- 5601	6.48	-0.08	-0.37	14.08	-2.84	-3.36 X	27.40	4.52	3.58 X	27.40 X
89YLR2- 5601	6.63	0.07	0.31	16.98	0.06	0.07	23.00	0.12	0.10	22.98
8JVADX- 5605	6.70	0.14	0.62	16.60	-0.32	-0.38	24.00	1.12	0.89	23.80
8UDC2P- 5605	6.44	-0.12	-0.55	16.45	-0.47	-0.56	23.00	0.12	0.10	23.05
8V6Z XK- 5601	7.00	0.44	1.97	19.00	2.08	2.46	21.62	-1.26	-0.99	21.62
8VTTZP- 5601	6.60	0.04	0.17	16.20	-0.72	-0.85	24.00	1.12	0.89	24.04
8Z6GYZ- 5601	6.72	0.16	0.71	17.81	0.89	1.05	22.00	-0.88	-0.69	22.17

TABLE 1
Stain E, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
98FDPQ- 5601	6.60	0.04	0.17	18.50	1.58	1.87	20.90	-1.98	-1.56	20.90
9K9NMX- 5605	6.60	0.04	0.17	17.20	0.28	0.33	23.00	0.12	0.10	22.56
9KLA9T- 5601	6.50	-0.06	-0.28	18.00	1.08	1.28	21.10	-1.78	-1.41	21.17
9LWCUR- 5601	6.50	-0.06	-0.28	16.60	-0.32	-0.38	23.10	0.22	0.18	23.05
A8XFHK- 5605	6.70	0.14	0.62	16.10	-0.82	-0.97	24.70	1.82	1.44	24.59
ABD4ZW- 5605	6.90	0.34	1.52	16.00	-0.92	-1.09	25.53	2.65	2.10	25.55
ARHLL2- 5601	6.70	0.14	0.62	17.00	0.08	0.09	23.20	0.32	0.26	23.21
BU77CQ- 5605	6.50	-0.06	-0.28	16.60	-0.32	-0.38	23.50	0.62	0.49	23.05
BXDKAB- 5605	6.60	0.04	0.17	17.89	0.97	1.15	22.00	-0.88	-0.69	21.65
C2ZV6E- 5601	6.80	0.24	1.07	17.00	0.08	0.09	23.60	0.72	0.57	23.58
C86LMK- 5601	6.70	0.14	0.62	16.30	-0.62	-0.73	24.27	1.39	1.10	24.27
CAT94E- 5605	6.60	0.04	0.17	16.20	-0.72	-0.85	24.00	1.12	0.89	24.04
CBQC4G- 5601	7.30	0.74	3.32 X	18.20	1.28	1.51	23.60	0.72	0.57	23.65
CK7T83- 5605	6.60	0.04	0.17	16.90	-0.02	-0.02	23.00	0.12	0.10	22.99
CL7D9P- 5605	27.90	21.34	95.87 X	68.50	51.58	61.05 X	24.00	1.12	0.89	24.04
CXWQA2- 5601	7.00	0.44	1.97	18.00	1.08	1.28	23.00	0.12	0.10	22.89
DEJZTM- 5605	6.60	0.04	0.17	16.40	-0.52	-0.62	23.50	0.62	0.49	23.73
DG7LFJ- 5605	6.48	-0.08	-0.37	16.66	-0.26	-0.31	23.00	0.12	0.10	22.89
DYCJ6A- 5605	6.80	0.24	1.07	18.00	1.08	1.28	22.00	-0.88	-0.69	22.20

TABLE 1
Stain E, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
E4KGWT-5601	6.51	-0.05	-0.23	17.67	0.75	0.89	21.60	-1.28	-1.01	21.62
EGJ26Y-5605	6.00	-0.56	-2.53	16.00	-0.92	-1.09	22.00	-0.88	-0.69	22.02
EGL3DW-5605	6.68	0.12	0.53	18.90	1.98	2.34	20.70	-2.18	-1.72	20.70
EHW4YV-5605	6.00	-0.56	-2.53	17.00	0.08	0.09	20.67	-2.21	-1.75	20.67
EM9RW8-5605	6.80	0.24	1.07	15.60	-1.32	-1.56	25.80	2.92	2.31	25.84
EPD7YZ-5605	6.80	0.24	1.07	16.80	-0.12	-0.14	23.87	0.99	0.79	23.88
F4F7UV-5605	6.70	0.14	0.62	18.50	1.58	1.87	21.23	-1.65	-1.30	21.23
FGLFJP-5601	6.29	-0.27	-1.22	16.74	-0.18	-0.21	22.10	-0.78	-0.61	22.07
FJHUF9-5605	6.64	0.08	0.35	18.05	1.13	1.34	21.58	-1.30	-1.03	21.58
FKGDNM-5605	6.60	0.04	0.17	16.70	-0.22	-0.26	23.90	1.02	0.81	23.28
FKHDGV-5601	0.60	-5.96	-26.79 X	1.60	-15.32	-18.13 X	23.00	0.12	0.10	22.02
FPQV2C-5605	6.52	-0.04	-0.19	17.05	0.13	0.15	22.48	-0.40	-0.31	22.48
FTBJGN-5605	6.40	-0.16	-0.73	16.50	-0.42	-0.50	23.00	0.12	0.10	22.82
FVYGRV-5605	6.75	0.19	0.84	16.75	-0.17	-0.20	23.76	0.88	0.70	23.76
FWAHDU-5601	6.50	-0.06	-0.28	15.00	-1.92	-2.27	25.67	2.79	2.21	25.68
G8NU6W-5601	6.50	-0.06	-0.28	17.00	0.08	0.09	22.48	-0.40	-0.31	22.48
GGUHG4-5601	6.50	-0.06	-0.28	16.50	-0.42	-0.50	23.00	0.12	0.10	23.20
GQLCWR-5605	5.00	-1.56	-7.02 X	13.00	-3.92	-4.64 X	22.62	-0.26	-0.20	22.62
H7B239-5605	6.68	0.12	0.53	18.06	1.14	1.35	21.70	-1.18	-0.93	21.71

TABLE 1
Stain E, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
HJKFQZ-5605	6.76	0.20	0.89	16.94	0.02	0.02	23.52	0.64	0.51	23.52
HWTBRH-5605	6.70	0.14	0.62	16.70	-0.22	-0.26	24.00	1.12	0.89	23.65
HXGYB-5605	7.00	0.44	1.97	17.00	0.08	0.09	24.00	1.12	0.89	24.32
J2FKAE-5605	6.60	0.04	0.17	17.00	0.08	0.09	23.00	0.12	0.10	22.84
J4XGAJ-5605	6.70	0.14	0.62	14.80	-2.12	-2.51	27.00	4.12	3.26 X	26.92 X
J8JYWB-5601	6.60	0.04	0.17	17.00	0.08	0.09	22.84	-0.04	-0.03	22.84
K9633M-5605	6.60	0.04	0.17	16.80	-0.12	-0.14	23.10	0.22	0.18	23.13
KBYAJJ-5605	5.90	-0.66	-2.97	15.70	-1.22	-1.44	22.06	-0.82	-0.65	22.07
KG7WCM-5605	1.05	-5.51	-24.77 X	2.72	-14.20	-16.81 X	23.00	0.12	0.10	22.71
KMUEU6-5605	6.71	0.15	0.66	16.81	-0.11	-0.13	23.50	0.62	0.49	23.53
KPUDKJ-5605	6.56	0.00	-0.01	16.64	-0.28	-0.33	23.36	0.48	0.38	23.22
KVMRRJ-5605							25.00	2.12	1.68	
L3BQFP-5605	7.00	0.44	1.97	15.00	-1.92	-2.27	28.00	5.12	4.06 X	27.82 X
L7YJQD-5601	6.50	-0.06	-0.28	16.80	-0.12	-0.14	22.80	-0.08	-0.06	22.76
L98EPN-5605	6.50	-0.06	-0.28	17.20	0.28	0.33	22.20	-0.68	-0.54	22.20
L9NPBA-5601	6.60	0.04	0.17	16.00	-0.92	-1.09	24.36	1.48	1.17	24.36
LD4DTL-5605	6.62	0.06	0.26	16.42	-0.50	-0.59	24.00	1.12	0.89	23.78
LGGXL-5605	1.14	-5.42	-24.36 X	2.89	-14.03	-16.61 X	23.20	0.32	0.26	23.23
LQMVNB-5605	6.60	0.04	0.17	16.40	-0.52	-0.62	24.00	1.12	0.89	23.73

TABLE 1
Stain E, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
MLDYGF-5605	6.80	0.24	1.07	17.00	0.08	0.09	23.60	0.72	0.57	23.58
MRVE2C-5605	6.00	-0.56	-2.53	17.00	0.08	0.09	20.70	-2.18	-1.72	20.67
MYVBPX-5605	6.40	-0.16	-0.73	15.60	-1.32	-1.56	24.20	1.32	1.05	24.22
N793RL-5605	7.00	0.44	1.97	29.00	12.08	14.30 X	13.97	-8.91	-7.05 X	13.97 X
NBKBVC-5605	2.86	-3.70	-16.63 X	7.11	-9.81	-11.61 X	23.70	0.82	0.65	23.72
ND8UWA-5601	6.50	-0.06	-0.28	16.80	-0.12	-0.14	22.76	-0.12	-0.09	22.76
NTY9Y4-5605	6.62	0.06	0.26	16.72	-0.20	-0.24	23.32	0.44	0.35	23.32
PUWC9B-5605	6.40	-0.16	-0.73	17.80	0.88	1.04	21.10	-1.78	-1.41	21.07
Q29V29-5605	53.70	47.14	211.79 X	132.40	115.48	136.68 X	23.90	1.02	0.81	23.93
QGL9DE-5601	6.60	0.04	0.17	16.40	-0.52	-0.62	23.70	0.82	0.65	23.73
QMTU84-5605	6.51	-0.05	-0.23	16.95	0.03	0.04	22.64	-0.24	-0.19	22.59
R6NHFE-5605	6.80	0.24	1.07	16.20	-0.72	-0.85	24.00	1.12	0.89	24.82
RANKQA-5605	6.50	-0.06	-0.28	12.00	-4.92	-5.82 X	33.00	10.12	8.01 X	32.80 X
RF6TNY-5605	6.60	0.04	0.17	16.58	-0.34	-0.40	23.50	0.62	0.49	23.46
RHBPCE-5605	6.40	-0.16	-0.73	17.00	0.08	0.09	22.10	-0.78	-0.61	22.12
RNEGYC-5605	6.70	0.14	0.62	17.80	0.88	1.04	22.10	-0.78	-0.61	22.11
RTU4FG-5605	6.50	-0.06	-0.28	17.50	0.58	0.69	21.00	-1.88	-1.49	21.80
RVJN88-5605	6.70	0.14	0.62	16.80	-0.12	-0.14	23.50	0.62	0.49	23.50
RX9YXZ-5605	6.50	-0.06	-0.28	16.60	-0.32	-0.38	23.20	0.32	0.26	23.05

TABLE 1
Stain E, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
T3GHWT-5601	6.50	-0.06	-0.28	18.00	1.08	1.28	21.17	-1.71	-1.35	21.17
T69J73-5605	6.00	-0.56	-2.53	18.00	1.08	1.28	19.47	-3.41	-2.70	19.47
TE4XCD-5605	6.00	-0.56	-2.53	17.00	0.08	0.09	20.70	-2.18	-1.72	20.67
TH6KTH-5605	6.11	-0.45	-2.03	17.13	0.21	0.25	20.90	-1.98	-1.57	20.90
TJNUA4-5601	6.40	-0.16	-0.73	16.70	-0.22	-0.26	22.00	-0.88	-0.69	22.53
TNCLDQ-5605	6.70	0.14	0.62	16.60	-0.32	-0.38	24.00	1.12	0.89	23.80
TPMV2C-5605	6.00	-0.56	-2.53	15.00	-1.92	-2.27	23.50	0.62	0.49	23.58
TYCFQH-5601	6.00	-0.56	-2.53	18.00	1.08	1.28	19.47	-3.41	-2.70	19.47
U3AJTP-5605	6.60	0.04	0.17	16.20	-0.72	-0.85	24.00	1.12	0.89	24.04
UBHZJA-5605	6.40	-0.16	-0.73	17.70	0.78	0.92	21.00	-1.88	-1.49	21.20
UDPW4J-5605	6.60	0.04	0.17	17.40	0.48	0.57	22.00	-0.88	-0.69	22.29
UXGTQ6-5605	6.50	-0.06	-0.28	18.80	1.88	2.22	20.20	-2.68	-2.12	20.23
UXXUP2-5605	6.50	-0.06	-0.28	18.00	1.08	1.28	21.17	-1.71	-1.35	21.17
VFQXAU-5605	6.40	-0.16	-0.73	18.25	1.33	1.57	20.50	-2.38	-1.88	20.53
VJENYJ-5605	6.50	-0.06	-0.28	17.20	0.28	0.33	22.00	-0.88	-0.69	22.20
VXUNR4-5605	0.88	-5.68	-25.53 X	2.28	-14.64	-17.33 X	22.70	-0.18	-0.14	22.70
W6BKAJ-5601	7.00	0.44	1.97	17.00	0.08	0.09	24.00	1.12	0.89	24.32
WBLLG9-5605	6.50	-0.06	-0.28	16.70	-0.22	-0.26	22.90	0.02	0.02	22.91
WXPP7U-5605	6.50	-0.06	-0.28	15.80	-1.12	-1.33	24.30	1.42	1.13	24.29

TABLE 1
Stain E, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
X2J6U8-5605	3.60	-2.96	-13.31 X	9.20	-7.72	-9.14 X	23.00	0.12	0.10	23.04
X6H37E-5601	6.00	-0.56	-2.53	16.00	-0.92	-1.09	22.00	-0.88	-0.69	22.02
XMQ9Y4-5605	6.70	0.14	0.62	17.20	0.28	0.33	22.90	0.02	0.02	22.93
XVKGJV-5605	6.50	-0.06	-0.28	16.30	-0.62	-0.73	23.60	0.72	0.57	23.50
XYZV6F-5605	6.50	-0.06	-0.28	16.40	-0.52	-0.62	23.30	0.42	0.34	23.35
Y6XJYM-5605	6.60	0.04	0.19	17.02	0.10	0.12	22.84	-0.04	-0.03	22.83
YADYNE-5605	6.70	0.14	0.62	18.50	1.58	1.87	21.23	-1.65	-1.30	21.23
YMF3Q6-5605	7.00	0.44	1.97	16.00	-0.92	-1.09	26.00	3.12	2.47	25.94
YQYFWG-5605	6.50	-0.06	-0.28	16.50	-0.42	-0.50	23.20	0.32	0.26	23.20
YUHUZG-5605	6.50	-0.06	-0.28	16.00	-0.92	-1.09	24.00	1.12	0.89	23.97
YUXTGL-5601	6.80	0.24	1.07	17.20	0.28	0.33	23.30	0.42	0.34	23.29
Z44UBQ-5605	6.70	0.14	0.62	16.70	-0.22	-0.26	24.00	1.12	0.89	23.65
Z86Q37-5601	6.73	0.17	0.75	17.40	0.48	0.57	22.75	-0.13	-0.10	22.75
Z8HTME-5605	6.60	0.04	0.17	16.51	-0.41	-0.49	23.56	0.68	0.54	23.56
Z9J4M9-5605	6.00	-0.56	-2.53	16.50	-0.42	-0.50	21.00	-1.88	-1.49	21.32
Z9MLQY-5605	6.53	-0.03	-0.14	18.58	1.66	1.96	21.00	-1.88	-1.49	20.58
ZBNRZD-5605	6.40	-0.16	-0.73	16.70	-0.22	-0.26	22.50	-0.38	-0.30	22.53
ZGGRKZ-5605	6.50	-0.06	-0.28	17.70	0.78	0.92	21.50	-1.38	-1.09	21.54
ZKTJQT-5605	6.48	-0.08	-0.37	17.45	0.53	0.63	21.80	-1.08	-0.85	21.80

TABLE 1
Stain E, continued

WebCode- Test	Width			Length			Angle			<i>CalcAng</i>
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
ZLCEHU-5601	6.80	0.24	1.07	18.00	1.08	1.28	22.20	-0.68	-0.54	22.20
Grand Mean	6.56			16.92			22.88			22.86
Standard Deviation	0.22			0.84			1.26			1.24
Participants Included in calculations		138			136			148		147
Participants excluded from calculations (indicated by X)		14			16			5		5

Stain E Preparation Angle: 26.1°

Pattern Description, Part 1

For each of the following patterns, indicate the single pattern type that best describes the image.

TABLE 2: Single Pattern Recognition

Item 2

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
2GTQB3-5605	Transfer Stain	4KDWDU-5601	Transfer Stain
2PG6WF-5601	Transfer Stain	4KY34L-5605	Transfer Stain
2W4G6V-5601	Transfer Stain	4LWLTU-5605	Transfer Stain
2XTX6V-5605	Transfer Stain	4RK9NY-5601	Transfer Stain
2Z7CWB-5601	Transfer Stain	4TV3FT-5601	Transfer Stain
36RD83-5605	Transfer Stain	4V3FYF-5605	Transfer Stain
3DLUZY-5605	Transfer Stain	6643RC-5601	Transfer Stain
3EXRBV-5605	Transfer Stain	68TDH6-5601	Transfer Stain
3HGZK-5605	Transfer Stain	6ACTL6-5605	Transfer Stain
3KM83M-5601	Transfer Stain	6BTMNZ-5605	Transfer Stain
3QNKGW-5605	Transfer Stain	6LT4N4-5601	Transfer Stain
3RARAA-5601	Transfer Stain	6MNUTW-5605	Transfer Stain
3RJ4LJ-5605	Transfer Stain	6NGPBY-5601	Transfer Stain
3ZFUBZ-5601	Transfer Stain	6RX89A-5605	Transfer Stain
47KV9A-5601	Transfer Stain	6UKQA8-5601	Transfer Stain
48ARB4-5601	Transfer Stain	6V2T9U-5601	Transfer Stain
48U7HX-5601	Transfer Stain	6ZWPVY-5605	Transfer Stain

TABLE 2: Single Pattern Recognition

Item 2, continued

WebCode- Test	Pattern Type	WebCode- Test	Pattern Type
7APM27- 5605	Transfer Stain	BXDKAB- 5605	Transfer Stain
7WPW9E- 5601	Transfer Stain	C2ZV6E- 5601	Transfer Stain
7ZQRZU- 5601	Transfer Stain	C86LMK- 5601	Transfer Stain
89T3FD- 5601	Transfer Stain	CAT94E- 5605	Transfer Stain
89YLR2- 5601	Transfer Stain	CBQC4G- 5601	Transfer Stain
8JVADX- 5605	Transfer Stain	CK7T83- 5605	Transfer Stain
8UDC2P- 5605	Transfer Stain	CL7D9P- 5605	Transfer Stain
8V6ZXX- 5601	Transfer Stain	CMFDDW- 5601	Transfer Stain
8VTTZP- 5601	Transfer Stain	CRAA23- 5601	Transfer Stain
8Z6GYZ- 5601	Transfer Stain	CXWQA2- 5601	Transfer Stain
98FDPQ- 5601	Transfer Stain	DEJZTM- 5605	Transfer Stain
9K9NMX- 5605	Transfer Stain	DG7LFJ- 5605	Transfer Stain
9KLA9T- 5601	Transfer Stain	DUJLGH- 5605	Transfer Stain
9LWCUR- 5601	Transfer Stain	DYCJ6A- 5605	Transfer Stain
A8XFHK- 5605	Transfer Stain	E4KGWT- 5601	Transfer Stain
ABD4ZW- 5605	Transfer Stain	ECUT9Q- 5601	Transfer Stain
ARHLL2- 5601	Transfer Stain	EGJ26Y- 5605	Transfer Stain
BJMPNQ- 5601	Transfer Stain	EGL3DW- 5605	Transfer Stain
BU77CQ- 5605	Transfer Stain	EHW4YV- 5605	Transfer Stain

TABLE 2: Single Pattern Recognition

Item 2, continued

WebCode- Test	Pattern Type	WebCode- Test	Pattern Type
EM9RW8-5605	Transfer Stain	HKDLQQ-5605	Transfer Stain
EPD7YZ-5605	Transfer Stain	HWTBRH-5605	Transfer Stain
F4F7UV-5605	Transfer Stain	HXGYB-5605	Transfer Stain
F737QP-5601	Transfer Stain	J2FKAE-5605	Transfer Stain
FGLFJP-5601	Transfer Stain	J4XGAJ-5605	Transfer Stain
FJHUF9-5605	Transfer Stain	J8JYWB-5601	Transfer Stain
FKGDNM-5605	Transfer Stain	K9633M-5605	Transfer Stain
FKHDGV-5601	Transfer Stain	KBYAJJ-5605	Transfer Stain
FPQV2C-5605	Transfer Stain	KG7WCM-5605	Transfer Stain
FQ3FKR-5605	Transfer Stain	KMUEU6-5605	Transfer Stain
FTBJGN-5605	Transfer Stain	KPUDKJ-5605	Transfer Stain
FVYGRV-5605	Transfer Stain	KVMRRJ-5605	Transfer Stain
FWAHDU-5601	Transfer Stain	L3BQFP-5605	Transfer Stain
G8NU6W-5601	Transfer Stain	L7YJQD-5601	Transfer Stain
GCKT2L-5601	Transfer Stain	L98EPN-5605	Transfer Stain
GGUHG4-5601	Transfer Stain	L9NPBA-5601	Transfer Stain
GQLCWR-5605	Transfer Stain	LD4DTL-5605	Transfer Stain
H7B239-5605	Transfer Stain	LGGXXL-5605	Transfer Stain
HJKFQZ-5605	Transfer Stain	LQMVNB-5605	Transfer Stain

TABLE 2: Single Pattern Recognition

Item 2, continued

WebCode- Test	Pattern Type	WebCode- Test	Pattern Type
MB84CP-5605	Transfer Stain	RN3UAP-5601	Transfer Stain
MLDYGF-5605	Transfer Stain	RNEGYC-5605	Transfer Stain
MRVE2C-5605	Transfer Stain	RTU4FG-5605	Transfer Stain
MYVBPX-5605	Transfer Stain	RVJN88-5605	Transfer Stain
N793RL-5605	Transfer Stain	RWF73G-5601	Transfer Stain
NBKBVC-5605	Transfer Stain	RX9YZ-5605	Transfer Stain
ND8UWA-5601	Transfer Stain	T3GHWT-5601	Transfer Stain
NKECHG-5601	Transfer Stain	T69J73-5605	Transfer Stain
NTY9Y4-5605	Transfer Stain	TE4XCD-5605	Transfer Stain
PUWC9B-5605	Transfer Stain	TH6KTH-5605	Transfer Stain
Q29V29-5605	Transfer Stain	TJNUA4-5601	Transfer Stain
QGL9DE-5601	Transfer Stain	TNCLDQ-5605	Transfer Stain
QLHNCN-5601	Transfer Stain	TPMV2C-5605	Transfer Stain
QMTU84-5605	Transfer Stain	TQLBW3-5605	Transfer Stain
R6NHFE-5605	Transfer Stain	TVXEPQ-5605	Transfer Stain
RANKQA-5605	Transfer Stain	TYCFQH-5601	Transfer Stain
RF6TNY-5605	Transfer Stain	U3AJTP-5605	Transfer Stain
RHBPCE-5605	Transfer Stain	UBHZJA-5605	Transfer Stain
RJ6MGF-5605	Transfer Stain	UDPW4J-5605	Transfer Stain

TABLE 2: Single Pattern Recognition

Item 2, continued

WebCode- Test	Pattern Type	WebCode- Test	Pattern Type
UJKC6D- 5601	Transfer Stain	YMF3Q6- 5605	Transfer Stain
UXGTQ6- 5605	Transfer Stain	YQYFWG- 5605	Transfer Stain
UXXUP2- 5605	Transfer Stain	YUHUZG- 5605	Transfer Stain
VFQXAU- 5605	Transfer Stain	YUXTGL- 5601	Transfer Stain
VJENYJ- 5605	Transfer Stain	Z44UBQ- 5605	Transfer Stain
VXUNR4- 5605	Transfer Stain	Z86Q37- 5601	Transfer Stain
W6BKAJ- 5601	Transfer Stain	Z8HTME- 5605	Transfer Stain
WBLLG9- 5605	Transfer Stain	Z9J4M9- 5605	Transfer Stain
WXPP7U- 5605	Transfer Stain	Z9MLQY- 5605	Transfer Stain
X2J6U8- 5605	Transfer Stain	ZARA44- 5601	Transfer Stain
X6H37E- 5601	Transfer Stain	ZBNRZD- 5605	Transfer Stain
XM9Y4- 5605	Transfer Stain	ZGGRKZ- 5605	Transfer Stain
XVKGJV- 5605	Transfer Stain	ZKTJQT- 5605	Transfer Stain
XYZV6F- 5605	Transfer Stain	ZLCEHU- 5601	Transfer Stain
Y234VC- 5601	Transfer Stain		
Y3D7HB- 5601	Transfer Stain		
Y6XJYM- 5605	Transfer Stain		
YADYNE- 5605	Transfer Stain		
YBUKKF- 5601	Transfer Stain		

**Pattern Types reported for Item 2
(Total Participants Responding = 181)**

<u>Pattern Type</u>	<u>Percent Reported</u>
Transfer Stain	181 (100.0%)

TABLE 2: Single Pattern Recognition

Item 3

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
2GTQB3-5605	Impact Pattern	4LWLTU-5605	Impact Pattern
2PG6WF-5601	Impact Pattern	4RK9NY-5601	Impact Pattern
2W4G6V-5601	Impact Pattern	4TV3FT-5601	Impact Pattern
2XTX6V-5605	Impact Pattern	4V3FYF-5605	Impact Pattern
2Z7CWB-5601	Impact Pattern	6643RC-5601	Impact Pattern
36RD83-5605	Impact Pattern	68TDH6-5601	Splash Pattern
3DLUZY-5605	Impact Pattern	6ACTL6-5605	Impact Pattern
3EXRBV-5605	Impact Pattern	6BTMNZ-5605	Impact Pattern
3HGNZK-5605	Impact Pattern	6LT4N4-5601	Impact Pattern
3KM83M-5601	Splash Pattern	6MNUTW-5605	Impact Pattern
3QNKGW-5605	Impact Pattern	6NGPBY-5601	Impact Pattern
3RARAA-5601	Impact Pattern	6RX89A-5605	Impact Pattern
3RJ4LJ-5605	Impact Pattern	6UKQA8-5601	Splash Pattern
3ZFUBZ-5601	Impact Pattern	6V2T9U-5601	Impact Pattern
47KV9A-5601	Impact Pattern	6ZWPVY-5605	Impact Pattern
48ARB4-5601	Impact Pattern	7APM27-5605	Impact Pattern
48U7HX-5601	Impact Pattern	7WPW9E-5601	Impact Pattern
4KDWDU-5601	Impact Pattern	7ZQRZU-5601	Impact Pattern
4KY34L-5605	Impact Pattern	89T3FD-5601	Impact Pattern

TABLE 2: Single Pattern Recognition

Item 3, continued

WebCode- Test	Pattern Type	WebCode- Test	Pattern Type
89YLR2- 5601	Impact Pattern	CBQC4G- 5601	Impact Pattern
8JVADX- 5605	Impact Pattern	CK7T83- 5605	Impact Pattern
8UDC2P- 5605	Impact Pattern	CL7D9P- 5605	Impact Pattern
8V6ZXK- 5601	Impact Pattern	CMFDDW- 5601	Impact Pattern
8VTTZP- 5601	Impact Pattern	CRAA23- 5601	Impact Pattern
8Z6GYZ- 5601	Impact Pattern	CXWQA2- 5601	Splash Pattern
98FDPQ- 5601	Impact Pattern	DEJZTM- 5605	Impact Pattern
9K9NMX- 5605	Impact Pattern	DG7LFJ- 5605	Impact Pattern
9KLA9T- 5601	Impact Pattern	DUJLGH- 5605	Impact Pattern
9LWCUR- 5601	Impact Pattern	DY CJ6A- 5605	Impact Pattern
A8XFHK- 5605	Expiration Pattern	E4KGWT- 5601	Impact Pattern
ABD4ZW- 5605	Impact Pattern	ECUT9Q- 5601	Impact Pattern
ARHLL2- 5601	Projected Pattern	EGJ26Y- 5605	Impact Pattern
BJMPNQ- 5601	Impact Pattern	EGL3DW- 5605	Impact Pattern
BU77CQ- 5605	Impact Pattern	EHW4YV- 5605	Splash Pattern
BXDKAB- 5605	Impact Pattern	EM9RW8- 5605	Impact Pattern
C2ZV6E- 5601	Impact Pattern	EPD7YZ- 5605	Impact Pattern
C86LMK- 5601	Impact Pattern	F4F7UV- 5605	Impact Pattern
CAT94E- 5605	Impact Pattern	F737QP- 5601	Impact Pattern

TABLE 2: Single Pattern Recognition

Item 3, continued

WebCode- Test	Pattern Type	WebCode- Test	Pattern Type
FGLFJP-5601	Impact Pattern	J4XGAJ-5605	Impact Pattern
FJHUF9-5605	Impact Pattern	J8JYWB-5601	Impact Pattern
FKGDNM-5605	Impact Pattern	K9633M-5605	Splash Pattern
FKHDGV-5601	Projected Pattern	KBYAJJ-5605	Impact Pattern
FPQV2C-5605	Impact Pattern	KG7WCM-5605	Impact Pattern
FQ3FKR-5605	Impact Pattern	KMUEU6-5605	Impact Pattern
FTBJGN-5605	Impact Pattern	KPUDKJ-5605	Impact Pattern
FVYGRV-5605	Impact Pattern	KVMRRJ-5605	Projected Pattern
FWAHDU-5601	Splash Pattern	L3BQFP-5605	Splash Pattern
G8NU6W-5601	Impact Pattern	L7YJQD-5601	Impact Pattern
GCKT2L-5601	Impact Pattern	L98EPN-5605	Splash Pattern
GGUHG4-5601	Splash Pattern	L9NPBA-5601	Impact Pattern
GQLCWR-5605	Impact Pattern	LD4DTL-5605	Impact Pattern
H7B239-5605	Impact Pattern	LGGXXL-5605	Impact Pattern
HJKFQZ-5605	Impact Pattern	LQMVNB-5605	Impact Pattern
HKDLQQ-5605	Impact Pattern	MB84CP-5605	Impact Pattern
HWTBRH-5605	Impact Pattern	MLDYGf-5605	Impact Pattern
HXGYyb-5605	Impact Pattern	MRVE2C-5605	Impact Pattern
J2FKAE-5605	Impact Pattern	MYVBPX-5605	Impact Pattern

TABLE 2: Single Pattern Recognition

Item 3, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
N793RL-5605	Impact Pattern	RWF73G-5601	Impact Pattern
NBKBVC-5605	Impact Pattern	RX9YXZ-5605	Impact Pattern
ND8UWA-5601	Impact Pattern	T3GHWT-5601	Splash Pattern
NKECHG-5601	Impact Pattern	T69J73-5605	Splash Pattern
NTY9Y4-5605	Impact Pattern	TE4XCD-5605	Impact Pattern
PUWC9B-5605	Impact Pattern	TH6KTH-5605	Splash Pattern
Q29V29-5605	Impact Pattern	TJNUA4-5601	Impact Pattern
QGL9DE-5601	Impact Pattern	TNCLDQ-5605	Impact Pattern
QLHNCN-5601	Impact Pattern	TPMV2C-5605	Impact Pattern
QMTU84-5605	Impact Pattern	TQLBW3-5605	Impact Pattern
R6NHFE-5605	Impact Pattern	TVXEPQ-5605	Impact Pattern
RANKQA-5605	Impact Pattern	TYCFQH-5601	Splash Pattern
RF6TNY-5605	Splash Pattern	U3AJTP-5605	Impact Pattern
RHBPCE-5605	Splash Pattern	UBHZJA-5605	Impact Pattern
RJ6MGF-5605	Impact Pattern	UDPW4J-5605	Splash Pattern
RN3UAP-5601	Impact Pattern	UJKC6D-5601	Impact Pattern
RNEGYC-5605	Impact Pattern	UXGTQ6-5605	Impact Pattern
RTU4FG-5605	Impact Pattern	UXXUP2-5605	Splash Pattern
RVJN88-5605	Impact Pattern	VFQXAU-5605	Impact Pattern

TABLE 2: Single Pattern Recognition

Item 3, continued

WebCode- Test	Pattern Type	WebCode- Test	Pattern Type
VJENYJ- 5605	Impact Pattern	Z44UBQ- 5605	Impact Pattern
VXUNR4- 5605	Impact Pattern	Z86Q37- 5601	Impact Pattern
W6BKAJ- 5601	Impact Pattern	Z8HTME- 5605	Splash Pattern
WBLLG9- 5605	Impact Pattern	Z9J4M9- 5605	Impact Pattern
WXPP7U- 5605	Impact Pattern	Z9MLQY- 5605	Impact Pattern
X2J6U8- 5605	Impact Pattern	ZARA44- 5601	Impact Pattern
X6H37E- 5601	Impact Pattern	ZBNRZD- 5605	Impact Pattern
XMQ9Y4- 5605	Impact Pattern	ZGGRKZ- 5605	Impact Pattern
XVKGJV- 5605	Splash Pattern	ZKTJQT- 5605	Impact Pattern
XYZV6F- 5605	Impact Pattern	ZLCEHU- 5601	Impact Pattern
Y234VC- 5601	Projected Pattern		
Y3D7HB- 5601	Impact Pattern		
Y6XJYM- 5605	Impact Pattern		
YADYNE- 5605	Impact Pattern		
YBUKKF- 5601	Impact Pattern		
YMF3Q6- 5605	Impact Pattern		
YQYFWG- 5605	Impact Pattern		
YUHUZG- 5605	Impact Pattern		
YUXTGL- 5601	Impact Pattern		

**Pattern Types reported for Item 3
(Total Participants Responding = 181)**

<u>Pattern Type</u>	<u>Percent Reported</u>
Impact Pattern	156 (86.2%)
Splash Pattern	20 (11.0%)
Projected Pattern	4 (2.2%)
Expiration Pattern	1 (0.6%)

TABLE 2: Single Pattern Recognition

Item 4

WebCode- Test	Pattern Type	WebCode- Test	Pattern Type
2GTQB3-5605	Cast-off Pattern	4LWLTU-5605	Cast-off Pattern
2PG6WF-5601	Cast-off Pattern	4RK9NY-5601	Cast-off Pattern
2W4G6V-5601	Drip Stain	4TV3FT-5601	Cast-off Pattern
2XTX6V-5605	Cast-off Pattern	4V3FYF-5605	Cast-off Pattern
2Z7CWB-5601	Cast-off Pattern	6643RC-5601	Cast-off Pattern
36RD83-5605	Cast-off Pattern	68TDH6-5601	Drip Pattern
3DLUZY-5605	Cast-off Pattern	6ACTL6-5605	Cast-off Pattern
3EXRBV-5605	Cast-off Pattern	6BTMNZ-5605	Cast-off Pattern
3HGNZK-5605	Cast-off Pattern	6LT4N4-5601	Cast-off Pattern
3KM83M-5601	Cast-off Pattern	6MNUTW-5605	Cast-off Pattern
3QNKGW-5605	Cast-off Pattern	6NGPBY-5601	Cast-off Pattern
3RARAA-5601	Cast-off Pattern	6RX89A-5605	Cast-off Pattern
3RJ4LJ-5605	Cast-off Pattern	6UKQA8-5601	Cast-off Pattern
3ZFUBZ-5601	Cast-off Pattern	6V2T9U-5601	Cast-off Pattern
47KV9A-5601	Cast-off Pattern	6ZWPVY-5605	Cast-off Pattern
48ARB4-5601	Cast-off Pattern	7APM27-5605	Cast-off Pattern
48U7HX-5601	Cast-off Pattern	7WPW9E-5601	Cast-off Pattern
4KDWDU-5601	Drip Stain	7ZQRZU-5601	Cast-off Pattern
4KY34L-5605	Cast-off Pattern	89T3FD-5601	Cast-off Pattern

TABLE 2: Single Pattern Recognition

Item 4, continued

WebCode- Test	Pattern Type	WebCode- Test	Pattern Type
89YLR2-5601	Cast-off Pattern	CBQC4G-5601	Cast-off Pattern
8JVADX-5605	Cast-off Pattern	CK7T83-5605	Cast-off Pattern
8UDC2P-5605	Cast-off Pattern	CL7D9P-5605	Cast-off Pattern
8V6ZXK-5601	Drip Stain	CMFDDW-5601	Cast-off Pattern
8VTTZP-5601	Cast-off Pattern	CRAA23-5601	Cast-off Pattern
8Z6GYZ-5601	Cast-off Pattern	CXWQA2-5601	Cast-off Pattern
98FDPQ-5601	Cast-off Pattern	DEJZTM-5605	Cast-off Pattern
9K9NMX-5605	Cast-off Pattern	DG7LFJ-5605	Cast-off Pattern
9KLA9T-5601	Cast-off Pattern	DUJLGH-5605	Cast-off Pattern
9LWCUR-5601	Cast-off Pattern	DYCJ6A-5605	Cast-off Pattern
A8XFHK-5605	Cast-off Pattern	E4KGWT-5601	Cast-off Pattern
ABD4ZW-5605	Cast-off Pattern	ECUT9Q-5601	Cast-off Pattern
ARHLL2-5601	Cast-off Pattern	EGJ26Y-5605	Cast-off Pattern
BJMPNQ-5601	Cast-off Pattern	EGL3DW-5605	Cast-off Pattern
BU77CQ-5605	Cast-off Pattern	EHW4YV-5605	Drip Pattern
BXDKAB-5605	Cast-off Pattern	EM9RW8-5605	Cast-off Pattern
C2ZV6E-5601	Cast-off Pattern	EPD7YZ-5605	Cast-off Pattern
C86LMK-5601	Drip Stain	F4F7UV-5605	Drip Stain
CAT94E-5605	Cast-off Pattern	F737QP-5601	Cast-off Pattern

TABLE 2: Single Pattern Recognition

Item 4, continued

WebCode- Test	Pattern Type	WebCode- Test	Pattern Type
FGLFJP-5601	Cast-off Pattern	J4XGAJ-5605	Cast-off Pattern
FJHUF9-5605	Cast-off Pattern	J8JYWB-5601	Drip Stain
FKGDNM-5605	Cast-off Pattern	K9633M-5605	Cast-off Pattern
FKHDGV-5601	Cast-off Pattern	KBYAJJ-5605	Drip Stain
FPQV2C-5605	Cast-off Pattern	KG7WCM-5605	Cast-off Pattern
FQ3FKR-5605	Cast-off Pattern	KMUEU6-5605	Cast-off Pattern
FTBJGN-5605	Cast-off Pattern	KPUDKJ-5605	Cast-off Pattern
FVYGRV-5605	Cast-off Pattern	KVMRRJ-5605	Cast-off Pattern
FWAHDU-5601	Drip Stain	L3BQFP-5605	Cast-off Pattern
G8NU6W-5601	Cast-off Pattern	L7YJQD-5601	Cast-off Pattern
GCKT2L-5601	Cast-off Pattern	L98EPN-5605	Cast-off Pattern
GGUHG4-5601	Cast-off Pattern	L9NPBA-5601	Cast-off Pattern
GQLCWR-5605	Cast-off Pattern	LD4DTL-5605	Cast-off Pattern
H7B239-5605	Cast-off Pattern	LGGXXL-5605	Cast-off Pattern
HJKFQZ-5605	Cast-off Pattern	LQMVNB-5605	Cast-off Pattern
HKDLQQ-5605	Cast-off Pattern	MB84CP-5605	Cast-off Pattern
HWTBRH-5605	Cast-off Pattern	MLDYGF-5605	Cast-off Pattern
HXGYB-5605	Cast-off Pattern	MRVE2C-5605	Cast-off Pattern
J2FKA-5605	Cast-off Pattern	MYVBPX-5605	Cast-off Pattern

TABLE 2: Single Pattern Recognition

Item 4, continued

WebCode- Test	Pattern Type	WebCode- Test	Pattern Type
N793RL- 5605	Cast-off Pattern	RWF73G- 5601	Cast-off Pattern
NBKBVC- 5605	Cast-off Pattern	RX9YXZ- 5605	Cast-off Pattern
ND8UWA- 5601	Drip Stain	T3GHWT- 5601	Impact Pattern
NKECHG- 5601	Cast-off Pattern	T69J73- 5605	Drip Stain
NTY9Y4- 5605	Cast-off Pattern	TE4XCD- 5605	Cast-off Pattern
PUWC9B- 5605	Cast-off Pattern	TH6KTH- 5605	Cast-off Pattern
Q29V29- 5605	Cast-off Pattern	TJNUA4- 5601	Cast-off Pattern
QGL9DE- 5601	Cast-off Pattern	TNCLDQ- 5605	Cast-off Pattern
QLHNCN- 5601	Cast-off Pattern	TPMV2C- 5605	Drip Stain
QMTU84- 5605	Cast-off Pattern	TQLBW3- 5605	Cast-off Pattern
R6NHFE- 5605	Cast-off Pattern	TVXEPQ- 5605	Cast-off Pattern
RANKQA- 5605	Cast-off Pattern	TYCFQH- 5601	Drip Stain
RF6TNY- 5605	Cast-off Pattern	U3AJTP- 5605	Cast-off Pattern
RHBPCE- 5605	Cast-off Pattern	UBHZJA- 5605	Cast-off Pattern
RJ6MGF- 5605	Cast-off Pattern	UDPW4J- 5605	Cast-off Pattern
RN3UAP- 5601	Cast-off Pattern	UJKC6D- 5601	Cast-off Pattern
RNEGYC- 5605	Cast-off Pattern	UXGTQ6- 5605	Cast-off Pattern
RTU4FG- 5605	Cast-off Pattern	UXXUP2- 5605	Cast-off Pattern
RVJN88- 5605	Cast-off Pattern	VFQXAU- 5605	Cast-off Pattern

TABLE 2: Single Pattern Recognition

Item 4, continued

WebCode- Test	Pattern Type	WebCode- Test	Pattern Type
VJENYJ- 5605	Cast-off Pattern	Z44UBQ- 5605	Cast-off Pattern
VXUNR4- 5605	Cast-off Pattern	Z86Q37- 5601	Cast-off Pattern
W6BKAJ- 5601	Drip Stain	Z8HTME- 5605	Impact Pattern
WBLLG9- 5605	Cast-off Pattern	Z9J4M9- 5605	Cast-off Pattern
WXPP7U- 5605	Cast-off Pattern	Z9MLQY- 5605	Cast-off Pattern
X2J6U8- 5605	Cast-off Pattern	ZARA44- 5601	Cast-off Pattern
X6H37E- 5601	Cast-off Pattern	ZBNRZD- 5605	Cast-off Pattern
XMQ9Y4- 5605	Cast-off Pattern	ZGGRKZ- 5605	Cast-off Pattern
XVKGJV- 5605	Cast-off Pattern	ZKTJQT- 5605	Cast-off Pattern
XYZV6F- 5605	Cast-off Pattern	ZLCEHU- 5601	Cast-off Pattern
Y234VC- 5601	Cast-off Pattern		
Y3D7HB- 5601	Cast-off Pattern		
Y6XJYM- 5605	Cast-off Pattern		
YADYNE- 5605	Forward Spatter Pattern		
YBUKKF- 5601	Cast-off Pattern		
YMF3Q6- 5605	Cast-off Pattern		
YQYFWG- 5605	Cast-off Pattern		
YUHUZG- 5605	Cast-off Pattern		
YUXTGL- 5601	Cast-off Pattern		

**Pattern Types reported for Item 4
(Total Participants Responding = 181)**

<u>Pattern Type</u>	<u>Percent Reported</u>
Cast-off Pattern	163 (90.1%)
Drip Stain	13 (7.2%)
Drip Pattern	2 (1.1%)
Impact Pattern	2 (1.1%)
Forward Spatter Pattern	1 (0.6%)

Pattern Description, Part 2

TABLE 3: Recognition and Description
Item 5

WebCode-Test	Detailed Pattern Description
2GTQB3-5605	From top-left corner to the bottom-right one, there is a series of bloodstains exhibiting a linear distribution. All these bloodstains are nearly circular with a diameter between 2 mm to 4,5 mm. In the center of this distribution pattern, 6 bloodstains have been altered by an object in motion while the blood was still wet. The similarity in size and shape as well as the linear distribution are characteristic of a cast-off pattern. The wipe pattern observed in the centre of the cast-off indicate that something was in motion and altered some of the bloodstains before they were dry. On the right side of the picture, there is a bloodstain measuring approximately 71 mm x 68 mm characteristic of a transfer stain. A repetitive linear motif is observe in this transfer stain which indicates that the object that produced this transfer stain has the same motif (ex. shoe sole).
2PG6WF-5601	Transfer pattern at center right side. Cast-off pattern extending from lower right corner to upper left corner. Stains in center of this pattern have been altered with a wipe pattern.
2W4G6V-5601	A drip trail is observed from the top left corner to the bottom right corner. The drip stains in the middle appeared to have wipe stains with the skeletons still present from the original placement. In the middle right side, there is a transfer stain from an unknown object.
2XTX6V-5605	A red-brown transfer stain (A), measuring ~60 mm wide by ~75 mm in length is observed on the center right side of the target. Linear striations are noted within the stain that measure a distance of ~2mm between one another. The top edge of the stain appears rounded. Between the lower right corner and upper left corner of the target, several mostly circular red-brown stains (B), measuring less than 1mm to ~5mm in width, with a linear distribution are observed. These stains are consistent with a cast-off pattern or drip trail. Within the center of this pattern, several wipe stains (C) are noted. The original stains are altered resulting in perimeter stains (D) being observed.
2Z7CWB-5601	A drip trail, some of which has been altered by wiping resulting in perimeter stains. Transfer pattern, possible shoe.
36RD83-5605	There are three separate patterns present in image 5. A cast-off pattern with approximately 20 stains is present between the upper left and lower right side of the target. Approximately six stains in the middle of the cast-off pattern are altered by wipes while the stains were still wet. Perimeter stains are present in the altered areas. The middle right side of the image contains an approximately 60mm x 70mm circular transfer/contact stain with offset rectangular patterns inside of it. Mild pooling is also present in the transfer stain.
3DLUZY-5605	There were three bloodstain patterns/areas of interest (labeled A-C) on the tile target. A transfer stain (Pattern A) is present on the right side of the tile target. A linear cast-off pattern (Pattern B) can be observed between the lower right of the tile and the upper left of the tile. Given the reported nature of the tile in this scene and the characteristics observed in the lower right of the tile, a drip trail cannot be ruled out as a possible mechanism of deposition for this pattern. The perimeter staining in the center of the tile indicates that Pattern B was deposited on the tile prior to a wipe (Pattern C) occurring.
3EXRBV-5605	-uniformly spaced linear stains on the right side of the target approximately half way down are consistent with a transfer pattern; potentially made by an object that has parallel lines on it approximately 2mm apart and rounded edges; one possibility may be a partial footwear impression - could be either a cast off pattern based on the elliptical stains on the top left of the target or a drip trail as the majority of the stains are circular spanning from the top left of the target to the bottom right with a minimum of 6 altered stains in the center of the target. Altered stains further classified as wipe pattern(s) with object(s) moving vertically down the target when properly oriented from the top of the stains on the target, through them, and further down causing the perimeter stains within the cast off pattern.

TABLE 3: Recognition and Description
Item 5, continued

WebCode-Test	Detailed Pattern Description
3HGNZK-5605	A series of approximately 20 stains in a linear orientation span the image from the top left to the bottom right. The stains are near circular in the bottom right and become more elliptical toward the top of the image, with a progressive change in angle of impact. This cast-off pattern is surrounded by sub millimeter spatter stains. The cast-off directionality is indeterminable due to the lack of scalloping/spines on the individual bloodstains. In the approximate center of the image, six bloodstains had begun to dry, but were wiped through before drying completely. There is visible perimeter staining from the original bloodstains. The wipes had downward directionality. A pattern transfer impression is approximately centered in the right half of the image. The pattern consists of a series of repeating parallel lines, and is somewhat circular overall. There is a larger accumulation of blood at the top of the impression than the bottom.
3KM83M-5601	Center/right - An irregular shaped stain with parallel lines of varying intensities, heavier staining observed at top of stain. Overall pattern measures ~7cm x 5.5cm. Consistent with transfer. To the left of the transfer stain is a linear arrangement of ~20 circular stains with diameters of ~2mm to ~4mm. The overall pattern is diagonal across the tile, with stains at the top left and bottom right of the tile; however, directionality cannot be determined. The middle 6 stains appear to have been altered by one or more wipes. Skeletal rings are observed within those stains. The directionality of the wipe(s) is downward based on the feathering/striations and intensity of staining. The linear arrangement of stains is consistent with a drip trail or a cast-off pattern. The entire pattern may not be visible.
3QNKGW-5605	The target supports a cast-off pattern with some stains altered by wipes in a downward direction. On the right side of the target is a transfer stain.
3RARAA-5601	A transfer stain is present along the right-hand side of item 5. A drip trail extends between the top left and bottom right corners of item 5. At least one wipe is present in the middle portion of the drip trail, altering multiple drip stains and leaving perimeter stains visible.
3RJ4LJ-5605	Target is a vinyl tile on the horizontal plane. At the center of the target on the right side is an irregular shaped bloodstain with a size of approximately 4.5cm x 5cm. There are regularly spaced lines in the bloodstain. The classification of this bloodstain pattern: Transfer stain There are a series of stains approximately in a linear distribution from the bottom right portion of the target to the top left portion. The overall pattern is approximately 30cm in length. The individual stains in this linear pattern are circular to slightly elliptical and they measure from less than 1mm to approximately 3mm. The classification of these bloodstains: Cast-off pattern Near the center of the target there are at least six somewhat circular stains that show movement through the stains from the top of the target to the bottom. The six stains have edge characteristics where the bloodstains were before they were moved through by an object. The classifications of these bloodstains: Wipe
3ZFUBZ-5601	On the right-side, center part of the image a transfer stain is present. Between the top left-side and the bottom right side of the image is a cast-off pattern. Some of the stains in the cast-off pattern have been altered by a wipe, resulting in perimeter stains.
47KV9A-5601	Transfer stain observed in middle right area of target. Cast-off pattern observed across target between upper left area and lower right area. Wipe with perimeter stains observed in center area of target.
48ARB4-5601	There is a large stain approx. 6cm in size of uniform density with some voided areas. The stain has a textured appearance and in our opinion is a possible footwear mark or other type of surface bearing a pattern which was stained with wet blood and created the transfer bloodstain observed. In the centre of the overall pattern there is a spatter pattern. The arrangement appears linear (diagonal) and the spots are generally of a uniform size approx. 0.2cm – 0.5cm. The spots towards the bottom right of the image are slightly smaller. There is no directionality. There are 6 spots within the centre of the pattern which are perimeter stains where the edge characteristics are present and the central area has been either partially or entirely removed. These appear to have been possibly wiped through in a downwards direction. The spots within the linear arrangement are parallel to each other, the density is

TABLE 3: Recognition and Description
Item 5, continued

WebCode-Test	Detailed Pattern Description
	uniform and there is no directionality. The spatter does not appear to radiate from any central point and there is a very slight decrease in size between spatter stains in the top left corner and spatter stains in the bottom right corner. In our opinion, the spots are drip stains deposited as a result of blood drops falling due to gravity which have created a drip trail where there has been movement of a source of drip stains between two points. Some of the spots were possibly wiped through in a downwards motion. Due to the size of the spots, we have considered the object from which they fell from as having a smaller surface area. Considering the contextual information – multiple stab wounds a knife tip wet with blood could be the source. The transfer bloodstain was deposited as a result of contact between a surface wet with blood and the tile. In our opinion, this could include a bloodstained item of footwear or another surface bearing a textured pattern. We are unable to determine which of the drip trail or the transfer stain were deposited first, or if they were deposited at the same time.
48U7HX-5601	A cast-off stain was present diagonally across the surface. The central stains of the cast-off pattern have been wiped through leaving perimeter stains. Adjacent to the wipe pattern, is a transfer stain which appears consisted with a footwear impression. The characteristics of the transfer stain were parallel lines with one side having a sufficient volume to create pooling among the pattern.
4KDWDU-5601	A drip trail is observed from the top left corner to the bottom right corner. Multiple drip stains within the drip trail (in the middle of the image) appeared to contain wipe stains with skeletonization still present. In the middle right of the image, there is a transfer stain of an unknown object.
4KY34L-5605	There were approximately 20 near circular to elliptical-shaped bloodstains that were in a linear orientation forming a cast-off pattern that was approximately 32 cm in length and 3.5 cm wide. These bloodstains were oriented from the bottom right corner towards the upper left corner and passed through the center of the image. Six of the bloodstains within the center of this pattern were wiped through from top to bottom creating associated wipe marks and perimeter bloodstains. A transfer bloodstain that consisted of a series of linear parallel lines that were generally evenly spaced was located near the center right side of the image. These lines were oriented vertically in the image and formed a transfer stain that was approximately 7 cm by 7 cm in size. The margins were intermittent throughout the bloodstain and rounded on the left side.
4LWLTU-5605	Approximately 20 mainly circular with some elliptical stains, approximately 2 - 4 millimetres wide, in a linear arrangement between the top left and bottom right corners of the photo. 6 stains in the central area have visible edges but no central area of staining however there is a light coloured stain below the lower edge, this is in the same orientation for all 6 stains. - cast-off pattern with alteration by wiping in a downwards direction (as photo viewed). on the right side of the photo there is a roughly circular area of staining, with repeated pattern of parallel lines, the staining is discontinuous in areas. transfer stain (transfer pattern) with voids
4RK9NY-5601	Near center of photo are stains with approximate 90 degree appearance that have been wiped through from top to bottom and only mostly the outer ring remains (perimeter stains). To the upper left and lower right are additional approximate 90 degree stains that are unaltered (possible drip trail or cast off). At center right of tile is a patterned stain with ridges- Transfer pattern. Top of pattern has more volume of blood and more appearance that blood was on tile and then item placed/ applied to surface, but bottom area of transfer has less blood and appears more likely that blood was on item and then item was applied to surface. Possible that there was a larger volume of blood at the top of the object causing the appearance of the staining. Additionally possible that this was caused by multiple transfers of the item to the surface.
4TV3FT-5601	Transfer stain on the right, Drip trail diagonally top left-bottom right. Wipe through some of the drip stains in the driptrail, direction of wipe top to bottom.
4V3FYF-5605	A drip trail exists between the upper left-hand corner and the lower right-hand corner. Several drip stains in the middle of the drip trial have been altered via a wipe, resulting in perimeter stains. A

TABLE 3: Recognition and Description
Item 5, continued

WebCode- Test	Detailed Pattern Description
	transfer stain is located to the right of the drip trail.
6643RC- 5601	Pattern Types: Pattern Transfer, Cast-Off/Drip Trail, Wipe On the right side of the photograph near the middle is a generally circular-shaped bloodstain pattern. This pattern contains irregular margins, and the interior of the pattern has linear aspects which are both parallel and equidistant apart. The volume of the pattern is inconsistent indicating the surface of the object may not have been fully saturated. This pattern can be classified as a pattern transfer. A linear distribution of generally circular and elliptical stains is observed spanning from the top left corner of the photograph to the bottom right corner. These stains appear to be no larger than 4 mm in width and are slightly more elongated near the top corner of the photograph. The linear distribution allows this pattern to be classified as either a drip trail or a cast-off pattern. Due to the small potential change in impact angle from one end of the photograph to the other and lack of additional photographs and information, this pattern cannot be classified further. In the central portion of the linear spatter pattern (cast-off/drip trail) are six stains which appear to be altered (i.e., perimeter stains). Feathering and striations are observed consistent with movement through the linear spatter pattern from the top of the photograph to the bottom. This portion of the linear spatter pattern can also be classified as a wipe pattern.
68TDH6- 5601	- A transfer stain with a greater volume of blood on the upper part - A drip pattern with a movement from bottom to top (two drops are superimposed) - Wipe pattern with a movement from top to bottom
6ACTL6- 5605	Image contains a cast off diagonally which could be from a cessation of an object in motion. The middle section of drops was secondarily altered from a wipe after partial drying allowed a perimeter stain. A deposit on the right is consistent with alteration where an object with parallel, linear texture created a linear pattern.
6BTMNZ- 5605	Drip trail, altered stain/perimeter stain, wipe pattern, transfer pattern, accompanying drop.
6LT4N4- 5601	A drip trail extends from the upper left corner to the lower right corner of the target. A wipe is present in the center of the target which created several altered stains in this area. A transfer stain is observed on the center right edge of the target.
6MNUTW- 5605	On the right side of the photograph, there is a volume of blood with a regular lined hash pattern. This large roughly circular deposit is an apparent contact pattern transfer stain. Numerous small slightly elliptical and circular stains are present in diagonal, roughly linear distribution(s) between the upper left and lower right corners. The three largest, most elliptical of these apparent spatter stains are located in the upper left corner. Several smaller, circular stains are prevalent in the lower right corner of the photograph. The center area in between contains circular perimeter stains with downward wipes. The lengths of these wipes vary. All of these small stains could be the result of cast-off (cessation cannot be ruled out). The more elliptical stains are the most supportive of this determination. It may also be possible that a very sharp or pointy implement coated with blood was in slight motion above the surface in question. This could produce smaller circular stains in a drip trail similar to those found in the lower right corner.
6NGPBY- 5601	Cast-off with linear distribution Wipe with downward movement observed through six of the individual stains in the cast-off pattern Transfer stain displaying a linear pattern in the right/center of the substrate
6RX89A- 5605	Several circular reddish-brown stains in a linear pattern, ranging in size from 2.25 millimeters to 5 millimeters in diameter, with six of the middle circular reddish-brown stains containing only the outer rim of the stain with apparent wipe stains moving towards the bottom of the photograph, one apparent discontinuous reddish-brown transfer stain of a possible footwear impression in the middle right side of the photograph. Interpretation and Opinion: The size, shape and distribution of reddish-brown stains in Item 5 is consistent with a drip trail with the middle stains as perimeter stains with wipes, and a transfer stain of a possible footwear impression.

TABLE 3: Recognition and Description
Item 5, continued

WebCode-Test	Detailed Pattern Description
6UKQA8-5601	Observation A - Linear bloodstain pattern from the top left to bottom center corners, consists of 19 bloodstains, between 6mm and 2mm, the bloodstains are circular on the lower corner and elliptical toward the top. Observation B - the center 6 bloodstains have been wiped through leaving the perimeter stains. the wipe shows a 12 to 6 o'clock direction. Observation C - the right center edge shows a linear transfer pattern of 2.75" x 2.75". The concentration of the blood is at the top edge with less blood at the bottom, the pattern is primarily top to bottom linear with cross sections.
6V2T9U-5601	There was a linear pattern of spots of blood on the tile, between the top left and bottom right of the image. This was, in my opinion, a cast-off pattern, created when blood is released from an object due to its motion. In this case, the direction of motion of the object releasing the blood was from the bottom right to the top left of the image. Several of the blood spots comprising the cast-off pattern near the centre of the image had become altered stains after being wiped through in a downward motion in relation to the image, whilst the stains had partially dried. The ring-shapes resulting from this process are termed perimeter stains. There was another pattern on the right-hand side of the image. This was a transfer stain, created when an object stained with blood contacts a surface. In this case it appeared that the transfer stain was caused by contact with a blood stained shoe sole.
6ZWPVY-5605	At least 19 near circular and elliptical stains from top left of photo to bottom right of photo. Stains in top left more elliptical; stains in bottom right more circular. No indication of direction of travel. > Cast-off pattern. The six stains in the middle of the cast-off pattern (centre of photo) have been affected by a wipe motion from the top of the photo to the bottom of the photo. Perimeter stains remain. >Wipe through central area of cast-off pattern. To the right (in photo) of the perimeter stains is an irregular shaped transfer pattern. Note, there is a regular pattern throughout the transfer pattern - a series of linear/vertical lines with a short horizontal line connecting two linear/vertical lines. The horizontal lines are repeated. Approx. 75 X 70 millimetres (mm) at widest points. Approx 105 mm from top of photo. >Transfer Pattern. Potential transfer source - the ball area of the sole of a shoe.
7APM27-5605	The area of fine parallel bars is a transfer pattern, possibly from the sole of a shoe. The spots are a cast-off pattern and the stains in the centre have been wiped before the blood had dried creating perimeter stains.
7WPW9E-5601	Multiple bloodstains were observed on the exhibit. A bloodstain is a deposit of blood on a surface. Three bloodstain patterns (Stains A, B, and C) were labeled and documented. A bloodstain pattern is a grouping or distribution of bloodstains that indicates through regular or repetitive form, order, or arrangement the manner in which the pattern was deposited. Stain A was consistent with an apparent cast-off pattern. A cast-off pattern is a bloodstain pattern resulting from blood drops released from an object due to its motion. This pattern consisted of multiple blood drops that varied in shape and size and were distributed or arranged in a linear trail. In order to describe the size and distribution of the blood drops that made up the cast-off pattern, it was separated into three separate areas (A1, A2, and A3). The top portion (A1) consisted of approximately three blood drops that were elongated and larger than the rest of the blood drops within the pattern. The center portion (A2) of the pattern consisted of approximately six circular blood drops that appeared to be altered stains. An altered stain is a bloodstain with characteristics that indicate a physical change has occurred. Lastly, the lower portion (A3) of the cast-off pattern consisted of approximately 10 blood drops that were distributed closer together, varied in size, and were smaller than the blood drops observed on the top and center portion of the pattern. Directionality, the characteristic of a bloodstain that indicates the direction blood was moving at the time of deposition, was difficult to determine due to the shape of the blood drops. Stain B were wipe bloodstains within the center portion (A2) of the cast-off pattern. A wipe is an altered stain resulting from an object moving through a preexisting wet bloodstain. The movement of the wipe appeared to be towards the bottom left-hand corner of the photograph. The directionality was supported by the apparent blood smear observed below their respective perimeter stain. A perimeter stain is an altered stain consisting of its edge characteristic, the central area having been partially or entirely removed. Lastly, Stain C was a transfer stain from an unknown object that was observed next and on the right-side of the wipe bloodstains (Stain B). A transfer stain is a bloodstain

TABLE 3: Recognition and Description
Item 5, continued

WebCode-Test	Detailed Pattern Description
	resulting from contact between a blood-bearing surface and another surface.
7ZQRZU-5601	There is a transfer bloodstain, that has characteristics of a portion of a shoe sole in the middle of the right side of the photograph. There is a bloodstain pattern that consists of a linear series of circular to slightly oval-shaped bloodstains between the lower right and top left of the photograph. This type of bloodstain pattern is a cast-off pattern. I am unable to determine the direction of motion. The bloodstains approximately in the centre of the cast-off pattern, have been wiped in a direction towards the bottom of the photograph, leaving perimeter bloodstains.
89T3FD-5601	There is a transfer pattern with linear striations. A series of small spatter stains that transition from circles to ellipses from bottom right to upper left is consistent with a cast-off pattern. In the visible middle of the cast-off pattern is a wipe through several stains creating perimeter stains.
89YLR2-5601	There was a linear distribution of bloodstains across the target surface which extended diagonally between the upper left corner and the lower right corner, likely a cast-off pattern, but possibly a drip trail, which appeared to continue into areas beyond the photograph provided. (Unable to determine further without additional contextual information from the scene and additional photographs of the entirety of the bloodstains in this pattern.) There were wipes of six of the central stains of this linear distribution of stains, which also created perimeter stains. Additionally, there was a patterned transfer stain in the central area of the right side of the target surface. There were also multiple spatter stains on the target surface with the heaviest distribution in the bottom right area.
8JVADX-5605	Several elliptical stains with linear spatial distribution and widths varying between 2 and 5 mm are seen along a diagonal line across the tile. There is a slight increase in the aspect ratio of these stains from the bottom right of the picture, where the stains are mostly round, and the top left of the picture, where the stains are more elongated. These stains are cast-off stains, resulting from blood drops released from an object due to its motion. At the center of the picture, there are six stains with blood more visible at the edge than at their centers. Linear blood traces are also visible between some of these stains and the bottom of the picture. These stains are altered stains, also called perimeter stains: stains consisting of their edge characteristics, the central area having been partially or entirely removed. They indicate that an object has contacted the stains while they were not fully dried and have removed some of the blood along the direction of the linear blood traces. Finally, there is a transfer stain on the right of the picture, with linear features with spacing between 2.2. and 2.8 mm. A transfer stain is a bloodstain resulting from contact between a blood-bearing surface and another surface.
8UDC2P-5605	It should be noted that bloodstaining may continue outside the frame of the photograph, there is a possibility the entire pattern was not captured for analysis; therefore, overall pattern size is undetermined. Additionally, all conclusions and descriptions are based only on the bloodstaining present in the photograph. The bloodstain in the photograph, marked Item 5, contains a complex bloodstain pattern consisting of a cast-off bloodstain pattern, altered (wiped) bloodstains, and a transfer bloodstain. The pattern consists of less than 25 circular and elliptical, sub-4mm spatter bloodstains related to form a linear spatter pattern with a slight progressive shape change from top to bottom, the overall pattern appears to be at an approximately 45 degree angle and is visible across the entire photograph. Approximately 5 of the spatter bloodstains near the center of the photograph have been altered. Perimeter bloodstaining is present indicating the bloodstains were wiped, in a downward motion at some point after deposition. Additionally, there is a bloodstain present to the right of the cast-off bloodstain pattern, near the center of the photograph. The non-spatter bloodstain with regular margins is consistent with a transfer bloodstain. The stain is approximately 6 cm in width and 8 cm in length with with a visible uniform linear striation pattern . There is denser bloodstaining at the upper portion of the stain. The photograph contains a complex bloodstain pattern consistent with a cast-off bloodstain pattern, a bloodstain pattern resulting from blood drops released from an object due to its motion; a wipe pattern, an altered bloodstain resulting from an object moving through a preexisting wet bloodstain, and transfer stain; a bloodstain resulting from contact between a blood-bearing surface and another surface. Note: During previous experimentation it was observed

TABLE 3: Recognition and Description
Item 5, continued

WebCode-Test	Detailed Pattern Description
	that the majority of cast-off patterns contained small, sub 4 millimeter bloodstains with more pronounced shape change. However, all previous cast-off experimentation was related to vertical surfaces not horizontal.
8V6ZXX-5601	The length of the tile has a bloodstain pattern containing a drip trail across the length of the tile. The center drip stains within the pattern are altered. It appears these drops had a wipe occur after they began to dry. To the right of this trail is a transfer stain appearing to have come from a blood-stained item contacting the floor.
8VTTZP-5601	Multiple bloodstain patterns located on vinyl tile. Pattern 1: Located on right side of image approx. centre, linear pattern consistent with a transfer pattern. Pattern 2: Located top left to bottom right. In excess of 19 near circular spatter stains in a linear pattern, most consistent with a cast-off pattern. pattern 3: Located centre of image, centrally along cast-off pattern (pattern 2) 6 x skeletal remains of spatter stain, movement through the top of the stain, most consistent to a wipe stain.
8Z6GYZ-5601	A portion of a possible CAST-OFF PATTERN in a linear orientation was located between the top left and bottom right corners of the photograph. WIPES in the direction towards the bottom of the photograph were present through six circular stains in the approximate center of the possible CAST-OFF PATTERN, which left PERIMETER STAINS in its place. A TRANSFER STAIN was located near the right edge in the approximate center of the photograph.
98FDPQ-5601	Transfer stain - consisting of linear marks in blood and possibly forming a partial footwear mark impression in blood. Drip trail with some of the dripped blood spots having been disrupted/wiped before completely drying resulting in perimeter blood stains and smears of blood.
9K9NMX-5605	A linear arrangement of stains, averaging less than 4mm in width extends across the image from the lower right to the upper left. The pattern of stains appears to continue out of frame in the upper left. It is undetermined if the pattern of stains continues off-frame in the lower right. The impact angle of the stains are generally less acute in the lower right and become more acute to the upper left. This is indicative of an object moving over the surface, depositing blood as it moves. With the limited information provided, it is undetermined at this time if the pattern is cast-off or a drip trail. Should additional images capturing the full pattern be available, a more conclusive determination may be able to be made. After the linear pattern of stains were deposited, an object wiped through six stains at the approximate center of the image. This wipe occurred from top to bottom, as imaged. Perimeter stains remained, indicating a time break between the deposition of the linear pattern of stains and the wiping action. A transfer stain is noted at the right side of the image exhibiting an array of roughly parallel lines with apparent bridges between lines. Heavier deposition of blood is noted in the upper portion of the transfer stain, filling the space between parallel lines and obscuring some detail.
9KLA9T-5601	The vinyl tile was examined and a drip trail was observed (diagonally across the tile). Some of the drip stains within the drip trail have been wiped (from top to bottom) creating some perimeter bloodstains. Some additional satellite bloodstains in places (to the greatest extent, to the bottom right, as viewed). A transfer bloodstain was also present on the mid-right hand side of the tile.
9LWCUR-5601	A 'cast-off pattern' with 'satellite stains' between the top left and the bottom right. Several of the cast-off stains have been altered to create a 'wipe' leaving behind 'perimeter stains'. To the right of the cast-off pattern is a 'transfer stain'.
A8XFHK-5605	The first identifiable bloodstain pattern appears to be a drip trail that starts/ends in the top left corner and moves across diagonally to the bottom right corner start/ends. In the center of the image, the possible drip pattern has been disturbed by something going through the partially drying drip creating what appears to be a wipe pattern. In the middle on the right side is another bloodstain pattern. This appears to be a transfer stain where something bloody touched the surface and left a pattern on the surface.

TABLE 3: Recognition and Description
Item 5, continued

WebCode- Test	Detailed Pattern Description
ABD4ZW- 5605	A linear arrangement of bloodstains were presented diagonally across the photograph, between the bottom right and the top left of the photo. Bloodstains between the bottom right and central area of photo are mostly circular, between approximately 2 and 5mm in diameter. Stains are slightly elliptical towards the top left side of the photo, one appears to have a satellite spine, however the quality of the photo is poor and cannot be zoomed in on to check. There are no larger drip stains to suggest a drip trail. Overall appearance of stains suggests that a bloodstained object or appendage, has been flicked or passed over this area producing a cast-off pattern. The blood stains central to the photograph have been wiped through in a direction towards the bottom of the photo, leaving behind at least 6 perimeter stains. At least 6 smaller, circular, sub-mm spatter-type stains, located mostly on bottom right side of photo. On the central right side of the photograph there is a transfer stain/pattern with a repeated linear pattern throughout – cannot exclude the possibility that this may be a partial shoe impression. There is a small amount of pooled blood within the transfer stain, towards the top of the pattern.
ARHLL2- 5601	On the right side of the image, a pattern transfer is observed, under it and on the left side of it a drip trail was formed/ created then followed with wiped stains in the middle of the trail.
BJMPNQ- 5601	The image consists of discrete bloodstains. On the right side, there is a large bloodstain exhibiting an internal pattern and a curved edge. There are varying concentrations of blood within the stain. This stain is classified as a transfer stain. There is a linear distribution of small round bloodstains extending from the upper left of the image to the lower right of the image. Some of these stains have been altered and are observed as perimeter stains. Linear staining radiating (extending) from these perimeter stains indicate that these are wipe stains. The distribution of these small round bloodstains indicate that this could be a drip trail or drip stains.
BU77CQ- 5605	Drip trail - extending between upper left and lower right corners Wipe(s) - stains in center of tile altered due to motion through pre-existing stains, resulting in perimeter stains (movement from top edge of tile to lower edge) Transfer stain - on right edge of tile near center line, with pooling at top of stain Satellite stain (s) bottom right corner, adjacent to larger stains
BXDKAB- 5605	There is a drip trail going diagonal across the photo in a linear pattern from one corner to the other. The drip trail is made up of individual circular drip stains. Several of these drip stains in the middle of the trail are altered stains that can be classified as perimeter stains and wipes. These drip stains have been wiped, and there is feathering downward from the bottom of them showing movement from top to bottom. The central area of these altered drip stains has been partially or entirely removed by this wiping motion, leaving a distinct circular edge/outline or perimeter stain. There is a possible bloody shoe impression (based on the characteristics of the pattern) on the right side of the photo. This is a transfer stain.
C2ZV6E- 5601	The bloodstain pattern present in the photograph is oriented in the horizontal plane on vinyl tile. Starting at the upper left-hand portion of the image there is a series of circular to elliptical spatter stains that travel through the center of the image to the lower right-hand side of the image that span a distance of approximately 35 cm. The larger of these spatter stains measures approximately 5 mm by 6 mm and the spatters are arranged in a linear fashion. At least six (6) of these spatter stains have been altered by an object moving through the preexisting wet blood stain to create a wipe. This bloodstain pattern is suggestive of a cast-off pattern. As the bloodstains in this linear pattern only constitute a total distance of approximately 35 cm, consideration is also given to the fact that another mechanism could have created this linear pattern. It cannot be ruled out that this pattern could have been potentially created by a series of drip stains to constitute a drip trail. Also present in this photograph is a bloodstain pattern on the right-hand side of the image that is located approximately at the halfway point between the top and the bottom of the target. This bloodstain pattern measures approximately 6 cm by 7 cm overall and is comprised of a series of vertical lines some of which are connected to each other via red staining. A heavier distribution of blood is noted near the top of this bloodstain pattern when compared to the bottom of the bloodstain pattern. This bloodstain pattern is suggestive of a transfer stain.

TABLE 3: Recognition and Description
Item 5, continued

WebCode-Test	Detailed Pattern Description
C86LMK-5601	There is a drip trail that spread between the top left corner and bottom right corner of the diagram. There are approximately 6 stains that exhibit a wipe pattern from pre-existing stains. There are visible perimeter stains where the blood had dried prior to being wiped, being wiped away by an unknown object(s). There is a transfer stain from an unknown blood bearing object depositing onto the tile.
CAT94E-5605	An image of vinyl tile in the horizontal plane with multiple bloodstain patterns. From the upper left corner to the bottom right corner of the photograph, circular and near-circular bloodstains exist in a linear pattern, indicating a possible drip trail. In the middle portion of this linear pattern I observed at least six altered stains resulting in perimeter stains with edge characteristics. All of these altered stains have an accompanying wipe moving towards the bottom of the photograph. The middle right area of the photograph contains a bloodstain with pattern characteristics. Based on the similar shape and equidistance of this pattern, this appears to be a transfer stain made by an unknown object.
CBQC4G-5601	There were a number of circular and oval bloodstains, ranging from approximately 2 to 5 millimetres in width, in an approximately linear alignment from the top left to the bottom right of the photo. In my opinion, these are spatter stains that form a cast-off pattern. Several of the spatter stains in the middle have had blood smeared from the stains and towards the bottom of the photo, leaving some perimeter stains. In my opinion these have are wipe stains. Several other small circular stains, approximately 0.5 to 1 millimetre in size, that were in my opinion spatter stains, were present. A larger area of staining, approximately 60 by 70 millimetres in dimensions, was present in the centre-left of the photo. The staining was a series of parallel lines of an equal distance apart. IN my opinion, this is a pattern transfer, likely from the sole a shoe.
CK7T83-5605	A series of drip stains forming a drip trail from the upper left to the lower right of the tiles was present. Several of the drip stains near the center of the tile had been wiped leaving perimeter stains. A transfer stain from an unknown object with a repeating pattern of parallel lines was near the right center of the tile.
CL7D9P-5605	Item #5: Three bloodstain patterns/areas, labeled as A through C, are on the target. A cast-off pattern (A) is located in a diagonal linear fashion extending from the upper left corner of the target to the lower right corner of the target. Due to the size of the target/pattern, a drip trail cannot be eliminated as creating this pattern. Wipe stains (B) are located within the middle of pattern (A) and exhibit perimeter stains. A transfer stain (C) is located on the right side of the target, near the center (from top to bottom). The pattern is composed of multiple linear lines that have varying levels of heavier and lighter staining throughout the pattern.
CMFDDW-5601	On the right-side middle of the target a transfer stain is observed. The transfer stain has patterned/parallel lines visible within it and shows no indication of movement or alteration. There is a linear arrangement of mostly rounded drip stains in the upper left-hand corner of the target/diagonal towards the lower right-hand corner of the target (not necessarily the direction of travel); therefore, a drip trail is observed. Some of the drip stains within the drip trail (near the center of the target) have perimeter staining and appear to have been altered by some means via moving the blood towards the bottom of the target, thus creating at least one wipe.
CRAA23-5601	A cast-off pattern was observed diagonally across the target. Multiple wipes with corresponding perimeter stains within the cast-off pattern were observed near the center of the target. A transfer stain was observed near the right edge of the target.
CXWQA2-5601	Many drip stains forming a drip trail across the tile. The central part of the trail is partially removed by a wipe from the top to the bottom of the image. A transfer stain is in the central right part of the image.
DEJZTM-5605	A cast-off pattern is present that was wiped through some time after deposition. A transfer pattern that may be the impression of some object is also present on this vinyl floor tile.

TABLE 3: Recognition and Description
Item 5, continued

WebCode-Test	Detailed Pattern Description
DG7LFJ-5605	Image 5 depicts a complex bloodstain pattern of multiple types. A transfer stain with elements of a possible impression is near the center, right of the image. A cast-off pattern of elliptical spatter stains is oriented in a linear arrangement between the upper left and lower right of the image. Six of the stains near the middle of the cast-off pattern have been altered via a wipe toward the bottom of the image.
DUJLGH-5605	This pattern is consistent with cast-off or a drip trail between the top left corner and the bottom right corner. In the middle of the trail there are several altered stains. These are wipe stains. To the right of the trail there is a transfer stain.
DYJ6A-5605	The textured tan and gray tile surface exhibits a linear drip trail consisting of at least 19 round drip stains in the lower right area to the upper left area. The drip trail displays little to no directionality of deposition. The diameters of the drip stains range in size from approximately 0.5 mm to 4.5 mm. At least six of the stains in the center of the drip trail have been altered by a wipe and display round perimeter stains. The feathery edge characteristics of the altered stains indicate movement of the wipe was from a top to bottom directionality. The center right area of the tile also exhibits a transfer stain that is possibly a partial bloody shoe impression.
E4KGWT-5601	transfer stain on the center right side of the photo - consistent with a partial shoe print. a cast-off pattern from the top left to bottom right of the photo with wipes on center stains, creating perimeter stains.
ECUT9Q-5601	There is a cast-off pattern diagonally across the target, consisting of circular to elliptical stains in a linear formation. Some of the stains within the cast-off pattern near the center of the target have been altered as evidenced by perimeter staining from the original stains. This is categorized as a wipe. A transfer stain, with tread-like characteristics, is present on the center right side of the target.
EGJ26Y-5605	Transfer stain - possibly a footwear mark. Cast off staining where some of the stains have been wiped through as can see the halo of the existing stain and then the wipe mark
EGL3DW-5605	I have identified the following blood stain patterns onto the Target Surface. Drip trail, Drip Stain, Accompanying drop, Transfer Stain, Altered Stain, Edge Characteristic, Perimeter Stain, Wipe, and finally, some Serum Separation on the edge of the transfer pattern.
EHW4YV-5605	Multiple stains observed on the surface. A drip trail is observed diagonally between the upper left and lower right corner of the surface. Potential directionality of the trail denotes movement from the lower right section to the upper left. Within the drip trail, there are approximately six (6) wipe stains in the center of the drip trail. Movement through the stains are from a top to bottom direction. On the right side of the drip trail, a transfer stain is present consistent with a shoe impression. The impression may have come from the heel of a shoe.
EM9RW8-5605	Depicted in Lab Item #5 is a linear alignment of bloodstains which extend from the upper right corner of the target to the bottom center. This description does not imply the direction of travel. The bloodstains were deposited on the vinyl tile while in a horizontal placement. Disruptions can be observed on the leading edges of some of the bloodstains. No determination of directionality can be made without further examination of the surface texture of the vinyl tile. Pattern Classification: Cast-off pattern, wipe, transfer
EPD7YZ-5605	Two separate pattern types evident on the photographed target: 1. On the right of the image, a transfer stain is evident, this transfer stain contains within in a regular geometric pattern which is an indicator of the surface pattern of the contacting surface. 2. A bloodstain pattern spanning between bottom right and upper left of image, comprising bloodstain's forming a pattern with a strong linear component. The Angle of impact of the stains in the bottom right corner of image is approximately 90 degrees, this angle gradually changes as the pattern extends towards the top left of the image, with the stains becoming more oblate, and their long axis' remaining broadly parallel to the linear aspect of the pattern. These characteristics support the view this is a Cast off pattern (in-line cast off). The

TABLE 3: Recognition and Description
Item 5, continued

WebCode-Test	Detailed Pattern Description
	linear nature of the pattern combined with the changing angle provides support for the view that the cast off has been generated by a bloodstained object being moved/swung above the target surface in a bottom right to top left direction. There is also a Wipe pattern associated with this Cast off pattern. Six (possibly 7) of the stains within the cast off pattern have been altered in appearance due to a surface contacting the target and moving through the stains in a top to bottom (of the image) direction causing parallel smears of blood and leaving behind Perimeter Stains. The observation that the smears extending from these perimeter stains are parallel and extend in the same direction, indicate that the wipe pattern has been generated by a single movement.
F4F7UV-5605	In ITEM 5, a drip trail is observed in the diagonal from the lower right corner to the upper left corner, presenting in six drip stains located in the middle of the drip trail, different wipe patterns produced by an object that has been deposited on them and later it has slipped towards the bottom of the image, remaining the perimeter stain of the same. In the central right part of the image, there is a transfer stain produced by an object impregnated with blood that has been deposited on the target and subsequently withdrawn. IN CONCLUSION: a DRIP TRAIL, WIPES, PERIMETER STAINS and TRANSFER STAIN is observed.
F737QP-5601	There are several round to elliptical stains diagonally across the target from the top left to the bottom right forming a cast-off pattern. Several of the stains in the cast-off pattern have been altered by a wipe resulting in perimeter stains. In the middle right side, there is a transfer stain.
FGLFJP-5601	A transfer stain is located on the right side about half way up. The transfer stain consists of a series of repeating narrow lines spaced about 2.2mm apart. Some of the linear transfer stains are joined with a small block. The deposition is heaviest towards the upper portion of the transfer stain. The transfer stain would be suitable for chemical enhancement and comparison to a known object. There are spatter stains with a linear distribution consistent with a cast-off pattern distributed between the lower right corner to the upper left corner. The spatter stains that make up the cast-off pattern are circular in shape with some in the upper left region being slightly elongated. The stains range in diameter from 2.5-4.5mm. An object has wiped through the central portion of the cast-off pattern causing a wipe pattern. The wipe pattern is located below the cast-off spatter bloodstains indicating the movement of the object through the stains was from top towards bottom. This wipe has left the edge characteristics of the cast-off spatter stains on the floor.
FJHUF9-5605	Item 5 is a photo that shows several different bloodstain patterns. There are numerous drip stains that make up a drip trail going diagonal across the photo. Within the drip trail are several wiped stains with visible perimeter stains. There is a transfer stain on the right middle side of the photo. This stain has a repeating linear pattern with a larger amount of staining in the upper area of the pattern.
FKGDNM-5605	- AT the lower right part of the image there is a transfer stain presenting a characteristic pattern (shoe sole/fabric...). - At the top left corner, presence of a cast-off pattern. Orientation of the cast-off is from bottom to top, and from right to left. - At the lower right corner presence of spatter stains. Distribution is linear. These spatter stains may result from cast-off or from another event (object in movement...). Drip trail resulting from the move of a low adhesive force objetc (knife blade...) can not be excluded. -On the central part, we can observe a wipe pattern, sliding from top to bottom. This wipe has been created seconds/minutes following the creation of the spatter stains located at the center of the board, resulting in perimeter stains creation.
FKHDGV-5601	On the right side of the image, a transfer pattern is observed, under it and on the left side of it a cast off pattern was formed/ created then followed with wiped stains in the middle of it.
FPQV2C-5605	Extending from the upper left portion of the photograph to the lower right portion of the photograph were several circular spatter stains with a liner orientation, no evident flows in individual stains, and no progressive impact angle changes which is consistent with a DRIP TRAIL. The center of the drip trail, near the center of the photograph, was altered and formed a non-spatter stain with irregular margins and no spatter or spines, through existing stains which is consistent with a WIPE STAIN. The

TABLE 3: Recognition and Description
Item 5, continued

WebCode-Test	Detailed Pattern Description
	edge characteristics indicated movement from top to bottom through the pre-existing stains, near the right center portion of the photograph was a non-spatter stain with a patterned deposit which is consistent with a TRANSFER STAIN.
FQ3FKR-5605	There are a number of downward drips forming a drip trail. Some of the drip stains towards the centre of the image appear to have been wiped towards the bottom of the image before they have fully dried causing altered blood stains in the form of perimeter stains and wipes of blood. There is a heavy transfer blood stain to the right side of the image.
FTBJGN-5605	A bloodstain pattern with irregular shape was observed at the right region of the tile, which appeared to be resulted from contact between a blood-bearing surface (resembling a shoe sole) and the tile. The features indicate that this bloodstain pattern was likely a transfer stain. A group of circular and elliptical stains with linear distribution was observed to the left of the transfer stain. This group of stain was more likely a cast-off pattern, with some progressive change in shape observed. Nonetheless, the possibility that this group of stains being a projected pattern or drip stains could not be ruled out based solely on this image, without further information. At the central region of the likely cast-off pattern, some smudges, perimeter stains, and feathered features were observed, indicating a wipe pattern.
FVYGRV-5605	Drip trail from top left of image to bottom right corner. 6 x altered stains in middle of trail, stains have been wiped through vertically, creating skeletonised/perimeter stains. Right hand side of image in the middle, a transfer stain of apparent shoe mark present.
FWAHDU-5601	three different patterns can be detected. a first pattern located in the central area of the picture (right side) can be classified as a 'transfer stain'. A second pattern identified between the upper left corner and the lower right of the picture can be classified as a 'drip trail'. In the middle of the drop trail described above a 'wipe pattern' has been detected.
G8NU6W-5601	Drip trail: A blood stain pattern observed resulting from movement of source of drip stain between two points. Transfer stain: A blood stain resulting from contact between a blood bearing surface and another surface. Wipe: An altered stain resulting from an object moving through a pre-existing wet blood stain.
GCKT2L-5601	A transfer stain was noted as present on the right side of the target. A cast-off pattern was noted as present across the target extending between the upper left hand corner and the lower right hand corner. Multiple wipes with associated perimeter stains were noted as present in the center of the target.
GGUHG4-5601	A drip trail going across the tile with a wipe in part of the drip trail. There is a transfer pattern beside the drip trail.
GQLCWR-5605	There is a "Cast-off pattern" on the tile, showing direction of travel from the lower left corner to the upper right corner. In the center of the photographed Cast-off pattern, 6 stains have been disturbed (Altered Stains), showing movement through these bloodstains, from the top down. The "Altered Stains" occurred after a short passage of time, as the skeletal edge of the original bloodstains can be seen. There is a "Transfer Stain" on the right side/center of the photo. The Transfer Stain resulted from contact between a blood-bearing surface and in this case, the tile floor. This Transfer Stain has a linear pattern, suggestive of being a partial bloody shoeprint.
H7B239-5605	Image consists of two distinct patterns. Pattern A is a transfer pattern located on the right side of the image. The pattern is irregular-shaped with regular margins and parallel linear lines throughout. There is a higher volume of blood toward the top of the pattern, somewhat obscuring the linear lines. The overall size of the pattern is 70x70mm. Pattern B is a cast-off pattern consisting of 20 near circular to elliptical bloodstains, ranging in size from 1x1 mm to 4.6x5.7mm. The pattern covers the image from the top left corner to the bottom right corner with the bloodstains oriented in a linear orientation (line). There is a progressive change in impact angle. Six of the bloodstains have been

TABLE 3: Recognition and Description
Item 5, continued

WebCode- Test	Detailed Pattern Description
	altered/wiped through in a downward direction. Perimeter staining is visible within these altered bloodstains and they have a fainter appearance overall.
HJKFQZ- 5605	There is a what appears to be a cast-off pattern diagonally positioned from the top left corner through the bottom right corner of the photograph. At least six of the stains in the middle section of the cast-off pattern have been wiped through, leaving behind perimeter stains and wipe patterns through each of them. The direction of the movement through these stains is moving from the top of the photograph toward the bottom and slightly left. There is a transfer stain on the right side of the photograph, near the middle of the image.
HKDLQQ- 5605	There is a cast-off pattern with a wipe and a transfer stain on the textured vinyl tile in the horizontal plane.
HWTBRH- 5605	Bloodstaining located at the middle, right side of photo. Transfer stain. Near circular bloodstains approx. 5mm or less between top left and bottom right of photo. Cast-off pattern. Altered bloodstains (perimeter stains) at the centre of the photo (part of the cast-off pattern) caused by movement with directionality from top to bottom of photo. Wipe.
HXGYB- 5605	On the right side a pattern of vertical broken lines with blood concentrations in between at some locations. This is a transfer stain with a line pattern surface. 19 spatter stains nearly circular in shape and vary in size between 3mm and 6mm in diameter. Together they emerge in a linear pattern from bottom right to top left (or vice versa). This can be classified as a drip trail. In the middle of this drip trail, six spatter stains are disturbed. As a result, the edges of the spatter stains (perimeter stains) are still visible and the rest is no longer (or almost no longer) present. You can clearly see the line patterns. This is based on swiping an object through the spatter stains. The pattern is classified as a wipe.
J2FKA- 5605	Image of a horizontal textured tile with staining with the scale located in the upper left corner of the image. There is a transfer stain located approximately between the top and bottom of the image on the right hand side and a cast-off pattern spanning between the lower right corner and the upper left corner. This cast-off pattern has been altered in the center area creating a wipe pattern consistent with movement through the existing stain toward the lower portion of the image.
J4XGAJ- 5605	A drip trail extends from the lower right to the upper left of the target. Several of the drips exhibit a wiping motion from top to bottom through the stains with visible perimeter stains left behind. A transfer stain (pattern transfer) is observed in the approximate middle right of the target surface.
J8JYWB- 5601	main pattern is the multiple drip stain (drip trail) with each drop have 2.20-4.60 millimeter diameter from upper left corner to lower right corner of picture but cannot describe the directionality of the overall stain. in the middle center of picture found the wipe patten on the wet drip stain direction from upper to lower part of the picture. in the middle right of the picture found the transfer stain form object which have multiple line pattern.
K9633M- 5605	Item #5 consists of multiple patterns including, but not limited to, a drip trail, wipe, drip pattern, and transfer stain. The drip trail extends from the top left to to bottom right corners of the image and is comprised of mostly circular drops formed due to gravity resulting from the movement of the source between two points. Within the trail described, a wipe and a drip pattern are also present. The wipe is located roughly in the center of the drip trail and is indicated as such due to the presence of perimeter stains with altered edge characteristics. The perimeter stains indicate that the blood was deposited on the target and an object then moved through it, creating the observed wipe and irregular margins. The drip pattern is located towards the bottom right of the image and is indicated by the irregular margins representative of blood that has dripped into blood. Finally, the transfer stain is located in the center right of the image, to the right of the wipe. Equidistant parallel lines running from the top to the bottom of the image are present within the curved margins of the pattern, indicative of deposition from a blood-bearing surface to the target surface.

TABLE 3: Recognition and Description
Item 5, continued

WebCode- Test	Detailed Pattern Description
KBYAJJ-5605	In item five, textured vinyl tile, identify three pattern. Diagonally a drip trail pattern, its a bloodstain pattern resulting from the movement of a source of drip stains between two points. In the center of the drip trail pattern present a wipe pattern, an altered stain resulting from an object moving through a preexisting wet bloodstain. To the far right on the vinyl tile, a transfer stain pattern was present, is a bloodstain resulting from contact between a blood-bearing surface and another surface.
KG7WCM-5605	There are spatter stains in a linear arrangement from the lower right to the upper left of the target. The majority of these spatter stains range in size from approximately 2mm to approximately 5mm (width). The spatter stains appear more elongated toward the top of the target and more circular near bottom of the target. This linear arrangement of spatter stains is a cast-off pattern. The spatter stains in the cast-off pattern near the center of the target are altered with perimeter staining present. There is apparent movement (feathering) toward the bottom of the target. These altered stains are wipes. There is a larger (~6x8cm) area of non-spatter staining at the mid-right of the target. This staining consists of a regular/repeating linear pattern and is a transfer stain, possibly a (partial) footwear impression.
KMUEU6-5605	Item 5 is an image of a complex bloodstain pattern on vinyl tile on a horizontal plane. There is a linear arrangement of at least 19 spatter bloodstains between the bottom right corner and the top left corner. Designated as Bloodstain Pattern A. These spatter stains range in size from approximately 2 mm in diameter to approximately 5 mm by 3.6 mm and range in shape from near circular to elliptical. There are at least 8 additional spatter stains associated with this pattern that are all less than 1 mm in size. The elliptical spatter stains have a general directionality towards the top left corner of the image. There is a slight decrease in the impact angles of the spatter stains towards the top left of the image. Bloodstain pattern A is a castoff bloodstain pattern. Six of the spatter bloodstains in the castoff pattern have been wiped through in a direction towards the bottom of the image. Perimeter stains are present and there are striations and feathering associated with the wipes. A second bloodstain pattern is towards the center right of the image. This bloodstain is approximately 5.8 cm by 7 cm in size and consists of linear parallel lines oriented along the vertical axis of the image. A larger concentration of blood is towards the top of the pattern. This is a transfer bloodstain pattern and is possibly a partial outsole impression. Designated as bloodstain pattern B. Item 5 consists of a castoff pattern, wipes, and a transfer pattern.
KPUDKJ-5605	Multiple bloodstain patterns present. Transfer Stain with repeating geometric features indicative of a footwear impression. Spatter Stains with features indicative of a cast-off pattern. Wipes present within a number of the spatter stains.
KVMRRJ-5605	In the middle area of the image wipe stains and to the right of it - at the right area of the image - a transfer stain. In addition, there are individual drip stains in the lower right area.
L3BQFP-5605	The pattern existing across the diagonal portion of the tile is a drip pattern. In the center of the drip pattern, several wipe stains are evident. Finally, a transfer pattern exists that has parallel linear features with some slight pooling observed.
L7YJQD-5601	There is a linear pattern of small to medium spots of blood from the top left corner to the bottom right corner of the photo which, in our opinion, could be explained by a cast-off pattern. This was considered as a possible drip trail, however, given size of the spots, in our opinion, more likely to be cast off. Some of the spots of blood in the middle of the linear pattern appear to have been altered whilst they were partially dry. They appear to have been wiped (from top to bottom of the photo) resulting in a perimeter stain on the edges of the spots of blood. To the right of the altered wiped stains there is a transfer stain present (possible partial footwear impression in blood). There are also minute spots of blood at the lower right hand corner of the photo which, in our opinion, could be explained by satellite stains.
L98EPN-5605	Transfer stain of apparent partial shoe impression in middle right of photo. Cast-off pattern extending in a linear orientation from the bottom right of photo to the top left of the photo. Progressive change

TABLE 3: Recognition and Description
Item 5, continued

WebCode-Test	Detailed Pattern Description
	in shape from circles to ellipses. Wipe pattern in center of photo. Approximately six apparent blood stains have a dried outer ring (skeleton) of the original stain. There is feathering, striations and diminished volume.
L9NPBA-5601	Item 5 is a complex stain consisting of a cast-off pattern, wipes, perimeter stains, a transfer pattern, and a void. The cast-off pattern is oriented from the upper left corner to the lower right corner of the photograph. Six stains in the mid-section of the cast-off pattern are downward wipes with perimeter stains. There is a transfer stain with a void in the right middle area of the photograph.
LD4DTL-5605	Numerous circular-shaped bloodstains with diameters of approximately 3 to 5 mm in size can be observed on the horizontal, vinyl tile surface. These stains are arranged linearly along the entire diagonal of the image, running from the top-left to the bottom-right corner. Due to their arrangement, sizes, and the consistent angle of impact of successive drops within this pattern, one can infer that it is a drip trail (a deposit of a series of drip stains in linear orientations). Several of the drip stains (approximately 6 drips located in the central part of the photo) have been altered prior to completion of the drying process. As a result, one can observe the edge characteristics typical for the perimeter stains, where those portions of the stain that had dried (the peripheral rim) remain undisturbed, while the wet blood was wiped away. The wiping motion occurred from top to bottom (of the image). In this case, the skeletonization effect not only allows to recognize the stains' original size and shape, but also helps in sequencing actions. It can be seen that some subsequent action (the wiping motion) has followed the deposit of drip stains. In the top-left corner, another altered trace is also visible, which has partially flaked off after the blood has completely dried. Additionally, on the right side, in the central part of the image, a transfer stain that can be further classified as a pattern transfer is present.
LGGXXL-5605	A cast-off pattern extends diagonally across the target surface between the lower right corner and the top left of the image. The spatter stains within this pattern range from 3 to 5 millimeters and are in a linear orientation. The stains in the lower right portion of the pattern are generally circular and the stains in the upper left portion of the pattern are more elliptical. Multiple of the stains within the cast-off pattern (near the center of the pattern/target image) display perimeter staining and have been wiped through in a direction toward the bottom of the image. At the center right side of the target image is a transfer stain with patterning (vertical lines) noted. Some of the blood near the top of the transfer stain has heavier concentration/pooling.
LQMVNB-5605	Stain A in the center is consistent with a Castoff pattern and is red-brown. Circular spatter stains measuring approximately 2mm-4mm in diameter and elliptical spatter stains measuring approximately 3-6mm in width. The spatter stains are in a linear distribution and show a progressive change of shape. Several stains in the center of stain A were altered. These stains are consistent with being a wipe stain, noted by the perimeter stain and the blood displacement from the center of the stain outside the stain. Feathering is observed on the edge of the wipe. Stain B is a transfer stain to the right of Stain A. A repeating pattern, regular margins and uneven areas of staining were noted within the transfer stain. Stain B is red-brown and measured approximately 72mm x 55mm.
MB84CP-5605	- Drip Trail - Wipe - Transfer Stain Drip trail; A bloodstain pattern resulting from the movement of a source of Drip stains between two points. Wipe; An altered stain resulting from an object moving through a positive wet bloodstain, to contact of trail. Transfer stain; A blood stain resulting from contact between a blood-bearing surface and another surface to right side of drip trail (adjacent to wipe).
MLDYGF-5605	Three bloodstain patterns were depicted in the photograph (item 1-1-5). One of the patterns was a cast-off pattern with a linear distribution on the vinyl tile. The spatter stains within the cast-off pattern are oriented from the lower right towards the upper left as viewed facing the photograph. The individual spatter stains within the cast-off pattern are nearly circular towards the lower right and are slightly elongated towards the upper left. A pattern consisting of several wipe stains was located within the central portion of the cast-off pattern. These wipe stains have a downward directionality as viewed

TABLE 3: Recognition and Description
Item 5, continued

WebCode-Test	Detailed Pattern Description
	facing the photograph. A transfer stain pattern is located on the middle right side of vinyl tile as viewed facing the photograph. The transfer stain consists of a pattern of linear/parallel impressions. Additionally, there is a small accumulation of apparent blood in the upper portion of the transfer stain. Additionally, there are a few small accumulations of blood between some of parallel impressions. Conclusion: A cast-off pattern, a wipe and a transfer stain were observed on the digital photograph (item 1-1-5). A cast-off pattern is a bloodstain pattern resulting from blood drops released from an object due to its motion. A wipe is an altered stain resulting from an object moving through a preexisting wet bloodstain. A transfer stain is a bloodstain resulting from contact between a blood-bearing surface and another surface.
MRVE2C-5605	Bloodstaining consisted of: - a linear series of round/oval bloodstains, ranging in size from approx. 2mm - 5mm in diameter, that form a cast-off pattern. - altered bloodstains in the central section of the cast-off pattern that, in my opinion, appear to be the result of bloodstains that were wiped after deposition and before the original stain was fully dried. - several very small spots of blood (less than 1mm in diameter) close to the cast-off pattern. - a transfer stain with a distinctive pattern/marks.
MYVBPX-5605	The image exhibits 2 or more patterns. The blood was deposited on a vinyl tile in a horizontal plane. The 1st pattern forms a diagonally line across the surface between the lower right corner (when looking at the image) and the upper left corner. The bloodstains ranged in size from ~1.5mm wide to ~3.5mm wide. The bloodstains in the lower right corner of the surface exhibit round (or near round) shapes. The bloodstains in the upper left corner exhibit oval shapes. In the center of this pattern are ~6 bloodstains that have been altered by a wipe motion from the top of the target surface moving toward the bottom of the target surface. The wipe occurred after the margins of most of the bloodstains had dried. There is a transfer stain on the center right side of the image. The stain exhibits a series of thin parallel lines separated from each other by ~2mm. The orientation of the lines is near parallel to the left and right sides of the image. Blood has filled in the void areas between some of the parallel lines. The largest concentration of the excess blood is along the top center of the transfer stain. The top edge of the transfer stain appears to be curved in shape.
N793RL-5605	1- There is a cast-off blood pattern in the upper left area toward bottom right area. 2- In the middle of the figure, some of the blood has wiped pattern. 3- Also, there is transfer stain blood pattern formed as a footwear mark in the right middle of the figure.
NBKBVC-5605	The irregular shape stain with varying concentrations on the right side of the target (A) was consistent with a transfer stain. The circular to oblong stains in a linear arrangement (B) were consistent with a cast-off pattern. The altered portion of the cast-off pattern (C) was consistent with a wipe.
ND8UWA-5601	Drip trail spanning from the top left corner to the bottom right corner. Approx. 6 drip stains in the drip trail had wipe stains present. A transfer stain of an unknown object was present in the middle right.
NKECHG-5601	There is a cast-off pattern between the upper left-hand corner and the lower right-hand corner of the image. Some of the stains within the cast-off pattern are altered leaving perimeter staining. This is a wipe. In the middle of the right-hand side of the image, there is a transfer stain.
NTY9Y4-5605	There are one Transfer Stain at the right corner of this image, and a linear distribution of Drip Trail / Drip Stains with Accompanying Drops observed between left top and right bottom of this image. Additionally, there are six Perimeter Stains and Wipe patterns observed at the centre of the image.
PUWC9B-5605	Red stains were observed on right and from lower right to upper left indicating two main patterns. The stains on the right of the image had a linear pattern inside and defined outline, size was about 7 cm x 7cm. possibly consistent with a footwear impression or other impression The stains from lower right to upper left pattern were circular, oriented in a linear pattern and approximately 3-5mm in size. The pattern had the appearance of a drip trail but are generally smaller than standard drip stains (which are typically about 10mm). The pattern was consistent with a castoff pattern or drip trail. The circular stains in the center of the pattern had perimeter stains with staining going through them transferring blood away from the center of the stain with a lighter deposition/feathering appearance, indicating a

TABLE 3: Recognition and Description
Item 5, continued

WebCode- Test	Detailed Pattern Description
	wiping action. Conclusion: - The stain pattern on the right side of the image was consistent with a transfer pattern. - The stain pattern consisting of circular stains in a linear pattern was consistent with a drip trail or castoff pattern from lower right to upper left (not implying direction of deposition). - A wipe pattern through center stains of drip trail/castoff pattern was also observed.
Q29V29-5605	On the right side of the target, a TRANSFER STAIN is located with an apparent pattern/texture present in the staining. Between the top left of the target and the bottom right of the target, a possible DRIP TRAIL is present as a linear collection of stains. Alternatively, this collection of stains may be considered as a CAST-OFF PATTERN - additional observations from the scene would be needed for better classification/determination. Within the middle of the target, several of the existing BLOODSTAINS that comprise the possible DRIP TRAIL or CAST-OFF PATTERN have become a WIPE pattern when an object moved through the stains in a direction from the top of the target towards the bottom of the target.
QGL9DE-5601	Image is reportedly of vinyl tile (horizontal plane) which appears to have some texture. Pattern recognition and description is requested. An apparent drip trail in a diagonal orientation between the top left and bottom right of the image. Most of these stains are circular, all with a diameter of approximately 5mm or less. The top left corner stains appear more elliptical in shape, however there are no satellite stains or scalloped edges to indicate a direction of travel. (6) of the drip trail stains, located in the center of the image, have been wiped through with a top to bottom of the image directionality. Circular drip perimeter stains are visible at the top of each with parallel linear wipes from them that exhibit saturation to desaturation and some feathering characteristics. A roughly circular transfer stain is located approximately 1.5 - 2 inches to the right of the drip trail/wipe stains and has an approximate 2.5 inch diameter. The transfer has a linear and repeating pattern with varying amounts of blood (more saturated at the top than bottom) and possibly including 1 or more voids.
QLHN CN-5601	Item 5 shows a cast-off pattern in a linear area extending between the top left and the bottom right of the target. Wipes with corresponding perimeter stains were observed within the cast-off pattern near the center of the target. A transfer stain was observed on the right side of the target.
QMTU84-5605	A drip trail extending diagonally from the lower right side to the upper left side, passing through its middle region. Additionally, several wipe stains with Edge Characteristic (Perimeter Stains) are present in the central area, originating from previously deposited blood stains. Furthermore, a Transfer Stain that resembles a blooded shoeprint is evident at the right middle side of the tile.
R6NHFE-5605	Between the upper left corner and the lower right corner, there are bloodstains distributed in a linear pattern compatible with a cast-off. In the central part of this pattern, a group of perimeter stains is observed; these bloodstains were altered by wiping, while the blood was still wet. In the middle right part of the target, there is a transfer stain with a linear pattern.
RANKQA-5605	Approximately 20 near-circular spatter bloodstains (~3-5mm) linearly distributed and positioned diagonally between the top left and bottom right; approximately five of these stains towards the middle of the image have been altered by a downward wipe. There is transfer bloodstaining on the middle of the right of the image. This staining has a structured appearance; the transfer source is possible bloodied footwear.
RF6TNY-5605	1/ a series of circular to ovoid bloodstains are visible across the picture, between top left and bottom right. Their axes are parallel and their distribution is linear. This is a CAST-OFF PATTERN. The ovoid traces show a right-to-left direction and are the result of a right-to-left movement of an unidentifiable bloody object. 2/ Some of the bloodstains of the cast-off pattern show only their skeleton and a strip-shaped trace of the same width with internal striation. This is a WIPE PATTERN. 3/In the center of the right-hand side of the picture, a sole with fine parallel lines can be seen. This is a TRANSFER STAIN. If we can say that the WIPE is after the CAST-OFF, no interaction exists with the sole trace. So no chronology can be given between the TRANSFER STAIN and the CAST-OFF.

TABLE 3: Recognition and Description
Item 5, continued

WebCode-Test	Detailed Pattern Description
RHBPCF-5605	Pattern depicted occupies an area approx. 12 inches square. It is reported to be vinyl tile on a horizontal plane (i.e. flooring). At least three pattern types appear to be present- drip trail, wipe and transfer. 20-25 circular stains are present, approx. 3-4mm in size. They run in a diagonal line from the bottom right of the image to the top left(drip trail). They have no significant directionality. 5-6 sub millimeter circular stains are also present near the bottom right. 6 of the stains in the center of the image have been wiped, with the directionality being from the top down. They exhibit both feathering and skeletonization. To the right of these, near the right side of the image there is a transfer pattern approx 3 inches square with repeating rectangular elements.
RJ6MGF-5605	In my opinion there is a drip trail, where some drip stains have been wiped whilst they were still wet. There is also a transfer stain present with linear marks which could relate to an apparent footwear mark ([Analyst]: footwear is not in my area of expertise).
RN3UAP-5601	On the right side of the vinyl tile there is a transfer stain. Oriented between the upper left corner and the lower right corner is a cast-off pattern. The center section of the cast-off pattern has been altered by a wipe. The wipe left behind perimeter stains.
RTU4FG-5605	A linear pattern of circular to oval bloodstains was observed diagonally across the surface in the image from the lower right hand corner of the image to the upper left hand corner of the image. The linear bloodstain pattern has an appearance suggestive of a possible drip trail with cast-off characteristics. The drip trail would have resulted from the movement of a source of drip stains between two points, and the cast-off characteristics resulted from blood drops released from an object due to its motion. The stains at the center of the image have been altered leaving several wipe stains and perimeter stains. An altered stain is a bloodstain with characteristics that indicate a physical change has occurred. The wipe stains observed are altered stains resulting from an object moving through the preexisting wet bloodstains. The perimeter stains are also altered stains consisting of its edge characteristics, the central area of the wet stains having been partially or entirely removed. A transfer stain was observed at the mid-right side of the surface in the image. A transfer stain is a bloodstain resulting from contact between a blood-bearing surface and another surface.
RVJN88-5605	There is a linear distribution of spatter stains between the bottom right and the top left corners. Individual stains appear to become more elongated from the bottom right to the top left. The overall pattern could be classified as a cast-off pattern. An alternative consideration would be a possible drip trail created from a moving blood source located relatively close to the target surface. Six of the central spatter stains have been wiped through in a downward direction creating six perimeter stains above the wipe marks. There is a transfer stain at the centre right of the image. The linear repeat pattern within this stain shows a transfer pattern possibly created after partial contact with a bloodied sole of a shoe. There are several smaller possible spatter stains (approx. equal to or less than 1mm in diameter) broadly dispersed on the bottom right quadrant.
RWF73G-5601	A Transfer Stain was noted on the middle right portion of the target. A Drip Trail was observed between the lower right hand corner and the upper left hand corner of this target. A Wipe was noted on the center of this target through six (6) of the drip stains from the drip trail.
RX9YXZ-5605	There is a drip trail from the lower right corner of the image upward toward the upper left corner of the image. There appears to be a wipe pattern in the center of the image across a portion of the drip trail that demonstrates movement from the top of the image toward the bottom. There is a possible transfer stain approximately halfway up the right side of the image that demonstrates characteristics of a possible shoe print.
T3GHWT-5601	Transfer stain in the 3 o'clock position from a blood bearing object coming in contact with the vinyl tile. Drip trail from the top left of image to the bottom right of image with evidence of the blood being altered from an object wiping through the blood (downward) when it was partially dried, creating a perimeter stain.

TABLE 3: Recognition and Description
Item 5, continued

WebCode- Test	Detailed Pattern Description
T69J73- 5605	The below listed bloodstain patterns were noted on the provided photo. 1.) Drip Stain: Bloodstain from falling droplet 2.) Wipe Stain: altered stain resulting from an object moving through a preexisting wet bloodstain 3.) Pattern Transfer Stain: bloodstain resulting from contact between a blood bearing surface and another surface 4.) Drip Trail: bloodstain pattern resulting from movement of a source of drip stains between two points
TE4XCD- 5605	Apparent footwear mark in blood, transfer stain. linear spatter stains of blood from bottom right corner to top right corner indicative of a cast-off pattern. Some of the spatter blood stains in the centre of the photograph appear to have been wiped to create perimeter blood stains.
TH6KTH- 5605	From the upper left corner to the lower right corner: Cast-off Pattern In the middle part: Wipe Right in the center: Transfer Stain and Swipe
TJNUA4- 5601	There is a cast off pattern or possible drip trail extending between the upper left corner and lower right corner of the photograph, made up of small circular shaped stains in a linear distribution. Due to the individual circular and elongated stains being smaller in size it is more consistent with a cast off than a drip trail. There may be some elongation of the stains in the upper left of the pattern indicating possible directionality towards the upper left corner. In the middle of this pattern is a number of the circular shaped stains have been altered by way of a wipe through the stain in directionality from top to bottom of the photograph, indicated by the skeletonization of the outer rim of the stains and feathering and darkening at the bottom of the stains. On the centre right side of the photograph is a transfer stain where a bloodstain object has come into contact with the surface leaving an impression on the surface. The impression has features which may indicate a partial shoe sole impression or other object with the same class characteristics. There does not appear to have been any movement of this object when coming into contact with the surface. The top (as positioned in the photograph) of the impression contains a larger quantity of blood than the lower portion. This may have been from the amount of blood on the object or blood that was already deposited on the surface prior to the object coming into contact with the surface.
TNCLDQ- 5605	There is a transfer stain with a linear patterned appearance near the right edge of the image. There is an apparent void within the transfer stain. From the upper left corner of the image to the lower right corner of the image, there is a linear pattern of bloodstains that appears to be most consistent with a cast-off pattern. The directionality of the pattern was not determined. Within this cast-off pattern, several of the stains have been altered to produce wipes with remaining perimeter stains. The wiping motion was in a downward direction in the image.
TPMV2C- 5605	This target contains a drip trail which can be seen at the top left of the picture and continuing down to the bottom right of the picture (not respectively). At the center of the target I observed a wipe pattern due to blood droplets being present which have skeletal borders in the disturbed blood droplets. At the right of the target I observe a transfer stain.
TQLBW3- 5605	There are numerous circular stains in a linear distribution diagonally across the tile. Relatively uniform in size - this is a drip trail. Five of the drip stains in the middle of the drip trail have been altered. The perimeter stains are still visible and there is feathering coming from the original stains - these are wipes. There is fairly heavy bloodstaining on the right hand side with a distinguishable shape. The object that created this stain could possibly be the sole of a shoe - this is a transfer stain (we would call this a transfer pattern).
TVXEPQ- 5605	A cast-off pattern (spatter -> non-radiating -> horizontal surface but not mostly circular -> linear -> progressive change in shape) is present along the diagonal from the lower right corner to the upper left corner. Several of the spatter stains in the middle of the cast-off pattern have been altered, producing wipes (feathering to suggest motion -> obvious altered stain) traveling from the upper edge toward the lower edge of the photo. On the center right is a transfer stain, more specifically a stamped impression (non-spatter -> transfer -> no feathering or striations -> recognizable shape) of a possibly irregular-shaped rounded object with a texture of parallel lines.

TABLE 3: Recognition and Description
Item 5, continued

WebCode-Test	Detailed Pattern Description
TYCFQH-5601	Some drip stains, a transfer stain and some wipe stains are reported in the picture
U3AJTP-5605	There are three patterns noted on the target: 1. A linear distribution of stains diagonally across the target consisting of small round stains (bottom right) to small oval stains (top left). The size of the stains range from ~3mm to ~5mm. The pattern is consistent with cast-off, but a drip pattern cannot be excluded. 2. Within the above pattern, a wipe occurred though several of the individual stains in a downward motion, as indicated by the middle of the stains trailing downward while the outer edge characteristics of the stains remained intact. 3. To the right of the page is a transfer stain where a blood-stained object with a distinctive vertical and horizontal linear pattern made contact with the target.
UBHZJA-5605	From the lower right corner to the upper left there is a cast-off pattern with around 20 bloodstains ranging between 1-5 mm in diameter. In the upper part of the pattern the stains are a bit more elongated than in the lower part, where the stains are more or less circular (indicating a perpendicular angle of impact). In the middle of the cast-off pattern the stains have been wiped in a downward direction, resulting in perimeter stains. The edge characteristic (thin rim) indicates a short period of time between cast-off and wiping. To the right of the cast-off pattern there is a transfer stain from a bloodied object.
UDPW4J-5605	Item 5- Vinyl tile on a horizontal plane Item 5 depicts a linier drip trail that consists of circular shaped stains on the lower right corner, center, and upper left corner, with the stains in the upper left corner becoming slightly more elliptical. The center portion of the trail consist of a wipe pattern. This is evident by 5 circular perimeter stains with feathering going downward from the stains. On the center right side of the tile is a transfer stain of an apparent footwear impression. This is evident by stains with edge characteristics. Linier stains within the transfer stain run parallel to each other with equal spacing.
UJKC6D-5601	There is a drip trail between the upper left corner and the lower right corner of the target. There is a wipe in the center of the target, as several of the drip stains within the drip trail have been wiped through. A transfer stain is present on the right side of the target, near the center.
UXGTQ6-5605	There is a partial circular transfer stain in the middle right of the target, comprised of evenly spaced, linear bloodstains with some bloodstains connecting them. From the lower right of the target to the upper left there are several, drip stains. They are in a mostly linear path and indicates a drip trail. There is also a possibility that this pattern could be attributed to a cast-off pattern. In the middle of the drip trail, there is an area of altered stains. The stains present are perimeter stains and have a linear wipe below the bloodstain indicating a top to bottom directionality.
UXXUP2-5605	Diagonally across center of target, drip trail with more elliptical shaped stains at top left and more circular stains at bottom right. Center of trail contains 6 stains with a wipe impression. Right side near center of target photo has a transfer impression.
VFQXAU-5605	From bottom right to top left of the image, there is a linear blood pattern consisting of approximately 20 spatter stains. The stains range from approximately 1 millimetre in diameter to approximately 6 millimetres in diameter. Stains are largely round and do not show detail of directionality. No spines or satellite spatters present, suggesting low energy. Size of stains possibly too small to be passive drips, wholly due to gravity. Therefore likely to be cast-off pattern. Towards the centre of this spatter pattern, some of the stains are altered and have been wiped, resulting in the perimeter stains being visible in this area of the pattern. At the right-side of image, there is a separate pattern consisting of a transfer stain. The stain shows a pattern of parallel bars, indicating the nature of the item that had transferred the blood.
VJENYJ-5605	Drip trail consisting of drip stains, which were partially altered (altered stain) by wiping (wipe), leaving just a perimeter stain of the original drip stain. Additionnally, there is a transfer stain (possibly left by a shoe sole), which has a small pool of blood in one area.

TABLE 3: Recognition and Description
Item 5, continued

WebCode-Test	Detailed Pattern Description
VXUNR4-5605	In a diagonal linear arrangement are mainly round and a few elliptical bloodstains most consistent with castoff pattern(s). Near the middle of the target are a few of the stains in the diagonal pattern(s) that have skeletal stains and lightened staining/feathering from them indicating altered stains consistent with wipe(s). Bloodstaining with distinctive edges that consists of parallel lines with an arching at the top of them and areas of lightening of the lines of bloodstaining. This is most consistent with a blood bearing object that came into contact with the surface resulting in a transfer stain. Cast off Pattern(s) Wipe(s) Transfer Stain
W6BKAJ-5601	Item #5: drip trail with a wipe pattern in the middle of the vinyl tile floor and a transfer stain from an unknown impression.
WBLLG9-5605	A drip trail was found on the vinyl tile from the upper left corner to the lower right corner, in which bloodstains of the central region of the drip trail were wiped vertically downward, forming perimeter stains. On the right-hand side of the wipe pattern, a transfer stain was found.
WXPP7U-5605	Item 5 is a complex bloodstain pattern that includes a castoff pattern with altered (wiped) stains and a transfer stain. The castoff pattern is made up of at least twenty elliptical and mostly circular bloodstains, which range in size from 2 mm in diameter to 4 mm x 6 mm. The castoff pattern is a diagonal linear shape from the upper left to the lower right of the photo and measures 36 cm x 3 cm. There is a progressive change in the shape of the bloodstains, with more elliptical stains in the upper left and more circular stains in the lower right. At least six of the elliptical stains in the middle of the image have been altered. These altered stains have elliptical perimeter stains with staining below that indicate wiping in a top to bottom direction. The transfer stain is along the right side of the photo, in the middle. It covers an area of 6 cm x 7 cm. The stain is made up of parallel lines, with heavier bloodstaining between some of the lines.
X2J6U8-5605	A cast-off pattern (Area A) was present on the target surface between the bottom right and upper left. The center portion of this cast-off pattern had downward wipe stains with visible perimeter stains (Area B). A transfer stain of an impression with a network of thin lines (Area C) was on the target to the right of the area of wipe stains.
X6H37E-5601	1. Cast-off. In the central part of the castoff we can see some altered stains due to a (2.) swipe pattern (presence of edge characteristics). The movement is from up to down watching the picture; 3. transfer stain. the surface with the blood has a characteristic geometrical shape. the upper area of the transfer stain (watching the picture) has a grater presence of blood.
XMQ9Y4-5605	There is a series of circular and slightly elliptical stains, distributed in an irregular linear pattern, oriented diagonally from the upper left to the lower right of the target. The stains in the center and lower right of this pattern are circular, with two sets of overlapping stains at the lower right. The size and distribution of these stains indicate a possible drip trail. The six circular stains located near the center of the target have been altered, creating perimeter stains and wipes. The directionality of the wipes is downward, toward the bottom of the target. Slightly elliptical stains at the upper left area of the blood trail indicate possible cast-off from an object in motion. Directionality is not apparent. On the right side of the target is a transfer stain with patterning. Due to the volume of blood present in that area, there may have been a pre-existing stain prior to the transfer taking place.
XVKGJV-5605	There are several types of patterns in this photograph. Running diagonally cross the page, there is a drip trail from the top left to bottom right. These stains are fairly circular and directionality is unknown. In the middle of the drip trail, there are 6 perimeter stains that are accompanied by wipes stains. These are caused from something dragging through the original drip stains creating the perimeter and wipe stains. To the right side in the middle of the page is a transfer stain. The source of the transfer is unknown but there are vertical lines inside the pattern and possibly short horizontal lines as well.

TABLE 3: Recognition and Description
Item 5, continued

WebCode-Test	Detailed Pattern Description
XYZV6F-5605	Cast-off pattern (possibly more than one) noted from lower right corner of image to upper left corner. There is no clear directionality noted and it cannot be determined with any degree of certainty whether the direction of movement is from the upper left to lower right or the opposite. In the center area of the cast-off pattern, six of the stains have wipe patterns with the direction of movement from the top of the image towards the bottom. A transfer stain is located in the center of the right side of the image. This stain has some possible class characteristics that may be useful for comparison.
Y234VC-5601	There is a transfer stain on the center right side of the target. There is a drip trail from the bottom right corner of the target to the top left corner of the target. There is at least one wipe through the drip trail with perimeter stains in the center of the target.
Y3D7HB-5601	There are multiple drip stains creating a drip trail between the lower right and upper left corners of the target (direction of travel not determined). At least one wipe is present through several of the drip stains near the middle of the drip trail. The movement of the wipe/wipes is toward the bottom of the target. A transfer stain is present near the middle right side of the target.
Y6XJYM-5605	Item 5 is an image of two distinct bloodstain patterns on vinyl tile in the horizontal plane. The first pattern (Pattern 1) is a series of small circular and oval bloodstains in a diagonal linear pattern that cross the center of the image from the upper left to the lower right (as facing). The center of this pattern also shows signs that it has been disturbed. The second pattern (Pattern 2) is an irregularly shaped transfer stain at the right side of the image. Pattern consists of approximately circular and oval bloodstains without any clear directionality. I also do not see any ruffled edges or any satellite stains associated with the bloodstains. The stains are more round at the lower right of the image and this indicates that they struck the vinyl tile at approximately 90 degrees. As I move toward the upper left corner of the image, the stains become more oval in shape, which indicates that blood struck the vinyl tile at an angle less than 90 degrees. I measured six of the stains along the length of the pattern and found the measured angles of impact to be approximately 90 degrees at the lower right corner to less than approximately 60 degrees at the upper left corner. This change in angle of impact indicates motion and is consistent with this pattern being a cast-off pattern. I only determined that the angle was changing and did not determine the overall direction of travel for the cast off pattern. Additionally, the reported measurements are for descriptive purposes only and do not represent a quantitative forensic test result. The stains in the approximate middle of the cast-off pattern are altered stains. There is a clear perimeter stain for 6 of the bloodstains and the blood has been wiped through the pattern toward the bottom of the image. Since perimeter stains are visible, I am able to determine that the alteration is a wipe pattern. Pattern 2 is an irregularly shaped transfer pattern at the right side of the image. The pattern does not appear to have been disturbed/altered. One edge of the transfer pattern appears to be curved/round. The transfer pattern also looks as if an object with a surface that has highs and lows/hills and valleys left the transfer pattern on the tile. I did not determine what blood-bearing object could have left the transfer pattern on the vinyl tile. In addition to the patterns described above, there are some small, irregularly shaped bloodstains and fine spatter in the Item 5 image. They do not appear to be associated with each other or the described patterns (cast-off, wipe, and transfer). I did not come to any conclusion regarding these bloodstains.
YADYNE-5605	Blood mechanisms presented in item 5 are: Transfer Stain, Drip Stain, Wipe.
YBUKKF-5601	A transfer stain, appearing to be of irregular shape, varying stain density, textured appearance, and a defined if rough edge, was identified on the right side of the field. A cast-off pattern of near-circular to slightly elliptical stains, all being of similar size, was identified along a linear area extending between the top left and bottom right of the field. A wipe passing through the center of the cast-off pattern, displaying trails of staining extending downwards from the altered stains, which have the appearance of perimeter stains, was identified near the center of the field.
YMF3Q6-5605	In this item, a transfer stain can be seen at the right in what seems to be a shoe impression. There's also a drip trail, interrupted in the middle by a wipe pattern which also left an edge characteristic of

TABLE 3: Recognition and Description
Item 5, continued

WebCode-Test	Detailed Pattern Description
	the original drip.
YQYFWG-5605	Item 5 exhibits several types of blood stain patterns. In the center right there is a transfer stain that left a distinct pattern from a bloody object. There is a drip trail running diagonally from the bottom right through the center of the image. In the center of the image there is a clear wipe pattern, resulting in several perimeter stains.
YUHUZG-5605	This photograph depicts apparent bloodstain patterns on a vinyl tile floor. There is a linear pattern of circular bloodstains across the floor (diagonally across the photo) forming an apparent drip trail. The stains have fairly smooth edge characteristics. Some of the stains in this pattern have been altered, leaving a perimeter stain and a wipe. There are also a few small and irregular shaped bloodstains speckled on the tile around and between the drip stains. To the right of the drip trail, there is a transfer stain forming an arrangement of parallel lines.
YUXTGL-5601	The following bloodstain patterns were observed on the board: A linear distribution of bloodstains consisting of circular to elliptical stains with shape of the stains indicating a right to left and lower (corner) to upper (corner) directionality. The stains are fairly consistent in size ranging from 3-5 mm. The size, shape and distribution of the stains are characteristic of a cast-off pattern; however without context and case related information, a low volume, low pressure projection mechanism cannot be excluded. Several of the stains within this linear pattern have been altered resulting in perimeter staining and elongated feathered staining toward the lower side of the target. These features are characteristic of wipes with the direction of movement through the pre-existing stains from the top of the target towards the bottom. Near the right edge of the target (and to the right of the pattern described above) is a transfer pattern consisting of a series of linear parallel striations each approx. 3 mm apart. Some pooling is evident within and between the striations. The overall top of side of this transfer pattern displays a curved edge. Insufficient characteristics are present to indicate the potential source of this transfer pattern.
Z44UBQ-5605	Item 5 is an image of textured vinyl tile in the horizontal plane with multiple bloodstains. The pattern was found in a room containing a deceased victim with multiple stab wounds. There is a cast-off pattern that extends between the upper left corner and lower right corner of the image. Some of the bloodstains within the cast-off pattern were altered to include wipes. The wipes extend downward from the original position of the bloodstains in the cast-off pattern. There are several perimeter stains remaining as a result of the physical change that occurred to the wiped cast-off pattern. Towards the right side of the image, there is an additional bloodstain that appears to have a linear pattern. This is a transfer stain from a blood bearing surface with linear pattern details.
Z86Q37-5601	Item 5 consisted of a transfer stain on the middle right side of the tile. A possible cast-off pattern was between the lower right and upper left corners of the image (the image did not capture the entire tile). Six of the bloodstains in the possible cast-off pattern were wiped through in a downward direction (top of the tile towards the bottom of the tile) leaving behind perimeter stains. There was possibly a swipe to the left of the second from the left swipe (could be part of the wipe but was wider than the start of the and difficult to tell as a 3-D surface captured in a 2-D image). A few random spatter stains were visible in the upper left and lower right corners of the image.
Z8HTME-5605	Complex bloodstain pattern consisting of two types of bloodstains. Stain 1 is a transfer stain with pattern characteristics consistent with the tread of a shoe or similar object. Stain 2 is a drip trail with some altered stains consisting of their edge characteristics and the central area having been partially removed with a wipe event.
Z9J4M9-5605	A linear pattern of multiple bloodstains was observed extending from the lower right corner of the image to the upper left corner of the image. This linear pattern of multiple bloodstains displays features suggestive of both a cast-off pattern and a drip trail. A wipe pattern displaying perimeter stains was observed on the center stains of the linear pattern of multiple bloodstains. A transfer stain was observed at the mid-right edge of the image.

TABLE 3: Recognition and Description
Item 5, continued

WebCode-Test	Detailed Pattern Description
Z9MLQY-5605	There is a cast-off pattern diagonally across the target (between upper left and lower right). In the middle of the cast-off pattern are perimeter stains with wipe. There is a transfer stain (with apparent repetitive linear pattern) on the right side of the target.
ZARA44-5601	There is a cast-off pattern diagonally across the target from the top left corner to the bottom right corner. There is a wipe in the center of the target through the cast-off leaving altered stains with perimeter staining. There is a transfer stain in the center right of the target.
ZBNRZD-5605	Circular to elliptical shaped stains measuring less than 1 mm to 5 mm in size with a linear distribution extending between the top left and bottom right of the target. The stains have smooth margins and are classified as a cast-off pattern. Within this linear distribution are stains that have circular perimeter stains measuring less than 1 mm to 5 mm in size. Stains are altered with some feathering. This would be classified as a wipe. The right side of the pattern has a circular shaped bloodstain measuring 72mm by 64mm with a varying concentration through the stain with a linear pattern throughout. This would be classified as a transfer stain.
ZGGRKZ-5605	Multiple spatter stains spanned the upper left corner to the lower right corner of the tile in a linear distribution. The width of the overall pattern is compact, and the shape of the individual spatter stains is primarily circular across the pattern. Several of the circular stains at the center section of the pattern are altered, with wipe characteristics present including perimeter staining and the stain color is not consistent throughout each of these altered stains; movement downward towards the bottom of the image and feathering is observed with these stains. The feathering on the lowermost of these altered stains stops abruptly. A transfer stain is observed at the center right of the tile. This stain exhibits a repeating linear pattern, and the stain volume/density is higher towards the top of the stain (towards the top of the tile). There appear to be voids within the pattern.
ZKTJQT-5605	Upper right corner appears to contain a transfer stain. A drip trail is present diagonally from right to left and down to up. A wipe is present through at least (6) drip stains. Small spatter stains present on bottom right are between transfer and drip trail, which could possibly be satellite stains.
ZLCEHU-5601	Two different bloodstain patterns were observed on the target. The first consisted of a series of small elliptical stains arranged in a linear formation extending from the lower right corner of the target to the upper left corner. These stains are characteristic of a cast-off pattern. The changing shape of these stains indicated the direction of the swing producing them was in an upward and left direction in relation to the target (ie from the lower right corner to the upper left corner). Six of the cast-off stains in the centre of the pattern had been altered with a wiping action in a downward direction (in relation to the target) before they had completely dried, resulting in streaks of blood extending downward from the original stains. The second bloodstain pattern was an area of transfer bloodstaining, positioned to the right of the cast-off pattern, and consisting of a series of parallel lines and geometric shapes. The overall shape and pattern of the stain has the appearance of the heel of a shoe.

Additional Comments

TABLE 4

WebCode-Test	Additional Comments
3DLUZY-5605	Section 1 width and length measurements are not in millimeters. They were calculated utilizing PowerPoint and the numbers are a ratio and not actual measurements.
3QNKGW-5605	PowerPoint was used for Section I [Table 1: Angle of Impact Determination] measurements for angle of impact. These measurements are in inches rather than mm.
3ZFUBZ-5601	The angle of impact determination was not completed, as our laboratory does not provide this service.
47KV9A-5601	Angle of Impact Determination was not completed, as our laboratory does not provide this service.
6RX89A-5605	Items 3, 4 and 5 did not appear to be the entire pattern within the image given, this may lead to an inaccurate interpretation and opinion for these items.
6ZWPVY-5605	Measurements for item 1 Angle of Impact Determination was carried out using Excel. Measurements (width and length) are in centimetres using the Format Shape function.
7WPW9E-5601	Results for Item 1 were not entered because the laboratory does not have a procedure to determine the angle of impact of a bloodstain.
89YLR2-5601	Once again CTS has failed to provide sufficient images of the entirety of the bloodstain pattern(s), access to the digital image files as well as sufficient context for this portion of the exam. The lack of this information not only substantially impacts examiner ability to accurately and comprehensively assess the pattern(s) it also introduces significant potential for error in the final data. Especially considering test results and data from CTS is being further used in research to evaluate the accuracy of and in some instances repudiate this discipline, CTS truly does the bloodstain pattern analysis practitioner community a grave disservice by its continued dereliction in providing sufficient imagery and contextual information representative of actual casework data. As this has been a documented issue with this test for over 10 years, one can only speculate at the motivations of CTS's willful imperviousness to improvement.
ABD4ZW-5605	The photo was of poor quality and certain details were blurry when zooming into the photo electronically.
BJMPNQ-5601	The angle of impact was not performed as the laboratory manual does not include a procedure for determining angle of impact. The angle of impact is not performed during bloodstain pattern analysis in the laboratory.
CK7T83-5605	Due to the lack of context for Item 4 a projected pattern or drip trail are also possible.
CL7D9P-5605	Section 1 width and length measurements are not in millimeters. They were calculated utilizing PowerPoint and the numbers are a ratio and not actual measurements.
CMFDDW-5601	Angle of Impact Determination was not completed, as our laboratory does not provide this service.
CRAA23-5601	Angle of impact determinations (Item 1) were not completed as my laboratory does not provide this service.
DUJLGH-5605	Did not complete section one.
E4KGWT-5601	it would appear that the cast-off pattern was not present in its entirety. The top and bottom of the pattern were not present in the photo. So I would have to say that it is "Most likely" cast-off, due to lack of the pattern being present in its entirety.
F4F7UV-5605	In ITEM 3, an impact pattern produced by an object that has hit an amount of liquid blood that previously existed in the target is observed. After impact, the object is removed, leaving a void pattern

TABLE 4

WebCode-Test	Additional Comments
	in the center of the pattern, coinciding with the contact area of the object against the target. In ITEM 4, there are several stains corresponding to drops produced by the dripping of an object impregnated with blood that is in motion, forming a drip trail pattern as a whole.
F737QP-5601	The angle of impact determination section was not completed, as our laboratory does not provide this service.
FQ3FKR-5605	The transfer stain exhibits some patterning within, possibly from the tread of a shoe or another article with a regular pattern. Please note - with respect to Section I - [Table 1: Angle of Impact Determination] - the calculation of such angles is not a procedure currently undertaken at this laboratory
FTBJGN-5605	Item 3: Smaller stains that converge to a larger stain with a transfer stain at the convergence were observed, indicating that the bloodstain pattern was likely an impact pattern. Item 4: Elliptical stains with linear distribution, which appeared to have some progressive change in shape, were observed. While the pattern appeared to be more likely a cast-off pattern, the possibility that this group of stains being a projected pattern could not be ruled out based solely on this image, without further information.
FVYGRV-5605	Image 4 consideration to Drip trail, but no option in the check boxes
GCKT2L-5601	Angle of Impact Determination was not completed, as our laboratory does not provide this service.
KG7WCM-5605	For Item 1: [Table 1: Angle of Impact Determination]: PowerPoint was used to discern stain sizes. Therefore, the measurements documented for the length and width of each stain are not in mm and were used solely as a ratio to calculate the angle.
KPUDKJ-5605	This test should be more extensive to be considered a proper assessment of BPA skills.
KVMRRJ-5605	Width and Length are not indicated because the given template 23_5605_BPA TIF showed too small spots to measure them exactly. We therefore zoomed the spots out to determine the angle of impact. We propose to prepare in future pictures with the natural size of the blood spots.
LD4DTL-5605	Item 3 The pattern under consideration has been eventually described as an IMPACT pattern that could have been created as a result of an object striking liquid blood on a hard, horizontal surface. This conclusion is drawn based on the altered section of the bloodstain pattern (in its lower part), which could have been subjected to additional force creating elongated narrow spines. However, this conclusion is not unequivocal and in – forensic practice - such a categorical interpretation, which is required within the scope of this test, would not be presented. The presented pattern could also arise as a result of a larger volume of blood falling onto a hard surface, and thus be classified as a splash pattern, which was subsequently (partially) wiped away while still being in a liquid state. Another possible mechanism - apart from the splash - could be blood projection, for example, as a result of blood being forced by airflow out of the mouth (the expiration pattern). Such a hypothesis could be supported by the presence of numerous air bubbles within the blood pattern. Nevertheless, it is known that these air bubbles are not specific to an expiration pattern; therefore, it would be necessary to verify this hypothesis based on medical reports of individuals involved in the incident (e.g., the presence of blood in the mouth).
LGGXXL-5605	Item 1 [Table 1: Angle of Impact Determination]: widths and lengths entered are from the sizes (in inches) of PowerPoint ellipses created and not the actual measurements of the stains in mm.
LQMVNB-5605	The scale included in pattern one is inadequate for determining an angle of impact. The scale should be more precise to accommodate the measurements needed for this calculation.
MYVBPX-5605	The "scenarios" provided with patterns 2-4 are of no value. They may create a bias when identifying the "best" pattern type. In addition, the lack of additional information which is frequently used during the pattern interpretation process such as injuries and injury locations allow for multiple possible

TABLE 4

WebCode-Test	Additional Comments
	pattern type identifications. Item 3 exhibits characteristics that can be associated with impact patterns, splash patterns, and projected patterns. All 3 of which may be influenced by wound severity, wound location, internal injuries (circulatory system breach), and what appears to be an alteration of the pattern in it's center. The scene and description(s) for Test 23-5605: Bloodstain Pattern Analysis say that all patterns have been provided in their entirety. Does that apply to Item 4? Item 4 exhibits characteristics that can be associated with a cast-off pattern or drip trail. However, drip trail is not one of the options provide on the answer key. Leaving the test taker a default selection of cast-off pattern.
Q29V29-5605	NOTE - widths and lengths for item 1 [Table 1: Angle of Impact Determination] were made through measurement in PowerPoint (all measurements in cm/mm) and were performed on zoomed views of the stains and may not reflect the original physical stain sizes.
QLHNCN-5601	Angle of impact determination was not completed as our laboratory does not provide this service.
RN3UAP-5601	Angle of Impact Determination was not completed, as our laboratory does not provide this service.
RVJN88-5605	The diameters of individual stains within the linear distribution of spatter stains appear too small for a trail of drip stains arising from an elevated blood source. However, if the source of liquid blood was relatively close to the target surface, smaller drip stains may result. Although the transfer stain could be a partial shoe tread pattern, there may be alternative explanations for this pattern.
T3GHWT-5601	I struggled with Item 4 because the stain was on the floor, a horizontal surface and could have been a drip trail with movement but that was not one of the options. The stains are elliptical, and a few had very small tails, so I chose impact pattern. I would have liked more contextual info before coming to a conclusion. I have seen this type of pattern on prior tests and I think they should not be used because they could be more than one type of stain, and I was forced to pick only one right answer. I feel similarly about cast off stains in testing scenarios. If you are looking at the pattern on a piece of paper and not standing in the room where the bloodshed event occurred, it is difficult to determine between cast off and impact spatter. All Cast off is an impact pattern but not all impact pattern is cast off. If that makes sense. Thanks for your time.
TJNUA4-5601	Item 2 - transfer stain – bloodied right hand coming into contact with a white surface. No movement through the stain. Item 3 – impact pattern – appears to have been a bloodstain (possible pool) on the surface which has been impacted by an object causing the blood to disperse out in spines across the surface. A splash pattern with an item in the middle which has been removed was also considered when viewing the photograph. However, there appears to be more spines than satellite spatter on the surface which is more consistent with impact rather than splash. It also has a high number of long spines which is more consistent with impact rather than splash. Item 4 – cast off - small oval shaped bloodstains with directionality to the bottom of photograph. Oval shaped stains distributed in a linear pattern. Considered drip trail, however would need to see a larger photograph and have some more context from scene. More consistent with cast off due to the size, shape and distribution of the bloodstains. There is also smaller spatter stains around the main linear distribution of elongated stains which is consistent with cast off rather than drip trail.
TVXEPQ-5605	Our crime lab does not calculate angle of impact so Section I was not completed.
VXUNR4-5605	Measurements under item 1 [Table 1: Angle of Impact Determination] are not in metric, but in imperial due to using a software program to do the measuring of the stains. The unit of measurements cancel out using the equation for calculating the angle of impact, therefore it is not necessary.
X2J6U8-5605	Section I [Table 1: Angle of Impact Determination] measurements taken using computer software, so they are not in millimeters.
Y6XJYM-5605	1. Despite being given the complete image, I feel that the patterns are still not complete. For Item 5 specifically one of the stains is cut off at the top of the image. Even if this is the complete piece of

TABLE 4

WebCode- Test	Additional Comments
YADYNE- 5605	vinyl tile used for the test, the pattern seems to continue off of the tile. This is still a partial pattern out of context. Bloodstain patterns are interpreted as part of a larger scene, and trying to interpret partial patterns out of context is difficult. It is also not something I would typically do in casework.
YBUKKF- 5601	On the non-aabsorbent surface, blood stains were applied, the characteristics of which consist of: drips, wipes and acontact trace (layered) The traces of blood, which were formed as a result of the free detachment of blood drops from the source of bleeding, were smeared after some time. This operation consists in the contact of one surface uncontaminated with blood with the place of occurrence of single dripe of blood, as aresult of which six blood stains are removed. The contact trace, layered is probably a traseological trace and may indicate the back part of the sole of the shoe heel.
Z86Q37- 5601	The angle of impact determination section was not completed, as our laboratory does not provide this service.
Z86Q37- 5601	CTS continues to show one scale image that in only one piece of a larger pattern/scene. The linear distribution of circular to semicircular bloodstains is most likely part of a larger cast-off pattern that began and ended in areas outside of the piece of floor tile depicted in the one scale image provided. A mid-range view of the area surrounding the tile along with the scaled image would assist in proper pattern recognition and description. I've commented on this same issue several times as have many others, yet CTS continues to ignore the requests for proper documentation to make an informed and correct conclusion. A 9-inch by 11.5-inch image is not sufficient if you have patterns that extend beyond that space.
ZARA44- 5601	Angle of Impact Determination was not completed, as our laboratory does not provide this service.

**-End of Report-
(Appendix may follow)**

Test No. 23-5601: Bloodstain Pattern Analysis

DATA MUST BE SUBMITTED BY **Aug. 21, 2023, 11:59 p.m. EDT** TO BE INCLUDED IN THE REPORT

Participant Code: U1234F

WebCode: 7K96LP

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.

This test is divided into two sections: Angle of Impact Determination and Pattern Description.

Patterns provided in the Pattern Description section of the test include a simulated scenario for each item.

Pattern images have been provided in their entirety, expanded views are not available.

Items Submitted (Sample Pack BSP - Photographs):

Item 1: Angle of Impact Determination (Stains A through E)

Items 2-4: Pattern Description: Part 1

Item 5: Pattern Description: Part 2

Appendix: Suggested Terminology Glossary

Section I: ANGLE OF IMPACT DETERMINATION

Examine bloodstains A-E and report the length and width of each stain along with the calculated angle of impact. For all stains the blood was dropped from a pipette onto white posterboard targets at predetermined angles from the vertical.

Please report a single value for each measurement/calculation, not a range of values.

Report your measurements in accordance with your laboratory's requirement for significant figures. Please note that answers will be rounded to two decimal places in the Summary Report.

<u>Stain</u>	<u>Width (mm)</u>	<u>Length (mm)</u>	<u>Angle of Impact (degrees)</u>
A	<input type="text"/>	<input type="text"/>	<input type="text"/>
B	<input type="text"/>	<input type="text"/>	<input type="text"/>
C	<input type="text"/>	<input type="text"/>	<input type="text"/>
D	<input type="text"/>	<input type="text"/>	<input type="text"/>
E	<input type="text"/>	<input type="text"/>	<input type="text"/>

PATTERN DESCRIPTION, PART 1

NOTE: The Pattern Description section is divided into two parts. Please read the instructions carefully prior to filling out the data sheet.

Single Pattern Recognition: For each of the following patterns, indicate the single pattern type that best describes the image. Although you may use different terminology in your casework, in order to standardize responses for this exercise, please make your selection using the terminology provided.

Item 2: Target was a white posterboard in the vertical plane. Pattern was found on the wall of a stabbing victim's residence.

- | | | |
|--|---|--------------------------------------|
| <input type="radio"/> Cast-off Pattern | <input type="radio"/> Forward Spatter Pattern | <input type="radio"/> Splash Pattern |
| <input type="radio"/> Cessation Pattern | <input type="radio"/> Impact Pattern | <input type="radio"/> Swipe |
| <input type="radio"/> Drip Pattern | <input type="radio"/> Projected Pattern | <input type="radio"/> Transfer Stain |
| <input type="radio"/> Drip Stain | <input type="radio"/> Saturation Stain | <input type="radio"/> Wipe |
| <input type="radio"/> Expiration Pattern | | |

Item 3: Target was a textured vinyl tile in the horizontal plane. Pattern was found in a bar where a physical fight broke out between two individuals where one individual was stabbed with a broken bottle.

- | | | |
|--|---|--------------------------------------|
| <input type="radio"/> Cast-off Pattern | <input type="radio"/> Forward Spatter Pattern | <input type="radio"/> Splash Pattern |
| <input type="radio"/> Cessation Pattern | <input type="radio"/> Impact Pattern | <input type="radio"/> Swipe |
| <input type="radio"/> Drip Pattern | <input type="radio"/> Projected Pattern | <input type="radio"/> Transfer Stain |
| <input type="radio"/> Drip Stain | <input type="radio"/> Saturation Stain | <input type="radio"/> Wipe |
| <input type="radio"/> Expiration Pattern | | |

Item 4: Target was a textured vinyl tile in the horizontal plane. Pattern was found on the kitchen floor of a home where a bloodletting event is suspected to have previously occurred.

- | | | |
|--|---|--------------------------------------|
| <input type="radio"/> Cast-off Pattern | <input type="radio"/> Forward Spatter Pattern | <input type="radio"/> Splash Pattern |
| <input type="radio"/> Cessation Pattern | <input type="radio"/> Impact Pattern | <input type="radio"/> Swipe |
| <input type="radio"/> Drip Pattern | <input type="radio"/> Projected Pattern | <input type="radio"/> Transfer Stain |
| <input type="radio"/> Drip Stain | <input type="radio"/> Saturation Stain | <input type="radio"/> Wipe |
| <input type="radio"/> Expiration Pattern | | |

Section II: PATTERN DESCRIPTION cont.

Part 2 - Recognition and Description : For the following pattern, please write a brief description using the Suggested Terminology Glossary provided in the Appendix. Although you may use different terminology in your casework, in order to standardize responses for this exercise, please write your description using the suggested terminology.

Note: This part of the test is not a reconstruction of a scenario, but simply a test of pattern recognition and description.

Please note: Any additional formatting applied in the free form spaces 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.

Item 5: Target was a textured vinyl tile in the horizontal plane. Pattern was found in a room containing a deceased victim with multiple stab wounds.

Additional Comments

Appendix: Suggested Terminology Glossary***Accompanying Drop**

A small blood drop produced as a by-product of drop formation.

Altered Stain

A bloodstain with characteristics that indicate a physical change has occurred.

Angle of Impact

The angle (alpha), relative to the plane of a target, at which a blood drop strikes the target.

Area of Convergence

The space in two dimensions to which the directionalities of spatter stains can be retraced to determine the location of the spatter producing event.

Area of Origin

The space in three dimensions to which the trajectories of spatter can be utilized to determine the location of the spatter producing event.

Backspatter Pattern

A bloodstain pattern resulting from blood drops which can be produced when a projectile creates an entrance wound.

Blood Clot

A gelatinous mass formed by a complex mechanism involving red blood cells, fibrinogen, platelets, and other clotting factors.

Bloodstain

A deposit of blood on a surface.

Bloodstain Pattern

A grouping or distribution of bloodstains that indicates through regular or repetitive form, order, or arrangement the manner in which the pattern was deposited.

Bubble Ring

An outline within a bloodstain resulting from air in the blood.

Cast-off Pattern

A bloodstain pattern resulting from blood drops released from an object due to its motion.

Cessation Pattern

A bloodstain pattern resulting from blood drops released from an object due to its abrupt deceleration.

Directional Angle

The angle (gamma) between the long axis of a spatter stain and a defined reference line on the target.

Directionality

The characteristic of a bloodstain that indicates the direction blood was moving at the time of deposition.

Drip Pattern

A bloodstain pattern resulting from a liquid that dripped into another liquid, at least one of which was blood.

Drip Stain

A bloodstain resulting from a falling drop that formed due to gravity.

Drip Trail

A bloodstain pattern resulting from the movement of a source of drip stains between two points.

Edge Characteristic

A physical feature of the periphery of a bloodstain.

Expiration Pattern

A bloodstain pattern resulting from blood forced by airflow out of the nose, mouth, or a wound.

Flow

A bloodstain resulting from the movement of a volume of blood on a surface due to gravity or movement of the target

Forward Spatter Pattern

A bloodstain pattern resulting from blood drops which can be produced when a projectile creates an exit wound.

Impact Pattern

A bloodstain pattern resulting from an object striking liquid blood.

Insect Stain

A bloodstain resulting from insect activity.

Parent Stain

A bloodstain from which a satellite stain(s) originated.

Perimeter Stain

An altered stain consisting of its edge characteristics, the central area having been partially or entirely removed.

Pool

A bloodstain resulting from an accumulation of liquid blood on a surface.

Projected Pattern

A bloodstain pattern resulting from the ejection of blood under hydraulic pressure, typically from a breach in the circulatory system.

Satellite Stain

A smaller bloodstain that originated during the formation of the parent stain as a result of blood impacting a surface.

Saturation Stain

A bloodstain resulting from the accumulation of liquid blood in an absorbent material.

Serum Stain

The stain resulting from the liquid portion of blood (serum) that separates during coagulation.

Spatter Stain

A bloodstain resulting from an airborne blood drop created when external force is applied to liquid blood.

Splash Pattern

A bloodstain pattern created from a large volume of liquid blood falling onto a surface.

Swipe

A bloodstain resulting from the transfer of blood from a blood-bearing surface onto another surface, with characteristics that indicate relative motion between the two surfaces.

Target

A surface onto which blood has been deposited.

Transfer Stain

A bloodstain resulting from contact between a blood-bearing surface and another surface.

Void

An absence of blood in an otherwise continuous bloodstain or bloodstain pattern.

Wipe

An altered stain resulting from an object moving through a preexisting wet bloodstain.

* As established by the AAFS Standards Board (ASB) - 2017

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)