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Bloodstain Pattern Analysis Test No. 24-5601/5 Summary Report

Each sample set consisted of digitally produced photographs (24-5601) or directly downloadable digital images (24-5605) of bloodstains for Angle of Impact Determination and Pattern Description. Data were returned from 181 participants: 52 for 24-5601 and 129 for 24-5605 and are compiled into the following tables:

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Appendix: Data Sheet & Glossary

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 images for the purposes of angle of impact determination, and pattern recognition/ description provided in photographic (5601) or digital download (5605) form. Participants were asked 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 PREPARATION: Images were assembled onto test templates prior to physical printing.

VERIFICATION: Predistribution results were consistent with each other and the manufacturer's preparation information.

SAMPLE SET ASSEMBLY: Once verification was complete and sample preparation was done, each photo set was packaged and sealed. Digitally downloadable material was zipped and uploaded to the CTS Portal.

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-one inches above the impact surface. White poster board targets were placed on an inclined plane at the following predetermined angles from the vertical:

Stain	Preparation Angle
А	18°
В	25°
С	12°
D	40°
E	27°

Please note: Preparation Angle is the value used for the test preparation phase and may not necessarily represent the final angle of the drops. For performance evaluation purposes, it is advised to use the Grand Mean values within the summary statistics section presented at the end of each stain's set of results.

Manufacturer's Information, continued

PATTERN DESCRIPTION

- Item 2: A mixture of saliva and blood was combined in a weigh boat and held ~ 12 inches away from a vertical target. A compressed air can with an extension tube attached was sprayed across the surface of the mixture in the direction of the target.
- Item 3: The palmer side of a bare hand's fingers were placed in a weigh boat filled with blood. Once dipped, the hand was slightly shaken to release any excess blood, then placed on a vertical target with fingers close together. While still wet, the hand was dragged down and to the right across the target and then removed.
- Item 4: Blood was released from an electronic pipette angled slightly upward at the side of a vertical target. As the blood was being released from the pipette, the pipette was quickly moved in a slightly upward direction across the surface. The blood pattern was then left to drip down the target.
- Item 5: A knife was fully immersed in a beaker of blood. Then, the knife was held at a distance above the horizontal target and slowly moved horizontally over the surface. The knife stopped moving and was held above the target for a few seconds. The knife was then lowered closer to the target and dropped from a few inches above the target near the previously created stain. After a couple seconds, the knife was carefully removed from the target.

Introduction

This test was designed to allow participants to assess their proficiency in the 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. Refer to the Manufacturer's Information for detailed explanations of how the angles and patterns were created.

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). Participants were asked to report the Length, Width, and Angle of the stain. CTS produced an additional value, the Calculated Angle of Impact (CalcAng), which was calculated using the width and length values provided. 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 resulting in an angle value within the ±3 STD range. A total of 20 participants were excluded from the statistics calculated for the reported angle. Of those, 19 were also excluded from the calculated angle statistics, along with one additional participant that was also being excluded from these statistics but not excluded from the reported angle statistics. The Grand Mean and Standard Deviation are shown below, based on each Calculated Angle.

		Calcula	ted Angle
Stain	Preparation Angle	Grand Mean	Standard Deviation
А	18°	19.05°	1.52
В	25°	26.73°	2.25
С	12°	12.53°	0.83
D	40°	37.53°	1.91
E	27°	24.15°	1.32

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.

In Table 2, part one, Item 2, 99.4% of participants reported "Expiration Pattern." For Item 3, 98.9% of participants reported "Swipe." For Item 4, 93.9% of participants reported "Projected Pattern."

In Table 3, part two, Item 5, the majority of participants reported the following distinct pattern types: 1) Transfer Stain, 2) Drip Trail, 3) Drip Pattern and 4) Drip 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: $\sin \theta = \text{width/length}$, 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 - Preparation Angle: 18°

WebCode-	Width			Length				Angle		
Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	CalcAng
2CGXY3- 5605	1.50	-0.18	-1.42	5.00	-0.21	-0.69	17.46	-1.53	-1.00	17.46
3BYBZK- 5605	3.00	1.32	10.29 <mark>X</mark>	9.00	3.79	12.18 <mark>X</mark>	19.50	0.51	0.33	19.47
3FAHBA- 5605	1.70	0.02	0.14	5.40	0.19	0.60	18.00	-0.99	-0.65	18.35
3N3QVZ- 5605	1.58	-0.10	-0.79	5.03	-0.18	-0.59	18.30	-0.69	-0.45	18.31
3UUXEA- 5601	1.70	0.02	0.14	5.00	-0.21	-0.69	19.90	0.91	0.59	19.88
3VK3ZG- 5605	1.70	0.02	0.14	5.40	0.19	0.60	18.37	-0.62	-0.41	18.35
3XUAAA- 5601	1.70	0.02	0.14	5.20	-0.01	-0.05	19.08	0.09	0.06	19.08
3Y7LE7- 5605	1.75	0.07	0.53	5.50	0.29	0.92	18.55	-0.44	-0.29	18.55
4KH4VZ- 5605	1.80	0.12	0.92	4.90	-0.31	-1.01	21.60	2.61	1.70	21.55
4X83L3- 5605	1.60	-0.08	-0.64	5.40	0.19	0.60	17.00	-1.99	-1.30	17.24
4ZFBT3- 5601	1.60	-0.08	-0.64	5.20	-0.01	-0.05	17.90	-1.09	-0.71	17.92
62NPZ9- 5605	1.80	0.12	0.92	5.00	-0.21	-0.69	21.00	2.01	1.31	21.10
66PW8E- 5605	1.70	0.02	0.14	5.50	0.29	0.92	18.00	-0.99	-0.65	18.00
6L9M7D- 5605	2.00	0.32	2.49	5.00	-0.21	-0.69	23.58	4.59	2.98	23.58
6VVMR3- 5605	1.60	-0.08	-0.64	5.00	-0.21	-0.69	19.00	0.01	0.00	18.66
6YZC4X- 5605	1.90	0.22	1.71	5.00	-0.21	-0.69	22.33	3.34	2.17	22.33
7GTEHE- 5605	1.50	-0.18	-1.42	7.00	1.79	5.75 X	12.00	-6.99	-4.55 <mark>X</mark>	12.37 X
7HATV3- 5605	1.90	0.22	1.71	5.50	0.29	0.92	20.00	1.01	0.66	20.21
7L8CQ2- 5605	1.50	-0.18	-1.42	4.50	-0.71	-2.30	19.00	0.01	0.00	19.47
87BEBW- 5605	1.50	-0.18	-1.42	5.00	-0.21	-0.69	17.45	-1.54	-1.00	17.46
88MWKF- 5605	1.56	-0.12	-0.95	5.97	0.76	2.43	15.00	-3.99	-2.60	15.15

 TABLE 1

 Stain A - Preparation Angle: 18°, continued

WohCodo	Width			Length				Angle		
Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	CalcAng
89V96B- 5605	1.69	0.01	0.07	5.20	-0.01	-0.05	19.00	0.01	0.00	18.97
8BNXMY- 5605	1.50	-0.18	-1.42	4.40	-0.81	-2.62	20.00	1.01	0.66	19.93
8EY9D8- 5605	1.50	-0.18	-1.42	4.30	-0.91	-2.94	20.40	1.41	0.92	20.42
8HNCFZ- 5601	1.80	0.12	0.92	5.00	-0.21	-0.69	21.00	2.01	1.31	21.10
8JFG28- 5605	1.70	0.02	0.14	9.75	4.54	14.60 <mark>X</mark>	10.04	-8.95	-5.83 <mark>X</mark>	10.04 X
8QFY6B- 5605	1.70	0.02	0.14	5.20	-0.01	-0.05	19.60	0.61	0.39	19.08
8RN6E6- 5601	1.70	0.02	0.14	5.30	0.09	0.28	18.70	-0.29	-0.19	18.71
93QQAV- 5605	1.60	-0.08	-0.64	5.10	-0.11	-0.37	18.00	-0.99	-0.65	18.28
96QZD7- 5605	1.70	0.02	0.14	5.40	0.19	0.60	19.00	0.01	0.00	18.35
9CCRP7- 5605	1.70	0.02	0.14	5.30	0.09	0.28	18.90	-0.09	-0.06	18.71
9JBH9V- 5601	1.70	0.02	0.14	5.50	0.29	0.92	18.00	-0.99	-0.65	18.00
9T2VC2- 5605	1.70	0.02	0.14	5.27	0.06	0.18	18.78	-0.21	-0.14	18.82
AAL88U- 5601	1.58	-0.10	-0.79	5.02	-0.19	-0.62	18.35	-0.64	-0.42	18.35
ADJMN3- 5605	1.60	-0.08	-0.64	5.20	-0.01	-0.05	18.00	-0.99	-0.65	17.92
AHA4Y8- 5605	1.70	0.02	0.14	5.40	0.19	0.60	18.30	-0.69	-0.45	18.35
AMPCM8- 5605	1.70	0.02	0.14	5.10	-0.11	-0.37	19.00	0.01	0.00	19.47
AXAJLW- 5605	2.86	1.18	9.20 X	0.91	-4.30	-13.85 <mark>X</mark>	18.60	-0.39	-0.26	
BGGA97- 5605	1.70	0.02	0.14	5.80	0.59	1.89	17.00	-1.99	-1.30	17.04
BPQZC9- 5605	1.53	-0.15	-1.18	4.19	-1.02	-3.30 <mark>X</mark>	21.42	2.43	1.58	21.42
BUKUAA- 5605	1.70	0.02	0.14	5.20	-0.01	-0.05	19.00	0.01	0.00	19.08
BV2PC6- 5605	1.74	0.06	0.46	5.00	-0.21	-0.69	20.50	1.51	0.98	20.37

 TABLE 1

 Stain A - Preparation Angle: 18°, continued

WebCode-	Width				Length			Angle		
Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	CalcAng
C7WKPQ- 5605	1.73	0.05	0.38	5.51	0.30	0.95	18.29	-0.70	-0.46	18.30
CE9HMV- 5605	1.50	-0.18	-1.42	5.00	-0.21	-0.69	17.50	-1.49	-0.97	17.46
CJKJFT- 5605	1.80	0.12	0.92	5.40	0.19	0.60	19.50	0.51	0.33	19.47
CLKTEM- 5605	1.70	0.02	0.14	5.35	0.14	0.44	18.50	-0.49	-0.32	18.53
CNY3XA- 5605	1.60	-0.08	-0.64	5.20	-0.01	-0.05	17.90	-1.09	-0.71	17.92
CW6ZFW- 5605	1.70	0.02	0.14	5.40	0.19	0.60	18.00	-0.99	-0.65	18.35
D2FC2R- 5605	1.66	-0.02	-0.17	5.26	0.05	0.15	18.00	-0.99	-0.65	18.40
DCEBGP- 5605	1.69	0.01	0.07	5.22	0.01	0.02	18.90	-0.09	-0.06	18.89
DGRUY7- 5605	1.70	0.02	0.14	5.29	0.08	0.24	19.00	0.01	0.00	18.75
DWLH4P- 5605	1.75	0.07	0.53	5.50	0.29	0.92	18.60	-0.39	-0.26	18.55
DXXDCN- 5605	2.09	0.41	3.19 X	6.12	0.91	2.92	20.00	1.01	0.66	19.97
EE3ZGV- 5601	1.78	0.10	0.77	5.16	-0.05	-0.17	20.18	1.19	0.77	20.18
EEXMTZ- 5605	5.30	3.62	28.25 <mark>X</mark>	1.80	-3.41	-10.99 X	19.30	0.31	0.20	
EG47N2- 5605	2.12	0.44	3.42 X	4.81	-0.40	-1.30	26.15	7.16	4.66 X	26.15 X
EGPJHT- 5605	1.50	-0.18	-1.42	5.00	-0.21	-0.69	17.46	-1.53	-1.00	17.46
EHK4G2- 5605	1.65	-0.03	-0.25	5.40	0.19	0.60	17.80	-1.19	-0.78	17.79
ENMBQM- 5605	0.72	-0.96	-7.51 X	2.21	-3.00	-9.67 X	19.00	0.01	0.00	19.01
ETH6NN- 5605	1.73	0.05	0.38	5.28	0.07	0.21	19.10	0.11	0.07	19.13
EXTB4V- 5605	1.70	0.02	0.14	5.30	0.09	0.28	19.00	0.01	0.00	18.71
FED23U- 5601	1.85	0.17	1.32	5.63	0.42	1.34	19.00	0.01	0.00	19.18
FJBMQQ- 5605	1.70	0.02	0.14	5.20	-0.01	-0.05	19.00	0.01	0.00	19.08

 TABLE 1

 Stain A - Preparation Angle: 18°, continued

WebCode	Width				Length			Angle		
Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	CalcAng
FMBWR8- 5605	1.80	0.12	0.92	5.20	-0.01	-0.05	20.25	1.26	0.82	20.25
FU9PZ2- 5601	1.60	-0.08	-0.64	5.00	-0.21	-0.69	18.70	-0.29	-0.19	18.66
FWCLDN- 5605	1.70	0.02	0.14	4.90	-0.31	-1.01	20.30	1.31	0.85	20.30
FZX32P- 5605	1.70	0.02	0.14	4.96	-0.25	-0.82	20.30	1.31	0.85	20.04
G9MCNP- 5605	1.60	-0.08	-0.64	5.00	-0.21	-0.69	18.60	-0.39	-0.26	18.66
G9P2ZM- 5601	1.75	0.07	0.53	4.75	-0.46	-1.49	22.00	3.01	1.96	21.62
GDZV78- 5605	2.00	0.32	2.49	5.00	-0.21	-0.69	23.50	4.51	2.93	23.58
GLREEY- 5605	1.80	0.12	0.92	5.80	0.59	1.89	18.00	-0.99	-0.65	18.08
HLN8MQ- 5605							18.30	-0.69	-0.45	
HQJYVM- 5605	0.80	-0.88	-6.88 X	2.52	-2.69	-8.67 <mark>X</mark>	18.50	-0.49	-0.32	18.51
HW7PD4- 5605	1.60	-0.08	-0.64	5.00	-0.21	-0.69	18.70	-0.29	-0.19	18.66
J6YGX3- 5605	1.70	0.02	0.14	5.30	0.09	0.28	18.70	-0.29	-0.19	18.71
J7QFC2- 5605	1.70	0.02	0.14	5.40	0.19	0.60	18.30	-0.69	-0.45	18.35
JJUZHJ- 5605	17.00	15.32	119.6 <mark>X</mark>	56.00	50.79	163.4 <mark>X</mark>	18.00	-0.99	-0.65	17.67
JMNHER- 5605	1.40	-0.28	-2.20	4.00	-1.21	-3.91 <mark>X</mark>	20.00	1.01	0.66	20.49
JQZGDY- 5605	1.70	0.02	0.14	5.10	-0.11	-0.37	19.30	0.31	0.20	19.47
JR8QFJ- 5605	1.50	-0.18	-1.42	4.70	-0.51	-1.65	18.60	-0.39	-0.26	18.61
K2UA2G- 5605	1.80	0.12	0.92	5.50	0.29	0.92	19.00	0.01	0.00	19.10
K7QWWP- 5601	1.72	0.04	0.30	5.41	0.20	0.63	18.54	-0.45	-0.29	18.54
KEJ9XZ- 5601	1.80	0.12	0.92	4.60	-0.61	-1.98	23.00	4.01	2.61	23.04
KJAJ3G- 5605	42.00	40.32	314.8 <mark>X</mark>	125.10	119.89	385.8 <mark>X</mark>	19.60	0.61	0.39	19.62

TABLE 1Stain A - Preparation Angle: 18°, continued

WebCode-	Width				Length				Angle		
Test	mm	Diff	CPV	mm	Diff	CPV	De	g.	Diff	CPV	CalcAng
KT2X7M- 5601	1.70	0.02	0.14	4.90	-0.31	-1.01	20.	30	1.31	0.85	20.30
KZLYGL- 5605	1.30	-0.38	-2.98	4.00	-1.21	-3.91 <mark>X</mark>	19.	00	0.01	0.00	18.97
L3KW3X- 5605	1.50	-0.18	-1.42	4.69	-0.52	-1.69	18.	65	-0.34	-0.22	18.65
L4EG3P- 5601	1.55	-0.13	-1.03	5.54	0.33	1.05	16.	00	-2.99	-1.95	16.25
L4WQRJ- 5605	1.70	0.02	0.14	5.30	0.09	0.28	18.	70	-0.29	-0.19	18.71
L8Z6QX- 5601	1.80	0.12	0.92	5.80	0.59	1.89	18.	00	-0.99	-0.65	18.08
LA7PFH- 5601	1.80	0.12	0.92	6.40	1.19	3.82 <mark>X</mark>	16.	00	-2.99	-1.95	16.33
LF6C7X- 5605	1.50	-0.18	-1.42	5.00	-0.21	-0.69	17.	45	-1.54	-1.00	17.46
LFUBEH- 5605	1.70	0.02	0.14	5.50	0.29	0.92	18.	00	-0.99	-0.65	18.00
LQNR4J- 5605	1.70	0.02	0.14	5.30	0.09	0.28	18.	70	-0.29	-0.19	18.71
LTEQHG- 5605	1.75	0.07	0.53	5.23	0.02	0.05	19.	55	0.56	0.36	19.55
LWE3DG- 5605	1.70	0.02	0.14	5.50	0.29	0.92	18.	00	-0.99	-0.65	18.00
MULPPV- 5605	1.70	0.02	0.14	5.50	0.29	0.92	18.	00	-0.99	-0.65	18.00
N3VE3U- 5605	1.60	-0.08	-0.64	5.40	0.19	0.60	17.	20	-1.79	-1.17	17.24
P3PMNH- 5605	1.70	0.02	0.14	5.30	0.09	0.28	18.	90	-0.09	-0.06	18.71
PA9KKH- 5601	1.72	0.04	0.30	5.02	-0.19	-0.62	16.	70	-2.29	-1.49	20.04
PG97FE- 5605	1.75	0.07	0.53	5.50	0.29	0.92	18.	55	-0.44	-0.29	18.55
PRTCJH- 5601	1.74	0.06	0.46	5.05	-0.16	-0.53	20.	20	1.21	0.79	20.15
Q6W2VN- 5605	1.80	0.12	0.92	5.20	-0.01	-0.05	20.	30	1.31	0.85	20.25
QA7H4D- 5605	1.50	-0.18	-1.42	5.50	0.29	0.92	15.	83	-3.16	-2.06	15.83
QAQVUB- 5605	1.68	0.00	-0.01	5.61	0.40	1.27	17.	42	-1.57	-1.02	17.43

TABLE 1Stain A - Preparation Angle: 18°, continued

WebCode-	Width				Length			Angle		
Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	CalcAng
QGNPXQ- 5605	1.40	-0.28	-2.20	4.00	-1.21	-3.91 <mark>X</mark>	20.48	1.49	0.97	20.49
QK3M6D- 5601	1.50	-0.18	-1.42	4.40	-0.81	-2.62	19.93	0.94	0.61	19.93
QLGRUN- 5605	1.70	0.02	0.14	5.70	0.49	1.56	17.00	-1.99	-1.30	17.35
RCTHRM- 5605	14.60	12.92	100.9 <mark>X</mark>	47.00	41.79	134.5 <mark>X</mark>	18.00	-0.99	-0.65	18.10
RFTMGD- 5605	1.80	0.12	0.92	5.20	-0.01	-0.05	20.30	1.31	0.85	20.25
RKJ22E- 5605	1.55	-0.13	-1.03	5.36	0.15	0.47	16.81	-2.18	-1.42	16.81
RTV2VP- 5605	1.72	0.04	0.30	5.38	0.17	0.53	18.60	-0.39	-0.26	18.64
RU9QTM- 5605	1.72	0.04	0.30	5.50	0.29	0.92	18.22	-0.77	-0.50	18.22
RY6FAV- 5605	2.00	0.32	2.49	6.00	0.79	2.53	19.00	0.01	0.00	19.47
T8TRRE- 5605	1.65	-0.03	-0.25	5.33	0.12	0.37	18.00	-0.99	-0.65	18.03
TC4FRB- 5605	1.72	0.04	0.30	5.20	-0.01	-0.05	19.32	0.33	0.21	19.32
TM64ET- 5605	1.65	-0.03	-0.25	4.62	-0.59	-1.91	20.90	1.91	1.24	20.92
TTTL4B- 5605	1.80	0.12	0.92	5.30	0.09	0.28	19.00	0.01	0.00	19.85
U4MMMK- 5601	2.00	0.32	2.49	5.00	-0.21	-0.69	23.60	4.61	3.00	23.58
U93VBJ- 5601	1.60	-0.08	-0.64	5.10	-0.11	-0.37	18.30	-0.69	-0.45	18.28
U9R3JF- 5601	1.90	0.22	1.71	5.60	0.39	1.24	19.80	0.81	0.53	19.83
UAUQYD- 5605	1.80	0.12	0.92	5.40	0.19	0.60	19.00	0.01	0.00	19.47
UC29X9- 5605	1.80	0.12	0.92	5.00	-0.21	-0.69	21.00	2.01	1.31	21.10
UH77ED- 5605	2.00	0.32	2.49	5.00	-0.21	-0.69	23.58	4.59	2.98	23.58
UKTQFB- 5605	0.45	-1.23	-9.61 X	1.35	-3.86	-12.44 <mark>X</mark>	19.50	0.51	0.33	19.47
UMZZCE- 5605	1.70	0.02	0.14	5.20	-0.01	-0.05	19.00	0.01	0.00	19.08

 TABLE 1

 Stain A - Preparation Angle: 18°, continued

WobCodo-	de- Width				Length			Angle		
Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	CalcAng
V433K7- 5601	1.80	0.12	0.92	5.20	-0.01	-0.05	20.25	1.26	0.82	20.25
VLMUEQ- 5605	1.80	0.12	0.92	5.60	0.39	1.24	19.00	0.01	0.00	18.75
VPVWQF- 5605	1.40	-0.28	-2.20	4.80	-0.41	-1.33	17.00	-1.99	-1.30	16.96
VTKLMK- 5601	1.70	0.02	0.14	5.00	-0.21	-0.69	19.80	0.81	0.53	19.88
VVCK2J- 5605	1.80	0.12	0.92	5.00	-0.21	-0.69	21.10	2.11	1.37	21.10
WYN8DH- 5605	1.60	-0.08	-0.64	5.40	0.19	0.60	17.20	-1.79	-1.17	17.24
X29WAL- 5605	1.74	0.06	0.46	5.37	0.16	0.50	18.90	-0.09	-0.06	18.91
X8C6J8- 5605	10.20	8.52	66.50 <mark>X</mark>	28.00	22.79	73.33 <mark>X</mark>	21.30	2.31	1.50	21.36
XAHNEA- 5605	1.80	0.12	0.92	5.40	0.19	0.60	19.47	0.48	0.31	19.47
XBFVT8- 5601	1.72	0.04	0.30	5.19	-0.02	-0.08	19.40	0.41	0.26	19.35
XN34H9- 5605	1.70	0.02	0.14	5.30	0.09	0.28	18.70	-0.29	-0.19	18.71
XN6RU7- 5601	1.50	-0.18	-1.42	5.00	-0.21	-0.69	17.46	-1.53	-1.00	17.46
Y3EZ49- 5601	17.00	15.32	119.6 <mark>X</mark>	56.00	50.79	163.4 <mark>X</mark>	17.70	-1.29	-0.84	17.67
Y8V8R8- 5605	1.50	-0.18	-1.42	5.00	-0.21	-0.69	17.00	-1.99	-1.30	17.46
Y9PRQF- 5601	1.70	0.02	0.14	5.00	-0.21	-0.69	19.90	0.91	0.59	19.88
YDWHTL- 5605	1.50	-0.18	-1.42	5.00	-0.21	-0.69	17.00	-1.99	-1.30	17.46
YF6W67- 5605	2.16	0.48	3.74 X	6.70	1.49	4.78 <mark>X</mark>	18.80	-0.19	-0.13	18.81
YFMLVD- 5605	1.60	-0.08	-0.64	5.40	0.19	0.60	17.00	-1.99	-1.30	17.24
YLB8UE- 5601	1.70	0.02	0.14	5.00	-0.21	-0.69	19.90	0.91	0.59	19.88
YPBGT9- 5605	1.60	-0.08	-0.64	5.50	0.29	0.92	16.90	-2.09	-1.36	16.91
Z349AB- 5605	1.40	-0.28	-2.20	3.60	-1.61	-5.19 <mark>X</mark>	23.00	4.01	2.61	22.89

 TABLE 1

 Stain A - Preparation Angle: 18°, continued

WobCodo		Width			Length			Angle				
Test	mm	Diff	CPV		mm	Diff	CPV		Deg.	Diff	CPV	CalcAng
Z6LF8K- 5605	1.80	0.12	0.92	ł	5.60	0.39	1.24		18.70	-0.29	-0.19	18.75
Z73K6B- 5605	1.55	-0.13	-1.03	4	4.92	-0.29	-0.95		18.36	-0.63	-0.41	18.36
ZLLRLZ- 5601	1.80	0.12	0.92	ł	5.20	-0.01	-0.05		20.30	1.31	0.85	20.25
ZPLVE9- 5605	1.70	0.02	0.14	Į	5.30	0.09	0.28		19.00	0.01	0.00	18.71
ZRDUT7- 5605	1.60	-0.08	-0.64	ł	5.40	0.19	0.60		17.24	-1.75	-1.14	17.24
ZVVV48- 5605	1.70	0.02	0.14	4	4.70	-0.51	-1.65		21.00	2.01	1.31	21.20

Summary Statistics for Stain A - Preparation Angle: 18°										
	Width (mm)	Length (mm)	Angle [°]	CalcAng°						
Grand Mean	1.68	5.21	18.99	19.05						
Standard Deviation	0.13	0.31	1.54	1.52						
Participants Included in calculations	138	132	150	147						
Participants excluded from calculations (indicated by X)	14	20	3	3						

TABLE 1 Stain B - Preparation Angle: 25°

WebCode-	Width				Length			Angle		
Test	mm	Diff	CPV	mm	Diff	CPV	Deg	Diff	CPV	CalcAng
2CGXY3- 5605	2.00	0.13	1.27	4.00	-0.16	-0.54	30.0	0 3.26	1.47	30.00
3BYBZK- 5605	3.00	1.13	11.20 <mark>X</mark>	6.60	2.44	8.02 X	27.0	3 0.29	0.13	27.04
3FAHBA- 5605	1.90	0.03	0.28	4.20	0.04	0.12	27.0	0 0.26	0.12	26.90
3N3QVZ- 5605	1.78	-0.09	-0.91	3.78	-0.38	-1.27	28.1	0 1.36	0.61	28.09
3UUXEA- 5601	1.90	0.03	0.28	3.80	-0.36	-1.20	30.0	0 3.26	1.47	30.00
3VK3ZG- 5605	1.87	0.00	-0.02	4.37	0.21	0.68	25.2	6 -1.48	-0.67	25.34
3XUAAA- 5601	1.90	0.03	0.28	4.20	0.04	0.12	26.9	0 0.16	0.07	26.90
3Y7LE7- 5605	2.00	0.13	1.27	4.50	0.34	1.11	26.3	9 -0.35	-0.16	26.39
4KH4VZ- 5605	1.90	0.03	0.28	4.00	-0.16	-0.54	28.4	0 1.66	0.75	28.36
4X83L3- 5605	1.80	-0.07	-0.71	4.20	0.04	0.12	25.0	0 -1.74	-0.79	25.38
4ZFBT3- 5601	1.80	-0.07	-0.71	4.20	0.04	0.12	25.4	0 -1.34	-0.61	25.38
62NPZ9- 5605	1.80	-0.07	-0.71	4.20	0.04	0.12	25.0	0 -1.74	-0.79	25.38
66PW8E- 5605	1.80	-0.07	-0.71	4.50	0.34	1.11	23.6	0 -3.14	-1.42	23.58
6L9M7D- 5605	2.00	0.13	1.27	4.00	-0.16	-0.54	30.0	0 3.26	1.47	30.00
6VVMR3- 5605	1.80	-0.07	-0.71	4.00	-0.16	-0.54	27.0	0 0.26	0.12	26.74
6YZC4X- 5605	2.00	0.13	1.27	4.00	-0.16	-0.54	30.0	0 3.26	1.47	30.00
7GTEHE- 5605	3.00	1.13	11.20 X	5.00	0.84	2.75	37.0	0 10.26	4.63 <mark>X</mark>	36.87 X
7HATV3- 5605	2.10	0.23	2.27	4.50	0.34	1.11	28.0	0 1.26	0.57	27.82
7L8CQ2- 5605	1.50	-0.37	-3.69 <mark>X</mark>	4.00	-0.16	-0.54	22.0	0 -4.74	-2.14	22.02
87BEBW- 5605	1.50	-0.37	-3.69 <mark>X</mark>	4.00	-0.16	-0.54	22.0	2 -4.72	-2.13	22.02
88MWKF- 5605	1.62	-0.25	-2.50	4.23	0.07	0.22	23.0	0 -3.74	-1.69	22.52

TABLE 1Stain B - Preparation Angle: 25°, continued

WebCede	Width				Length			Angle		
Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	CalcAng
89V96B- 5605	1.90	0.03	0.28	4.14	-0.02	-0.08	27.00	0.26	0.12	27.32
8BNXMY- 5605	1.60	-0.27	-2.70	4.00	-0.16	-0.54	24.00	-2.74	-1.24	23.58
8EY9D8- 5605	1.80	-0.07	-0.71	3.60	-0.56	-1.86	30.00	3.26	1.47	30.00
8HNCFZ- 5601	2.00	0.13	1.27	4.00	-0.16	-0.54	30.00	3.26	1.47	30.00
8JFG28- 5605	1.85	-0.02	-0.21	7.65	3.49	11.48 <mark>X</mark>	13.99	-12.75	-5.76 <mark>X</mark>	13.99 X
8QFY6B- 5605	1.90	0.03	0.28	4.20	0.04	0.12	27.50	0.76	0.34	26.90
8RN6E6- 5601	1.90	0.03	0.28	4.20	0.04	0.12	26.80	0.06	0.03	26.90
93QQAV- 5605	1.80	-0.07	-0.71	3.80	-0.36	-1.20	28.00	1.26	0.57	28.27
96QZD7- 5605	1.90	0.03	0.28	4.40	0.24	0.78	26.00	-0.74	-0.33	25.58
9CCRP7- 5605	1.90	0.03	0.28	4.20	0.04	0.12	26.90	0.16	0.07	26.90
9JBH9V- 5601	1.90	0.03	0.28	4.40	0.24	0.78	25.60	-1.14	-0.52	25.58
9T2VC2- 5605	1.85	-0.02	-0.21	4.21	0.05	0.15	26.06	-0.68	-0.31	26.07
AAL88U- 5601	1.88	0.01	0.08	4.22	0.06	0.18	26.46	-0.28	-0.13	26.46
ADJMN3- 5605	1.80	-0.07	-0.71	4.20	0.04	0.12	25.00	-1.74	-0.79	25.38
AHA4Y8- 5605	1.80	-0.07	-0.71	4.00	-0.16	-0.54	26.70	-0.04	-0.02	26.74
AMPCM8- 5605	1.90	0.03	0.28	4.10	-0.06	-0.21	28.00	1.26	0.57	27.61
AXAJLW- 5605	1.23	-0.64	-6.37 X	2.76	-1.40	-4.63 <mark>X</mark>	26.50	-0.24	-0.11	26.47
BGGA97- 5605	1.90	0.03	0.28	4.50	0.34	1.11	25.00	-1.74	-0.79	24.97
BPQZC9- 5605	1.79	-0.08	-0.81	3.40	-0.76	-2.52	31.77	5.03	2.27	31.77
BUKUAA- 5605	1.90	0.03	0.28	3.90	-0.26	-0.87	29.00	2.26	1.02	29.16
BV2PC6- 5605	1.89	0.02	0.18	4.32	0.16	0.51	26.10	-0.64	-0.29	25.94

TABLE 1 Stain B - Preparation Angle: 25°, continued

WobCodo	Width				Length			Angle			
Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	CalcAng	
C7WKPQ- 5605	4.90	3.03	30.06 <mark>X</mark>	4.43	0.27	0.88	25.39	-1.35	-0.61		
CE9HMV- 5605	1.75	-0.12	-1.21	4.00	-0.16	-0.54	26.00	-0.74	-0.33	25.94	
CJKJFT- 5605	2.00	0.13	1.27	4.50	0.34	1.11	26.40	-0.34	-0.15	26.39	
CLKTEM- 5605	1.62	-0.25	-2.50	3.84	-0.32	-1.07	25.00	-1.74	-0.79	24.95	
CNY3XA- 5605	2.10	0.23	2.27	4.10	-0.06	-0.21	30.80	4.06	1.83	30.81	
CW6ZFW- 5605	1.90	0.03	0.28	4.20	0.04	0.12	27.00	0.26	0.12	26.90	
D2FC2R- 5605	1.90	0.03	0.28	4.46	0.30	0.97	25.00	-1.74	-0.79	25.21	
DCEBGP- 5605	1.88	0.01	0.08	4.24	0.08	0.25	26.30	-0.44	-0.20	26.32	
DGRUY7- 5605	1.88	0.01	0.08	4.29	0.13	0.41	26.00	-0.74	-0.33	25.99	
DWLH4P- 5605	2.00	0.13	1.27	4.50	0.34	1.11	26.40	-0.34	-0.15	26.39	
DXXDCN- 5605	2.75	0.88	8.72 X	6.25	2.09	6.87 <mark>X</mark>	26.10	-0.64	-0.29	26.10	
EE3ZGV- 5601	2.00	0.13	1.27	4.05	-0.11	-0.38	29.59	2.85	1.29	29.59	
EEXMTZ- 5605	4.20	2.33	23.11 X	1.90	-2.26	-7.46 <mark>X</mark>	26.50	-0.24	-0.11		
EG47N2- 5605	1.92	0.05	0.48	4.41	0.25	0.81	25.80	-0.94	-0.43	25.81	
EGPJHT- 5605	2.00	0.13	1.27	4.50	0.34	1.11	26.39	-0.35	-0.16	26.39	
EHK4G2- 5605	1.90	0.03	0.28	3.90	-0.26	-0.87	29.00	2.26	1.02	29.16	
ENMBQM- 5605	0.99	-0.88	-8.75 X	2.21	-1.95	-6.44 X	26.60	-0.14	-0.06	26.61	
ETH6NN- 5605	1.88	0.01	0.08	4.24	0.08	0.25	26.30	-0.44	-0.20	26.32	
EXTB4V- 5605	1.90	0.03	0.28	4.20	0.04	0.12	27.00	0.26	0.12	26.90	
FED23U- 5601	1.99	0.12	1.18	4.50	0.34	1.11	26.00	-0.74	-0.33	26.25	
FJBMQQ- 5605	1.80	-0.07	-0.71	4.10	-0.06	-0.21	26.00	-0.74	-0.33	26.04	

TABLE 1Stain B - Preparation Angle: 25°, continued

WebCede	Width				Length				Angle		
Test	mm	Diff	CPV	mm	Diff	CPV	D	eg.	Diff	CPV	CalcAng
FMBWR8- 5605	1.90	0.03	0.28	4.10	-0.06	-0.21	27	7.61	0.87	0.39	27.61
FU9PZ2- 5601	1.90	0.03	0.28	4.00	-0.16	-0.54	28	3.40	1.66	0.75	28.36
FWCLDN- 5605	1.90	0.03	0.28	3.90	-0.26	-0.87	29	9.20	2.46	1.11	29.16
FZX32P- 5605	1.80	-0.07	-0.71	3.60	-0.56	-1.86	30	0.00	3.26	1.47	30.00
G9MCNP- 5605	1.90	0.03	0.28	4.10	-0.06	-0.21	27	7.60	0.86	0.39	27.61
G9P2ZM- 5601	2.00	0.13	1.27	3.75	-0.41	-1.36	32	2.00	5.26	2.37	32.23
GDZV78- 5605	2.00	0.13	1.27	3.50	-0.66	-2.19	34	1.80	8.06	3.64 X	34.85 X
GLREEY- 5605	2.00	0.13	1.27	4.70	0.54	1.77	25	5.20	-1.54	-0.70	25.18
HLN8MQ- 5605							24	1.60	-2.14	-0.97	
HQJYVM- 5605	0.98	-0.89	-8.85 <mark>X</mark>	2.20	-1.96	-6.47 <mark>X</mark>	26	5.50	-0.24	-0.11	26.45
HW7PD4- 5605	1.80	-0.07	-0.71	3.90	-0.26	-0.87	27	7.50	0.76	0.34	27.49
J6YGX3- 5605	1.90	0.03	0.28	4.40	0.24	0.78	25	5.60	-1.14	-0.52	25.58
J7QFC2- 5605	1.80	-0.07	-0.71	4.40	0.24	0.78	24	1.10	-2.64	-1.19	24.15
JJUZHJ- 5605	19.00	17.13	170.0 X	43.00	38.84	127.9 <mark>X</mark>	26	5.00	-0.74	-0.33	26.22
JMNHER- 5605	1.70	-0.17	-1.70	3.60	-0.56	-1.86	28	3.00	1.26	0.57	28.18
JQZGDY- 5605	1.80	-0.07	-0.71	4.00	-0.16	-0.54	28	5.70	-0.04	-0.02	26.74
JR8QFJ- 5605	1.60	-0.27	-2.70	3.80	-0.36	-1.20	24	1.90	-1.84	-0.83	24.90
K2UA2G- 5605	1.90	0.03	0.28	4.20	0.04	0.12	27	7.00	0.26	0.12	26.90
K7QWWP- 5601	1.84	-0.03	-0.31	4.14	-0.02	-0.08	26	5.39	-0.35	-0.16	26.39
KEJ9XZ- 5601	2.00	0.13	1.27	3.80	-0.36	-1.20	32	2.00	5.26	2.37	31.76
KJAJ3G- 5605	57.20	55.33	549.1 X	122.40	118.24	389.5 <mark>X</mark>	27	7.90	1.16	0.52	27.86

TABLE 1 Stain B - Preparation Angle: 25°, continued

WobCodo	Width				Length			Angle				
Test	mm	Diff	CPV	mm	Diff	CPV	[Deg.	Diff	CPV	CalcAng	
KT2X7M- 5601	1.90	0.03	0.28	4.20	0.04	0.12	2	26.90	0.16	0.07	26.90	
KZLYGL- 5605	1.70	-0.17	-1.70	3.80	-0.36	-1.20	2	7.00	0.26	0.12	26.57	
L3KW3X- 5605	1.69	-0.18	-1.80	3.81	-0.35	-1.17	2	26.33	-0.41	-0.19	26.33	
L4EG3P- 5601	1.74	-0.13	-1.31	4.48	0.32	1.04	2	3.00	-3.74	-1.69	22.85	
L4WQRJ- 5605	1.80	-0.07	-0.71	4.10	-0.06	-0.21	2	.00	-0.74	-0.33	26.04	
L8Z6QX- 5601	1.80	-0.07	-0.71	4.80	0.64	2.10	2	2.00	-4.74	-2.14	22.02	
LA7PFH- 5601	1.80	-0.07	-0.71	5.00	0.84	2.75	2	1.00	-5.74	-2.59	21.10	
LF6C7X- 5605	1.50	-0.37	-3.69 X	4.00	-0.16	-0.54	2	2.02	-4.72	-2.13	22.02	
LFUBEH- 5605	1.90	0.03	0.28	4.50	0.34	1.11	2	5.00	-1.74	-0.79	24.97	
LQNR4J- 5605	1.90	0.03	0.28	4.20	0.04	0.12	2	.30	-0.44	-0.20	26.90	
LTEQHG- 5605	1.95	0.08	0.78	4.14	-0.02	-0.08	2	8.10	1.36	0.61	28.10	
LWE3DG- 5605	1.90	0.03	0.28	4.40	0.24	0.78	2	25.60	-1.14	-0.52	25.58	
MULPPV- 5605	1.90	0.03	0.28	4.40	0.24	0.78	2	.00	-0.74	-0.33	25.58	
N3VE3U- 5605	1.80	-0.07	-0.71	4.40	0.24	0.78	2	4.10	-2.64	-1.19	24.15	
P3PMNH- 5605	1.90	0.03	0.28	4.30	0.14	0.45	2	26.40	-0.34	-0.15	26.22	
PA9KKH- 5601	1.87	0.00	-0.02	4.25	0.09	0.28	2	8.10	-0.64	-0.29	26.10	
PG97FE- 5605	2.00	0.13	1.27	4.25	0.09	0.28	2	8.07	1.33	0.60	28.07	
PRTCJH- 5601	1.91	0.04	0.38	4.07	-0.09	-0.31	2	8.00	1.26	0.57	27.99	
Q6W2VN- 5605	1.95	0.08	0.78	4.00	-0.16	-0.54	2	9.20	2.46	1.11	29.18	
QA7H4D- 5605	2.00	0.13	1.27	4.25	0.09	0.28	2	8.07	1.33	0.60	28.07	
QAQVUB- 5605	1.83	-0.04	-0.41	4.52	0.36	1.17	2	3.88	-2.86	-1.29	23.88	

TABLE 1Stain B - Preparation Angle: 25°, continued

WobCodo	Width			Length			Angle			
Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	CalcAng
QGNPXQ- 5605	1.80	-0.07	-0.71	3.28	-0.88	-2.91	33.28	6.54	2.95	33.28
QK3M6D- 5601	1.80	-0.07	-0.71	4.20	0.04	0.12	25.38	-1.36	-0.61	25.38
QLGRUN- 5605	1.90	0.03	0.28	4.50	0.34	1.11	25.00	-1.74	-0.79	24.97
RCTHRM- 5605	17.80	15.93	158.1 <mark>X</mark>	36.80	32.64	107.5 <mark>X</mark>	29.00	2.26	1.02	28.93
RFTMGD- 5605	1.90	0.03	0.28	3.50	-0.66	-2.19	32.90	6.16	2.78	32.88
RKJ22E- 5605	1.88	0.01	0.08	4.47	0.31	1.01	24.87	-1.87	-0.84	24.87
RTV2VP- 5605	1.87	0.00	-0.02	4.41	0.25	0.81	25.10	-1.64	-0.74	25.09
RU9QTM- 5605	1.86	-0.01	-0.11	4.42	0.26	0.84	24.89	-1.85	-0.84	24.89
RY6FAV- 5605	2.00	0.13	1.27	5.00	0.84	2.75	26.00	-0.74	-0.33	23.58
T8TRRE- 5605	1.85	-0.02	-0.21	4.19	0.03	0.09	26.20	-0.54	-0.24	26.20
TC4FRB- 5605	1.88	0.01	0.08	4.16	0.00	-0.01	26.87	0.13	0.06	26.87
TM64ET- 5605	1.82	-0.05	-0.51	4.30	0.14	0.45	25.00	-1.74	-0.79	25.04
TTTL4B- 5605	1.90	0.03	0.28	4.30	0.14	0.45	26.00	-0.74	-0.33	26.22
U4MMMK- 5601	2.00	0.13	1.27	4.00	-0.16	-0.54	30.00	3.26	1.47	30.00
U93VBJ- 5601	1.70	-0.17	-1.70	4.10	-0.06	-0.21	24.40	-2.34	-1.06	24.50
U9R3JF- 5601	2.00	0.13	1.27	4.40	0.24	0.78	27.00	0.26	0.12	27.04
UAUQYD- 5605	1.90	0.03	0.28	4.30	0.14	0.45	26.60	-0.14	-0.06	26.22
UC29X9- 5605	2.00	0.13	1.27	4.00	-0.16	-0.54	30.00	3.26	1.47	30.00
UH77ED- 5605	2.00	0.13	1.27	4.00	-0.16	-0.54	30.00	3.26	1.47	30.00
UKTQFB- 5605	0.50	-1.37	-13.61 <mark>X</mark>	1.07	-3.09	-10.19 <mark>X</mark>	27.90	1.16	0.52	27.86
UMZZCE- 5605	1.90	0.03	0.28	4.10	-0.06	-0.21	28.00	1.26	0.57	27.61

TABLE 1Stain B - Preparation Angle: 25°, continued

WebCede	Width				Length			Angle		
Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	CalcAng
V433K7- 5601	1.90	0.03	0.28	4.00	-0.16	-0.54	28.36	1.62	0.73	28.36
VLMUEQ- 5605	1.90	0.03	0.28	4.30	0.14	0.45	26.00	-0.74	-0.33	26.22
VPVWQF- 5605	1.60	-0.27	-2.70	3.40	-0.76	-2.52	28.00	1.26	0.57	28.07
VTKLMK- 5601	1.90	0.03	0.28	4.00	-0.16	-0.54	28.40	1.66	0.75	28.36
VVCK2J- 5605	2.00	0.13	1.27	3.80	-0.36	-1.20	31.70	4.96	2.24	31.76
WYN8DH- 5605	1.80	-0.07	-0.71	4.20	0.04	0.12	25.40	-1.34	-0.61	25.38
X29WAL- 5605	2.00	0.13	1.27	4.21	0.05	0.15	28.40	1.66	0.75	28.36
X8C6J8- 5605	10.70	8.83	87.62 X	22.90	18.74	61.72 X	27.80	1.06	0.48	27.86
XAHNEA- 5605	1.80	-0.07	-0.71	5.00	0.84	2.75	21.10	-5.64	-2.55	21.10
XBFVT8- 5601	1.91	0.04	0.38	4.36	0.20	0.65	26.00	-0.74	-0.33	25.98
XN34H9- 5605	1.90	0.03	0.28	4.20	0.04	0.12	26.90	0.16	0.07	26.90
XN6RU7- 5601	1.75	-0.12	-1.21	4.50	0.34	1.11	22.89	-3.85	-1.74	22.89
Y3EZ49- 5601	19.00	17.13	170.0 <mark>X</mark>	44.00	39.84	131.2 <mark>X</mark>	25.60	-1.14	-0.52	25.58
Y8V8R8- 5605	1.80	-0.07	-0.71	4.00	-0.16	-0.54	27.00	0.26	0.12	26.74
Y9PRQF- 5601	1.90	0.03	0.28	4.00	-0.16	-0.54	28.40	1.66	0.75	28.36
YDWHTL- 5605	1.90	0.03	0.28	4.40	0.24	0.78	26.00	-0.74	-0.33	25.58
YF6W67- 5605	2.40	0.53	5.24 X	5.60	1.44	4.73 X	25.40	-1.34	-0.61	25.38
YFMLVD- 5605	2.00	0.13	1.27	4.40	0.24	0.78	27.00	0.26	0.12	27.04
YLB8UE- 5601	1.80	-0.07	-0.71	4.00	-0.16	-0.54	26.70	-0.04	-0.02	26.74
YPBGT9- 5605	1.80	-0.07	-0.71	4.20	0.04	0.12	25.30	-1.44	-0.65	25.38
Z349AB- 5605	1.60	-0.27	-2.70	4.00	-0.16	-0.54	24.00	-2.74	-1.24	23.58

TABLE 1Stain B - Preparation Angle: 25°, continued

WohCodo	Width				Length		Angle			
Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	CalcAng
Z6LF8K- 5605	1.90	0.03	0.28	4.00	-0.16	-0.54	28.40	1.66	0.75	28.36
Z73K6B- 5605	1.64	-0.23	-2.30	3.85	-0.31	-1.03	25.20	-1.54	-0.70	25.21
ZLLRLZ- 5601	1.90	0.03	0.28	4.30	0.14	0.45	26.20	-0.54	-0.24	26.22
ZPLVE9- 5605	1.90	0.03	0.28	4.20	0.04	0.12	27.00	0.26	0.12	26.90
ZRDUT7- 5605	1.80	-0.07	-0.71	4.20	0.04	0.12	25.37	-1.37	-0.62	25.38
ZVVV48- 5605	1.90	0.03	0.28	3.80	-0.36	-1.20	30.00	3.26	1.47	30.00

Summary Statistics for Stain B - Preparation Angle: 25°										
	Width (mm)	Length (mm)	Angle°	CalcAng°						
Grand Mean	1.87	4.16	26.74	26.73						
Standard Deviation	0.10	0.30	2.22	2.25						
Participants Included in calculations	134	138	150	147						
Participants excluded from calculations (indicated by X)	18	14	3	3						

TABLE 1 Stain C - Preparation Angle: 12°

WebCode-	Width			Length				Angle		
Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	CalcAng
2CGXY3- 5605	1.50	-0.17	-1.28	6.50	-1.15	-2.55	13.34	1 0.78	0.93	13.34
3BYBZK- 5605	2.50	0.83	6.16 X	12.00	4.35	9.60 <mark>X</mark>	12.20) -0.36	-0.42	12.02
3FAHBA- 5605	1.70	0.03	0.21	7.80	0.15	0.32	13.00) 0.44	0.53	12.59
3N3QVZ- 5605	1.51	-0.16	-1.20	6.86	-0.79	-1.75	12.70) 0.14	0.17	12.72
3UUXEA- 5601	1.70	0.03	0.21	8.00	0.35	0.77	12.30) -0.26	-0.30	12.27
3VK3ZG- 5605	1.72	0.05	0.36	7.75	0.10	0.21	12.78	3 0.22	0.27	12.82
3XUAAA- 5601	1.60	-0.07	-0.53	7.90	0.25	0.55	11.69	9 -0.87	-1.02	11.69
3Y7LE7- 5605	1.75	0.08	0.58	8.00	0.35	0.77	12.64	0.08	0.10	12.64
4KH4VZ- 5605	1.80	0.13	0.95	7.90	0.25	0.55	13.20) 0.64	0.76	13.17
4X83L3- 5605	1.50	-0.17	-1.28	7.80	0.15	0.32	11.00) -1.56	-1.84	11.09
4ZFBT3- 5601	1.60	-0.07	-0.53	7.60	-0.05	-0.12	12.20) -0.36	-0.42	12.15
62NPZ9- 5605	1.70	0.03	0.21	7.20	-0.45	-1.00	14.00) 1.44	1.71	13.66
66PW8E- 5605	1.70	0.03	0.21	8.00	0.35	0.77	12.30) -0.26	-0.30	12.27
6L9M7D- 5605	1.50	-0.17	-1.28	8.00	0.35	0.77	10.80) -1.76	-2.08	10.81
6VVMR3- 5605	1.60	-0.07	-0.53	7.20	-0.45	-1.00	13.00) 0.44	0.53	12.84
6YZC4X- 5605	1.90	0.23	1.70	8.00	0.35	0.77	13.74	1 1.18	1.40	13.74
7GTEHE- 5605	2.50	0.83	6.16 X	8.00	0.35	0.77	18.00) 5.44	6.44 <mark>X</mark>	18.21 X
7HATV3- 5605	1.90	0.23	1.70	8.20	0.55	1.21	13.00) 0.44	0.53	13.40
7L8CQ2- 5605	1.30	-0.37	-2.77	7.00	-0.65	-1.44	11.00) -1.56	-1.84	10.70
87BEBW- 5605	1.50	-0.17	-1.28	8.00	0.35	0.77	10.80) -1.76	-2.08	10.81
88MWKF- 5605	1.52	-0.15	-1.13	7.81	0.16	0.35	11.00) -1.56	-1.84	11.22

TABLE 1Stain C - Preparation Angle: 12°, continued

WebCode-		Width			Length			Angle		
Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	CalcAng
89V96B- 5605	1.71	0.04	0.28	7.90	0.25	0.55	13.00	0.44	0.53	12.50
8BNXMY- 5605	1.30	-0.37	-2.77	6.40	-1.25	-2.77	12.00	-0.56	-0.66	11.72
8EY9D8- 5605	1.50	-0.17	-1.28	6.50	-1.15	-2.55	13.30	0.74	0.88	13.34
8HNCFZ- 5601	2.00	0.33	2.44	7.60	-0.05	-0.12	15.00	2.44	2.89	15.26 X
8JFG28- 5605	1.70	0.03	0.21	11.75	4.10	9.04 X	8.32	-4.24	-5.01 <mark>X</mark>	8.32 X
8QFY6B- 5605	1.80	0.13	0.95	7.90	0.25	0.55	12.90	0.34	0.41	13.17
8RN6E6- 5601	1.60	-0.07	-0.53	7.30	-0.35	-0.78	12.60	0.04	0.05	12.66
93QQAV- 5605	1.70	0.03	0.21	7.50	-0.15	-0.34	13.00	0.44	0.53	13.10
96QZD7- 5605	1.70	0.03	0.21	7.90	0.25	0.55	13.00	0.44	0.53	12.43
9CCRP7- 5605	1.70	0.03	0.21	7.90	0.25	0.55	12.70	0.14	0.17	12.43
9JBH9V- 5601	1.70	0.03	0.21	8.00	0.35	0.77	12.30	-0.26	-0.30	12.27
9T2VC2- 5605	1.69	0.02	0.13	7.47	-0.18	-0.40	13.07	0.51	0.61	13.08
AAL88U- 5601	1.44	-0.23	-1.73	7.23	-0.42	-0.93	11.48	-1.08	-1.27	11.49
ADJMN3- 5605	1.60	-0.07	-0.53	8.00	0.35	0.77	12.00	-0.56	-0.66	11.54
AHA4Y8- 5605	1.70	0.03	0.21	7.80	0.15	0.32	12.60	0.04	0.05	12.59
AMPCM8- 5605	1.70	0.03	0.21	7.10	-0.55	-1.22	14.00	1.44	1.71	13.85
AXAJLW- 5605	0.77	-0.90	-6.71 X	3.53	-4.12	-9.10 X	12.60	0.04	0.05	12.60
BGGA97- 5605	1.70	0.03	0.21	8.10	0.45	0.99	12.10	-0.46	-0.54	12.12
BPQZC9- 5605	1.39	-0.28	-2.10	5.47	-2.18	-4.82 X	14.72	2.16	2.56	14.72
BUKUAA- 5605	1.70	0.03	0.21	8.10	0.45	0.99	12.00	-0.56	-0.66	12.12
BV2PC6- 5605	1.72	0.05	0.36	7.85	0.20	0.43	12.70	0.14	0.17	12.66

TABLE 1Stain C - Preparation Angle: 12°, continued

WebCode	Width				Length			Angle		
Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	CalcAng
C7WKPQ- 5605	1.66	-0.01	-0.09	8.05	0.40	0.88	11.90	-0.66	-0.78	11.90
CE9HMV- 5605	1.50	-0.17	-1.28	8.00	0.35	0.77	11.00	-1.56	-1.84	10.81
CJKJFT- 5605	1.90	0.23	1.70	8.10	0.45	0.99	13.60	1.04	1.24	13.57
CLKTEM- 5605	1.74	0.07	0.51	7.55	-0.10	-0.23	13.30	0.74	0.88	13.32
CNY3XA- 5605	1.80	0.13	0.95	8.20	0.55	1.21	12.60	0.04	0.05	12.68
CW6ZFW- 5605	1.70	0.03	0.21	7.90	0.25	0.55	12.00	-0.56	-0.66	12.43
D2FC2R- 5605	1.75	0.08	0.58	7.75	0.10	0.21	13.00	0.44	0.53	13.05
DCEBGP- 5605	1.70	0.03	0.21	7.82	0.17	0.37	12.60	0.04	0.05	12.56
DGRUY7- 5605	1.75	0.08	0.58	8.14	0.49	1.07	12.00	-0.56	-0.66	12.41
DWLH4P- 5605	1.75	0.08	0.58	8.25	0.60	1.32	12.20	-0.36	-0.42	12.25
DXXDCN- 5605	2.17	0.50	3.71 X	9.45	1.80	3.97 <mark>X</mark>	13.30	0.74	0.88	13.28
EE3ZGV- 5601	1.84	0.17	1.25	7.56	-0.09	-0.21	14.09	1.53	1.82	14.09
EEXMTZ- 5605	7.90	6.23	46.33 X	1.80	-5.85	-12.92 <mark>X</mark>	12.70	0.14	0.17	
EG47N2- 5605	1.99	0.32	2.37	6.58	-1.07	-2.37	17.60	5.04	5.97 <mark>X</mark>	17.60 X
EGPJHT- 5605	1.50	-0.17	-1.28	7.00	-0.65	-1.44	12.37	-0.19	-0.22	12.37
EHK4G2- 5605	1.70	0.03	0.21	7.70	0.05	0.10	12.75	0.19	0.23	12.75
ENMBQM- 5605	0.88	-0.79	-5.89 X	4.12	-3.53	-7.80 <mark>X</mark>	12.30	-0.26	-0.30	12.33
ETH6NN- 5605	1.73	0.06	0.43	7.80	0.15	0.32	12.80	0.24	0.29	12.81
EXTB4V- 5605	1.70	0.03	0.21	7.90	0.25	0.55	12.00	-0.56	-0.66	12.43
FED23U- 5601	1.82	0.15	1.10	8.33	0.68	1.49	13.00	0.44	0.53	12.62
FJBMQQ- 5605	1.70	0.03	0.21	7.50	-0.15	-0.34	13.00	0.44	0.53	13.10

TABLE 1Stain C - Preparation Angle: 12°, continued

WebCode	Width				Length			Angle		
Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	CalcAng
FMBWR8- 5605	1.80	0.13	0.95	7.40	-0.25	-0.56	14.08	1.52	1.80	14.08
FU9PZ2- 5601	1.80	0.13	0.95	6.75	-0.90	-1.99	15.50	2.94	3.49 X	15.47 X
FWCLDN- 5605	1.70	0.03	0.21	7.00	-0.65	-1.44	14.00	1.44	1.71	14.06
FZX32P- 5605	1.67	0.00	-0.01	6.88	-0.77	-1.71	14.00	1.44	1.71	14.05
G9MCNP- 5605	1.70	0.03	0.21	7.40	-0.25	-0.56	13.20	0.64	0.76	13.28
G9P2ZM- 5601	1.50	-0.17	-1.28	7.50	-0.15	-0.34	12.00	-0.56	-0.66	11.54
GDZV78- 5605	1.50	-0.17	-1.28	7.00	-0.65	-1.44	12.40	-0.16	-0.18	12.37
GLREEY- 5605	1.80	0.13	0.95	8.20	0.55	1.21	12.70	0.14	0.17	12.68
HLN8MQ- 5605							12.20	-0.36	-0.42	
HQJYVM- 5605	0.68	-0.99	-7.38 <mark>X</mark>	3.24	-4.41	-9.74 X	12.10	-0.46	-0.54	12.12
HW7PD4- 5605	1.60	-0.07	-0.53	7.30	-0.35	-0.78	12.70	0.14	0.17	12.66
J6YGX3- 5605	1.70	0.03	0.21	7.60	-0.05	-0.12	12.90	0.34	0.41	12.93
J7QFC2- 5605	1.70	0.03	0.21	7.90	0.25	0.55	12.40	-0.16	-0.18	12.43
JJUZHJ- 5605	18.00	16.33	121.5 <mark>X</mark>	8.00	0.35	0.8	13.00	0.44	0.53	
JMNHER- 5605	1.60	-0.07	-0.53	7.20	-0.45	-1.00	13.00	0.44	0.53	12.84
JQZGDY- 5605	1.70	0.03	0.21	7.00	-0.65	-1.44	13.90	1.34	1.59	14.06
JR8QFJ- 5605	1.40	-0.27	-2.02	7.20	-0.45	-1.00	11.20	-1.36	-1.60	11.21
K2UA2G- 5605	1.80	0.13	0.95	8.00	0.35	0.77	13.00	0.44	0.53	13.00
K7QWWP- 5601	1.66	-0.01	-0.09	8.03	0.38	0.83	11.93	-0.63	-0.74	11.93
KEJ9XZ- 5601	1.80	0.13	0.95	6.60	-1.05	-2.32	16.00	3.44	4.08 X	15.83 X
KJAJ3G- 5605	33.70	32.03	238.3 <mark>X</mark>	146.20	138.55	305.9 <mark>X</mark>	13.30	0.74	0.88	13.33

TABLE 1Stain C - Preparation Angle: 12°, continued

WobCodo	Width				Length			Angle		
Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	CalcAng
KT2X7M- 5601	1.80	0.13	0.95	7.50	-0.15	-0.34	13.90	1.34	1.59	13.89
KZLYGL- 5605	1.70	0.03	0.21	7.00	-0.65	-1.44	14.00	1.44	1.71	14.06
L3KW3X- 5605	1.65	-0.02	-0.16	7.00	-0.65	-1.44	13.63	1.07	1.27	13.63
L4EG3P- 5601	1.50	-0.17	-1.28	7.84	0.19	0.41	11.00	-1.56	-1.84	11.03
L4WQRJ- 5605	1.70	0.03	0.21	7.60	-0.05	-0.12	12.90	0.34	0.41	12.93
L8Z6QX- 5601	1.60	-0.07	-0.53	7.40	-0.25	-0.56	12.00	-0.56	-0.66	12.49
LA7PFH- 5601	1.80	0.13	0.95	8.60	0.95	2.09	12.00	-0.56	-0.66	12.08
LF6C7X- 5605	1.50	-0.17	-1.28	8.00	0.35	0.77	10.80	-1.76	-2.08	10.81
LFUBEH- 5605	1.70	0.03	0.21	8.20	0.55	1.21	12.00	-0.56	-0.66	11.97
LQNR4J- 5605	1.60	-0.07	-0.53	7.50	-0.15	-0.34	12.80	0.24	0.29	12.32
LTEQHG- 5605	1.70	0.03	0.21	8.27	0.62	1.36	11.86	-0.70	-0.82	11.86
LWE3DG- 5605	1.80	0.13	0.95	8.20	0.55	1.21	12.70	0.14	0.17	12.68
MULPPV- 5605	1.70	0.03	0.21	7.90	0.25	0.55	12.00	-0.56	-0.66	12.43
N3VE3U- 5605	1.60	-0.07	-0.53	8.00	0.35	0.77	11.50	-1.06	-1.25	11.54
P3PMNH- 5605	1.70	0.03	0.21	7.90	0.25	0.55	12.70	0.14	0.17	12.43
PA9KKH- 5601	1.66	-0.01	-0.09	7.84	0.19	0.41	12.20	-0.36	-0.42	12.22
PG97FE- 5605	1.75	0.08	0.58	8.00	0.35	0.77	12.64	0.08	0.10	12.64
PRTCJH- 5601	1.74	0.07	0.51	7.35	-0.30	-0.67	13.70	1.14	1.35	13.69
Q6W2VN- 5605	1.80	0.13	0.95	7.85	0.20	0.43	13.30	0.74	0.88	13.26
QA7H4D- 5605	1.50	-0.17	-1.28	7.75	0.10	0.21	11.16	-1.40	-1.65	11.16
QAQVUB- 5605	1.69	0.02	0.13	8.12	0.47	1.03	12.01	-0.54	-0.64	12.01

TABLE 1Stain C - Preparation Angle: 12°, continued

WebCode		Width			Length			Angle		
Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	CalcAng
QGNPXQ- 5605	1.69	0.02	0.13	6.05	-1.60	-3.54 X	16.22	3.66	4.34 X	16.22 X
QK3M6D- 5601	1.50	-0.17	-1.28	7.80	0.15	0.32	11.09	-1.47	-1.73	11.09
QLGRUN- 5605	1.70	0.03	0.21	8.00	0.35	0.77	12.00	-0.56	-0.66	12.27
RCTHRM- 5605	15.40	13.73	102.1 <mark>X</mark>	68.00	60.35	133.2 <mark>X</mark>	16.00	3.44	4.08 X	13.09
RFTMGD- 5605	1.80	0.13	0.95	7.70	0.05	0.10	13.50	0.94	1.12	13.52
RKJ22E- 5605	1.65	-0.02	-0.16	7.77	0.12	0.26	12.26	-0.30	-0.35	12.26
RTV2VP- 5605	1.74	0.07	0.51	8.13	0.48	1.05	12.40	-0.16	-0.18	12.36
RU9QTM- 5605	1.68	0.01	0.06	8.06	0.41	0.90	12.03	-0.53	-0.62	12.03
RY6FAV- 5605	1.50	-0.17	-1.28	8.00	0.35	0.77	11.00	-1.56	-1.84	10.81
T8TRRE- 5605	1.65	-0.02	-0.16	7.39	-0.26	-0.58	12.90	0.34	0.41	12.90
TC4FRB- 5605	1.66	-0.01	-0.09	8.01	0.36	0.79	11.96	-0.60	-0.70	11.96
TM64ET- 5605	1.61	-0.06	-0.46	7.16	-0.49	-1.09	13.00	0.44	0.53	12.99
TTTL4B- 5605	1.80	0.13	0.95	8.10	0.45	0.99	12.00	-0.56	-0.66	12.84
U4MMMK- 5601	2.00	0.33	2.44	7.00	-0.65	-1.44	16.60	4.04	4.79 X	16.60 X
U93VBJ- 5601	1.60	-0.07	-0.53	7.20	-0.45	-1.00	12.80	0.24	0.29	12.84
U9R3JF- 5601	1.90	0.23	1.70	8.20	0.55	1.21	13.40	0.84	1.00	13.40
UAUQYD- 5605	1.80	0.13	0.95	8.00	0.35	0.77	12.70	0.14	0.17	13.00
UC29X9- 5605	1.80	0.13	0.95	7.80	0.15	0.32	13.00	0.44	0.53	13.34
UH77ED- 5605	2.00	0.33	2.44	7.50	-0.15	-0.34	15.47	2.91	3.45 X	15.47 X
UKTQFB- 5605	0.39	-1.28	-9.54 X	1.80	-5.85	-12.92 <mark>X</mark>	12.50	-0.06	-0.07	12.51
UMZZCE- 5605	1.70	0.03	0.21	7.80	0.15	0.32	13.00	0.44	0.53	12.59

TABLE 1Stain C - Preparation Angle: 12°, continued

WebCede	Width			Length				Angle		
Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	CalcAng
V433K7- 5601	1.70	0.03	0.21	7.20	-0.45	-1.00	13.66	1.10	1.31	13.66
VLMUEQ- 5605	1.70	0.03	0.21	8.10	0.45	0.99	12.00	-0.56	-0.66	12.12
VPVWQF- 5605	1.60	-0.07	-0.53	8.00	0.35	0.77	12.00	-0.56	-0.66	11.54
VTKLMK- 5601	1.70	0.03	0.21	7.70	0.05	0.10	12.80	0.24	0.29	12.75
VVCK2J- 5605	1.90	0.23	1.70	6.50	-1.15	-2.55	16.90	4.34	5.14 <mark>X</mark>	17.00 X
WYN8DH- 5605	1.60	-0.07	-0.53	7.80	0.15	0.32	11.80	-0.76	-0.89	11.84
X29WAL- 5605	1.74	0.07	0.51	8.00	0.35	0.77	12.60	0.04	0.05	12.56
X8C6J8- 5605	7.87	6.20	46.11 X	36.30	28.65	63.24 <mark>X</mark>	12.50	-0.06	-0.07	12.52
XAHNEA- 5605	1.50	-0.17	-1.28	7.50	-0.15	-0.34	11.50	-1.06	-1.25	11.54
XBFVT8- 5601	1.70	0.03	0.21	7.63	-0.02	-0.05	12.90	0.34	0.41	12.87
XN34H9- 5605	1.70	0.03	0.21	7.80	0.15	0.32	12.60	0.04	0.05	12.59
XN6RU7- 5601	1.50	-0.17	-1.28	7.50	-0.15	-0.34	11.54	-1.02	-1.20	11.54
Y3EZ49- 5601	17.00	15.33	114.0 X	80.00	72.35	159.7 <mark>X</mark>	12.30	-0.26	-0.30	12.27
Y8V8R8- 5605	1.40	-0.27	-2.02	7.50	-0.15	-0.34	11.00	-1.56	-1.84	10.76
Y9PRQF- 5601	1.70	0.03	0.21	7.30	-0.35	-0.78	13.50	0.94	1.12	13.47
YDWHTL- 5605	1.30	-0.37	-2.77	8.00	0.35	0.77	9.00	-3.56	-4.21 X	9.35 X
YF6W67- 5605	2.29	0.62	4.60 X	10.78	3.13	6.90 <mark>X</mark>	12.30	-0.26	-0.30	12.26
YFMLVD- 5605	1.60	-0.07	-0.53	7.60	-0.05	-0.12	12.00	-0.56	-0.66	12.15
YLB8UE- 5601	1.60	-0.07	-0.53	7.50	-0.15	-0.34	12.30	-0.26	-0.30	12.32
YPBGT9- 5605	1.70	0.03	0.21	8.10	0.45	0.99	12.10	-0.46	-0.54	12.12
Z349AB- 5605	1.50	-0.17	-1.28	7.00	-0.65	-1.44	12.00	-0.56	-0.66	12.37

TABLE 1Stain C - Preparation Angle: 12°, continued

WahCada	Width				Length		Angle			
Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	CalcAng
Z6LF8K- 5605	1.80	0.13	0.95	8.00	0.35	0.77	13.00	0.44	0.53	13.00
Z73K6B- 5605	1.50	-0.17	-1.28	7.14	-0.51	-1.13	12.10	-0.46	-0.54	12.13
ZLLRLZ- 5601	1.70	0.03	0.21	7.90	0.25	0.55	12.40	-0.16	-0.18	12.43
ZPLVE9- 5605	1.60	-0.07	-0.53	7.80	0.15	0.32	12.00	-0.56	-0.66	11.84
ZRDUT7- 5605	1.60	-0.07	-0.53	7.50	-0.15	-0.34	12.32	-0.24	-0.28	12.32
ZVVV48- 5605	1.70	0.03	0.21	6.80	-0.85	-1.88	15.00	2.44	2.89	14.48

Summary Statistics for Stain C - Preparation Angle: 12°										
	Width (mm)	Length (mm)	Angle°	CalcAng°						
Grand Mean	1.67	7.65	12.56	12.53						
Standard Deviation	0.13	0.45	0.84	0.83						
Participants Included in calculations	138	137	142	139						
Participants excluded from calculations (indicated by X)	14	15	11	11						

TABLE 1 Stain D - Preparation Angle: 40°

WebCode-		Width			Length			Angle		
Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	CalcAng
2CGXY3- 5605	3.30	-0.06	-0.39	5.00	-0.54	-1.91	41.30	3.77	1.99	41.30
3BYBZK- 5605	5.30	1.94	12.27 <mark>X</mark>	9.00	3.46	12.22 <mark>X</mark>	36.07	-1.46	-0.77	36.08
3FAHBA- 5605	3.40	0.04	0.24	5.60	0.06	0.21	37.00	-0.53	-0.28	37.38
3N3QVZ- 5605	3.28	-0.08	-0.52	4.90	-0.64	-2.26	42.00	4.47	2.36	42.02
3UUXEA- 5601	3.40	0.04	0.24	5.60	0.06	0.21	37.40	-0.13	-0.07	37.38
3VK3ZG- 5605	3.43	0.07	0.43	5.55	0.01	0.03	38.11	0.58	0.31	38.17
3XUAAA- 5601	3.40	0.04	0.24	5.60	0.06	0.21	37.38	-0.15	-0.08	37.38
3Y7LE7- 5605	3.25	-0.11	-0.71	6.00	0.46	1.62	32.80	-4.73	-2.49	32.80
4KH4VZ- 5605	3.20	-0.16	-1.03	5.70	0.16	0.56	34.20	-3.33	-1.75	34.15
4X83L3- 5605	3.40	0.04	0.24	5.50	-0.04	-0.14	38.00	0.47	0.25	38.18
4ZFBT3- 5601	3.40	0.04	0.24	5.60	0.06	0.21	37.40	-0.13	-0.07	37.38
62NPZ9- 5605	3.30	-0.06	-0.39	5.30	-0.24	-0.85	39.00	1.47	0.78	38.51
66PW8E- 5605	3.40	0.04	0.24	5.80	0.26	0.92	35.90	-1.63	-0.86	35.89
6L9M7D- 5605	3.00	-0.36	-2.29	5.00	-0.54	-1.91	36.87	-0.66	-0.35	36.87
6VVMR3- 5605	3.40	0.04	0.24	5.20	-0.34	-1.20	41.00	3.47	1.83	40.83
6YZC4X- 5605	3.50	0.14	0.87	6.00	0.46	1.62	35.69	-1.84	-0.97	35.69
7GTEHE- 5605	4.00	0.64	4.04 X	7.00	1.46	5.16 <mark>X</mark>	35.00	-2.53	-1.33	34.85
7HATV3- 5605	3.40	0.04	0.24	5.90	0.36	1.27	35.00	-2.53	-1.33	35.19
7L8CQ2- 5605	4.00	0.64	4.04 X	4.50	-1.04	-3.68 <mark>X</mark>	63.00	25.47	13.44 <mark>X</mark>	62.73 X
87BEBW- 5605	3.00	-0.36	-2.29	5.00	-0.54	-1.91	36.56	-0.97	-0.51	36.87
88MWKF- 5605	3.03	-0.33	-2.10	5.21	-0.33	-1.17	36.00	-1.53	-0.81	35.56

TABLE 1Stain D - Preparation Angle: 40°, continued

WebCode-	Width				Length			Angle		
Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	CalcAng
89V96B- 5605	3.44	0.08	0.49	5.50	-0.04	-0.14	39.00	1.47	0.78	38.72
8BNXMY- 5605	3.10	-0.26	-1.66	5.00	-0.54	-1.91	38.00	0.47	0.25	38.32
8EY9D8- 5605	3.00	-0.36	-2.29	4.70	-0.84	-2.97	39.60	2.07	1.09	39.67
8HNCFZ- 5601	3.50	0.14	0.87	5.40	-0.14	-0.50	40.00	2.47	1.30	40.40
8JFG28- 5605	3.40	0.04	0.24	6.65	1.11	3.92 X	30.75	-6.78	-3.57 <mark>X</mark>	30.75 X
8QFY6B- 5605	3.30	-0.06	-0.39	5.60	0.06	0.21	36.00	-1.53	-0.81	36.11
8RN6E6- 5601	3.40	0.04	0.24	5.60	0.06	0.21	37.40	-0.13	-0.07	37.38
93QQAV- 5605	3.30	-0.06	-0.39	5.30	-0.24	-0.85	39.00	1.47	0.78	38.51
96QZD7- 5605	3.40	0.04	0.24	5.70	0.16	0.56	37.00	-0.53	-0.28	36.62
9CCRP7- 5605	3.50	0.14	0.87	5.70	0.16	0.56	38.00	0.47	0.25	37.88
9JBH9V- 5601	3.40	0.04	0.24	5.90	0.36	1.27	35.20	-2.33	-1.23	35.19
9T2VC2- 5605	3.42	0.06	0.37	5.53	-0.01	-0.04	38.10	0.57	0.30	38.20
AAL88U- 5601	3.28	-0.08	-0.52	5.73	0.19	0.67	34.92	-2.61	-1.37	34.92
ADJMN3- 5605	3.40	0.04	0.24	5.40	-0.14	-0.50	39.00	1.47	0.78	39.02
AHA4Y8- 5605	3.60	0.24	1.51	5.60	0.06	0.21	40.00	2.47	1.30	40.01
AMPCM8- 5605	3.40	0.04	0.24	5.60	0.06	0.21	37.00	-0.53	-0.28	37.38
AXAJLW- 5605	2.46	-0.90	-5.71 X	4.00	-1.54	-5.44 X	38.00	0.47	0.25	37.95
BGGA97- 5605	3.40	0.04	0.24	6.00	0.46	1.62	34.50	-3.03	-1.60	34.52
BPQZC9- 5605	3.00	-0.36	-2.29	4.11	-1.43	-5.05 X	46.88	9.35	4.93 <mark>X</mark>	46.88 X
BUKUAA- 5605	3.40	0.04	0.24	5.60	0.06	0.21	37.00	-0.53	-0.28	37.38
BV2PC6- 5605	3.43	0.07	0.43	5.71	0.17	0.60	36.90	-0.63	-0.33	36.92

TABLE 1 Stain D - Preparation Angle: 40°, continued

WebCode-	Width				Length			Angle		
Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	CalcAng
C7WKPQ- 5605	3.37	0.01	0.05	5.89	0.35	1.24	34.90	-2.63	-1.39	34.90
CE9HMV- 5605	3.25	-0.11	-0.71	5.50	-0.04	-0.14	36.00	-1.53	-0.81	36.22
CJKJFT- 5605	3.40	0.04	0.24	5.90	0.36	1.27	35.20	-2.33	-1.23	35.19
CLKTEM- 5605	3.24	-0.12	-0.77	5.38	-0.16	-0.57	37.00	-0.53	-0.28	37.03
CNY3XA- 5605	3.20	-0.16	-1.03	5.80	0.26	0.92	33.40	-4.13	-2.18	33.49
CW6ZFW- 5605	3.40	0.04	0.24	5.70	0.16	0.56	37.00	-0.53	-0.28	36.62
D2FC2R- 5605	3.37	0.01	0.05	5.88	0.34	1.20	35.00	-2.53	-1.33	34.97
DCEBGP- 5605	3.43	0.07	0.43	5.65	0.11	0.39	37.40	-0.13	-0.07	37.38
DGRUY7- 5605	3.45	0.09	0.56	5.69	0.15	0.53	37.00	-0.53	-0.28	37.32
DWLH4P- 5605	3.50	0.14	0.87	6.00	0.46	1.62	35.70	-1.83	-0.96	35.69
DXXDCN- 5605	4.92	1.56	9.87 X	7.97	2.43	8.58 <mark>X</mark>	38.10	0.57	0.30	38.12
EE3ZGV- 5601	3.55	0.19	1.19	5.68	0.14	0.49	38.68	1.15	0.61	38.68
EEXMTZ- 5605	5.70	2.34	14.81 <mark>X</mark>	3.50	-2.04	-7.21 <mark>X</mark>	37.50	-0.03	-0.01	
EG47N2- 5605	3.53	0.17	1.06	5.37	-0.17	-0.60	41.09	3.56	1.88	41.10
EGPJHT- 5605	3.00	-0.36	-2.29	5.00	-0.54	-1.91	36.87	-0.66	-0.35	36.87
EHK4G2- 5605	3.30	-0.06	-0.39	5.50	-0.04	-0.14	36.90	-0.63	-0.33	36.87
ENMBQM- 5605	1.15	-2.21	-14.01 X	1.93	-3.61	-12.75 <mark>X</mark>	36.60	-0.93	-0.49	36.57
ETH6NN- 5605	3.45	0.09	0.56	5.59	0.05	0.18	38.10	0.57	0.30	38.11
EXTB4V- 5605	3.40	0.04	0.24	5.60	0.06	0.21	37.00	-0.53	-0.28	37.38
FED23U- 5601	3.50	0.14	0.87	5.92	0.38	1.34	36.00	-1.53	-0.81	36.24
FJBMQQ- 5605	3.30	-0.06	-0.39	5.40	-0.14	-0.50	37.00	-0.53	-0.28	37.67

TABLE 1 Stain D - Preparation Angle: 40°, continued

WebCode-	Width				Length			Angle		
Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	CalcAng
FMBWR8- 5605	3.40	0.04	0.24	5.70	0.16	0.56	36.62	-0.91	-0.48	36.62
FU9PZ2- 5601	3.29	-0.07	-0.46	4.89	-0.65	-2.30	42.30	4.77	2.52	42.28
FWCLDN- 5605	3.40	0.04	0.24	5.40	-0.14	-0.50	39.00	1.47	0.78	39.02
FZX32P- 5605	3.41	0.05	0.30	5.37	-0.17	-0.60	39.40	1.87	0.99	39.42
G9MCNP- 5605	3.60	0.24	1.51	5.80	0.26	0.92	38.30	0.77	0.41	38.37
G9P2ZM- 5601	3.50	0.14	0.87	5.00	-0.54	-1.91	44.00	6.47	3.41 <mark>X</mark>	44.43 X
GDZV78- 5605	3.50	0.14	0.87	5.50	-0.04	-0.14	39.50	1.97	1.04	39.52
GLREEY- 5605	3.55	0.19	1.19	6.00	0.46	1.62	36.30	-1.23	-0.65	36.28
HLN8MQ- 5605							37.00	-0.53	-0.28	
HQJYVM- 5605	1.31	-2.05	-12.99 X	2.14	-3.40	-12.01 <mark>X</mark>	37.70	0.17	0.09	37.75
HW7PD4- 5605	3.40	0.04	0.24	5.60	0.06	0.21	37.40	-0.13	-0.07	37.38
J6YGX3- 5605	3.30	-0.06	-0.39	5.50	-0.04	-0.14	36.90	-0.63	-0.33	36.87
J7QFC2- 5605	3.40	0.04	0.24	5.70	0.16	0.56	36.60	-0.93	-0.49	36.62
JJUZHJ- 5605	34.00	30.64	194.0 <mark>X</mark>	57.00	51.46	181.8 <mark>X</mark>	37.00	-0.53	-0.28	36.62
JMNHER- 5605	3.00	-0.36	-2.29	5.20	-0.34	-1.20	35.00	-2.53	-1.33	35.23
JQZGDY- 5605	3.40	0.04	0.24	5.50	-0.04	-0.14	38.30	0.77	0.41	38.18
JR8QFJ- 5605	3.00	-0.36	-2.29	5.10	-0.44	-1.56	36.00	-1.53	-0.81	36.03
K2UA2G- 5605	3.50	0.14	0.87	5.60	0.06	0.21	38.00	0.47	0.25	38.68
K7QWWP- 5601	3.38	0.02	0.11	5.59	0.05	0.18	37.20	-0.33	-0.17	37.20
KEJ9XZ- 5601	3.30	-0.06	-0.39	5.10	-0.44	-1.56	40.00	2.47	1.30	40.32
KJAJ3G- 5605	105.00	101.64	643.6 <mark>X</mark>	165.90	160.36	566.5 <mark>X</mark>	39.30	1.77	0.94	39.27

TABLE 1 Stain D - Preparation Angle: 40°, continued

WebCode-	Width				Length			Angle		
Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	CalcAng
KT2X7M- 5601	3.50	0.14	0.87	5.40	-0.14	-0.50	40.40	2.87	1.52	40.40
KZLYGL- 5605	3.20	-0.16	-1.03	5.60	0.06	0.21	35.00	-2.53	-1.33	34.85
L3KW3X- 5605	3.15	-0.21	-1.34	4.90	-0.64	-2.26	40.00	2.47	1.30	40.01
L4EG3P- 5601	3.21	-0.15	-0.96	5.47	-0.07	-0.25	36.00	-1.53	-0.81	35.93
L4WQRJ- 5605	3.30	-0.06	-0.39	5.60	0.06	0.21	36.10	-1.43	-0.75	36.11
L8Z6QX- 5601	3.60	0.24	1.51	6.00	0.46	1.62	37.00	-0.53	-0.28	36.87
LA7PFH- 5601	3.60	0.24	1.51	6.20	0.66	2.33	36.00	-1.53	-0.81	35.50
LF6C7X- 5605	3.00	-0.36	-2.29	5.50	-0.04	-0.14	33.05	-4.48	-2.36	33.06
LFUBEH- 5605	3.50	0.14	0.87	5.70	0.16	0.56	37.90	0.37	0.20	37.88
LQNR4J- 5605	3.40	0.04	0.24	5.70	0.16	0.56	37.10	-0.43	-0.22	36.62
LTEQHG- 5605	3.45	0.09	0.56	5.56	0.02	0.07	38.35	0.82	0.43	38.35
LWE3DG- 5605	3.40	0.04	0.24	5.80	0.26	0.92	35.90	-1.63	-0.86	35.89
MULPPV- 5605	3.40	0.04	0.24	5.70	0.16	0.56	37.00	-0.53	-0.28	36.62
N3VE3U- 5605	3.20	-0.16	-1.03	5.80	0.26	0.92	33.50	-4.03	-2.12	33.49
P3PMNH- 5605	3.40	0.04	0.24	5.50	-0.04	-0.14	38.30	0.77	0.41	38.18
PA9KKH- 5601	3.43	0.07	0.43	5.62	0.08	0.28	37.60	0.07	0.04	37.61
PG97FE- 5605	3.25	-0.11	-0.71	5.90	0.36	1.27	33.43	-4.10	-2.16	33.43
PRTCJH- 5601	3.48	0.12	0.75	5.35	-0.19	-0.67	40.60	3.07	1.62	40.58
Q6W2VN- 5605	3.50	0.14	0.87	5.75	0.21	0.74	37.50	-0.03	-0.01	37.50
QA7H4D- 5605	3.25	-0.11	-0.71	5.50	-0.04	-0.14	36.22	-1.31	-0.69	36.22
QAQVUB- 5605	3.45	0.09	0.56	5.71	0.17	0.60	37.17	-0.36	-0.19	37.17

TABLE 1 Stain D - Preparation Angle: 40°, continued

WebCede	Width			Length			Angle			
Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	CalcAng
QGNPXQ- 5605	3.00	-0.36	-2.29	4.54	-1.00	-3.53 <mark>X</mark>	41.36	3.83	2.02	41.36
QK3M6D- 5601	3.40	0.04	0.24	5.60	0.06	0.21	37.38	-0.15	-0.08	37.38
QLGRUN- 5605	3.50	0.14	0.87	5.80	0.26	0.92	37.00	-0.53	-0.28	37.12
RCTHRM- 5605	31.00	27.64	175.0 <mark>X</mark>	48.00	42.46	150.0 <mark>X</mark>	41.00	3.47	1.83	40.23
RFTMGD- 5605	3.60	0.24	1.51	5.70	0.16	0.56	39.20	1.67	0.88	39.17
RKJ22E- 5605	3.30	-0.06	-0.39	5.50	-0.04	-0.14	36.87	-0.66	-0.35	36.87
RTV2VP- 5605	3.46	0.10	0.62	5.64	0.10	0.35	37.90	0.37	0.20	37.84
RU9QTM- 5605	3.42	0.06	0.37	5.71	0.17	0.60	36.79	-0.74	-0.39	36.79
RY6FAV- 5605	3.00	-0.36	-2.29	6.00	0.46	1.62	30.00	-7.53	-3.97 <mark>X</mark>	30.00 X
T8TRRE- 5605	3.43	0.07	0.43	5.49	-0.05	-0.18	38.70	1.17	0.62	38.67
TC4FRB- 5605	3.42	0.06	0.37	5.56	0.02	0.07	37.96	0.43	0.23	37.96
TM64ET- 5605	3.38	0.02	0.11	5.40	-0.14	-0.50	38.80	1.27	0.67	38.75
TTTL4B- 5605	3.50	0.14	0.87	5.80	0.26	0.92	37.00	-0.53	-0.28	37.12
U4MMMK- 5601	3.00	-0.36	-2.29	5.00	-0.54	-1.91	36.90	-0.63	-0.33	36.87
U93VBJ- 5601	3.60	0.24	1.51	5.50	-0.04	-0.14	40.80	3.27	1.73	40.89
U9R3JF- 5601	3.50	0.14	0.87	6.00	0.46	1.62	35.70	-1.83	-0.96	35.69
UAUQYD- 5605	3.40	0.04	0.24	5.60	0.06	0.21	37.30	-0.23	-0.12	37.38
UC29X9- 5605	3.50	0.14	0.87	5.00	-0.54	-1.91	44.00	6.47	3.41 X	44.43 X
UH77ED- 5605	3.50	0.14	0.87	5.50	-0.04	-0.14	39.52	1.99	1.05	39.52
UKTQFB- 5605	0.86	-2.50	-15.84 <mark>X</mark>	1.42	-4.12	-14.56 <mark>X</mark>	37.30	-0.23	-0.12	37.27
UMZZCE- 5605	3.30	-0.06	-0.39	5.40	-0.14	-0.50	38.00	0.47	0.25	37.67

TABLE 1Stain D - Preparation Angle: 40°, continued

WobCeda	Width			Length				Angle		
Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	CalcAng
V433K7- 5601	3.40	0.04	0.24	5.50	-0.04	-0.14	38.18	0.65	0.34	38.18
VLMUEQ- 5605	3.60	0.24	1.51	5.70	0.16	0.56	39.00	1.47	0.78	39.17
VPVWQF- 5605	3.10	-0.26	-1.66	5.60	0.06	0.21	34.00	-3.53	-1.86	33.61
VTKLMK- 5601	3.50	0.14	0.87	5.40	-0.14	-0.50	40.40	2.87	1.52	40.40
WCK2J- 5605	3.30	-0.06	-0.39	5.40	-0.14	-0.50	37.60	0.07	0.04	37.67
WYN8DH- 5605	3.40	0.04	0.24	5.80	0.26	0.92	35.90	-1.63	-0.86	35.89
X29WAL- 5605	3.53	0.17	1.06	5.58	0.04	0.14	39.20	1.67	0.88	39.24
X8C6J8- 5605	16.80	13.44	85.10 <mark>X</mark>	25.70	20.16	71.22 <mark>X</mark>	40.80	3.27	1.73	40.82
XAHNEA- 5605	3.50	0.14	0.87	5.50	-0.04	-0.14	39.50	1.97	1.04	39.52
XBFVT8- 5601	3.55	0.19	1.19	5.72	0.18	0.64	38.40	0.87	0.46	38.36
XN34H9- 5605	3.40	0.04	0.24	5.50	-0.04	-0.14	38.20	0.67	0.36	38.18
XN6RU7- 5601	3.50	0.14	0.87	5.50	-0.04	-0.14	39.52	1.99	1.05	39.52
Y3EZ49- 5601	35.00	31.64	200.4 <mark>X</mark>	57.00	51.46	181.8 <mark>X</mark>	37.90	0.37	0.20	37.88
Y8V8R8- 5605	3.20	-0.16	-1.03	5.00	-0.54	-1.91	40.00	2.47	1.30	39.79
Y9PRQF- 5601	3.40	0.04	0.24	5.50	-0.04	-0.14	38.20	0.67	0.36	38.18
YDWHTL- 5605	4.00	0.64	4.04 X	6.50	0.96	3.39 <mark>X</mark>	38.00	0.47	0.25	37.98
YF6W67- 5605	5.95	2.59	16.39 <mark>X</mark>	9.96	4.42	15.61 <mark>X</mark>	36.70	-0.83	-0.44	36.68
YFMLVD- 5605	3.40	0.04	0.24	5.60	0.06	0.21	37.00	-0.53	-0.28	37.38
YLB8UE- 5601	3.40	0.04	0.24	5.60	0.06	0.21	37.40	-0.13	-0.07	37.38
YPBGT9- 5605	3.40	0.04	0.24	5.80	0.26	0.92	35.90	-1.63	-0.86	35.89
Z349AB- 5605	3.10	-0.26	-1.66	5.60	0.06	0.21	34.00	-3.53	-1.86	33.61
TABLE 1Stain D - Preparation Angle: 40°, continued

WohCodo		Width		Length					Angle		
Test	mm	Diff	CPV	m	m	Diff	CPV	Deg.	Diff	CPV	CalcAng
Z6LF8K- 5605	3.60	0.24	1.51	5.	60	0.06	0.21	40.00	2.47	1.30	40.01
Z73K6B- 5605	3.04	-0.32	-2.04	5.	16	-0.38	-1.34	36.10	-1.43	-0.75	36.10
ZLLRLZ- 5601	3.50	0.14	0.87	5.	50	-0.04	-0.14	39.50	1.97	1.04	39.52
ZPLVE9- 5605	3.40	0.04	0.24	5.	60	0.06	0.21	37.00	-0.53	-0.28	37.38
ZRDUT7- 5605	3.20	-0.16	-1.03	5.	00	-0.54	-1.91	39.79	2.26	1.19	39.79
ZVVV48- 5605	3.40	0.04	0.24	5.	20	-0.34	-1.20	41.00	3.47	1.83	40.83

Summary Statistics for Stain D - Preparation Angle: 40°									
	Width (mm)	Length (mm)	Angle°	CalcAng°					
Grand Mean	3.36	5.54	37.53	37.53					
Standard Deviation	0.16	0.28	1.90	1.91					
Participants Included in calculations	136	133	147	145					
Participants excluded from calculations (indicated by X)	16	19	6	6					

TABLE 1 Stain E - Preparation Angle: 27°

WebCode	Width			Length			Angle			
Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	CalcAng
2CGXY3- 5605	2.50	0.05	0.56	5.50	-0.49	-1.40	27.04	2.89	2.17	27.04
3BYBZK- 5605	3.90	1.45	16.38 <mark>X</mark>	10.00	4.01	11.42 <mark>X</mark>	22.95	-1.20	-0.90	22.95
3FAHBA- 5605	2.50	0.05	0.56	6.20	0.21	0.59	24.00	-0.15	-0.12	23.78
3N3QVZ- 5605	2.33	-0.12	-1.36	5.42	-0.57	-1.63	25.50	1.35	1.01	25.46
3UUXEA- 5601	2.50	0.05	0.56	5.80	-0.19	-0.54	25.50	1.35	1.01	25.53
3VK3ZG- 5605	2.46	0.01	0.11	6.26	0.27	0.77	23.14	-1.01	-0.76	23.14
3XUAAA- 5601	2.50	0.05	0.56	6.10	0.11	0.31	24.20	0.05	0.04	24.19
3Y7LE7- 5605	2.30	-0.15	-1.69	6.00	0.01	0.02	22.54	-1.61	-1.21	22.54
4KH4VZ- 5605	2.40	-0.05	-0.56	5.90	-0.09	-0.26	24.00	-0.15	-0.12	24.00
4X83L3- 5605	2.50	0.05	0.56	6.10	0.11	0.31	24.00	-0.15	-0.12	24.19
4ZFBT3- 5601	2.40	-0.05	-0.56	5.80	-0.19	-0.54	24.40	0.25	0.19	24.44
62NPZ9- 5605	2.40	-0.05	-0.56	6.00	0.01	0.02	24.00	-0.15	-0.12	23.58
66PW8E- 5605	2.50	0.05	0.56	6.20	0.21	0.59	23.80	-0.35	-0.27	23.78
6L9M7D- 5605	2.50	0.05	0.56	6.00	0.01	0.02	24.60	0.45	0.34	24.62
6VVMR3- 5605	2.40	-0.05	-0.56	5.60	-0.39	-1.11	25.00	0.85	0.64	25.38
6YZC4X- 5605	2.50	0.05	0.56	6.20	0.21	0.59	23.78	-0.37	-0.28	23.78
7GTEHE- 5605	3.00	0.55	6.21 X	7.00	1.01	2.87	25.00	0.85	0.64	25.38
7HATV3- 5605	2.40	-0.05	-0.56	6.30	0.31	0.88	22.00	-2.15	-1.62	22.39
7L8CQ2- 5605	2.00	-0.45	-5.08 X	5.50	-0.49	-1.40	21.00	-3.15	-2.37	21.32
87BEBW- 5605	2.00	-0.45	-5.08 X	6.00	0.01	0.02	19.47	-4.68	-3.52 <mark>X</mark>	19.47 X
88MWKF- 5605	2.29	-0.16	-1.81	5.89	-0.10	-0.29	23.00	-1.15	-0.87	22.88

TABLE 1Stain E - Preparation Angle: 27°, continued

WohCodo		Width			Length			Angle		
Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	CalcAng
89V96B- 5605	2.47	0.02	0.23	6.10	0.11	0.31	24.00	-0.15	-0.12	23.89
8BNXMY- 5605	2.30	-0.15	-1.69	5.20	-0.79	-2.25	26.00	1.85	1.39	26.25
8EY9D8- 5605	2.10	-0.35	-3.95 <mark>X</mark>	5.10	-0.89	-2.54	24.30	0.15	0.11	24.32
8HNCFZ- 5601	2.50	0.05	0.56	6.00	0.01	0.02	25.00	0.85	0.64	24.62
8JFG28- 5605	3.45	1.00	11.29 <mark>X</mark>	10.20	4.21	11.99 <mark>X</mark>	19.77	-4.38	-3.29 <mark>X</mark>	19.77 X
8QFY6B- 5605	2.40	-0.05	-0.56	5.90	-0.09	-0.26	24.10	-0.05	-0.04	24.00
8RN6E6- 5601	2.40	-0.05	-0.56	5.80	-0.19	-0.54	24.40	0.25	0.19	24.44
93QQAV- 5605	2.40	-0.05	-0.56	6.00	0.01	0.02	24.00	-0.15	-0.12	23.58
96QZD7- 5605	2.50	0.05	0.56	6.40	0.41	1.16	23.00	-1.15	-0.87	22.99
9CCRP7- 5605	2.50	0.05	0.56	6.10	0.11	0.31	24.10	-0.05	-0.04	24.19
9JBH9V- 5601	2.50	0.05	0.56	6.40	0.41	1.16	23.00	-1.15	-0.87	22.99
9T2VC2- 5605	2.50	0.05	0.56	5.96	-0.03	-0.09	24.80	0.65	0.49	24.80
AAL88U- 5601	2.33	-0.12	-1.36	6.08	0.09	0.25	22.53	-1.62	-1.22	22.53
ADJMN3- 5605	2.40	-0.05	-0.56	6.00	0.01	0.02	24.00	-0.15	-0.12	23.58
AHA4Y8- 5605	2.50	0.05	0.56	6.00	0.01	0.02	24.60	0.45	0.34	24.62
AMPCM8- 5605	2.50	0.05	0.56	6.10	0.11	0.31	24.00	-0.15	-0.12	24.19
AXAJLW- 5605	1.40	-1.05	-11.86 <mark>X</mark>	3.48	-2.51	-7.15 <mark>X</mark>	23.70	-0.45	-0.34	23.72
BGGA97- 5605	2.50	0.05	0.56	6.40	0.41	1.16	23.00	-1.15	-0.87	22.99
BPQZC9- 5605	2.29	-0.16	-1.81	4.05	-1.94	-5.53 <mark>X</mark>	34.43	10.28	7.72 <mark>X</mark>	34.43 X
BUKUAA- 5605	2.50	0.05	0.56	6.10	0.11	0.31	24.00	-0.15	-0.12	24.19
BV2PC6- 5605	2.50	0.05	0.56	6.09	0.10	0.28	24.20	0.05	0.04	24.24

TABLE 1Stain E - Preparation Angle: 27°, continued

WebCode		Width Le		Length	ength		Angle			
Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	CalcAng
C7WKPQ- 5605	2.43	-0.02	-0.23	6.53	0.54	1.53	21.87	-2.28	-1.72	21.85
CE9HMV- 5605	2.25	-0.20	-2.26	5.50	-0.49	-1.40	24.00	-0.15	-0.12	24.15
CJKJFT- 5605	2.30	-0.15	-1.69	6.20	0.21	0.59	21.80	-2.35	-1.77	21.78
CLKTEM- 5605	2.49	0.04	0.45	5.90	-0.09	-0.26	25.00	0.85	0.64	24.96
CNY3XA- 5605	2.30	-0.15	-1.69	6.30	0.31	0.88	21.40	-2.75	-2.07	21.41
CW6ZFW- 5605	2.50	0.05	0.56	6.20	0.21	0.59	24.00	-0.15	-0.12	23.78
D2FC2R- 5605	2.53	0.08	0.90	6.09	0.10	0.28	25.00	0.85	0.64	24.55
DCEBGP- 5605	2.49	0.04	0.45	6.12	0.13	0.37	24.00	-0.15	-0.12	24.01
DGRUY7- 5605	2.53	0.08	0.90	6.18	0.19	0.54	24.00	-0.15	-0.12	24.17
DWLH4P- 5605	2.50	0.05	0.56	6.50	0.51	1.45	22.60	-1.55	-1.17	22.62
DXXDCN- 5605	3.58	1.13	12.76 X	8.84	2.85	8.11 X	23.90	-0.25	-0.19	23.89
EE3ZGV- 5601	2.63	0.18	2.03	5.99	0.00	0.00	26.04	1.89	1.42	26.04
EEXMTZ- 5605	5.90	3.45	38.96 X	2.50	-3.49	-9.94 X	25.20	1.05	0.79	
EG47N2- 5605	2.99	0.54	6.10 X	5.39	-0.60	-1.71	33.69	9.54	7.16 X	33.69 X
EGPJHT- 5605	2.50	0.05	0.56	6.00	0.01	0.02	24.62	0.47	0.35	24.62
EHK4G2- 5605	2.40	-0.05	-0.56	6.00	0.01	0.02	23.60	-0.55	-0.42	23.58
ENMBQM- 5605	0.94	-1.51	-17.05 X	2.35	-3.64	-10.37 <mark>X</mark>	23.60	-0.55	-0.42	23.58
ETH6NN- 5605	2.49	0.04	0.45	6.05	0.06	0.17	24.30	0.15	0.11	24.30
EXTB4V- 5605	2.50	0.05	0.56	6.10	0.11	0.31	24.00	-0.15	-0.12	24.19
FED23U- 5601	2.60	0.15	1.69	6.27	0.28	0.79	24.00	-0.15	-0.12	24.50
FJBMQQ- 5605	2.40	-0.05	-0.56	5.60	-0.39	-1.11	25.00	0.85	0.64	25.38

TABLE 1Stain E - Preparation Angle: 27°, continued

WebCode-		Width			Length			Angle		
Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	CalcAng
FMBWR8- 5605	2.30	-0.15	-1.69	6.00	0.01	0.02	22.54	-1.61	-1.21	22.54
FU9PZ2- 5601	2.50	0.05	0.56	5.50	-0.49	-1.40	27.00	2.85	2.14	27.04
FWCLDN- 5605	2.40	-0.05	-0.56	5.70	-0.29	-0.83	24.90	0.75	0.56	24.90
FZX32P- 5605	2.43	-0.02	-0.23	6.07	0.08	0.22	23.58	-0.57	-0.43	23.60
G9MCNP- 5605	2.50	0.05	0.56	6.30	0.31	0.88	23.30	-0.85	-0.64	23.38
G9P2ZM- 5601	2.50	0.05	0.56	5.50	-0.49	-1.40	27.00	2.85	2.14	27.04
GDZV78- 5605	2.50	0.05	0.56	5.50	-0.49	-1.40	27.00	2.85	2.14	27.04
GLREEY- 5605	2.60	0.15	1.69	6.70	0.71	2.02	22.80	-1.35	-1.02	22.83
HLN8MQ- 5605							22.40	-1.75	-1.32	
HQJYVM- 5605	1.11	-1.34	-15.13 <mark>X</mark>	2.83	-3.16	-9.00 <mark>X</mark>	23.10	-1.05	-0.79	23.09
HW7PD4- 5605	2.40	-0.05	-0.56	5.70	-0.29	-0.83	24.90	0.75	0.56	24.90
J6YGX3- 5605	2.40	-0.05	-0.56	5.90	-0.09	-0.26	24.00	-0.15	-0.12	24.00
J7QFC2- 5605	2.50	0.05	0.56	6.20	0.21	0.59	23.80	-0.35	-0.27	23.78
JJUZHJ- 5605	25.00	22.55	254.7 <mark>X</mark>	63.00	57.01	162.4 <mark>X</mark>	23.00	-1.15	-0.87	23.38
JMNHER- 5605	2.60	0.15	1.69	5.70	-0.29	-0.83	27.00	2.85	2.14	27.14
JQZGDY- 5605	2.40	-0.05	-0.56	5.90	-0.09	-0.26	24.20	0.05	0.04	24.00
JR8QFJ- 5605	2.20	-0.25	-2.82	5.40	-0.59	-1.68	24.00	-0.15	-0.12	24.04
K2UA2G- 5605	2.60	0.15	1.69	6.10	0.11	0.31	25.00	0.85	0.64	25.23
K7QWWP- 5601	2.43	-0.02	-0.23	6.22	0.23	0.65	23.00	-1.15	-0.87	23.00
KEJ9XZ- 5601	2.30	-0.15	-1.69	5.30	-0.69	-1.97	26.00	1.85	1.39	25.72
KJAJ3G- 5605	59.30	56.85	642.0 <mark>X</mark>	140.40	134.41	382.8 <mark>X</mark>	25.00	0.85	0.64	24.98

TABLE 1Stain E - Preparation Angle: 27°, continued

WebCede		Width		Length			Angle			
Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	CalcAng
KT2X7M- 5601	2.50	0.05	0.56	6.00	0.01	0.02	24.60	0.45	0.34	24.62
KZLYGL- 5605	2.40	-0.05	-0.56	5.40	-0.59	-1.68	26.00	1.85	1.39	26.39
L3KW3X- 5605	2.31	-0.14	-1.58	5.65	-0.34	-0.97	24.13	-0.02	-0.02	24.13
L4EG3P- 5601	2.21	-0.24	-2.71	6.17	0.18	0.51	21.00	-3.15	-2.37	20.99
L4WQRJ- 5605	2.40	-0.05	-0.56	6.20	0.21	0.59	22.80	-1.35	-1.02	22.77
L8Z6QX- 5601	2.40	-0.05	-0.56	6.60	0.61	1.73	21.00	-3.15	-2.37	21.32
LA7PFH- 5601	2.60	0.15	1.69	7.00	1.01	2.87	22.00	-2.15	-1.62	21.80
LF6C7X- 5605	2.00	-0.45	-5.08 X	6.00	0.01	0.02	19.47	-4.68	-3.52 X	19.47 X
LFUBEH- 5605	2.50	0.05	0.56	6.30	0.31	0.88	23.40	-0.75	-0.57	23.38
LQNR4J- 5605	2.40	-0.05	-0.56	6.00	0.01	0.02	24.00	-0.15	-0.12	23.58
LTEQHG- 5605	2.49	0.04	0.45	6.19	0.20	0.57	23.72	-0.43	-0.33	23.72
LWE3DG- 5605	2.40	-0.05	-0.56	6.50	0.51	1.45	21.70	-2.45	-1.84	21.67
MULPPV- 5605	2.50	0.05	0.56	6.40	0.41	1.16	23.00	-1.15	-0.87	22.99
N3VE3U- 5605	2.40	-0.05	-0.56	6.40	0.41	1.16	22.00	-2.15	-1.62	22.02
P3PMNH- 5605	2.50	0.05	0.56	6.10	0.11	0.31	23.50	-0.65	-0.49	24.19
PA9KKH- 5601	2.41	-0.04	-0.45	6.21	0.22	0.62	22.80	-1.35	-1.02	22.84
PG97FE- 5605	2.50	0.05	0.56	6.25	0.26	0.74	23.58	-0.57	-0.43	23.58
PRTCJH- 5601	2.50	0.05	0.56	5.88	-0.11	-0.32	25.20	1.05	0.79	25.16
Q6W2VN- 5605	2.50	0.05	0.56	6.25	0.26	0.74	23.60	-0.55	-0.42	23.58
QA7H4D- 5605	2.50	0.05	0.56	6.00	0.01	0.02	24.62	0.47	0.35	24.62
QAQVUB- 5605	2.47	0.02	0.23	6.27	0.28	0.79	23.20	-0.95	-0.72	23.20

TABLE 1Stain E - Preparation Angle: 27°, continued

WebCode	Width			Length			Angle			
Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	CalcAng
QGNPXQ- 5605	2.30	-0.15	-1.69	5.55	-0.44	-1.26	24.48	0.33	0.25	24.48
QK3M6D- 5601	2.40	-0.05	-0.56	6.00	0.01	0.02	23.58	-0.57	-0.43	23.58
QLGRUN- 5605	2.60	0.15	1.69	6.00	0.01	0.02	26.00	1.85	1.39	25.68
RCTHRM- 5605	23.20	20.75	234.3 X	53.80	47.81	136.2 <mark>X</mark>	25.00	0.85	0.64	25.55
RFTMGD- 5605	2.50	0.05	0.56	5.90	-0.09	-0.26	25.10	0.95	0.71	25.07
RKJ22E- 5605	2.41	-0.04	-0.45	6.40	0.41	1.16	22.12	-2.03	-1.53	22.12
RTV2VP- 5605	2.46	0.01	0.11	5.85	-0.14	-0.40	24.90	0.75	0.56	24.87
RU9QTM- 5605	2.47	0.02	0.23	6.30	0.31	0.88	23.08	-1.07	-0.81	23.08
RY6FAV- 5605	2.00	-0.45	-5.08 X	7.00	1.01	2.87	17.00	-7.15	-5.37 <mark>X</mark>	16.60 X
T8TRRE- 5605	2.46	0.01	0.11	5.74	-0.25	-0.72	25.40	1.25	0.94	25.38
TC4FRB- 5605	2.41	-0.04	-0.45	6.15	0.16	0.45	23.07	-1.08	-0.81	23.07
TM64ET- 5605	2.41	-0.04	-0.45	5.62	-0.37	-1.06	25.40	1.25	0.94	25.39
TTTL4B- 5605	2.50	0.05	0.56	6.50	0.51	1.45	23.00	-1.15	-0.87	22.62
U4MMMK- 5601	2.00	-0.45	-5.08 X	5.00	-0.99	-2.82	23.60	-0.55	-0.42	23.58
U93VBJ- 5601	2.40	-0.05	-0.56	6.30	0.31	0.88	22.40	-1.75	-1.32	22.39
U9R3JF- 5601	2.50	0.05	0.56	6.20	0.21	0.59	23.80	-0.35	-0.27	23.78
UAUQYD- 5605	2.60	0.15	1.69	6.10	0.11	0.31	24.60	0.45	0.34	25.23
UC29X9- 5605	2.50	0.05	0.56	6.00	0.01	0.02	25.00	0.85	0.64	24.62
UH77ED- 5605	2.70	0.25	2.82	6.00	0.01	0.02	26.74	2.59	1.94	26.74
UKTQFB- 5605	0.63	-1.82	-20.55 X	1.51	-4.48	-12.76 X	24.70	0.55	0.41	24.66
UMZZCE- 5605	2.40	-0.05	-0.56	6.00	0.01	0.02	24.00	-0.15	-0.12	23.58

TABLE 1Stain E - Preparation Angle: 27°, continued

WebCode-		Width			Length			Angle		
Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	CalcAng
V433K7- 5601	2.40	-0.05	-0.56	5.40	-0.59	-1.68	26.39	2.24	1.68	26.39
VLMUEQ- 5605	2.50	0.05	0.56	6.10	0.11	0.31	24.00	-0.15	-0.12	24.19
VPVWQF- 5605	3.00	0.55	6.21 X	6.20	0.21	0.59	29.00	4.85	3.64 <mark>X</mark>	28.94 X
VTKLMK- 5601	2.50	0.05	0.56	5.90	-0.09	-0.26	25.10	0.95	0.71	25.07
VVCK2J- 5605	2.50	0.05	0.56	5.80	-0.19	-0.54	27.70	3.55	2.66	25.53
WYN8DH- 5605	2.40	-0.05	-0.56	5.60	-0.39	-1.11	25.40	1.25	0.94	25.38
X29WAL- 5605	2.47	0.02	0.23	5.63	-0.36	-1.03	26.00	1.85	1.39	26.02
X8C6J8- 5605	13.20	10.75	121.4 X	28.50	22.51	64.1 X	27.70	3.55	2.66	27.59
XAHNEA- 5605	2.50	0.05	0.56	6.00	0.01	0.02	24.60	0.45	0.34	24.62
XBFVT8- 5601	2.55	0.10	1.13	6.00	0.01	0.02	25.10	0.95	0.71	25.15
XN34H9- 5605	2.50	0.05	0.56	6.00	0.01	0.02	24.60	0.45	0.34	24.62
XN6RU7- 5601	2.50	0.05	0.56	6.00	0.01	0.02	24.62	0.47	0.35	24.62
Y3EZ49- 5601	25.00	22.55	254.7 X	63.00	57.01	162.4 X	23.40	-0.75	-0.57	23.38
Y8V8R8- 5605	2.30	-0.15	-1.69	5.50	-0.49	-1.40	25.00	0.85	0.64	24.72
Y9PRQF- 5601	2.40	-0.05	-0.56	5.60	-0.39	-1.11	25.40	1.25	0.94	25.38
YDWHTL- 5605	2.40	-0.05	-0.56	6.00	0.01	0.02	24.00	-0.15	-0.12	23.58
YF6W67- 5605	4.00	1.55	17.50 <mark>X</mark>	9.80	3.81	10.85 <mark>X</mark>	24.10	-0.05	-0.04	24.09
YFMLVD- 5605	2.40	-0.05	-0.56	6.00	0.01	0.02	24.00	-0.15	-0.12	23.58
YLB8UE- 5601	2.50	0.05	0.56	6.00	0.01	0.02	24.60	0.45	0.34	24.62
YPBGT9- 5605	2.40	-0.05	-0.56	6.10	0.11	0.31	23.20	-0.95	-0.72	23.17
Z349AB- 5605	2.30	-0.15	-1.69	5.60	-0.39	-1.11	24.00	-0.15	-0.12	24.25

TABLE 1Stain E - Preparation Angle: 27°, continued

WahCada		Width			Length			Angle		
Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	CalcAng
Z6LF8K- 5605	2.60	0.15	1.69	6.40	0.41	1.16	24.00	-0.15	-0.12	23.97
Z73K6B- 5605	2.16	-0.29	-3.28 X	5.59	-0.40	-1.14	22.70	-1.45	-1.09	22.73
ZLLRLZ- 5601	2.50	0.05	0.56	5.80	-0.19	-0.54	25.50	1.35	1.01	25.53
ZPLVE9- 5605	2.50	0.05	0.56	6.00	0.01	0.02	25.00	0.85	0.64	24.62
ZRDUT7- 5605	2.30	-0.15	-1.69	5.70	-0.29	-0.83	23.80	-0.35	-0.27	23.80
ZVVV48- 5605	2.50	0.05	0.56	5.40	-0.59	-1.68	27.00	2.85	2.14	27.58

Summary Statistics for Stain E - Preparation Angle: 27°									
	Width (mm)	Length (mm)	Angle°	CalcAng°					
Grand Mean	2.45	5.99	24.15	24.15					
Standard Deviation	0.09	0.35	1.33	1.32					
Participants Included in calculations	128	137	146	144					
Participants excluded from calculations (indicated by X)	24	15	7	7					

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-	Pattorn Tuno	WebCode-	Pattorn Type
	Panern Type		Pomern Type
2CGXY3- 5605	Expiration Pattern	/GTEHE- 5605	Expiration Pattern
3BYBZK- 5605	Expiration Pattern	7HATV3- 5605	Expiration Pattern
3FAHBA- 5605	Expiration Pattern	7L8CQ2- 5605	Expiration Pattern
3FU42E- 5601	Expiration Pattern	87BEBW- 5605	Expiration Pattern
3N3QVZ- 5605	Expiration Pattern	88MWKF- 5605	Expiration Pattern
3UUXEA- 5601	Expiration Pattern	89V96B- 5605	Expiration Pattern
3VK3ZG- 5605	Expiration Pattern	8BNXMY- 5605	Expiration Pattern
3XUAAA- 5601	Expiration Pattern	8EY9D8- 5605	Expiration Pattern
3Y7LE7- 5605	Expiration Pattern	8HNCFZ- 5601	Expiration Pattern
44YA7W- 5601	Expiration Pattern	8JFG28- 5605	Expiration Pattern
4KH4VZ- 5605	Expiration Pattern	8QFY6B- 5605	Expiration Pattern
4TFV4U- 5601	Expiration Pattern	8RN6E6- 5601	Expiration Pattern
4X83L3- 5605	Expiration Pattern	93QQAV- 5605	Expiration Pattern
4ZFBT3- 5601	Expiration Pattern	96QZD7- 5605	Expiration Pattern
62NPZ9- 5605	Expiration Pattern	9CCRP7- 5605	Expiration Pattern
66PW8E- 5605	Expiration Pattern	9JBH9V- 5601	Expiration Pattern
6L9M7D- 5605	Expiration Pattern	9T2VC2- 5605	Expiration Pattern
6VVMR3- 5605	Expiration Pattern	AAL88U- 5601	Expiration Pattern
6YZC4X- 5605	Expiration Pattern	ADJMN3- 5605	Expiration Pattern

WebCode-		WebCode-		
Test	Pattern Type	Test	Pattern Type	
AEEA27- 5601	Expiration Pattern	EEXMTZ- 5605	Expiration Pattern	
AHA4Y8- 5605	Expiration Pattern	EG47N2- 5605	Expiration Pattern	
AMPCM8- 5605	Expiration Pattern	EGPJHT- 5605	Expiration Pattern	
AXAJLW- 5605	Expiration Pattern	EHK4G2- 5605	Expiration Pattern	
AZDGWP- 5601	Expiration Pattern	ENMBQM- 5605	Expiration Pattern	
BGGA97- 5605	Expiration Pattern	EQEA6L- 5601	Expiration Pattern	
BPQZC9- 5605	Expiration Pattern	ETH6NN- 5605	Expiration Pattern	
BUKUAA- 5605	Expiration Pattern	EVPLR2- 5605	Expiration Pattern	
BV2PC6- 5605	Expiration Pattern	EXTB4V- 5605	Expiration Pattern	
C7WKPQ- 5605	Expiration Pattern	EYNXN2- 5605	Expiration Pattern	
CE9HMV- 5605	Expiration Pattern	FA2HDZ- 5601	Expiration Pattern	
CJKJFT- 5605	Expiration Pattern	FED23U- 5601	Expiration Pattern	
CLKTEM- 5605	Expiration Pattern	FJBMQQ- 5605	Expiration Pattern	
CNY3XA- 5605	Expiration Pattern	FMBWR8- 5605	Expiration Pattern	
CW6ZFW- 5605	Expiration Pattern	FU9PZ2- 5601	Expiration Pattern	
D2FC2R- 5605	Expiration Pattern	FWCLDN- 5605	Expiration Pattern	
DCEBGP- 5605	Expiration Pattern	FZX32P- 5605	Expiration Pattern	
DGRUY7- 5605	Expiration Pattern	G9MCNP- 5605	Expiration Pattern	
DWLH4P- 5605	Expiration Pattern	G9P2ZM- 5601	Expiration Pattern	
DXXDCN- 5605	Expiration Pattern	GDZV78- 5605	Expiration Pattern	
EE3ZGV- 5601	Expiration Pattern	GGDWWG- 5601	Expiration Pattern	

WebCode-		WebCode-	
Test	Pattern Type	Test	Pattern Type
GLREEY- 5605	Expiration Pattern	LA7PFH- 5601	Expiration Pattern
H3DDYQ- 5605	Expiration Pattern	LF6C7X- 5605	Projected Pattern
HLN8MQ- 5605	Expiration Pattern	LFUBEH- 5605	Expiration Pattern
HQJYVM- 5605	Expiration Pattern	LQNR4J- 5605	Expiration Pattern
HW7PD4- 5605	Expiration Pattern	LTEQHG- 5605	Expiration Pattern
J6YGX3- 5605	Expiration Pattern	LWE3DG- 5605	Expiration Pattern
J7QFC2- 5605	Expiration Pattern	MULPPV- 5605	Expiration Pattern
JJUZHJ- 5605	Expiration Pattern	MX3XDV- 5601	Expiration Pattern
JMNHER- 5605	Expiration Pattern	MZ9H3F- 5605	Expiration Pattern
JQZGDY- 5605	Expiration Pattern	N3VE3U- 5605	Expiration Pattern
JR8QFJ- 5605	Expiration Pattern	NEPT9H- 5601	Expiration Pattern
K2UA2G- 5605	Expiration Pattern	NNDMBU- 5605	Expiration Pattern
K7QWWP- 5601	Expiration Pattern	P3PMNH- 5605	Expiration Pattern
KEJ9XZ- 5601	Expiration Pattern	РА9ККН- 5601	Expiration Pattern
KJAJ3G- 5605	Expiration Pattern	PG97FE- 5605	Expiration Pattern
KT2X7M- 5601	Expiration Pattern	PRTCJH- 5601	Expiration Pattern
KZLYGL- 5605	Expiration Pattern	Q6W2VN- 5605	Expiration Pattern
L3KW3X- 5605	Expiration Pattern	QA7H4D- 5605	Expiration Pattern
L4EG3P- 5601	Expiration Pattern	QAQVUB- 5605	Expiration Pattern
L4WQRJ- 5605	Expiration Pattern	QGNPXQ- 5605	Expiration Pattern
L8Z6QX- 5601	Expiration Pattern	QK3M6D- 5601	Expiration Pattern

WebCode-		WebCode-	
Test	Pattern Type	Test	Pattern Type
QLGRUN- 5605	Expiration Pattern	V433K7- 5601	Expiration Pattern
QRLNFA- 5601	Expiration Pattern	V7U2Y6- 5601	Expiration Pattern
RCTHRM- 5605	Expiration Pattern	VAUCU6- 5601	Expiration Pattern
RFTMGD- 5605	Expiration Pattern	VLMUEQ- 5605	Expiration Pattern
RKJ22E- 5605	Expiration Pattern	VPVWQF- 5605	Expiration Pattern
RTV2VP- 5605	Expiration Pattern	VQUG2D- 5605	Expiration Pattern
RU9QTM- 5605	Expiration Pattern	VRALV6- 5601	Expiration Pattern
RY6FAV- 5605	Expiration Pattern	VTKLMK- 5601	Expiration Pattern
T8TRRE- 5605	Expiration Pattern	VVCK2J- 5605	Expiration Pattern
TC4FRB- 5605	Expiration Pattern	WDMTK4- 5601	Expiration Pattern
TM64ET- 5605	Expiration Pattern	WL3DYN- 5605	Expiration Pattern
TTTL4B- 5605	Expiration Pattern	WYN8DH- 5605	Expiration Pattern
U4MMMK- 5601	Expiration Pattern	X29WAL- 5605	Expiration Pattern
U93VBJ- 5601	Expiration Pattern	X8C6J8- 5605	Expiration Pattern
U9R3JF- 5601	Expiration Pattern	XAHNEA- 5605	Expiration Pattern
UAUQYD- 5605	Expiration Pattern	XBFVT8- 5601	Expiration Pattern
UC29X9- 5605	Expiration Pattern	XF9WR2- 5601	Expiration Pattern
UH77ED- 5605	Expiration Pattern	XHDQGK- 5601	Expiration Pattern
UKTQFB- 5605	Expiration Pattern	XN34H9- 5605	Expiration Pattern
UMZZCE- 5605	Expiration Pattern	XN6RU7- 5601	Expiration Pattern
UWPUJ6- 5601	Expiration Pattern	Y3EZ49- 5601	Expiration Pattern

WebCode-	
Test	Pattern Type
Y8V8R8- 5605	Expiration Pattern
Y9PRQF- 5601	Expiration Pattern
YB98NY- 5601	Expiration Pattern
YDWHTL- 5605	Expiration Pattern
YF6W67- 5605	Expiration Pattern
YFMLVD- 5605	Expiration Pattern
YHT4UA- 5601	Expiration Pattern
YLB8UE- 5601	Expiration Pattern
YPBGT9- 5605	Expiration Pattern
YTBPWH- 5601	Expiration Pattern
Z349AB- 5605	Expiration Pattern
Z6LF8K- 5605	Expiration Pattern
Z73K6B- 5605	Expiration Pattern
ZLLRLZ- 5601	Expiration Pattern
ZPLVE9- 5605	Expiration Pattern
ZRDUT7- 5605	Expiration Pattern
ZVVV48- 5605	Expiration Pattern

Pattern Types Reported for Item 2 Participants: 181			
<u>Pattern Type</u>	Percent Reported		
Expiration Pattern	180 (99.4%)		
Projected Pattern	1 (0.6%)		

Item 3

WebCode-		WebCode-	
Test	Pattern Type	Test	Pattern Type
2CGXY3- 5605	Swipe	7L8CQ2- 5605	Swipe
3BYBZK- 5605	Swipe	87BEBW- 5605	Swipe
3FAHBA- 5605	Swipe	88MWKF- 5605	Swipe
3FU42E- 5601	Swipe	89V96B- 5605	Swipe
3N3QVZ- 5605	Swipe	8BNXMY- 5605	Swipe
3UUXEA- 5601	Swipe	8EY9D8- 5605	Swipe
3VK3ZG- 5605	Swipe	8HNCFZ- 5601	Swipe
3XUAAA- 5601	Swipe	8JFG28- 5605	Swipe
3Y7LE7- 5605	Swipe	8QFY6B- 5605	Swipe
44YA7W- 5601	Swipe	8RN6E6- 5601	Swipe
4KH4VZ- 5605	Swipe	93QQAV- 5605	Swipe
4TFV4U- 5601	Swipe	96QZD7- 5605	Swipe
4X83L3- 5605	Swipe	9CCRP7- 5605	Swipe
4ZFBT3- 5601	Swipe	9JBH9V- 5601	Swipe
62NPZ9- 5605	Swipe	9T2VC2- 5605	Swipe
66PW8E- 5605	Swipe	AAL88U- 5601	Swipe
6L9M7D- 5605	Swipe	ADJMN3- 5605	Swipe
6VVMR3- 5605	Swipe	AEEA27- 5601	Swipe
6YZC4X- 5605	Swipe	AHA4Y8- 5605	Swipe
7GTEHE- 5605	Swipe	AMPCM8- 5605	Swipe
7HATV3- 5605	Swipe	AXAJLW- 5605	Swipe

WebCode-		WebCode-	
Test	Pattern Type	Test	Pattern Type
AZDGWP- 5601	Swipe	ENMBQM- 5605	Swipe
BGGA97- 5605	Swipe	EQEA6L- 5601	Swipe
BPQZC9- 5605	Swipe	ETH6NN- 5605	Swipe
BUKUAA- 5605	Swipe	EVPLR2- 5605	Swipe
BV2PC6- 5605	Swipe	EXTB4V- 5605	Swipe
C7WKPQ- 5605	Swipe	EYNXN2- 5605	Swipe
CE9HMV- 5605	Swipe	FA2HDZ- 5601	Swipe
CJKJFT- 5605	Swipe	FED23U- 5601	Swipe
CLKTEM- 5605	Swipe	FJBMQQ- 5605	Swipe
CNY3XA- 5605	Swipe	FMBWR8- 5605	Swipe
CW6ZFW- 5605	Swipe	FU9PZ2- 5601	Swipe
D2FC2R- 5605	Swipe	FWCLDN- 5605	Swipe
DCEBGP- 5605	Swipe	FZX32P- 5605	Swipe
DGRUY7- 5605	Swipe	G9MCNP- 5605	Swipe
DWLH4P- 5605	Swipe	G9P2ZM- 5601	Swipe
DXXDCN- 5605	Swipe	GDZV78- 5605	Swipe
EE3ZGV- 5601	Swipe	GGDWWG- 5601	Swipe
EEXMTZ- 5605	Swipe	GLREEY- 5605	Swipe
EG47N2- 5605	Swipe	H3DDYQ- 5605	Swipe
EGPJHT- 5605	Swipe	HLN8MQ- 5605	Swipe
EHK4G2- 5605	Swipe	HQJYVM- 5605	Swipe

WebCode-		WebCode-	
Test	Pattern Type	Test	Pattern Type
HW7PD4- 5605	Swipe	LTEQHG- 5605	Swipe
J6YGX3- 5605	Swipe	LWE3DG- 5605	Swipe
J7QFC2- 5605	Swipe	MULPPV- 5605	Swipe
JJUZHJ- 5605	Swipe	MX3XDV- 5601	Swipe
JMNHER- 5605	Swipe	MZ9H3F- 5605	Swipe
JQZGDY- 5605	Swipe	N3VE3U- 5605	Swipe
JR8QFJ- 5605	Swipe	NEPT9H- 5601	Swipe
K2UA2G- 5605	Swipe	NNDMBU- 5605	Swipe
K7QWWP- 5601	Swipe	P3PMNH- 5605	Swipe
KEJ9XZ- 5601	Swipe	РА9ККН- 5601	Swipe
KJAJ3G- 5605	Swipe	PG97FE- 5605	Swipe
KT2X7M- 5601	Swipe	PRTCJH- 5601	Swipe
KZLYGL- 5605	Swipe	Q6W2VN- 5605	Swipe
L3KW3X- 5605	Swipe	QA7H4D- 5605	Swipe
L4EG3P- 5601	Swipe	QAQVUB- 5605	Swipe
L4WQRJ- 5605	Swipe	QGNPXQ- 5605	Swipe
L8Z6QX- 5601	Swipe	QK3M6D- 5601	Swipe
LA7PFH- 5601	Swipe	QLGRUN- 5605	Swipe
LF6C7X- 5605	Swipe	QRLNFA- 5601	Swipe
LFUBEH- 5605	Swipe	RCTHRM- 5605	Swipe
LQNR4J- 5605	Swipe	RFTMGD- 5605	Swipe

WebCode-		WebCode-	
Test	Pattern Type	Test	Pattern Type
RKJ22E- 5605	Swipe	VPVWQF- 5605	Swipe
RTV2VP- 5605	Swipe	VQUG2D- 5605	Swipe
RU9QTM- 5605	Swipe	VRALV6- 5601	Swipe
RY6FAV- 5605	Swipe	VTKLMK- 5601	Swipe
T8TRRE- 5605	Swipe	VVCK2J- 5605	Swipe
TC4FRB- 5605	Swipe	WDMTK4- 5601	Swipe
TM64ET- 5605	Swipe	WL3DYN- 5605	Swipe
TTTL4B- 5605	Swipe	WYN8DH- 5605	Swipe
U4MMMK- 5601	Swipe	X29WAL- 5605	Swipe
U93VBJ- 5601	Swipe	X8C6J8- 5605	Swipe
U9R3JF- 5601	Swipe	XAHNEA- 5605	Swipe
UAUQYD- 5605	Transfer Stain	XBFVT8- 5601	Swipe
UC29X9- 5605	Swipe	XF9WR2- 5601	Swipe
UH77ED- 5605	Swipe	XHDQGK- 5601	Swipe
UKTQFB- 5605	Swipe	XN34H9- 5605	Swipe
UMZZCE- 5605	Swipe	XN6RU7- 5601	Swipe
UWPUJ6- 5601	Swipe	Y3EZ49- 5601	Swipe
V433K7- 5601	Swipe	Y8V8R8- 5605	Swipe
V7U2Y6- 5601	Swipe	Y9PRQF- 5601	Swipe
VAUCU6- 5601	Swipe	YB98NY- 5601	Swipe
VLMUEQ- 5605	Swipe	YDWHTL- 5605	Swipe

Transfer Stain

TABLE 2: Single Pattern Recognition

Item 3, continued

WebCode-		V	ebCode-	/ebCode-
Test	Pattern Type		Test	Test Pattern Type
YF6W67- 5605	Swipe			
YFMLVD- 5605	Swipe			
YHT4UA- 5601	Swipe			
YLB8UE- 5601	Swipe			
YPBGT9- 5605	Swipe			
YTBPWH- 5601	Swipe			
Z349AB- 5605	Swipe			
Z6LF8K- 5605	Swipe			
Z73K6B- 5605	Swipe			
ZLLRLZ- 5601	Swipe			
ZPLVE9- 5605	Swipe			
ZRDUT7- 5605	Swipe			
ZVVV48- 5605	Transfer Stain			
Pattern	Types Reported for Item 3 Participants: 181			
<u>Pattern Type</u>	Percent Reported			
Swipe	179 (98.9%)			

2 (1.1%)

Item 4

WebCode-		WebCode-	
Test	Pattern Type	Test	Pattern Type
2CGXY3- 5605	Projected Pattern	7L8CQ2- 5605	Projected Pattern
3BYBZK- 5605	Projected Pattern	87BEBW- 5605	Projected Pattern
3FAHBA- 5605	Projected Pattern	88MWKF- 5605	Projected Pattern
3FU42E- 5601	Projected Pattern	89V96B- 5605	Projected Pattern
3N3QVZ- 5605	Projected Pattern	8BNXMY- 5605	Projected Pattern
3UUXEA- 5601	Projected Pattern	8EY9D8- 5605	Projected Pattern
3VK3ZG- 5605	Projected Pattern	8HNCFZ- 5601	Projected Pattern
3XUAAA- 5601	Projected Pattern	8JFG28- 5605	Projected Pattern
3Y7LE7- 5605	Projected Pattern	8QFY6B- 5605	Projected Pattern
44YA7W- 5601	Projected Pattern	8RN6E6- 5601	Projected Pattern
4KH4VZ- 5605	Projected Pattern	93QQAV- 5605	Projected Pattern
4TFV4U- 5601	Projected Pattern	96QZD7- 5605	Projected Pattern
4X83L3- 5605	Projected Pattern	9CCRP7- 5605	Projected Pattern
4ZFBT3- 5601	Projected Pattern	9JBH9V- 5601	Projected Pattern
62NPZ9- 5605	Projected Pattern	9T2VC2- 5605	Projected Pattern
66PW8E- 5605	Cast-off Pattern	AAL88U- 5601	Projected Pattern
6L9M7D- 5605	Projected Pattern	ADJMN3- 5605	Projected Pattern
6VVMR3- 5605	Projected Pattern	AEEA27- 5601	Projected Pattern
6YZC4X- 5605	Projected Pattern	AHA4Y8- 5605	Projected Pattern
7GTEHE- 5605	Projected Pattern	AMPCM8- 5605	Projected Pattern
7HATV3- 5605	Projected Pattern	AXAJLW- 5605	Projected Pattern

WebCode-		WebCode-	
Test	Pattern Type	Test	Pattern Type
AZDGWP- 5601	Projected Pattern	ENMBQM- 5605	Projected Pattern
BGGA97- 5605	Projected Pattern	EQEA6L- 5601	Projected Pattern
BPQZC9- 5605	Cast-off Pattern	ETH6NN- 5605	Projected Pattern
BUKUAA- 5605	Projected Pattern	EVPLR2- 5605	Projected Pattern
BV2PC6- 5605	Projected Pattern	EXTB4V- 5605	Projected Pattern
C7WKPQ- 5605	Projected Pattern	EYNXN2- 5605	Cast-off Pattern
CE9HMV- 5605	Projected Pattern	FA2HDZ- 5601	Projected Pattern
CJKJFT- 5605	Projected Pattern	FED23U- 5601	Projected Pattern
CLKTEM- 5605	Projected Pattern	FJBMQQ- 5605	Projected Pattern
CNY3XA- 5605	Projected Pattern	FMBWR8- 5605	Projected Pattern
CW6ZFW- 5605	Projected Pattern	FU9PZ2- 5601	Projected Pattern
D2FC2R- 5605	Projected Pattern	FWCLDN- 5605	Projected Pattern
DCEBGP- 5605	Projected Pattern	FZX32P- 5605	Cast-off Pattern
DGRUY7- 5605	Projected Pattern	G9MCNP- 5605	Projected Pattern
DWLH4P- 5605	Projected Pattern	G9P2ZM- 5601	Projected Pattern
DXXDCN- 5605	Projected Pattern	GDZV78- 5605	Projected Pattern
EE3ZGV- 5601	Projected Pattern	GGDWWG- 5601	Projected Pattern
EEXMTZ- 5605	Projected Pattern	GLREEY- 5605	Projected Pattern
EG47N2- 5605	Cast-off Pattern	H3DDYQ- 5605	Projected Pattern
EGPJHT- 5605	Cast-off Pattern	HLN8MQ- 5605	Projected Pattern
EHK4G2- 5605	Projected Pattern	HQJYVM- 5605	Projected Pattern

WebCode-		WebCode-	
Test	Pattern Type	Test	Pattern Type
HW7PD4- 5605	Projected Pattern	LTEQHG- 5605	Projected Pattern
J6YGX3- 5605	Projected Pattern	LWE3DG- 5605	Projected Pattern
J7QFC2- 5605	Projected Pattern	MULPPV- 5605	Projected Pattern
JJUZHJ- 5605	Projected Pattern	MX3XDV- 5601	Projected Pattern
JMNHER- 5605	Projected Pattern	MZ9H3F- 5605	Projected Pattern
JQZGDY- 5605	Projected Pattern	N3VE3U- 5605	Projected Pattern
JR8QFJ- 5605	Projected Pattern	NEPT9H- 5601	Projected Pattern
K2UA2G- 5605	Projected Pattern	NNDMBU- 5605	Projected Pattern
K7QWWP- 5601	Projected Pattern	P3PMNH- 5605	Projected Pattern
KEJ9XZ- 5601	Cast-off Pattern	РА9ККН- 5601	Projected Pattern
KJAJ3G- 5605	Projected Pattern	PG97FE- 5605	Projected Pattern
KT2X7M- 5601	Projected Pattern	PRTCJH- 5601	Projected Pattern
KZLYGL- 5605	Projected Pattern	Q6W2VN- 5605	Projected Pattern
L3KW3X- 5605	Projected Pattern	QA7H4D- 5605	Projected Pattern
L4EG3P- 5601	Projected Pattern	QAQVUB- 5605	Projected Pattern
L4WQRJ- 5605	Projected Pattern	QGNPXQ- 5605	Cast-off Pattern
L8Z6QX- 5601	Projected Pattern	QK3M6D- 5601	Projected Pattern
LA7PFH- 5601	Projected Pattern	QLGRUN- 5605	Projected Pattern
LF6C7X- 5605	Cast-off Pattern	QRLNFA- 5601	Projected Pattern
LFUBEH- 5605	Projected Pattern	RCTHRM- 5605	Projected Pattern
LQNR4J- 5605	Projected Pattern	RFTMGD- 5605	Projected Pattern

WebCode-		WebCode-	
Test	Pattern Type	Test	Pattern Type
RKJ22E- 5605	Projected Pattern	VPVWQF- 5605	Projected Pattern
RTV2VP- 5605	Projected Pattern	VQUG2D- 5605	Projected Pattern
RU9QTM- 5605	Projected Pattern	VRALV6- 5601	Projected Pattern
RY6FAV- 5605	Projected Pattern	VTKLMK- 5601	Projected Pattern
T8TRRE- 5605	Projected Pattern	VVCK2J- 5605	Projected Pattern
TC4FRB- 5605	Projected Pattern	WDMTK4- 5601	Projected Pattern
TM64ET- 5605	Projected Pattern	WL3DYN- 5605	Projected Pattern
TTTL4B- 5605	Projected Pattern	WYN8DH- 5605	Projected Pattern
U4MMMK- 5601	Projected Pattern	X29WAL- 5605	Projected Pattern
U93VBJ- 5601	Projected Pattern	X8C6J8- 5605	Projected Pattern
U9R3JF- 5601	Projected Pattern	XAHNEA- 5605	Projected Pattern
UAUQYD- 5605	Projected Pattern	XBFVT8- 5601	Projected Pattern
UC29X9- 5605	Cast-off Pattern	XF9WR2- 5601	Projected Pattern
UH77ED- 5605	Projected Pattern	XHDQGK- 5601	Projected Pattern
UKTQFB- 5605	Projected Pattern	XN34H9- 5605	Projected Pattern
UMZZCE- 5605	Projected Pattern	XN6RU7- 5601	Projected Pattern
UWPUJ6- 5601	Projected Pattern	Y3EZ49- 5601	Projected Pattern
V433K7- 5601	Projected Pattern	Y8V8R8- 5605	Projected Pattern
V7U2Y6- 5601	Projected Pattern	Y9PRQF- 5601	Projected Pattern
VAUCU6- 5601	Projected Pattern	YB98NY- 5601	Projected Pattern
VLMUEQ- 5605	Projected Pattern	YDWHTL- 5605	Projected Pattern

Cast-off Pattern

TABLE 2: Single Pattern Recognition

Item 4, continued

WebCode-		WebCode
Test	Pattern Type	Test
YF6W67- 5605	Projected Pattern	
YFMLVD- 5605	Projected Pattern	
YHT4UA- 5601	Projected Pattern	
YLB8UE- 5601	Projected Pattern	
YPBGT9- 5605	Projected Pattern	
YTBPWH- 5601	Projected Pattern	
Z349AB- 5605	Projected Pattern	
Z6LF8K- 5605	Projected Pattern	
Z73K6B- 5605	Cast-off Pattern	
ZLLRLZ- 5601	Projected Pattern	
ZPLVE9- 5605	Projected Pattern	
ZRDUT7- 5605	Projected Pattern	
ZVVV48- 5605	Projected Pattern	
Pattern	Types Reported for Item 4 Participants: 181	
Pattern Type	Percent Reported	
Projected Patte	rn 170 (93.9%)	

11 (6.1%)

Pattern Description, Part 2

TABLE 3: Recognition and Description

Item 5

WebCode-	
Test	Detailed Pattern Description
2CGXY3- 5605	There were 5 elliptical drip stains with smooth margin observed at the bottom left hand side. The bottom most two stains are measured to be approximately 1 cm in size. The three other stains above are measured to be approximately 0.9 cm in size. The stains were observed to be drying and flaking. There was a pool of blood observed above the drip stains, measured to be approximately 3.2 cm x 4.8 cm in size. This pattern is amorphous in shaped with smooth margin. The pattern was observed to be drying and flaking. There was a transfer stain to the right of the pool of blood. This transfer pattern is measured to be approximately 8.3 cm by 3.8 cm in size. It has an amorphous shaped, and few satellite stains can be observed to be originating from the transfer pattern. Blood was distributed non-homogeneously, with some part of the transfer stain appearing darker. Voids were observed within the transfer pattern.
3BYBZK- 5605	Drip trail between bottom left corner and middle. Drip stain (or drip pattern) at middle end of drip trail. Transfer pattern to mid right. Clearly defined upper edge. Apparent voids present within this. Degree of forceful contact as associated directional spots radiating out from top edge. Could compare to items e.g. knife. Transfer pattern to left of first transfer pattern. Less clearly defined and smaller. Indication of degree of forceful contact as again directional stains radiating out.
3FAHBA- 5605	This photo depicted several red-brown stains on a vinyl floor including the following: A: Drip trail consisting of a series of circular red-brown stains in the lower left hand corner. B: Drip pattern consisting of overlapping red-brown stains in the center of the photograph. A few satellite stains were present around the larger stains. C: Irregularly shaped red-brown stain on the right side of the photograph. ~7cm long, with circular pattern down the center and a smooth edge on one side. This is a transfer stain from an object with a handle-like appearance. There were spines radiating from edges of this stain which is consistent with this object falling/dropping onto the target. D: Irregularly shaped red-brown stain, ~9x15mm. This is a transfer stain. There were spines and sheets radiating from the edges of this stain which is consistent with the source falling/dropping onto the target. Additional stains were observed but not classified due to a lack of characteristics.
3FU42E- 5601	There is a drip pattern on the center of the target surrounded by satellite stains. A transfer stain with some voids is present to the right of the drip pattern. A drip trail of several drip stains is present between the bottom left corner of the target and the drip pattern.
3N3QVZ- 5605	Extending between the bottom left corner of the tile and the center of the tile are a series of circular shaped drip stains, ranging in size from approx 8mm to 10mm diameter. At the center of the tile is a drip pattern, comprising of a number of drip stains being deposited on top of one another. As a result, satellite spatter has been created surrounding the drip pattern. To the left of the drip pattern is a transfer stain (Transfer A), approx 10mm x 8mm. Immediately to the right of the drip pattern is a further transfer pattern (Transfer B) measuring approx 15mm long. To the right of Transfer B is a pattern transfer (Transfer C) measuring approx 80mm in length. The transfer pattern has relatively well defined boundaries and generally circular shaped voids down the center.
3UUXEA- 5601	From center extending to bottom left, 5 distinct, round stains were observed with diameters of approximately 12mm to 9mm and are in a roughly linear distribution. The stains appear to have smooth edges overall and are consistent with being a drip trail. Above the drip trail and toward the center of the image appear to be several overlapping round stains with diameters of approximately 7mm to 10mm (consistent with drip stains) and a small volume of blood measuring approximately 36mm by 30mm with mainly smooth edges. Above the small volume are small round to oval stains with diameters of approximately 11mm to 3mm. These small stains are consistent with being a drip pattern. To the right of the drip pattern is an irregularly shaped stain with lighter intensity measuring approximately 10mm by 15mm with thin elongated spines extending out from the upper right portion. Intensity is inconsistent, with the bottom portion and parts of the edges being slightly lighter. The staining is consistent with being an impact pattern. To the right of the an impact pattern.

WebCode-	Dotailod Pattorn Description
Test	measures approximately 80mm by 20mm and contains a series of circular and amorphous voids within it. Portions of the stain have straight, defined edges and the intensity of the staining is inconsistent, with the bottom left portion being lighter. The stain is consistent with being a transfer stain.
3VK3ZG- 5605	We observe at bottom at left of the picture, circular traces with diameter of least 8 mm, corresponding to drip stain. We observe at right of the picture, particular shape with a part of its outline is clear, corresponding to transfer stain.
3XUAAA- 5601	Five well defined, circular stains. Smooth borders. Stains approximately 8-10mm and located in the bottom left of the photo. Consistent with a drip trail with unknown direction. Near middle of the photo and at one end of the drip train is an irregularly shaped stain with smooth borders. Limited satellite stains present. Stained area approximately 3.5x5cm. Consistent with a drip pattern. To the right of the drip pattern is irregular shaped staining. Varied staining throughout with defined, smooth border on right side. Seven possible void areas within the main stain. Some spines visible in top portion of stain. Main portion of stain is approximately 1x7cm. Possible void areas range from approximately 1-5mm. Consistent with a transfer stain.
3Y7LE7- 5605	There are 5x drip stains (near circular and up to $\sim 1 \text{ cm}$ in size) arranged in a linear diagonal fashion that span $\sim 10\text{ cm}$ from the lower left side/corner to the centre of the image/tile. Technically, this may also be considered to be a small drip trail. There are a few irregular shaped stains, possibly caused by overlapping drip stains, with the largest example measuring between ~ 2.3 cm in size in the centre of the image/tile. Technically, this may also be considered to be a very small blood pool. There is a transfer stain measuring $\sim 1 \text{ cm} \times 1.5$ cm that is immediately adjacent to the very small blood pool. There is a transfer stain measuring $\sim 1 \text{ cm} \times 1.5$ cm that is contacted the tile at this location. Note: there are ~ 12 examples of near circular (sub 3mm) stains that appear to be randomly distributed around most of the central staining. I am unable to rule out these stains as either satellite stains, or possible cessation pattern stains. There is a transfer stain measuring $\sim 8 \text{ cm} \times 1.5$ cm to the right side of the tile with well defined upper edges and less defined edge characteristics on the lower side. There are a series of voids within the transfer stain including 1 example of a well defined circle.
44YA7W- 5601	A drip trail is present in the lower left quadrant. At the center of the image, a drip pattern is present with associated satellite stains. Near the central right is a transfer stain.
4KH4VZ- 5605	At least three bloodstain patterns were depicted in the photograph (item #1-1-5). One of the patterns was a transfer stain located on the right side of the vinyl tile (as viewed facing the photograph) and was oriented diagonally from the upper left to the lower right. The stain was elongated and had an irregular shape with the general appearance of a possible knife handle. A drip trail was located in the lower portion of the vinyl tile. The drip trail was oriented from the lower left towards the upper middle as viewed facing the photograph. The pattern consists of individual drip stains in a linear orientation. A drip pattern was located centrally on the vinyl tile. The pattern consists of a non-spatter stain with irregular margin and volume accumulation. The pattern is surrounded by the distribution of several small satellite spatter stains. The drip pattern was located at one end of the drip trail and included portions of several recognizable drip stains. Conclusions: A transfer stain, drip trail, and drip pattern were observed on the digital photograph (item #1-1-5). A transfer stain is a bloodstain pattern resulting from the movement of a source of drip stains between two points. A drip pattern is a bloodstain pattern resulting from the movement of a source of drip stains between two points. A drip pattern is a bloodstain pattern resulting from the movement of a source of drip stains between two points. A drip pattern is a bloodstain pattern resulting from the movement of a source of drip stains between two points. A drip pattern is a bloodstain pattern were used to a source of drip stains between two points. A drip pattern is a bloodstain pattern were used to a source of drip stains between two points. A drip pattern is a bloodstain pattern resulting from the movement of a source of drip stains between two points. A drip pattern is a bloodstain pattern were used to a source of drip stains between two points. A drip pattern is a bloodstain pattern is a bloodstain pattern is a bloodstain pattern is a bloodst
4TFV4U-	A drip trail extends across the target between the bottom left corner and near-center, adjacent to a drip

- 4TFV4U- A drip trail extends across the target between the bottom left corner and near-center, adjacent to a drip 5601 pattern. The staining in both the drip trail and drip pattern are altered stains via cracking. A transfer stain is present in proximity to the drip pattern described above and exhibits characteristics (spines and satellite stains) consistent with an impact pattern in areas.
- 4X83L3- A linear series of round stains are observed spanning between the lower left edge of the target and the 5605 center of the target forming a drip trail. Observed in the center of the target is an irregular group of rounded stains with smooth edges forming a drip pattern. The irregular shape is observed in the middle

WebCode-	
Test	Detailed Pattern Description
	right side of the target is a transfer stain.
4ZFBT3- 5601	Circular staining (very dark and crackled in appearance) from bottom left corner towards center area of field (Drip Trail), where it appears that a couple of the drops run together- as though the item dripping the blood paused/stopped. (Drip Pattern) There are a few small darkened stains surrounding the center staining- (satellite stain). There is an irregularly shaped stain to the left of the center. To the right of the center are more darkened small stains - there is a bloodstain angled from left top to right bottom, with pattern reflective of the surface it was deposited by (Transfer Stain). The bloody item that came into contact with the board had apparent cut outs/textures that allowed a stain to be visible within it, that was consistent with having been a satellite stain previously deposited. This could mean the satellite staining was deposited before the transfer. Between the central staining and the transfer, is a light r/b irregular shaped stain with apparent spines to the top left of the photo, including past the transfer.
62NPZ9- 5605	Stains noted in this area include a drip trail, a drip pattern, and transfer stains with voids. Additional red-brown stains were noted.
66PW8E- 5605	The target is a vinyl tile on a horizontal plane. The middle of the target contains a drip pattern with a small amount of satellite spatter around it. A drip trail connects the drip pattern to the lower left side of the target with approximately seven drip stains. Several drip stains surround the drip pattern but one is misshapen and appears to be altered by an object that is no longer present. This object may have created a void on the middle left of the drip pattern and drip trail. The right side of the drip pattern shows two apparent transfer stains approximately 70mm x 13mm and 7mm x 15 mm in size. The larger transfer stain has several holes/voids in the pattern that may be useful in determining the source of the stain.
6L9M7D- 5605	Middle left of the plane a dry Drip Pattern and Drip Trail is observed. Middle right of the plane a Transfer Pattern is observed with a void caused by the object shape.
6VVMR3- 5605	Multiple drip stains forming a drip trail are observed at the lower left corner and at the center of the image. A drip pattern is observed in the center of the image. A transfer stain is observed at the center right portion of the image.
6YZC4X- 5605	In the bottom left quadrant of the image, there are 5 distinct individual bloodstains that are circular in shape, measured approximately 10mm in diameter. At the top right of these circular stains, there are also 3 amorphous bloodstains. The biggest bloodstain measured approximately 30 mm by 33 mm in size while the other two smaller amorphous stains measured approximately 8mm by 15mm. Surrounding the amorphous stains, some satellite stains were observed, and they range from 1mm to 2mm. The circular stains and the amorphous stains in the bottom left quadrant of the image are observed to have linear distribution and the overall linear pattern measured about 190mm, no directionality was observed. The stains in this pattern were observed to have cracked surface and regular margin. These characteristics are consistent with a drip stain (circular stains) and drip pattern (amorphous stains). At the right of the image, there 2 are lighter red coloured stain that are amorphous in shape. The smaller stain measured approximately 9mm by 15mm, with spines observed at the top part of the stain. The colour of the stain is inhomogeneous and all these characteristics are consistent with a transfer pattern. The bigger amorphous stain measured approximately 15mm by 80mm with irregular margin observed. There were also some spines observed at the top right corner of the stain. The colour distribution of the stain is inhomogeneous and some circular and irregular shaped voids were observed within the bloodstain. These characteristics are consistent with a contact transfer pattern. These stains is inhomogeneous and some circular and irregular shaped voids were observed within the bloodstain. These characteristics are consistent with a contact transfer pattern. These stains are likely satellite stains from the drip pattern as mentioned above.
7GTEHE- 5605	Item 5 presents a photograph showing three blood patterns. two of them related. The left one shows a drip trail pattern, going from left to right, ending on a drip stain suggesting end of movement. The one on the right shows a transfer stain, resulting from the contact of a blood-bearing object with the vinyl tile. The image retains the object form, suggesting a knife handle.

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Test	Detailed Pattern Description
/HATV3- 5605	I he image of the vinyl tile has multiple bloodstain patterns. I observed a transfer stain on the right side. This is a bloodstain with characteristics of blood being transferred from a blood-bearing surface onto the tile. I also observed multiple drip stains with similar sizes, and the general angle of the drips appears to be perpendicular to the tile surface. The drip stains appear to be forming a drip trail. In an area towards the center of the tile, I observed a drip pattern in which blood drops fell into other blood drops resulting in smaller satellite stains. These patterns are consistent with a victim having multiple stab wounds.
7L8CQ2- 5605	There is an area on the left side of the image with multiple (greater than 10 circular drip stains). The drip stains range in size from about 5mm to 10mm. There is also a drip pattern created by multiple drip stains also in this general location. The overall area of the drip stains and the drip pattern is approximately 150mm horizontal by 170mm vertical. There is a transfer stain on the right side of the image. The transfer stain appears to be the handle of a weapon (possible knife). The overall area of the transfer pattern is approximately 50mm horizontal by 60mm vertical. The blood is dark, discolored and is dry and cracking.
87BEBW- 5605	Item 5 was a combination of: a drip trail, a series of drip stains forming the trail, a drip pattern, created as a result of multiple drip stains dripping into each other Note: there is satellite stains associated with the drip trail and drip pattern (parent stains), a transfer stain which has some distinct features including circular/near circular voids and a defined edge characteristic, however it wasn't possible to state the nature of the item that deposited the blood, there is a second transfer bloodstain that has some associated spines, appears to have been deposited prior to the transfer stain with the circular/near circular voids and defined edge characteristic
88MWKF- 5605	1. Drip Pattern 2. Transfer Stain 3. Wipe
89V96B- 5605	Multiple bloodstain patterns were observed on the vinyl tile floor. These patterns included the following: Pattern A: A drip trail consisting of five individual circular stains, ranging in size from approximately 9 to 11mm, in a linear orientation was observed between the bottom left corner of the image and an accumulation of blood near the center of the image. Pattern B: A drip pattern (the accumulation of blood mentioned above within Pattern A) was observed around the center of the image with possibly related spatter/satellite stains. Pattern C: A transfer stain was observed on the right side of the image with a well-defined perimeter or edges containing some regularly shaped voids within the overall stain. This transfer stain provided a partial outline of an object. Pattern D: An additional transfer stain was observed in between Patterns B and C. This stain was irregularly-shaped, non-circular or elliptical in shape, and had no defined perimeter or edges. Pattern E: An additional non-descript, non-spatter stain was observed to the left of Pattern B. This stain was non-circular or elliptical in shape but appeared to have a defined perimeter or shape.
8BNXMY- 5605	On the right there is a transfer stain apparently produced by the handle of a knife. On the left there is a drip trail that ends on a pool and some Satellite Stain, all of them with alteration with scales on surface by the time
8EY9D8- 5605	Target is a vinyl tile on the horizontal plane. On the left lower part of the target (labeled A) are several primarily circular bloodstains that measure from 6mm to 8mm across. There are 5 of these stains before the stains are on top of one another to form an irregular shaped stain that is approximately 4cm x 3.5 cm. The classification of these bloodstains: Drip Trail, Drip Pattern In the right center of the target (labeled B) are bloodstains that have an overall irregular shape and measure approximately 2cm x 5cm. In this area the bloodstains are lighter in color. In this area there are several areas that are void of blood. Several of these voids appear to be circular in shape. The classification of this bloodstain: Transfer
8HNCFZ- 5601	Approximately in the centre of the photograph is a drip pattern. Between the drip pattern and the bottom left corner of the photograph there are five drip stains. To the right of the drip pattern is a transfer stain, that has the appearance of a handle. There is a smaller transfer stain adjacent to the top left end of the handle-shaped transfer stain, which in my opinion is associated with the handle-shaped

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	transfer stain. There are spines coming from the top left and of the handle-shaped transfer stain and
	the smaller transfer stain.
8JFG28- 5605	The five circular bloodstains on the left are 9-12 mm in diameter and are drip stain without directionality. The bloodstain in the middle is drip stain, and blood fell multiple times. The bloodstain on the right is transfer stain, and judging by the clear edge characteristics of the bloodstain, it is a bloodstain formed when the blood-soaked object (tool, etc.) came into contact with the vinyl tile.
8QFY6B- 5605	This image contains multiple drips from a moving source (drip trail), multiple drips from a source in the same location (drip pattern), and transfer stains. The largest transfer stain may be from an object, as indicated by the regular voids present within it. Spines located on the edge of the transfer stains indicate some force was applied to the blood as it was deposited on the target. A total of three transfer stains are present. It is undetermined if these were made through individual events, or simultaneously.
8RN6E6- 5601	In item 5, there is a drip trail of drip stains extending from the bottom left corner of the image to the center of the image. In the center of item 5, there is a drip pattern where blood has dripped into blood, and there are small satellites near the drip pattern. On the right side of the image, there is a transfer stain of an unknown item that contained suspected blood prior to being placed on the floor. The object was then removed, thus leaving the transfer stain.
93QQAV- 5605	Circular bloodstains compatible with a drip trail are visible between the lower left corner of the picture and its center, where there is also a drip pattern present. Next to the drip pattern, there are two transfer stains on the target, one of which has defined edges. There are elongated spines on the upper right side of both transfer stains.
96QZD7- 5605	Item 5: Appears to have a drip trail from the lower left corner to the approximate center of the image. In the center of the image, there appears to be a drip pattern. The drip trail and drip pattern appear to have the appearance of an altered stain. To the right of center of the image there appears to be a transfer stain.
9CCRP7- 5605	Drip Trail and Drip patterns- There are five (5) circular stains, with a size of approximately 9-12 mm, located between the bottom left corner and the middle of the target surface (drip trail). There is evidence of several circular stains dripping into the same area along with two separate stains nearby indicating at least two circular stains attached to each other (drip patterns). All of these stains are dark red in color and the surface is cracked indicating that the stains are dried. Transfer - On the right side of the drip patterns is a unique mostly linear shape. It could be the handle of an object with at least seven (7) voids, some circular in shape. Between the drip patterns and the transfer stain is a stain with irregular margins and spines coming off the stain. There are also very elongated/spine like stains to the left of the drip pattern that has regular margins and is a half circle in shape. The size is approximately 9mm by 6mm. On the target, there are also at least 12 circular stains spread throughout the other stains/patterns. The sizes range from 0.5mm to 2mm.
9JBH9V- 5601	(L) = long side of scale, (S) = short side of scale. 1. There were five (5) circular stains in the area of approximately 155 mm - 260 mm (L) and 25 mm - 105 mm (S). They ranged in size from approximately 9 mm x 9mm to 11.5 mm x 11.5 mm. They were in a linear distribution between the bottom left of the image and middle of the image. This portion of the pattern is classified as a drip trail with unknown directionality. 2. There were four (4) stains in the area of approximately 95 mm - 140 mm (L) and 90 mm - 145 mm (S). The margins had semi-circular features and there was small circular satellite spatter in the area surrounding, ranging in size from $<1 \text{ mm x} <1 \text{ mm to approximately 2 mm x 2 mm}$. The parent stains ranged in size from approximately 8 mm x 8 mm to 31 mm x 33 mm. This portion of the pattern is classified as a drip pattern. 3. There was one (1) stain in the area of approximately fifteen (15) linear stains $<1 \text{ mm}$ wide originating from the parent stain and extending towards the top right of the image. The parent stain was approximately 12 mm x 15 mm. This portion of the pattern is classified as a transfer or altered stain with an element of impact. 4. There was one (1) stain in the area of approximately 100 mm - 165 mm (L) and right of the short side of the

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	scale. The stain was lighter in color with irregular but well-detined margins and an overall linear shape. There were approximately seven (7) circular voids within the stain, ranging in size from approximately 1.5 mm x 1.5 mm to 6.5 mm x 6.5 mm. This portion of the pattern is classified as a transfer stain.
9T2VC2- 5605	From left to right: Linear drip stains forming a drip trail that stops at a blood onto blood pattern with associated satellite stains are skeletonized and appear to be clotted blood. Next to that is an impact pattern where the blood stain was disturbed, all the spines have the same directionality. This pattern was interrupted by a pattern transfer stain that show the imprint of a blooded object onto the surface.
AAL88U- 5601	Size of drips range from approximately 8m-12mm in size. Several drip stains landed on top of each other creating a drip pattern. The drip stains were oriented in a linear orientation. Therefore, creating a drip trail. A pattern with defined boarders and circular voids within the pattern identify a transfer stain. A bloodstain that has a lighter appearance located to the southwest of the transfer stain has satellite stains that are very elongated (spines) that have a linear radiation from southwest to northeast.
ADJMN3- 5605	Between the bottom left and center, several red-brown drip stains were present. This pattern was a drip trail. At the center, there were several red-brown circular drip stains in one central area that appeared to be deposited on top of one another. The stained area appeared altered (dried with cracks present). Circular and oblong shaped satellite stains surrounded the parent stain. This pattern was a drip pattern. At the right side, two areas of irregular shaped red-brown staining were noted. Spines were noted at the top of one of the stained areas. The other irregular shaped stained area had regular margins on the right side. Circular voids were noted within this stained area. Both stained areas were considered one transfer stain.
AEEA27- 5601	DRIP STAINS creating a DRIP TRAIL. Multiple DRIP STAINS in an area creating a DRIP PATTERN. SATELLITE STAINS radiated out from the DRIP PATTERN. Adjacent to the DRIP PATTERN was a TRANSFER STAIN containing VOIDS within.
AHA4Y8- 5605	Item 5 was an image depicting several different bloodstain patterns. Drip stains forming a small drip trail were observed spanning from the lower left to the center of the target. The direction of travel of the object could not be determined. A drip pattern forming a small pool of blood was observed near the center of the target at the edge of the drip trail. A transfer stain with approximately seven voids in a linear arrangement down the middle of it was observed on the right side of the target.
AMPCM8- 5605	All references to location/positional relationships refer to the staining as imaged. This complex pattern consists of a drip trail extending between the lower left of the image to a drip pattern located at the relative center of the image. A transfer pattern with an overall rectangular shape with a series of open/unstained areas is to the right of the drip pattern. Additional spines and satellite stains appear associated with the upper left of the transfer stain, presumably due to initial contact with the tile substrate. An additional bloodstain of undetermined mechanism of deposition is located between the drip pattern and transfer stain. Additional bloodstains are noted in proximity to the above patterns and may be related.
AXAJLW- 5605	A drip trail extends diagonally across the target surface between the lower left corner and center of the image. The drip stains within this pattern range from approximately 9 to 12 millimeters in size. There is a drip pattern in the center of the image. There are several areas of possible satellite stains in the center of the image. There are several generally circular voids within this transfer stain. A possible second, smaller transfer stain is just below and to the left of the larger one. There are spines associated with both stains which may indicate some force when the bloodstained item(s) made contact with the target surface, though an exact mechanism could not be determined.
AZDGWP- 5601	There is a drip trail between the lower left corner and the center of the target. The drip trail consists of drip stains arranged linearly. There is a drip pattern near the center of the target. A parent stain and associated satellite stains are present. A transfer stain is observed on the right side of the drip pattern.
BGGA97- 5605	There is a drip pattern in the central area. There are just a few satellites around the small pool where the drops have landed. We are not sure whether the small stains are satellites or accompanying drops,

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	or both. There are also five dripstains in curved line that we wold call a drip trail. Between the drip pattern and the drip trail there are two drops together with no satellites around. The drip trail and the drip pattern appears to have very smooth outlines, very few satellites, and they also seem to be quite dark and a bit "high". This may be because the height they have dripped from is quite low. To the right of the drip pattern there is a almost rectangular bloodstain with spines up to the right in the picture. This we think is a result of something with blood on it has landed on the surface. Further to the right there is a almost rectangular transfer pattern from something with blood on it. It could look a bit like the handle of a knife. Thowe two could be the result of a knife with blood on the handle landing on it back end and after that landing on the side.
BPQZC9- 5605	An analysis quality photo in which it is observed a white vinyl tile surface with multiple blood patterns. *I observed a bloodstain which it have an irregular form, color red, it have a lineal distribution and this one should be classified as Void, because it have an absence of blood in an otherwise continuous bloodstain or bloodstain pattern. *I observed a bloodstain which it have an irregular form , color dark red, it don't have any distribution and this one should be classified as Drip stain, because it is a bloodstain resulting from a falling drop that formed due to gravity. *I observed a bloodstain which it have an circular form, color dark red, it have a lineal distribution an this one should be classified as Drip trail, because it is a bloodstain pattern resulting from the movement of a source of drip stains between two points. Note: By looking to the Drip stain and the Drip trail, I can understand that the Drip trail have a beginning and a end.
BUKUAA- 5605	This photograph depicts apparent bloodstain patterns on vinyl tile. There is a linear pattern of circular drip stains forming an apparent drip trail. The stains have fairly smooth edge characteristics. In the center of the photo, at one end of the drip trail, there is an irregular shaped bloodstain where it appears several drip stains coalesced together. The presence of some small satellite stains indicate that some of the blood drops may have dripped into each other forming a small drip pattern. Two transfer patterns are adjacent to the drip pattern. One is a smaller, irregular shaped stain with spines radiating outwards towards the larger stain. The larger transfer stain has an elongated shape with circular voids. The contour of one edge is initially straight and then dips down, rises back up and curves.
BV2PC6- 5605	Item #5 depicts (3) bloodstain patterns (5a to 5c) deposited on a vinyl tile oriented on a horizontal plane. Item #5(a) depicts a series of individual circular stains ranging in size from approximately 11 mm to 7 mm in diameter. The total pattern area measures approximately 152 mm long and extends between the lower left and upper right aspects of the image as displayed. It should be noted there is a notable volume stain (5b) observed in the upper right corner of the image. These circular stains have well-defined margins with limited evidence of volume displacement (lacking scalloped edges or satellite staining). The pattern distribution is linear or curvilinear, with a dark red colored appearance, and evidence of cracking in the central elements of each circular stain. Based on the above characteristics, pattern #5a is classified as a drip trail. Item 5(b) depicts a large volume stain measuring approximately 35 mm by 31 mm at its widest elements. The bloodstain maintains an irregular shape with overlapping semi-circular well-defined edges. The distribution of blood is random throughout the pattern area and maintains a dark red colored appearance with elements of cracking within the pattern edges, but spatter stains are observed on the target surface adjacent to both this volume stain (5b) and the patterned stain observed to the right of the volume stain (as pictured). It should be noted the coloration of the spatter stains are more consistent with this stain then the patterned stain located to the right of (5b). Based on characteristics the pattern is classified as a drip pattern. Item 5(c) depicts (2) patterned stains, one large and one small. The large stain measures approximately 81 mm long by 15 mm wide with circular shaped spaces (voids) located within the central line of the large patterned bloodstain. These voids range in size from approximately 5 mm to 1 mm. It should be noted a dark red colored circular spatter stains conserved within one of the voids. The small patterned bloodstain measures approximat

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	small stains contain varying levels of blood volume distributed throughout the pattern area. The appearance of both stains contains varying shades of red coloration with well-defined margins along the darker red colored edge. Based on the image presented, the color has a gradient transition from light red to dark red, with the darker red color being isolated to the uppermost side of both bloodstain patterns observed in the pattern area. The lighter red side of the bloodstains have limited demarcations or poorly-defined edges, making it difficult to ascertain the implement responsible for creating the patterns on the target surface. Based on the above characteristics this pattern area (5C) is classified as (2) transfer patterns.
C7WKPQ- 5605	1. There is a transfer stain on the middle-right side of the image. A trail of dried drip stain forming a drip trail can be observed between the middle and lower side of this image. 2. In addition, there are some accompanying drop surrounding the main drip stain on he middle of this image.
CE9HMV- 5605	Several circular reddish-brown stains, ranging in size from ~9 millimeters to 11 millimeters in diameter, in a linear pattern, with an irregularly shaped parent stain, measuring ~35 millimeters by 30 millimeters, with some circular stains surrounding the parent stain, ranging in size from ~2 millimeters to under 1 millimeter, and one apparent discontinuous reddish-brown transfer stain of a possible knife handle. The size, shape and distribution of reddish-brown stains in Item 5 is consistent with a drip trail, a drip pattern and a transfer stain.
CJKJFT- 5605	Drip Stains (ca 10 mm), Drip trail, Sattelite Stains, Transfer pattern with cesation pattern/impact pattern Small (\approx 10mm Ø) drip stains in a drip trail leading to or from a drip pattern. Next to the drip pattern there are some sattelite stains. The size of the drip stains combined with the low amount of sattelite stains concludes that the stains originate from a low height. To the right of the drip pattern there is a transfer pattern. At the transfer pattern there are spines/smaller stains forming an cessation/impact pattern (object with liquid blood striking the surface)
CLKTEM- 5605	A drip trail is noted in the bottom left corner of the image. A drip stain/drip pattern is present in the center of the image. Parent and small satellite stains are present. These drips stains/trail/pattern appear to be dry and flaking. A linear object with small circular voids transfer pattern is present adjacent to the drip pattern. The coloring of the transfer pattern is considerably lighter in color and deposition than the drip stains/trail/pattern. Possible spatter stains or accompanying drops are present in the area of the transfer pattern.
CNY3XA- 5605	The image labeled Item 5 had a drip trail from the lower left to the approximate center of the tile where a drip pattern was present. A transfer stain was just to the right of the drip pattern.
CW6ZFW- 5605	There is a drip pattern near the center of the image, consisting of multiple overlapping drip stains. Some satellite stains are present in the image, likely associated with the drip pattern. There is a drip trail from the middle of the image to the bottom left corner of the image, which either starts or ends at the drip pattern (directionality of drip trail not determined). To the right of the drip pattern in the image are transfer stains. One of the transfer stains is possibly in the shape of a knife handle. There are some impact patterns extending out from the upper right portions of the transfer stains. The impact patterns primarily go up and to the right in the image.
D2FC2R- 5605	One, possibly two, transfer stains were observed on the center right side of the photo. One of the stains is much larger than the other and appears to be in the shape of a knife/tool handle with some void areas within it. This larger stain has some spatter stains observed on the upper end of it that appear to radiate toward the upper right corner of the photo. This could indicate the bloody item possibly hit the target with some force. The second smaller possible transfer stain is to the left of the larger stain. It is difficult to determine the shape of the smaller stain other than it comes to a point on the lower end. Some spatter stains were observed radiating out of the upper end of the stain (appear to radiate towards the upper right corner of the photo) indicating a bloody item possibly hit the target with some force. Five circular drip stains that create a drip trail were observed on the photo. The stains are in a semi-linear pattern from the lower left corner of the photo to the center of the photo. No obvious directionality of the drip trail could be determined due to the circular shape of the drip stains. A drip pattern was observed in the center of the photo at one end of the drip trail and next to the transfer

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	stains. The drip pattern consisted of numerous blood drip stains that are overlapping and surrounded by a random distribution of small satellite (spatter) stains with variation in directional angles and shapes.
DCEBGP- 5605	Complex bloodstain pattern consisting of a drip trail, a drip pattern, and transfer bloodstains. The drip trail consists of five drip bloodstains that are circular and range in diameter from 9mm to 11mm. The bloodstain trail is 12cm long with a diagonal orientation (between lower left and upper right). There is a drip pattern, made up of at least eight overlapping drip bloodstains, at the upper right end of the drip trail. The drip pattern is in an area that is 5cm x 3.5cm. At least twelve mostly circular bloodstains from 1-4mm in diameter, and one 2 x 9mm kidney shaped bloodstain, are around the drip pattern and the transfer bloodstains. A larger, roughly rectangular transfer bloodstain is to the right of the drip pattern. It covers an area of 2cm x 8cm. There are a few mostly circular voids within this transfer stain. A smaller, roughly rectangular transfer bloodstain (12mm x 16mm) is between the drip pattern and the larger transfer bloodstain.
DGRUY7- 5605	Multiple pattern types were observed, including a Drip Trail, an accumulation of Drip Stains with associated spatter, a Non-Spatter bloodstain, a Non-spatter bloodstain with possible associated spines, and a Transfer stain. Multiple additional small spatter stains were observed on the tile that were not associated with other stains at this time.
DWLH4P- 5605	There is an amorphous, central stain with smooth margins, which measures about 33 mm by 29 mm, seen in the middle of the image. It is homogeneously dark, reddish-brown in colour, with observed cracks found across the entire stain. There are some edge characteristics observed at four corners of this stain, with absence of satellite stains around them. It suggests that these individual circular stains could have been first deposited, before they merged together in the middle to form this larger central stain. On the top and bottom left of the central stain, two other elongated stains with some edge characteristics can be seen, and they also possess cracks within. Further left and downwards of this central stain are 5 circular stains with relatively smooth margins. These stains are arranged in a linear distribution, and are between 9 – 11 mm in radius. They are also homogeneous with a dark, reddish-brown colour just like the central stain, and also appears to have cracks within. The characteristics of these stains are consistent with drip stains. To the right of the central stain is an elongated amorphous stain with smooth margins at its top, but discontinuous margins at its bottom. This stain is inhomogeneous in colour, with the bottom part of the stain being comparatively lighter than the top portion. This stain measures about 80 mm by 20 mm, and has about 7 circular voids measuring between 2 – 7 mm within it. In my opinion, this stain has the characteristics of a transfer pattern and, judging from its shape, it could have been made by the blade of a knife. On the left of this stain is a smaller amorphous stain that is about 12 mm by 15 mm. It has irregular margins with some spines observed at its top-right corner. The characteristics of this stain are consistent with a transfer stain, and the spines suggest there was some force applied to the top-right corner of this transfer stain.
DXXDCN- 5605	There were three bloodstain patterns/areas of interest (labeled A-C) on the tile target. A drip trail (Pattern A) is present on the bottom left side of the tile target as well as near the middle of the target. A centrally located drip pattern (Pattern B) can be observed in the middle of the target to the upper right of pattern A. A transfer stain (Pattern C) is right of pattern B.
EE3ZGV- 5601	Item 5 consisted of multiple drip stains creating a drip trail between the lower left corner of the image and the drip pattern slightly above and right of the center of the image. There were small circular stains (consistent with satellite stains) around the drip pattern. A smaller transfer stain was to the right of the drip pattern with elongated satellite stains primarily above and to the right. A larger transfer stain was to the right of the smaller one and was possibly caused by some type of tool. There appear to be voids (circular and irregular shapes) within the larger transfer stain. There were a few small circular stains in and around the larger transfer stain (one stain being inside one of the circular voids). There were two elongated satellite stains above and to the left of the larger transfer stain.
EEXMTZ- 5605	There appears to be a drip trail from the lower left of the image upward on the image toward the right. At the upper right area of the drip trail there is a drip pattern. To the right of the drip pattern is a

Item 5, continued

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	possible transter stain that may have come trom a possible bloody knife being placed on the target. Just to the left of this transfer stain is a possible second transfer stain that may have occurred before the larger transfer stain was created.
EG47N2- 5605	1. Drip Trail: a bloodstain pattern resulting from the movement of a source of drip stains between two points. 2. Drip Pattern: a bloodstain pattern resulting from a liquid that dripped into another liquid, at least one of which was blood. 3. Transfer Stain: a bloodstain resulting from contact between a blood-bearing surface and another surface.
EGPJHT- 5605	A drip trail is observed from the lower left corner moving diagonally to the center of the frame. Within the center of a frame, a drip pattern (parent) is observed surrounded by satellite stains. Adjacent to the drip pattern is a transfer pattern in a distinct shape; possible a knife handle. Within the transfer pattern are small voids, circular in shape. Within one of the circular void patterns, a small circular stain is visible (drip stain).
EHK4G2- 5605	A series of circular stains ranging in size from less than 1mm to 12mm with a linear distribution that has a parent stain made up of multiple stains with smooth undisrupted margins. This series has been labeled 5a. There is also staining measuring 7cm by 1.5 cm that is consistent with the shape of a handle that has smooth margins and circular voids. There is a variation in blood concentration through the pattern. One area of staining has a disrupted margin indicating a more forceful transfer. This staining has been labeled 5b. Classifications: Drip Trail, Drip Pattern, and Transfer Stain
ENMBQM- 5605	Item #5: Three bloodstain patterns/areas, labeled as A through C, are on the target. A drip trail (A) comprised of 5 circular red/brown stains is located in a linear fashion in the bottom left corner of the target to the center. A drip pattern (B) is located near the center of the target. A transfer stain (C) is on the right side of the target.
EQEA6L- 5601	There is a linear arrangement of mostly rounded drip stains in the lower left-hand corner of the target/diagonal towards the center of the target (not necessarily the direction of travel); therefore, a drip trail is observed. Some of the drip stains within the drip trail overlap at the center of the target; thus creating a drip pattern. To the right of the drip pattern, a transfer stain is observed. The transfer stain shows no indication of movement or alteration.
ETH6NN- 5605	Item 5 is a complex bloodstain pattern covering an area of approximately 187mm x 229mm on a vinyl tile on the horizontal plane of which the center was approximately 145mm below the top edge and approximately 120mm to the right of the left edge of the tile. There were at least 5 circular/near circular bloodstains (some of which had scalloped margins) ranging in sizes from approximately 11.5mm x 12.1mm to 9.2mm x 9.3mm moving in a curvilinear direction from the bottom left to the top right side of the tile (ending near the center of the tile). These bloodstains formed a drip trail that terminated into a drip pattern (irregular shaped – blood into blood) consisting of multiple bloodstains that covered an area of approximately 40mm x 46mm in size. Smaller satellite spatter bloodstains (≤ 2mm diameter) were near the drip pattern. There was a transfer bloodstain to the right of the drip pattern near the right center of the tile. The bloodstain was irregular shaped and exhibited at least 5 near circular voids that could be due to the shape and/or structure of the item producing the transfer bloodstain. This transfer bloodstain approximately 19mm x 74mm in size with one edge of the bloodstain approximately 13mm x 15mm in size with very thin spatter stains (spines) radiating upwards towards the upper right corner of the tile. The thin spatter stains were radiating away from the parent stain. This bloodstain was consistent with an impact pattern.
EVPLR2- 5605	This comprises a number of drip stains which form a drip trail. There are a few saetllite stains associated with some of the drips. Apparent transfer stain also present which has voids within it - imprint from a blood stained object (potentially a knife handle?) Also there is potentially an element of a cessation pattern near the transfer stain, although the stianing is limited.
EXTB4V-	The image showed a rectangular area approximately 23 cm x 28 cm. Five circular bloodstains with

5605 diameters of approximately 1 cm were in a somewhat linear pattern from the lower, left-hand corner of

Item 5, continued

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Test	Detailed Pattern Description
	the image to the center of the image in a drip trail (a bloodstain pattern resulting from the movement of a source of drip stains between two points). In the center of the image was a drip pattern (a bloodstain pattern resulting from a liquid that dripped into another liquid, at least one of which was blood) with several overlapping drip stains (bloodstains resulting from a falling drop that formed due to gravity). To the right of the drip pattern was a faint, irregularly shaped bloodstain. This bloodstain had long, thin lines of spatter along one edge. This one bloodstain could be an impact pattern (a bloodstain pattern resulting from an object striking liquid blood) created by something striking liquid blood that was on the floor, or it could be a cessation pattern (a bloodstain pattern resulting from blood drops released from an object due to its abrupt deceleration) combined with a transfer stain created when a blood-coated object impacted the floor. Additional information regarding the victim's injuries, potential weapons, and other information about the crime could aid in further interpretation of this bloodstain. To the right of that bloodstain was a transfer stain (a bloodstain resulting from contact between a blood-bearing surface and another surface), which exhibited bloodstaining in the shape of possibly some type of tool.
EYNXN2- 5605	In my opinion, drip stains forming a drip trail between the lower left corner into the middle of the target where a drip pattern has resulted in a few satellite stains. In my opinion, there is a transfer stain on the right of the drop pattern with some voids within the stain. On the periphery of the transfer stain and the stain next to it there are elongated satellite stains which, in my opinion, indicate the item hit the target surface with some force.
FA2HDZ- 5601	A drip trail consisting of several nearly round drip stains measuring approximately 1 cm in diameter exists between the lower left corner of the target and the center of the target. A drip pattern consisting of an approximately 3.2 cm by 3.0 cm smooth-edged but irregularly shaped central stain and nearby associated satellite stains is located in the center of the target. Lastly, to the right of the drip pattern there is an approximately 8 cm by 2 cm transfer stain that exhibits both a pressed out appearance and some circular voids in it.
FED23U- 5601	Drip pattern, located in the center of the photograph and drip trail located between the drip pattern and the bottom left corner of the photograph. Transfer stain, of a possible handle, located in the right center area of the photograph. Additional transfer stains in the center of the photograph; one of a possible dropped object on the right side of the drip pattern with satellite spines radiating upward and to the right and the other transfer stain was located left of the drip pattern.
FJBMQQ- 5605	The photo appears to be taken at 90 degrees of blood patterns on a tile surface. There is a Drip Trail extending from the lower left corner to the aprx. center of the photo (8 stains). There is a Drip Pattern at the end of the Drip Trail, with blood dripping into blood (aprx. an additional 10+ stains). The bloodstains in the Drip Train and Drip Pattern are dark in color and cracking, which is an indication of time passage since deposition. Directly to the right of the Drip Pattern are 2 Transfer Stains. The Transfer Stains were made when a blood covered object had contact with the tile flooring. The object has some defined edges and interior circular Voids that may help to identify the object. The object itself is not shown in this photo. There are some fine thin spatters associated with the Transfer Stains indicating the direction/motion of the object as it hit the floor. The direction is from the Transfer stains towards upper right corner of photo. If the object was similar to a knife, it could have impacted end first and then landed on its side.
FMBWR8- 5605	1. Dark circular drip stains in roughly linear pattern forming a drip trail, also a number of overlapping dark circular drip stains creating a drip pattern. A small number of similarly dark satellite stains are adjacent to the drip pattern. 2. Long transfer stain with defined shape to right edge. Heaviest part of stain is approx. 7 cm long x 14 mm wide. Circular voids are present within the transfer stain. Edge characteristics (spines) are present to the top end of the long transfer stain. To top left of the stain is a smaller transfer stain, also with edge characteristics (spines). These spines show directionality to the right.
FU9PZ2- 5601	Item 5 is a complex stain consisting of a drip pattern, transfer stains, a drip trail, spatter stains, satellite stains, and a bloodstain. The drip pattern is located in the middle of the photograph. The transfer stain

is in the middle right-hand side of the photograph. The drip trail is oriented diagonally from the middle

WebCode-	
Test	Detailed Pattern Description
	of the photograph to the bottom left of the photograph. The bloodstain is in the middle of the photograph directly to the left of the drip pattern. The spatter stains are located at the top right, top middle, and top left of the photograph. The satellite stains are located in the top middle of the photograph adjacent to the drip pattern.
FWCLDN- 5605	There is a drip trail between the lower left hand corner and the center of the image. A drip pattern is visible in the center of the image with a few satellite stains. On the right side of the image, there is two transfer stains. Spines are visible on the right side of both transfer stains. The larger transfer stain has defined edges and voids are visible within.
FZX32P- 5605	Circular centimetric bloodstains on the vinyl tile with a linear distribution (= DRIP TRAIL). This pattern indicates that a source of blood has moved vertically over these stains. Particular shape (= TRANSFER STAIN) with spines on the outer edge, towards which ovoid millimetric bloodstains converge (= SPATTER). Circular millimetric bloodstains are also visible nearby (= SPATTER). This pattern reflects the sudden deposition of a bloody object on the tile. The shape is reminiscent of a knife blade. The overall pattern suggests that a knife was moved before being roughly placed on the vinyl tile.
G9MCNP- 5605	The target area shows multiple drip stains leading from the left corner of the target to the center of the target. A larger blood stain was observed at the center of the target. A transfer stain was observed next to the center drip stain.
G9P2ZM- 5601	It may be possible when examining blood stain patterns to make an interpretation of the action or actions which produced the blood stains. I have made these determinations where I am able to, and they are my opinions based on my training and experience in this field. There was a series of circular bloodstains from the lower left to the central area of the photo. In my opinion these were drip stains forming a drip trail. A drip stain is a bloodstain resulting from a falling drop that has formed due to gravity. A drip trail results from the movement of a source of drip stains between two points. In the central area the drip stains overlapped each other, indicating the source of the blood was stationary. To the right of the central group of drip stains was a larger area of blood staining with a defined edge along the right side, voids of circular area in the central area, and an irregular edge along the left side. In my opinion this was a transfer blood stain, where blood from a blood bearing surface has transferred due to contact with the tiles. The stain was approximately 1.5 by 7 centimetres. Between the overlapping drip stains and the above-mentioned transfer stain was a smaller area of transferred blood, approximately 1 by 1.5 centimetres. There were fine spines radiating out from the top right of this stain and extending beyond the larger blood stain. In my opinion the spines indicate that force has been applied to the small blood stain producing spatter. It is not possible to determine if the transferred blood stains were applied during the same or different events. To the left of the drip stains was a small blood stains around the other blood stains. There was a smaller area of ewe fine, approximately 1 millimetre in diameter, blood stains around the other blood stains. There was insufficient detail to interpret the mechanism used to create these blood stains.
GDZV78- 5605	Middle right of image has a transfer pattern. Spines observed on potion of this transfer stains. Drip trail from bottom left of image to middle of image. Cannot tell direction from the stains in the trail.
GGDWWG- 5601	There is a series of drip stains forming a drip trail oriented from the bottom left to the approximate middle of the vinyl tile. In the middle area of the tile, there is a drip pattern with some satellite stains. On the right side of the tile is a transfer stain.
GLREEY- 5605	At the center of the target is a drip pattern. There is a curvilinear pattern of circular stains, ranging in diameter from approximately 8.5mm to 12mm, from the center drip pattern to the lower left of the target. Directionality is not apparent. The stains are progressively larger with the smaller stains located near the center of the target and the larger stains located at the lower left. Adjacent and to the right of the drip pattern at the center, is a contact pattern transfer stain with defining characteristics, including an edge and a linear series of seven small voids. The bloody object that made contact with the target might have a corresponding row of holes, depressions, or similar marks. Additionally, part of the transfer pattern has spines, indicating that the object made contact with some degree of force.
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Test	Detailed Pattern Description
H3DDYQ- 5605	Item 5 represents a group of stains on a horizontal vinyl tile. From the center of the image to the lower left is a series of drip stains that form a drip trail (no direction of travel is implied). In the center of the image is a drip pattern. To the center right of the image is a transfer stain that may be further categorized as a stamped impression as there are no obvious signs of movement between the object and the target. Some small linear stains can be observed coming from this transfer stain and a nearby irregular stain. These could be the result of impact between the object that created the transfer and existing drops on the target. The pattern is too altered to confirm this. There are Voids in the transfer pattern that may be used to help identify the source of the transfer pattern.
HLN8MQ- 5605	The overall pattern exhibits a drip trail from the lower left to the middle of the vinyl tile, where a number of drips form a blood in blood pattern. These bloodstains appear in dark colour, clotted and cracked due to a drying process (altered stains). In the same colour smaller single bloodstains appear above and right to the middle pattern, which may be interpreted as satellite stains. Left to the middle formation an irregular shaped bloodstain of lighter colour can be seen. Right to the middle formation, also in lighter red, two parts of an irregularly shaped transfer stain can be seen. Its top border clearly shaped, its bottom border diffuse, with a few round and also irregularly shaped voids. The top left end of both parts show filamentous lines towards the upper right. Finally the whole target is covered with very small (<<0,5mm) blood stains with different directional information.
HQJYVM- 5605	The circular drip stains extending from the lower left corner of the tile to the center of the tile were consistent with a drip trail (A). The irregular shaped stain with smooth margins in the center of the tile was consistent with a drip pattern (B). On the right side of the tile were two irregular shaped stains with varying concentrations (C). These stains were consistent with transfer stains.
HW7PD4- 5605	In the middle of the photo is a drip pattern with an adjacent drip trail consisting of at least 5 circular drip stains oriented linearly between the drip pattern and the lower left corner of the photo. The diameter of each drip stain is approximately 9.5 mm. To the right of the drip pattern is a transfer stain with a heavier concentration of blood on the left linear edge as compared to the right irregular edge. The size of the transfer stain is approximately 6.5cm x 1.25 cm and oriented diagonally - upper left to lower right. There are several (approximately 6) small circular voids within the transfer stain. diameters of the voids ranging in size from approximately 2 mm to 6 mm. The shape of the transfer stain is consistent with a knife handle. There is a second transfer stain located directly to the left of the knife-handle-shaped transfer stain. The size of this second transfer stain is approximately 1.5 cm x 0.8 cm. There are long narrow spines radiating out from the top of this second transfer stain diagonally (left to right), indicating the second transfer stain was deposited with force.
J6YGX3- 5605	Pattern 5 has two parts. One is a drip trail of five, approximately 10 millimeter in diameter circular stains. There are very minimal to no spines. The drip stains have consistent edge characteristics around their perimeters. This indicates that each was a drip stain that hit the target at or near 90 degrees with little or no movement when released. The distance between the five drip stains ranges from 15 to 25 millimeters. The drip trail is about a 12 centimeter long line from the left lower corner to the center of the photograph. At the end of the drip trail at the center of the photograph is a larger (approximately 40 millimeters in diameter) group of drip stains that form a drip pattern where it appears that blood has dripped into a preexisting blood stain. This is indicated by the surrounding satellite stains that appear randomly around the drip pattern (parent stain). The satellite stains are circular to ellipse in shape and range in size from less than 1 to 4 millimeters in diameter (short axis for ellipses). The long axis of the ellipse shaped satellite stains show a directionality that radiates out from the parent stain. The majority of the satellite stains extend within about a 7 centimeter radius from the parent stain. Few satellite stains extend to about 13 centimeters from the parent stain. The drip trail and drip pattern all exhibit a cracking pattern likely due to drying. The second part of the pattern is a transfer stain from a bloody object. The object seems similar to the shape of a knife handle and possibly a portion of a partially folded blade. The apparent knife handle portion of the stain contains voids that are slightly circular which may indicate rivets or lanyard holes and a depression that is similar to a folding knife locking lever area. There are elongated satellite stains or spines pointing up and to the right and up and to the left. These elongated stains were produced with some force indicating the object may have been

WebCode	
Test	Detailed Pattern Description
J7QFC2- 5605	dropped onto the tloor/target. On top of a vinyl tile on a horizontal plane, there is a drip trail of circular blood stains with no apparent directionality from the lower left corner of the tile to the middle. In the middle of the tile is an irregular shaped drip pattern which is a bloodstain pattern resulting from liquid that dripped into another liquid and at least one of which is blood with some smaller satellite spatter close to the parent stain(s). To the right of the Drip pattern is a transfer stain which is bloodstain resulting from the transfer of blood from one blood-bearing surface onto another surface. The blood bearing object appears to be a handle of a knife.
JJUZHJ- 5605	Dried drip trail between the lower left corner and the center of the image. Drips of approx. the same size. A small accumulation of Blood in the center of the picture. Next to it, in the right half of the image a transfer stain that appears to be shaped - maybe a handle of a knive. Between the accumulation and the shaped transfer stain is one impact pattern located.
JMNHER- 5605	According to what I can see in the picture, there is a drip trail, because i can see motion from the source, I can see that this very stain is also an altered stain cause it looks dry and it is possible to see a cracking-shape. Next to this pattern is a transfer stain.
JQZGDY- 5605	Stains consistent with a Drip pattern observed at the center of the tile. A possible drip trail traversing the area between the tile center and the bottom left corner. A possible transfer pattern towards center/right edge of tile, with a possible impact pattern within the transfer pattern, towards the center of the tile - may have been caused during creation of possible transfer stain. Possible transfer stain to left of drip pattern observed at the center of the tile
JR8QFJ- 5605	Minimally, 3 patterns were observed. The first pattern observed ("Pattern 1") spans diagonally from the bottom left to the middle center of the image. About 5 circular stains with regular margin and smooth to slightly scalloped edge characteristics measuring 8 mm to 11 mm were observed. The stains were observed to be dark red with a flaky texture indicating that some time had passed since its deposition. In my opinion, Pattern 1 is a drip trail. The second pattern observed ("Pattern 2") is located at the middle center of the image, slight to the top right of Pattern 1. The pattern was observed to comprise a cluster of drip stains that measured 30 mm by 55 mm. The pattern's margin was observed to be regular with smooth to slightly scalloped edge characteristics. The pattern was also observed to be dark red with a flaky texture, similar to Pattern 1, which could indicate that Pattern 2 was deposited around the same time as Pattern 1. In my opinion, Pattern 2 is a drip pattern. The third pattern observed ("Pattern 3") is located immediately to the right of Pattern. The pattern was observed to be rectangular that measures 15 mm (width) by 70mm (length), with small circular void patterns within. One side of the pattern was observed to be amorphous with irregular discontinuous margin. It was also observed that there was an uneven deposition of blood. In my option, Pattern 3 is a transfer pattern.
K2UA2G- 5605	From the lower left corner diagonally to the right, up to about the middle of the vinyl tile, there are several nearly round bloodstains over a length of approximately 11 cm, each about 1 cm in diameter. These stains are classified as drip stains. In the middle of the tile, there is a bloodstain approximately 1.5 by 2 cm with a smooth edge, surrounded by a few round blood droplets with a diameter smaller than about 1 mm and some (combination of) more or less round bloodstains. This pattern is classified as a drip pattern. To the right of the drip pattern, there is a bloodstain approximately 8 by 1.5 cm with a few thin elongated spines on the upper left side. In the stain, there are several round to square-shaped areas where no blood is present. The top edge of the bloodstain is sharply defined, while the bottom edge shows a reduced blood volume and a more feathered edge. The stain is classified as a transfer stain. Given the shape of the stain and the contextual information, this stain could have been caused by a folding knife, but another object cannot be ruled out. Between the above-described drip pattern and the transfer stain, there is a bloodstain present approximately 1.5 by 1 cm with an irregular edge and large elongated spines. The spines attached to the bloodstain are interrupted by the above-described transfer stain but resume above the transfer stain. This pattern is classified as a cessation pattern. The pattern could have been caused by the falling object that also created the transfer stain.

TABLE 3: Recognition and Description

Test	Detailed Pattern Description
K7QWWP- 5601	An image of a tile with a drip trail extending between the bottom left corner and the approximate center of the target surface. There was a drip pattern in the approximate center of the target surface with few associated spatter stains. The stains comprising the drip trail and drip pattern were all dark colored and had all dried and cracked. There were two irregular shaped transfer stains located to the right of the approximate center of the target surface. These irregular shaped transfer stains each had a several spines radiating from them as well as a few associated elongated satellite stains radiating around them. There was another irregular shaped transfer stain to the left of the drip pattern. All of the transfer stains were much lighter colored red and did not appear to have finished drying. There were several small circular and irregular shaped void areas within the largest transfer stain.
KEJ9XZ- 5601	Presence of a drip trail and drip stain. The blood is dried and cracked. The drip stain show stagnation or slight movement in one place. There is contact transfer on the surface with a blood-stained object whose morphology suggests it may be a "knife handle" that has been removed. Note the presence of a small trace of blood impacted by the object in contact.
KJAJ3G- 5605	Several DRIP STAINS are visible in a generally linear arrangement between the lower left corner of the TARGET and the center of the TARGET and may comprise a DRIP TRAIL. At the center of the TARGET, a DRIP PATTERN is present with several small SATELLITE STAINS visible around it. To the right side of the TARGET, a TRANSFER STAIN is visible with lighter staining and variable intensity observed.
KZLYGL- 5605	Satellite stains are observed as well as a drip trail pattern ending in a pool, as well as alteration due to drying and a transfer stain.
L3KW3X- 5605	On the vinyl tile there are three pattern. Diagonally it has a drip trail pattern, its a bloodstain pattern resulting from the movement of a source of drip stains between two points. On the center it has a drip pattern, its a bloodstain pattern resulting from a liquid that dripped into another liquid, at least one of which was blood. To the right of vinyl tile it has a transfer stain, a bloodstain resulting from contact between a blood-bearing surface and another surface.
L4EG3P- 5601	In the approximate center of the photograph was a small drip pattern, right of this was a transfer stain that was consistent with possibly being caused by a knife handle, with misc. circular stains left of the transfer stain and one stain right of it. A drip trail was located on the lower left side of the drip pattern with the stains being located between the drip pattern and the lower left side of the photograph small circular bloodstains were located around the rip pattern. The bloodstains appeared to be dried with a cracked and flakey appearance.
L4WQRJ- 5605	Several drip stains with a size range of approximately 8 -12 mm were found, forming a drip trail across the vinyl tile between the bottom left corner and the central region of the tile, where a drip pattern with a diameter of approximately 35mm was found. On the right-hand side of the drip pattern, a rough rectangular-shaped transfer pattern was noted. On the upper edge of this transfer pattern, some spine-like patterns pointing towards the upper right corner of the vinyl tile were also noted. Some tiny round bloodstains with a size range of approximately 1-2mm were observed near the drip and transfer patterns. Due to the limited number of these bloodstains and lack of obvious directionality, the pattern nature of this group of bloodstains could not be ascertained. It could be satellite stains of the drip pattern or stains from a cast-off pattern.
L8Z6QX- 5601	Observation #A- Transfer stain- A transfer stain was in the center right area of the target. The apparent bloodstain measured approximately 3 $1/8'' \times \frac{3}{4}''$. The pattern's right edge began approximately 7/8" left of the right edge of the target. The pattern's top edge began 3 7/8" down from the top edge of the target. The transfer stain appears to be consistent with a knife handle or tool. The object appears to have been forcefully placed or dropped as there is an approximately $\frac{1}{2}'' \times \frac{1}{2}''$ stain to the left and below the transfer stain. This smaller stain had impact stains with a direction of travel toward the 2 o' clock position on the target. Observation #B- Drip pattern- A drip pattern was in the center of the target left of Observation "A". There were between approximately 10 to 20 stains, and the overall size of the pattern was approximately 1 $\frac{1}{2}'' \times 1 \frac{1}{2}''$. The pattern was approximately 3 5/8" left of the

Item 5, continued

WebCode-	
Test	Detailed Pattern Description
	right edge of the target and approximately 3 ³ / ₄ " from the top edge of the target. The sizes of the bloodstains ranged between 6 mm and 9 mm. The apparent bloodstains were predominately circular in shape and deposited at a 90° or nearly 90° angle. The pattern appears to have been present for a period of time as the stain had cracking. Observation #C- Drip Trail- A drip trail was in the center and center left of the target left and below Observation "B". There were approximately 5 stains, and the overall size of the pattern was approximately 4" x 3". The pattern was approximately 5 ¹ / ₄ " left of the right edge of the target and approximately 6" from the top edge of the target. The sizes of the bloodstains ranged between 8 mm and 10 mm. The apparent bloodstains were predominately circular in shape and deposited at a 90° or nearly 90° angle. Direction of travel was not able to be determined. The drip trail appears to have been present for a period of time as the stains had cracking. The sequence of events is unable to be determined.
LA7PFH- 5601	The blood patterns on the smooth vinyl of Item 5. There are 3 types of pattern. On the left side is a drip stain and in each drop the blood is clotted. On the right side, there are 2 types of pattern. There is a splash pattern with a tiny spine that may be caused by something pressing on the drip stain before the clot and the last one is transferred may be a bloodstain resulting from contact between a blood-bearing surface and another surface.
LF6C7X- 5605	A drip trail. Multiple 90 degree blood drops. Small in size lacking satellite stains / spines could indicate they originated from a shorter height. A large concentration of the 90 degree stains were observed near the center of the photograph. The stains were overlapping and small droplets of blood around the area consistent with drip stains observed. A transfer pattern from an object saturated in blood along the right side of the photograph. The shape of the pattern appears to be a handle of an object. Multiple voids were observed in the transfer pattern that are not circular and in various sizes could be used for identification/comparison of possible item.
LFUBEH- 5605	Three transfer bloodstains. One farthest right is near rectangular 14mm x 70mm with smooth margins and a linear pattern of circular voids down the middle. Spines from the impact onto the target radiate from the upper left end (as imaged). Immediately to the left is a 10mm x 12mm irregular-shaped transfer stain with smooth margins and spines from the impact onto the target radiating from the upper end. The third transfer pattern is an irregular-shaped 5.5 x 9.5mm bloodstain with smooth margins on the left side of the pattern. At the center of the pattern is an irregular-shaped 21mm x 32mm blood pool consisting over overlapping and/or adjacent near circular drip bloodstains. Pool lacks the irregular margins associated with blood dripping into blood, but adjacent drip bloodstains support drips contributed to the pool, in part or in whole. At least 10 near circular satellite spatter bloodstains, ranging in size from <1mm to 2mm in diameter distributed randomly around the blood pool and various drip and transfer bloodstains. A drip trail of at least 8 near circular drip bloodstains with smooth margins, ranging between 6 and 12mm in diameter, runs diagonally over 15cm between the pool and the lower left corner of the image. Overall multiple pattern dimensions are 19cm x 23cm. Conclusion: Transfer bloodstains and blood pool (possible drip pattern) with drip trail.
LQNR4J- 5605	There were at least five approximately circular drip stains, measuring 9 mm to 12 mm in diameter, extending between the lower left image and the centre of the image. In the centre, there was a drip pattern surrounded by a few satellite stains that appeared to be associated with the drip trail. On the right side of the image, there was a transfer stain measuring 14 mm by 70 mm with a distinct shape. A few spines extended from the top edge of the transfer stain. Additionally, there was a smaller bloodstain measuring 13 mm by 8 mm to the left of this transfer stain. It appeared to be an impact pattern consisting of a central stain with tightly distributed spines extending from the top right. The left edge of the central stain had a faint perimeter, suggesting that it shared features with a transfer stain. Qualifier: It is not practical to examine or describe all the bloodstains observed in the image. All measurements are approximate.

LTEQHG-5605 This is a complex bloodstain pattern consisting of three different bloodstain patterns on a horizontal vinyl tile. These were labelled A-C for documentation purposes. A. Pattern A is a drip trail that consists of 5 drip bloodstains. These bloodstains are in a curvilinear distribution and are all near circular in

TABLE 3: Recognition and Description Item 5, continued

WebCode-	
Test	Detailed Pattern Description
	shape and span about 7.3 cm long by 2 cm wide. These bloodstains have an even distribution throughout all of them and appears dried (cracked throughout). The majority of the margins of these drip bloodstains are smooth but the bottom two bloodstains are slightly scalloped. The drip trail starts at the bottom left-hand corner of the tile and moves up and to the right which leads into Pattern B. These bloodstains range in diameter from about 0.9 cm to 1.2 cm and the drip trail generally centered on the tile about 20 cm down from the top and 5.2 cm to the right of the left side. B. Pattern B is a drip pattern that consists of at least 8 drip bloodstains. This bloodstain pattern is near the center of the tile and generally spans 3.4 cm wide by 4.6 long. This bloodstain pattern has an even deposition of blood throughout and appears dry (cracked throughout). This pattern is generally centered 11.9 cm down from the top and 11.6 cm to the right of the left side. There are at least 14 associated satellite spatter bloodstains surrounding the drip pattern that range in size from submillimeter to 2 mm. Generally right of this pattern is pattern C. Pattern C is a transfer bloodstain spans approximately 6.8 cm by 7.3 cm and is irregular in shape. There is an uneven deposition of blood throughout and is lighter in color in some areas than others. There are some apparent generally circular voids in the center of the transfer, likely from the object. There are spines extending out and to the right from the transfer bloodstain that is on the left side of pattern B which is possibly associated with the transfer bloodstain. This is generally located 10.7 cm down from the top and 8.8 cm to the right of the left side and is about 8 mm by 4 mm in size.
LWE3DG- 5605	Item 5 is an image of a complex group of bloodstains. There is a drip trail of 5 individual near circular stains oriented diagonally between the lower left corner and the center of the image. At the center of this image is a drip pattern and some associated accompany drop bloodstains. There is a transfer stain in the center right side of the image just to the right of the drip pattern. The upper left side of the transfer stain has long, thin linear stains (spines) indicating some amount of force used to create this transfer stain.
MULPPV- 5605	A complex bloodstain pattern was evaluated on a vinyl tile in the horizontal plane. • A drip pattern exhibiting dense, dark red color was observed in the center of the pattern; the surface of the stains comprising the drip pattern was cracked. Limited associated spatter stains (primarily circular) were observed above the drip pattern. Two stains that could not be characterized were observed to the left of the drip pattern: a dark red stain with irregular margins approximately 10mm x 7mm and a faint apparent stain. • A drip trail comprised of five stains was located below the drip pattern; the drip trail spanned from the drip pattern to the lower left corner of the tile. The stains had a dense, dark red color and cracked appearance visually consistent with those observed in the drip pattern. • Several stains were observed to the right of the drip pattern. 1) A red-brown generally rectangular transfer stain with distinct edge characteristics along the right margin and several circular or amorphous voids within the pattern; the pattern appeared similar to a handle or blade. 2) A small (approximately 4mm x 2mm) stain was located on either side of the transfer stain; both of these stains. 3) A few dense, dark red spatter stains, and one of these stains was located within one of the voids. 4) A stain with irregular margins was observed to the left of the rectangular transfer stain; this stain had similar color density to the transfer stain. This stain also exhibited some cessation pattern characteristics, including spatter radiating from the top of the stain in an upward and left to right directionality; this spatter appeared to be underneath the rectangular transfer stain, with the rectangular transfer stain and the adjacent stain with irregular margins. The spatter was primarily elliptical, but directionality could not be determined.

MX3XDV-5601 There are drip stains creating a drip trail between the left side and the center of the target. There is a drip pattern in the center of the target which is closely surrounded by drip stains, some of which are overlapping. There are some satellite stains surrounding the parent stain. There is a transfer stain on the right side near the center of the target with some voids along the middle of the stain.

WebCode-	Detailed Pattern Description
MZ9H3F- 5605	The main features are: to the right of the image there is a transfer stain (70 mm in length and 20 mm in width, approximately) where an object wet with blood came into contact with the tile. Some features indicating the shape of the object are apparent in the transfer stain. In the centre of the image, there is a small pool of amalgamated drip stains. There is a drip trail of five drip stains in the bottom left section of the image. There are 10+ small circular stains mostly in the centre of the image and in the vicinity of the transfer stain.
N3VE3U- 5605	Item 5: (vinyl tile – horizontal plane) There are multiple overlapping bloodstains on this target. Located in the middle right of the tile is an irregular shaped slightly diagonal bloodstain of approximately 70mm long by 20mm wide with an additional 10mm long by 20mm wide stain just below it, approximately 10mm away. Overall, this stain has varying density, with a clearly defined top edge and a lighter density on the bottom edge. There are approximately 5 circular voids within the stain, varying from ~2mm to 5mm in size. There are thin (<1mm) spines coming off of the top sides of both the smaller and larger stains, with orientation between the center and upper right of the tile. These orientation marks are consistent with an indication of force with contact. This is a transfer stain. The middle of this tile has multiple overlapping circular drip stains forming a drip pattern, approximately 40mm by 40mm. This section of the pattern is dark and there are cracks in the staining. There are small (<1mm to 2mm) circular and semi-elliptical stains on the top and left of this drip pattern pool and irregular shaped stain to the right which appear to be satellite stains. Between the drip pattern in the middle of the tile and the lower left corner there are 5 additional drip stains. They are circular and approximately 1cm in size. These drip stains are also dark and have cracking. The 5 additional drip stains are in a line between the drip pattern and the lower left corner of the tile, possible a drip trail.
NEPT9H- 5601	This photograph depicts bloodstains on a horizontal vinyl-tile surface. The stained area covers a region of approximately 200mm x 195mm and consists of different patterns. Located in the roughly center region of the photograph is a concentration of circular stains, covering an area of approximately 5.0 x 5.0 cm. This pattern is characterized by bloodstaining having circular morphology with smooth edges. Circular stains on the periphery on the main concentrated pattern appear to have a diameter of 8.0 x 8.0mm. Small circular spatter (satellite staining), measuring approximately 1.0mm or less, can be observed at regions surrounding the parent pattern. Based upon these characteristics, this bloodstain pattern is best classified as a drip pattern. Located in a general linear orientation between the center and lower left region of the photograph are a series of roughly circular stains with an approximate diameter of 1.0cm. These stains cover a length of approximately 15.0cm. Based upon the circular morphology and linear distribution, this bloodstain pattern is best classified as a drip pattern is both the drip pattern and drip trail all displayed a cracked type of appearance, ostensibly due to the effects of drying. As such, these stains can be further classified as being altered stains. Located to the right of the drip pattern, is another bloodstained area. This stained region covers an area of approximately 7.5 x 3.5cm at its widest margins and is characterized by defined edges with voids present within the main stained area. This possibly resembles a handle or other object having perforations. Based upon the above described characteristics, this bloodstain is best classified as a transfer bloodstain.
NNDMBU- 5605	Bloodstaining was present that consisted of: a series of drip stains (approximately 0.6cm-1cm in diameter) that form a drip trail. a cluster of drip stains deposited in a similar area forming a drip pattern with associated satellite stains visible. Two transfer stains. The larger stain has some straight edges (and several small voids), suggesting a solid bloodstained object has made contact with the surface. The smaller of the transfer stains has less well defined edges. Both have elongated directional stains extending from the the uppermost sections of the parent stains.
P3PMNH- 5605	In the middle of the picture, there is a drip pattern. Right from the drip pattern, approx. 2 cm distance, there is a transfer stain, approx. 8 cm long. Between the transfer and the drip pattern, a 0.5 x 1 cm stain is visible, possible cessation pattern. From the drip pattern to the left-bottom corner of the picture, a drip trail is visible, formed of 5-7 drops. From the left of the drip pattern, approximately 1 cm distance, a "half" drip stain is visible, a possible result of a void. Accompanying drops are visible around the drip pattern.

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PA9KKH- 5601	Running from the bottom right corner of the photograph to the approximate centre of the photograph are a number of circular bloodstains which are drip stains (passive), these have formed into a linear drip trail. In the centre of the photograph a number of these drip stains have over lapped an have dripped into each other forming a small drip pattern with a number of small satellite spatter located around it. The blood in these have dried and the blood have started to crack. To the right of the drip pattern is a transfer stains which may be in the shape of the item which has formed it (such as a knife etc). This maybe compared to such items. This transfer has a number of potential voids in it which may align with features on the item which formed it. There are small spines coming from the transfer stain which may indicate an impact with the floor which was formed when the object that caused the transfer has impacted the floor.
PG97FE- 5605	Five circular stains with smooth margins were observed on the left side of the image. The stain size ranges from approximately 9mm to 10.5mm. The stains are dark colored with some cracking observed. In my opinion, these characteristics are consistent with drip stains. Three amorphous-shaped stain with smooth margins, measuring approximately 12.5mm, 30mm by 34mm and 15mm respectively were observed on the top right side of these five stains. These stains were observed to be dark in color, with some cracking. In my opinion, these characteristics are consistent with drip pattern. On the right side of the image, a large amorphous-shaped stain, measuring about 19mm by 81mm, with some voids on the stain was observed. The stain was observed to be inhomogeneous in color. These characteristics, in my opinion, are consistent with a transfer stain, another amorphous-shaped stain, measuring about 10.5mm by 15mm was observed. The stain was observed to be inhomogeneous in color. Long spines were observed to be radiating from the stain towards the top right direction. These characteristics, in my opinion, are consistent with an impact pattern.
PRTCJH- 5601	Just above the centre of the page is a group of one large and two smaller, irregularly-shaped bloodstains. The edge characteristics are rounded or scalloped. These heavy stains have homogeneous blood distribution, and have cracked as they dried. In my opinion these bloodstains comprise a small drip pattern, where dripped blood stains have coincided in area to overlap, and in the case of the larger, central stain, form a small pool, which measures approximately 31 by 34 millimetres at its widest points. The two smaller stains that comprise this drip pattern appear to have each been created by just two overlapping drip stains. There are a few small, circular to oval spatter stains that are most likely created as satellites from the splashing of successive drips in the drip pattern. Between this pattern and the lower left corner of the page is a fairly linear arrangement of five almost circular bloodstains, measuring between approximately 9 and 11 millimetres in diameter, and with homogeneous blood distribution. They have rounded to scalloped margins, but insufficient edge characteristics in my opinion, to determine directionality. These five stains, in my opinion, are drip stains and together comprise a small drip trail. To the right of the drip pattern are two lighter red bloodstains. The smaller of these measures approximately 15 by 9 millimetres at its widest points, has an irregular shape and fairly ill-defined margins. In my opinion this is a transfer stain. The larger of the two lighter red blood stains is approximately 82 by 24 millimetres at its widest points. It has well-defined margins that on the upper side, as placed on the page, are linear on the left side, and curved on the right. The lower side of this bloodstain pattern has a much less defined edge and an irregular shape. The blood distribution in this stain is non-homogeneous. In my opinion this is also a transfer stain, and appears to be the partial impression of an oblong object which was heavily bloodstained and has since been removed. There i

WebCode- Test	Detailed Pattern Description
Q6W2VN- 5605	Several red brown circular apparent drip stains (approximate diameters between 9 and 12 mm) form a curvilinear drip trail between the lower left corner and middle of the photograph. Just above the center of the photograph is a drip pattern (blood into blood) with limited associated satellite spatter stains (approximate diameters between 1 and 3 mm). All of these stains are quite dark. The drip pattern exhibits a cracked appearance, likely due to drying. A regular apparent pattern transfer stain is visible just right of the drip pattern. This transfer stain has a very sharp, well-defined margin at it's upper right with circular and near-circular voids within. The staining is not dark or cracked, suggesting that it may have been deposited more recently than the drip pattern.
QA7H4D- 5605	The pattern has a drip trail that is composed of dried bloodstains. Above the drip trail, a drip pattern can be observed, resulting from blood into blood. A transfer stain is to the right of the dried stains, a result of a blood-bearing item being placed then removed on the vinyl tile.
QAQVUB- 5605	From left to right and from lower to upper side of the tile: A Drip Trail at the left lower side of the tile diagonally to the center of the tile (with no directionality). A Drip Pattern at the center of the tile with some Satellite Stains in its surroundings. An Impact Pattern at the center of the tile. At the right side of the impact pattern there is a Transfer Stain.
QGNPXQ- 5605	A quality photograph analysis on smooth vinyl tile surface in a horizontal plane. Its shape is circular, its color is red, light red and dark red with linear distribution pattern: Drip trial and transfer stain. A. Drip Pattern- A bloodstain pattern resulting from a liquid that dripped into another liquid, at least one of which was blood. A. Drip Stain- A bloodstain resulting from a falling drop that formed due to gravity. B. Drip trial- A bloodstain pattern resulting from the movement of a source of drip stains between two points. C. Transfer Stain- A bloodstain resulting from contact between a blood-bearing surface and another surface
QK3M6D- 5601	Item 5: The following bloodstain patterns were observed on the tile: A linear distribution of bloodstains consisting of circular stains each approx. 1 cm in diameter. The stains are distributed from the lower left corner of the target toward the center. The stains are characteristic of drip stains forming a drip trail. At the one end of this trail (near the center of the target) is a cluster of apparent overlapping drip stains surrounded by a scattering of satellite stains characteristic of a drip pattern. To the right of this pattern is an elongated irregularly shaped stain (approx. 1.5 cm x 7 cm) lighter in color than the drip stains. The stain has a somewhat straight edge on the right side and a somewhat curved edge along the opposite side. There is a heavier concentration of staining along the straight edge and a lighter concentration on the opposite edge. Within the overall stain are a series of somewhat circular voids. This stain is characteristic of a transfer pattern. Insufficient characteristics are present to indicate the potential source of this transfer pattern. To the left of this transfer pattern is a smaller somewhat rectangular stain (approx. $0.8 \text{ cm x } 1.4 \text{ cm}$). On one edge are thin streaks of elongated spines that appear to originate from this stain. This is indicative of a forceful transfer (e.g., a transfer stain resulting from something bloody striking the non-bloody area of the tile.). An irregularly shaped stain (approx. 0.5 cm x 1 cm) was also noted to the left of the above mentioned drip pattern.
QLGRUN- 5605	Red-brown drip stains; a drip trail; a drip pattern; and a red-brown stained transfer with voids were observed on the vinyl tile.
QRLNFA- 5601	A drip pattern was observed near the middle of the target. A drip trail was observed extending between the lower left edge of the drip pattern and the lower left corner of the target. A transfer stain was observed near the middle right of the target. Additional bloodstains were observed, but were not classified.
RCTHRM- 5605	Several bloodstains were observed on a gray vinyl tile, which was oriented in the horizontal plane. Five near circular stains, each measuring approximately 1 cm in diameter, were present between the lower left and center of the target. They were dark red in color and had a "cracked eggshell" appearance. Those stains formed a drip trail. Adjacent to the upper part of the drip trail was a drip pattern. The drip pattern consisted of an approximately 4x5 cm area of dark red staining. The margins of the large stain were smooth, and in some areas a nearly circular area extended from it, as if being the result of a drip

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	stain. A stain at the upper left part of the drip pattern appeared similar, but slightly different in shape and color. This may be the result of surface effect or movement. To the right of the drip pattern are two lighter red in color impressions. The further left stain is smaller and has less detail, but it appears consistent in shape and size to the end of the right impression. The left impression exhibits motion and spines are observed extending from the right side. Similarly, some spines are observed from the right side of the larger, right impressions. Observed within the right impression are voids of blood, one of which is nearly circular. The upper margin is very linear and has a distinct shape in an area where the margin narrows and then reforms its width. These are classified as transfer stains, and because there is relative motion they would also correctly be classified as a swipe.
RKJ22E- 5605	DRIP TRAIL formed by moving object impregnated with blood, producing a pattern of 5 blood stains; The diameter of the drops decreases from left to right, indicating that the dripping object possibly followed that direction and direction. Next, a DRIP PATTERN is observed produced by an object soaked in blood, standing and dripping, falling drop after drop on the target. To the right of the previous pattern, an IMPACT PATTERN is observed, possibly produced by the impact of an object impregnated with blood against the target, leaving a transfer of the blood it was carrying on the target, as well as spiked stains produced in the impact. Finally, on the right of the image, a TRANSFER PATTERN produced by an object soaked in blood is observed. The shape and characteristics of the pattern indicate that the object could correspond to the handle of a knife.
RTV2VP- 5605	The larger circular stains are drip stains forming a drip trail. The overlapping stains and the smaller circular stains comprise a small drip pattern. The patterned stain is a transfer stain with a fairly distinct edge characteristic (shape) along the top edge, and several internal voids.
RU9QTM- 5605	Drip stains forming a drip trial were located between the bottom left corner and center of the image. Center of image has a drip pattern with some satellite stains surrounding the drip pattern. A transfer stain is located to the right of the drip stain pattern. Satellite stains leading to the upper right indicate that a bloody object was dropped onto the target and then removed.
RY6FAV- 5605	Drip Pattern Drip Trail Accompanying drop / Satellite stain Transfer stain
T8TRRE- 5605	 1 - From the bottom left corner to the middle of the picture, a drip trail. Orientation can't be determined. 2 - On the middle of the picture, a drip pattern. Presence of a few circular satellite stains. 3 - On the right of the picture, a tranfert pattern from a bloody object. This object can't be determined. 4 - Between the drip pattern and the transfert pattern, another transfert pattern made in a powerful way. Presence of some peripheral spines.
TC4FRB- 5605	There is a drip pattern comprised of at least 7 discernable, overlapping drip bloodstains that have accumulated in a pool in the approximate center of the image. Numerous satellite spatter stains surround the blood pool. A drip bloodstain trail comprised of five drip bloodstains is in a linear orientation between the bottom of the drip pattern and the lower left corner of the image. An apparent transfer stain is to the left of the drip pattern. Two transfer bloodstains are to the right of the drip pattern. The larger transfer bloodstain is roughly rectangular in shape and has several near-circular voids within the bloodstain. Both transfer bloodstains have faint spines radiating away from the perimeter, toward the upper right corner of the image.
TM64ET- 5605	This image consisted of multiple bloodstain patterns. There were numerous round red-brown stains consistent with drip stains and two lighter in color red-brown stains consistent with transfer stains. Numerous drip stains were in a somewhat linear pattern diagonally across the image (lower left corner to the center) indicating movement and are consistent with a drip trail. In the center of the image there were several drip stains that appeared to be on top of each other, creating a dip pattern. Smaller (less than 1 mm in diameter) stains surrounded these drip stains. There were two lighter red-brown transfers stains on the middle right side of the image. One was approximately 7.37 cm x 1.84 cm at its widest point and appeared to have a discernable shape/pattern. It had a defined edge on the right side, was slightly curvy with no defined edge on the left side, had circles in the middle that were void of staining and had thin red-brown stains that appeared to be coming off the upper right side. The other was

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	irregularly shaped and was approximately 1.37 x 0.95 cm at its widest point. There was approximately 0.77 cm between the two stains.
TTTL4B- 5605	Observation: 1. Drip stain / drip trail pattern The bloodstains are on a smooth vinyl tile (non-absorbed material) in the horizontal plane. The edges of bloodstains are dried, large and circular in shape. A linear distribution of bloodstains was present. It suggested that drip bloodstains from a falling drop formed due to gravity. 2. Transfer stain pattern There is a transfer bloodstain beside the drip stain pattern. Its edge shows an apparent contour of an object. However, the object with blood was removed from the floor. Conclusion: 1. The source of drip stains/ drip trail bloodstain pattern could be that a person was bleeding while walking slowly or a person was carrying an object with blood. 2. However, the quantity of blood from the dripping was limited and the distance of the trail pattern was short. It suggests that the transfer bloodstain could have come from a bloody weapon or object which was carried around or removed from the scene by someone. 3. From the transfer stain pattern, it suggests that the investigator should look for an object which matches the shape of bloodstain. This statement is based on the information provided by the photo. If further information becomes available, the analyst may need to reappraise the findings and conclusions.
U4MMMK- 5601	The following patterns were observed on the tile: - drip trail, circular blood drops (passive) deposited in a linear pattern - drip pattern - irregular margined stain with surrounding satellite stains - transfer stain as a result of a surface with liquid blood on in coming into contact with the vinyl floor. the item could possibly be identified but within the photo no further description of the item should be made.
U93VBJ- 5601	Item 5 shows multiple bloodstain patterns on a target area. Starting in the bottom left corner, smaller blood stains can be observed leading up to larger blood stain. Small accompanying blood stains are seen surrounding the larger blood stain in the middle of the image. Towards the right side of the image, a transfer stain (parent stain) can be observed. Voids are located within the parent stain. Satellite stains stemming from the parent stain are present. The satellite stains go upwards towards the top right side of the image.
U9R3JF- 5601	There is a small pool of blood at the center of the image. Then there is a drip trial going down towards the bottom left of the image. This small blood pool and drip trail are clotted. There is also a small transfer stain to the right of the small blood pool.
UAUQYD- 5605	At least six round reddish stains with a diameter slightly below 10mm are visible on the horizontal and smooth vinyl tile, with a linear spatial distribution going from the bottom left corner of the image to the center of the picture. The slightly larger traces at the center of the picture are probably made of overlapping stains of the same size. These stains are characteristic of dripping, and their relatively small size is possibly due to dripping from a hydrophilic object o an object with sharp edges. On the right of the picture is a reddish stain of about 5cm by 2cm, with a heterogeneous and unnatural shape. That stain is surrounded by several elongated spines. That stain is characteristic of the transfer of blood from a bloody object onto the tiles. The transfer occurred with some velocity which created the spines. Some round stains with diameter between 1 and 3mm are also visible in the picture, these are spatter stains.
UC29X9- 5605	In this photo can be observed a dried drip pattern, which formed from a liquid blood that dripped into another liquid drip stain falling all in one place. In addition, there is a drip trail showing movement direction of source of drip stains. The bloodstain on the left of drip pattern is not so intensive in color as a drip stains, also its edge characteristic and irregular shape distinguish it from drip stains. This stain may be altered stain or transfer stain, due to luck of characteristic features, cannot be exactly say how it formed. On the left of the drip pattern, there are two transfer stains resulting from contact between a blood-bearing surface and the vinyl tile surface. The transfer stain reflect the morphological characteristics of the object surface and can help to identify the knife/tool. Both these transfer stains in their upper parts has tiny satellite stains, originated during formation of transfer stain then the blood-bearing object (possibly knife/tool) impact the vinyl tile surface. Around these two transfer stains, there are roundish spatter stains, also few oval-shaped bloodstains in the top part of photo, the size of the stains from 1 to 3 mm, suggests that can be produced by stabbing.

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Test	Detailed Pattern Description
UH77ED- 5605	There is a drip trail between the bottom left corner of the image provided to approximately the centre of the image. This trail consisted of approximately five drip stains. In the centre of the image there is a drip pattern with possible associated satellite stains. To the right of the image there is a transfer stain. The transfer stain displays features of a possible transfer source. Between the drip pattern and transfer stain there is a blood stain with features of a cessation pattern with elongated satellite stains extending to the top right corner of the image.
UKTQFB- 5605	The target supports a drip trail, drip pattern, and transfer stain. There is also an altered stain between the drip pattern and transfer stain.
UMZZCE- 5605	Item 5 is an image of smooth vinyl tile in the horizontal plane with multiple bloodstains. The pattern was found in the home of a deceased victim with multiple stab wounds. There is a drip pattern in the center of the tile where several drops of blood appear to have dripped into one another. There is a drip trail that extends between this drip pattern and the lower left corner of the image. To the right of the drip pattern, there is a transfer stain where a blood bearing surface came in contact with the vinyl tile. The transfer stain has small apparent voids within it. The transfer stain shape outline and apparent voids may correspond to features in the bloodstained object that came in contact with the vinyl tile. Last, there are many satellite stains in the areas surrounding the drip pattern and the transfer stain that resulted from the formation of these parent stains.
UWPUJ6- 5601	Item 5 shows multiple drip stains creating a drip trail extending between the lower left of the target and the center of the target. A drip pattern was observed near the center of the target. A transfer stain was observed near the right side of the target.
V433K7- 5601	A suspected drip trail is visible in the bottom left corner of the photo, continuing to the center of the photograph. The suspected blood has dried, creating cracks throughout the stains. A suspected drip pattern is observed car the center of the photograph with a suspected transfer stains located to the right of the suspected drip pattern. There are satellite stains neat the top edge of the transfer pattern.
V7U2Y6- 5601	There are multiple drip stains creating a drip trail between the lower left corner to near the center of the target (direction of travel not determined). A drip pattern is present near the center of the target. A transfer stain is present near the middle right side of the target.
VAUCU6- 5601	A drip pattern is located in the middle of the image with a drip trail extending between this drip pattern and the lower left corner of the image. A transfer stain is located to the right of the drip pattern.
VLMUEQ- 5605	At least 5 individual drip stains are in the bottom left quadrant of the target. Near the center of the target is a blood into blood pattern with some associated satellite spatter. A transfer stain is to the right.
VPVWQF- 5605	On the right side, a transfer stain is observed. On the left side, a drip trail is observed which was altered by drying. On the upper left side, satellite stains are located
VQUG2D- 5605	In the bottom left corner of the tile there are five single bloodstains in a linear formation. These stains are near-circular and approximately 9 to 12 mm in diameter and form a drip trail with no directionality in the bottom/left corner of the tile. In the center of the tile, at one end of the drip trail are multiple similar stains on top of one another forming a drip pattern. Surrounding the drip pattern are small satellite stains, approximately 1-3mm. On the center/right side of the tile there is a transfer stain with one flat side and the other irregular with voids along the center of the stain.
VRALV6- 5601	There is a linear arrangement of multiple nearly circular drip stains creating a diagonal drip trail from the lower left corner to the center of the target (direction of travel not determined). A drip pattern is present near the center of the target. A transfer stain is present on the left side of the drip pattern and transfer stains are present on the right side.
VTKLMK- 5601	There is a drip trail extending between the lower left corner and an area near the middle of the target. The individual stains are circular with diameters ranging between approximately 9 to 12 mm. Near the middle of the target, there is also a drip pattern with minimal related satellite stains. To the right of the drip patterns, there is a diagonal transfer stain with a top left to bottom right orientation. The shape is roughly rectangular, measuring approximately 80 mm by 15 mm. There are voids within the transfer

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	pattern. Additionally, there are elongated satellite stains to the top right of the transfer stain. In between the drip pattern and the transfer stain, there is another smaller transfer stain with an irregular shape measuring approximately 15 mm by 10 mm with some elongated satellite stains to the top right of the stain.
VVCK2J- 5605	In Pattern Area 5 are three distinctive bloodstain pattern which were labelled 5A, 5B, and 5C 5A (Red rectangle) – Bloodstains observed in pattern area 5A consists of circular stains ranging in size from approximately nine (9) millimeters to eleven (11) millimeters. These bloodstains extend from the lower left corner of the vinyl tile to the center of the target area, however; no determination can be made regarding directionality. A larger pattern area is located in the center of the target consisting of a bloodstain with smooth margins and circular and semi-circular bloodstains. The smooth margins of these bloodstains may indicate that the source of blood was near the target when the pattern was created. 5B (Black arrow) – Observed between pattern areas 5A and 5C is a rectangular shaped bloodstain. The pattern area is approximately ten (10) millimeters by twenty (20) millimeters. There is no defined shape but with the exception of one portion of the pattern the margins are smooth. One area of the pattern area exhibits fine, thin radiating stains as the result of impacting the target with a source of blood already on the object. There is no indication that a bloodstain existed prior to the object striking the target. 5C (Blue rectangle) – Depicted in 5C is a well-defined pattern with smooth edges, with the exception of one end of the pattern where fine, radiating stains are observed. Similar to pattern area 5B there were no bloodstains on the target prior to creation of the pattern area. 5A – Series of drip stains (drip trail) and drip pattern 5B – Impact pattern, transfer pattern 5C – Transfer pattern
WDMTK4- 5601	A Drip Pattern was observed on the center of this target. A Drip Trail was noted between the center and lower left hand corner of this target. A Transfer Stain was observed on the right center of this target.
WL3DYN- 5605	Several large rounded drip stains approximately 1 cm in diameter forming a drip trail between bottom left corner and centre of tile. In the central area a few drips have pooled together and a few smaller spots approximately 1 mm in diameter (satellite stains) surrounded this. In my opinion, this may indicate a bleeding individual or item wet with blood has dripped, whilst moving along the trail, and paused at the centre dripping a few drops of blood into same spot which have then pooled. To the right hand side of the pooled drips is a transfer pattern with a few apparent voids within it. There are some very thin, directional stains (satellite stains) extending from this transfer pattern. In my opinion this may indicate an item wet with blood, possibly a knife, was dropped and impacted onto the surface before being removed.
WYN8DH- 5605	In the lower left portion of the image, multiple drip stains are observed. Additionally, a drip pattern is located in the middle of the image with satellite stains surrounding the drip pattern. The drip stains and drip pattern are dark in color, with observed cracks throughout the stains. On the right side of the image, a transfer stain is observed. It is best described as long and narrow with distinct edges. There are several small circles within the stain and this is possibly some type of transfer pattern. This stain is significantly brighter red in color than the drip stains/drip pattern. In between the transfer stain and drip pattern, another bright red bloodstain is observed. The edge characteristics are irregular and not well defined. Several small spines are observed extending outward from the stain. This stain does not have sufficient characteristics to be classified.
X29WAL- 5605	Near the center of the image are several drip stains with no directionality (near 90 degree impact angle) indicating a stationary source. From this stain area and in a line to the lower left of the image is a drip trail which also has no directionality. To the right of the drip stains in the center is a transfer stain with possible class characteristics. At the upper left edge of this transfer stain there are some very low-angle impact spatter stains. This could be produced by the object creating the transfer stain landing in an existing stain or by the object itself having a significant amount of blood on it when landing on the surface. There is also a stain to the lower left of the transfer stain that also exhibit these low-angle impact spatter stains.
X8C6J8- 5605	Round drip stains arranged in a near linear fashion diagonally through the target producing a drip trail. At one end of the drip trail is what appears to be more than one drip stain in the same/near same

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	location with few smaller satellite stains present, thus a drip pattern. Next to this drip pattern, is a fainter looking bloodstain nearly a rectangle, with one of the longer sides having a smooth defined edge, straight and then an arch. The other longer side is not smooth, uneven, and fainter. Within this near rectangular shape are some round voids, somewhat in a line/pattern. This appears to be an object that supported blood and came into contact with the surface/target creating a transfer stain. Drip stain, drip trail, drip pattern, and transfer.	
XAHNEA- 5605	Observed in the center of the plane is a drip stain with a transfer stain observed to the right of it and a drip trail observed in the left lower corner.	
XBFVT8- 5601	Located centrally is a drip pattern where blood has dripped into blood. There are a number of circul or near circular satellite stains near the drip pattern. There are a number of circular stains, consistent with drip stains, distributed in a relatively linear manner between the drip pattern and the lower left corner. The distribution of these drip stains is consistent with a drip trail. The drip stains and the drip pattern appear dark, dry and cracked. Immediately adjacent to the drip pattern, to the right side, are transfer stains. There are long and narrow satellite stains which radiate out from the parent transfer stains. The larger of the transfer stains measures approximately 8cm long x 1.5cm wide and has a patterned appearance with apparent intermittent voids centrally through the long axis of the transfer stain. There are satellite stains located adjacent to the transfer stains and one located within an apparent void.	
XF9WR2- 5601	Center of target is a drip pattern with associated spatter. Lower left quadrant of target is a series of drip stains comprising a drip trail. Right side of target is a transfer stain.	
XHDQGK- 5601	Round spatter stains about 10mm originating perpendicular to the horizontal plane. Stains in linear arrangement and size variation not significant. Given the overall length and distribution, whilst this is a drip trail. The stains at the end of this line have grouped and pooled indicating dripped blood with much smaller 1 to 2mm satellite stains caused by blood dripping into blood resulting in a drip pattern. The appearance is very dark with cracks evident where blood has dried over a period of time. To the right of the drip pattern is a blood pattern with straight edge and voids indicating that an object wet with blood has made contact with the target surface leaving a transfer pattern. This staining is less heavy than the dripped blood and not of uniform density. This may indicate the blood was lighter in some of the contact areas than others and I cannot exclude the lighter bloodstaining was from diluted blood but no water marks evident. Areas of the transfer bloodstaining have edge characteristics indicating a dynamic action as there is spatter – this could be as a result of the bloodstained object making contact with the target surface.	
XN34H9- 5605	There is a collection of bloodstains situated in the bottom left quarter of the image that are circular in shape and of a similar size (diameters ranging from approx 6mm to 10mm). The stains have generally smooth undisrupted edge characteristics and do not show any detail of directionality, thus indicating close to 90o deposition. The stains are almost equidistantly spaced and are of a uniform dark brown/red colour with a dried cracked appearance. There appears to be an element of linearity to the distribution of the stains. The diameter of the stains is observed to decrease slightly in size the closer they are to the centre of the image. Overall, the stains appear to form a drip trail. At the centre of the image, there are a number of stains, predominantly circular in shape, that have overlapped to form one larger, central stain. These appear to be a drip pattern, where blood has dripped into, or very near to, existing staining. Furthermore, to the left of this area is a further bloodstain which has a different shape and has a lighter colour to the adjacent bloodstaining. To the centre right of the image is a large transfer bloodstain measuring approx. 19mm x 72mm in size. The stain has a defined, straight upper edge. The pale red/pink colour suggests that the composition of the blood has been physiologically altered by dilution with another fluid. Several areas within the transfer stains are free of blood, suggestive of voiding and perhaps indicating the nature of the item that had transferred the blood. To the left of this large transfer stain, is a further small transfer stain are free of blood.	

WebCode-			
Test	Detailed Pattern Description		
	The colouring of the stain on the upper left edge is a pale red/pink colour and differs in appearance to the rest of the stain, indicating altered, likely diluted blood. Numerous, fine, spine-like projections are present at the periphery of the smaller transfer stain extending beyond the larger transfer stain.		
XN6RU7- 5601	The pattern consists of 5 circular stains between the bottom left of the image and the centre of the image, which were drip stains forming a trail. In the centre of the image was a group of overlapping circular stains with smaller stains surrounding them, which made up a drip pattern. On the right hand side of the drip pattern were irregular stains, one of which had defined edges and small round voids in the centre of the stain, which appeared to be a transfer stain from a bloodstained object, which has been subsequently removed. There are spines on the top right side of this stain, and another transfer stain close by, which suggests the application of some force to the blood, either from force as the bloodstained object contacted the target, or force applied to the blood after it was deposited onto the target.		
Y3EZ49- 5601	A series of drip stains are present forming a drip trail. In the centre of the photograph the drip pattern has formed a small pool and there are associated satellite stains. These blood stains are dark in colour and have dried and cracked. To the right of the photograph is a transfer stain with circular voids and an altered stain with a small impact pattern radiating out from one side.		
Y8V8R8- 5605	A transfer bloodstain was observed towards the middle right side of the image. The transfer stain resulted from contact between a blood-bearing surface (possibly the handle of a knife) and the surface in the image. A linear pattern of circular bloodstains was observed across the surface in the image from the lower left-hand corner to the upper right-hand corner of the image. The linear pattern of circular bloodstains has an appearance suggestive of a drip trail pattern. The drip trail pattern resulted from the movement of a source of drip stains between two points. The larger stains at the center of the image have the appearance of a drip bloodstain pattern. The drip bloodstain pattern resulted from blood dripping into existing bloodstains on the surface in the image.		
Y9PRQF- 5601	Item 5 depicts multiple bloodstain patterns. A drip trail, formed by drip stains, is observed from the bottom left corner to the middle of the area. The drip stains did not indicate the directionality of the trail. Near the middle of the image, a drip pattern is observed with some accompanying drops around the area. On the right side of item 5, a parent stain is observed with satellite stains traveling up and to the right side of the image. Further right of this parent stain is a possible transfer stain with circular-like voids within the stain.		
YB98NY- 5601	There is a drip pattern w/ satellite stains in the center of the target. To the lower left of the drip pattern, there is a series of drip stains forming a drip trail. To the right of the drip pattern, there is a transfer stain.		
YDWHTL- 5605	Drip trail and small pool of blood. Small blood spots. Transfer bloodstain which could have been created by contact with the blade of a bloodstained implement. Transfer stain with associated directional bloodstains (acute angle) likely generated as a consequence of impact of an item/individual wet with blood hitting/dropping onto the floor.		
YF6W67- 5605	A drip trail (Area A) was present between the center and bottom left of the target. A drip pattern, combined drip stains and satellite spatter (Area B) were in the center and upper right of the target above and right of Area A. An apparent altered stain (B1) was left of the drip pattern. A transfer stain (C) approximately 70mm x 18mm with circular voids arranged down the center of the length was to the right of Area B. A small bloodstain (D) with spines and elongated satellite spatter stains toward the upper right was between Area B and stain C.		
YFMLVD- 5605	Red-brown stains, identified as Pattern A and a drip trail, were observed in the lower left corner of the target to pattern B, located in the center of the target. Red-brown stains, identified as Pattern B and a drip pattern, was observed in the center of the target. A red-brown stain, identified as Pattern C and a transfer stain, consistent with being formed from an object, was observed on the right side of the target, adjacent to Pattern B. Additional red-brown stains were also noted.		

Item 5, continued

WebCode-	
Test	Detailed Pattern Description
YHT4UA- 5601	There were four main bloodstain patterns identified by [Name] on item 5. 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 patterns was deposited. Stain A was located on the center of the target, furthest to the right of the scale. Stain A was a transfer stain. A transfer stain is a bloodstain resulting from contact between a blood-bearing surface and another surface. The transfer stain was light red in color with the bottom appearing to be diluted. It also had apparent voids in a circular to semi-circular shape. A void is an absence of blood in an otherwise continuous bloodstain or bloodstain, irregular in shape with edge characteristics containing spines. A bloodstain is a deposit of blood on a surface. There is a possibility of Stain B (bloodstain) being a part of Stain A (transfer stain). Stain C was located on the center of the target needs on the center of the target needs on the center of the target stain a drip pattern. A drip pattern is a bloodstain pattern resulting from a liquid that dripped into another liquid, at least one of which was blood. The drip pattern was dark red in color, and it appeared to be dry and flaking. Several smaller drip stains is a bloodstain resulting from a falling drop that formed due to gravity. A parent stain is a bloodstain from which a satellite stain(s) originated. A satellite stain is a smaller bloodstain that originated during the formation of the parent stain as a result of blood impacting a surface. Stain D was a drip trail is a bloodstain pattern resulting from the movement of a source of drip stains between two points. The drip trail had a linear distribution and consisted of circular bloodstains. The drip trail appeared dry and flaking. Directionality was not present due to the absence of tails or spines from the edges of the stains.
YLB8UE- 5601	A drip trail is present from the top left corner towards the bottom right corner. Multiple drip stains are present to include a drip pattern with blood into blood. There is a transfer stain of an unknown blood bearing object coming into contact with a clean surface. The object was then removed to create the transfer stain pattern.
YPBGT9- 5605	Pattern types observed: Drip trail, drip pattern, altered stain, transfer stain (pattern transfer) Description: There is a series of circular stains in a linear distribution leading from the bottom left edge of the image towards the right and center of the image. Drying of the bloodstains is apparent with flaking observed along the outer edges of the stains. The drip stains appear slightly smaller in volume as they travel towards the upper right corner of the image. The circular shape, size of the stains, and the somewhat linear distribution of the drip stains from one point to another supports the classification of stains as a drip trail. In the center of the image the drip trail appears to end and there is a larger, irregular-shaped stain that can be classified as a drip pattern, with several small (1-3mm) sized circular stains surrounding it. There are also two larger stains to the left and right of the larger stain that appears slightly distorted. The appearance, location, and distribution of drip pattern is supported due to the larger size, irregular shape of the stain, and presence of these satellite drops, caused when drip stains are accumulating in one location. Drying of the drip pattern and the drip trail could be considered altered due to physical changes in appearance due to the drying effect. On the right side of the image, to the right of the drip pattern, is a transfer pattern. The stain is large and irregular in shape. and has a distinctive shape. The size and shape of the stain supports the classification of pattern transfer. Part of the stain, on the left side, has spines and elongated satellite stains radiating upwards and to the right. The large portion of the transfer stain seems to disrupt some of the satellite stains present. The transfer stain has a different appearance than the drip pattern, with no flaking or drying observed, indicating the transfer stain could have been left some time after the drip trail and drip pattern.

YTBPWH- There are several drips stains creating a drip trail between the lower left corner and center of the target.
5601 There is a drip pattern in the center of the target surrounded by some satellite stains. There is a transfer stain on the right side of the target with some voids along the length of the stain.

WebCode- Test	Detailed Pattern Description	
Z349AB- 5605	There is a drip trail pattern by dry stains and a small pool with some satellite stains and on the right is a transfer stain	
Z6LF8K- 5605	The bloodstain pattern shows a drip trail adjacent to a transfer stain. Satellite stains occurred with directionality from the transfer primarily toward the upper right of the image.	
Z73K6B- 5605	Target #5 was observed to be a smooth horizontal plane surface. A DRIP PATTERN is located in the center of the target area, which resulted from gravitational blood dripping into blood. Multiple distinct circular-shaped DRIP STAINS are located towards the bottom left of the drip pattern and extend toward the bottom left of the target area. The drip stains have a linear distribution and are classified as a DRIP TRAIL. To the left of the drip pattern is a half-circular BLOODSTAIN with additional small circular bloodstains above and to the right. A TRANSFER STAIN is located to the right of the drip pattern, which has irregular margins at the bottom and distinct edge characteristics along the top. The transfer stain is long and narrow, containing a small circular pattern VOIDS within. Located between the drip pattern and the transfer stain was an ALTERED STAIN appearing to have been struck by another object, and therefore classified as an IMPACT PATTERN. Directional and satellite stains are observed extending up and to the right of the parent stain. Extending from the bottom left area of the target, right towards the center, were multiple round stains consistent in appearance with DRIP STAINS. Observed to the right of the drip stains was a bloodstain pattern appearing to be caused by multiple blood drops falling into one another, consistent with a DRIP PATTERN.	
ZLLRLZ- 5601	From left bottom corner towards the middle of the picture there are drip stains forming a drip trail. The drip trail ends in a pattern with several drip stains merged together. On the right side there is a transfer pattern with a sessation cast-off. Some small spatter stains are found around these patterns.	
ZPLVE9- 5605	An image of a vinyl tile in the horizontal plane with multiple bloodstain patterns. In the center of the image is a drip pattern made from multiple drops of blood being dripped in the same area. Extending out from this drip pattern towards the bottom left corner of the photograph is a drip trail. The drip trail stains are similar in size and reasonably equidistance from each other. Based on the dark coloration and cracking of the drip pattern and the drip trail stains, both appear to be dry. Slightly to the right of the drip patterns. Between the drip pattern and the transfer stain there appears to be spatter stains from an impact pattern. It is uncertain whether the tile contained the bloodstain or if the striking object contained the bloodstain prior to impact. Various satellite stains are observed near the other bloodstain patterns.	
ZRDUT7- 5605	The pattern consists of a drip trail located between the bottom left corner and approximate centre of the image. The direction of the object that was the source of this trail cannot be determined however the near circular staining indicates a slow-moving source. A drip pattern in the approximate centre of the image indicates the source was stationary in this location for a period in time. Smaller spatter stains in this area appear to be satellite stains related to this event. There is a transfer stain in the mid-right-hand-side of the image with some pattern characteristics present. There is impact staining associated with this that appears to be the result of the object that produced the transfer stain, impacting this location.	
ZVVV48- 5605	The pattern consists of a series of five drip stains that run from the bottom left to the approximate middle of the image. No directionality is evident in any of the drips. A series of apparent overlapping drip stains are located in the approximate middle of the image, with two pairs of what appear to be two overlapping drips. To the right of the larger pattern of overlapping drips is a pattern transfer with voids. Between the transfer pattern and the central overlapping drips is what appears to be another smaller transfer pattern. Various other stains are observed around the patterns described above. This includes an irregularly shaped stain to the left of the overlapping drip pattern.	

Additional Comments

WebCode-	WebCode-			
Test	Additional Comments			
3FU42E- 5601	Angle of impact determination was not completed, as our laboratory does not provide this service.			
7GTEHE- 5605	Angle detemination is out of our accreditation scope. We still do it for the sake of practice the skill.			
8JFG28- 5605	1) The drip stains on the left and center are considered to have fallen from the victim's stab wound or an object (tool, etc.). 2) The transfer stain on the right were formed when the blood-soaked object (tool, etc.) on it was placed on the vinyl tile.			
9JBH9V- 5601	The word "impact" is used in the above description to indicate that some amount of energy was applied to liquid blood to create the stains observed. It is not meant to indicate the nature of an injury present on the victim.			
AEEA27- 5601	Angle of Impact Determination was not completed, as our laboratory does not provide this service.			
AHA4Y8- 5605	Item 2 depicted a pattern that extended beyond the size of the target. The pattern consisted of both small spatter stains and vertical linear stains which exhibited flow. Bubble rings and thin, linear stains (mucous strands) that ran between larger stains were present throughout the pattern. Item 3 depicted four or five roughly parallel, linear stains that were approximately 1 cm apart spanning from the upper left corner of the target to the lower right corner. Some apparent ridge detail and feathering was observed on the bottom right edges of some of the stains while the top edges of the stains were rounded with smooth margins. Based on the shape and detail within the stains, it is possible that the stains were deposited by either four or five fingers or toes moving from the top left to the bottom right of the target. Flow stains were observed from some of the stains across the top. Spatter stains exhibiting directionality from the left to the right of the target. Item 5 depicted a series of 5 individual, circular stains in a linear arrangement on the lower left side of the target. A larger irregular shaped stain and several smaller stains, potential satellite stains, all with smooth margins were observed on the right of the target. The density of the stains in both the lower left corner and center was fairly uniform. Two additional irregular shaped stains with varying density of staining within them were observed on the right side of the target. Seven fairly circular voids in a linear arrangement down the center of it.			
AXAJLW- 5605	Widths and lengths listed for Item 1 based on size of ellipses used in powerpoint (in inches) to obtain width/length ratio. Not actual measurement of the bloodstains.			
BPQZC9- 5605	The vision of the division is only identification and classification and not angle determination. In this case I made the angle determination for practical purposes.			
BUKUAA- 5605	Note/Comment regarding Item 3: According to my laboratory's technical procedures, in the absence of a clear alteration of the original stain (e.g. perimeter staining, which would indicate a wipe), these types of stains should be classified as "a swipe or a wipe." However, CTS requires that I select a single pattern type. Therefore, I had to deviate from our procedure and classify the stain as one or the other. Since there is no indication that this is an altered stain resulting from an object moving through a pre-existing wet stain, I am excluding "or a wipe" from my classification and selected "swipe" from the multiple choice options.			
C7WKPQ- 5605	please disclose the experimental design of the bloodstains and how the bloodstains were formed in the "Item 5" picture.			
D2FC2R- 5605	Note for item 3: Based on my laboratory's tech procedures, this stain would have been reported as a wipe or swipe.			

WebCode-	Additional Comments	
DGRUY7- 5605	Multiple areas of bloodstaining are observed on the vinyl tile. A sequence of circular bloodstains, in a linear/curvilinear distribution with measurements ranging from approximately 9 mm to 12mm is observed in the bottom left quadrant of the tile and extends between the bottom left corner and the center of the tile. This sequence of circular bloodstains is characterized as a Drip Trail. Near the center of the tile, at one end of the drip trail, is an area of bloodstaining consisting of a small accumulation of blood (irregularly shaped, but measuring approx. 29mm by 34mm) with margins consistent with multiple individual drip stains coalescing and overlapping, two nearby oblong stains (each consistent with multiple individual drip stains coalescing) and with multiple small spatter stains (around five in number, <4mm in size) located to the top left and top right of the accumulation (possibly satellite spatter or accompanying drops). There are none of the irregularly shaped surrounding stains or radiating satellite spatter that might commonly be seen with larger Drip Patterns but given the relatively small size of this particular stain it is possible few or no drip stains actually landed in an existing stain to create any surrounding spatter stains. Because it can't be determined if any liquid actually landed in liquid (and thus qualify as a Drip Pattern), this stain could best be described as an accumulation of Drip Stains with associated spatter. To the left of the accumulation of drip stains is a bloodstain with irregular shape, and possibly an area of feathering or other alteration on the bottom corner of the stain (would only be approx. 1 to 2 mm wide, is difficult to see with the provided image resolution). This stain can be characterized as a Non-Spatter bloodstain. Just to the right of center is an irregularly shaped bloodstain measuring approximately 14mm by 9mm, that is relatively 81mm by 19mm, with inconsistent density throughout the stain (color ranges from light to dark), with multiple circular voids	
DXXDCN- 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.	
EE3ZGV- 5601	Showing one scale image this is only one piece of a larger pattern/scene is not a realistic bloodstain pattern analysis. Minimally 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 in order to make informed and correct conclusions. An 11-inch by 14-inch image is not sufficient why you have patterns that obviously extend beyond that space	
EG47N2- 5605	This section I: Angle of impact determination, only to practice because the Division's scope is "Bloodstain Pattern Classification".	
ENMBQM- 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.	
EQEA6L- 5601	Angle of Impact Determination was not completed, as our laboratory does not provide this service.	
FA2HDZ- 5601	Angle of Impact Determination was not completed, as our laboratory does not provide this service.	
FJBMQQ- 5605	Item #1 Angle of Impact spatters: Image was printed off and measured using a Digital Caliper with Accuracy rating: +/- 0.2mm/0.01"	
GGDWWG- 5601	Angle of Impact Determinations was not completed as our laboratory does not provide this service.	
HQJYVM- 5605	In Section 1, the stain measurements are in inches, not mm.	

Additional Comments				
Unsurprisingly CTS has again tailed 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 11 years, one can only speculate at the motivations of CTS's willful imperviousness to improvement.				
NOTE - widths and lengths for Item 1 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 according to scales.				
5 x near circular drip stains located bottom left of image. Stains in a diagonal line towards centre of image, spread over area measuring approx 135mm x 80 mm. Stains between 7mm and 12 mm in diameter. Center of area small drip pattern spread over area measuring approx 40mm x 50mm with associated satellite stains. Right of drip pattern Transfer Stain in a linear pattern spread approx 15mm x 80 mm. Circular loke voids in centre of transfer stains. 1 x irregular shaped transfer stain in form of wipe 15mm x 8mm between transfer pattern and drip stain.				
The scope of the bloodstain pattern discipline for our division is only the identification and description of bloodstain pattern. We only determine angles of impact on CTS Forensic Testing Program.				
Item 2: The bloodstain pattern consisted of numerous very small (less than 1 mm) circular spatter stains, some "beaded" stains connected by fine lines, and many larger stains with flows due to gravity. These larger stains had intensity variations and clusters of bubble rings. Hence, Item 2 was classified as an expiration pattern. Item 3: A series of five lines with striations and smeared appearance. Each line appeared to terminate in an ovoid shape. There was ridge detail in these ovoid shapes. The absence of a pre-existing stain indicates that this bloodstain pattern was more consistent with a swipe than a wipe. The appearance of the bloodstains suggests that they were likely deposited by bloodstained fingers. Item 4: A curvilinear series of elliptical stains accompanied by flows due to gravity. There was some indication of a progressive change in stain impact angles, hence a cast-off pattern could not be ruled out, but in the context of a victim who sustained a possible arterial laceration and the flows present, this pattern was more consistent with a projected pattern.				
Angle of impact determination section was not completed, as my laboratory does not provide this service.				
Item 2: (poster board – vertical plane) This board has various bloodstaining throughout the surface. There are multiple overlapping bloodstains on this target including ~10 linear vertical stains (approximately 40mm to 180mm long), some of which run into each other with lighter density staining towards the top and heavier density staining at the bottom. These are flow patterns with the bottom being more dense and the top being lighter density due to gravity. There are 100's of small circular stains (approximately <1mm to 5mm, circular to elliptical) distributed evenly throughout the board. Some are dark and some are lighter and appear to be diluted, or have just a red circle around them (bubble ring). Some of these on the top and middle have approximate directionality away from the center or orientation along the bottom center to the edge of the target. There are several thin, curved lines going between the flows and link some of the larger circular stains that are consistent with being mucus strands. This overall pattern is consistent with expiration. Item 3: (poster board – vertical plane) Located diagonally across most of the middle of the poster board is a pattern (approximately 180mm long x 90mm wide) consisting of a series of parallel lines of varying densities of blood staining that appears as 4 or 5 darker lines. Each line slightly varies in size, however are generally 1cm to 2cm wide and 13cm to 15cm in length. In the 2 or 3 top most lines there is a wavy feathering of the staining. There is no additional staining around this pattern. Staining of the 4 or 5 lines towards the upper left corner are each round. Each line has a darker deposition on the bottom side of the line and lighter				

Test 24-5601/5

WebCode- Test	Additional Comments
	staining on the top side of the line, due to gravity. On the lower right side of each line, the staining is different; there are irregular darker densities and some with apparent ridge detail. There are altering lines of variation in density running lengthwise with the linear marks. Transfer stain with indications of upper left to lower right directionality, overall this pattern is a swipe. Item 4: (poster board – vertical plane) Near the top of this vertical board is one large curved bloodstain (approximately 200mm tall x 210mm wide overall) with several other smaller bloodstains in a general arc formation. The edge characteristics of the top of the arc are more broken up/disrupted with some smaller (5mm to 10mm), elliptical) spatter stains radiating to the right and down/right. Several (7) linear vertical stains (approximately 2cm to 15cm long x 5mm wide, with rounded bottoms) consistent with downward flow patterns were observed coming from the arc. At the bottom of these linear flows it is more dense due to gravity, and lighter at the top. This is a projected bloodstain.
NEPT9H- 5601	The Angle of Impact Determination portion of the CTS Bloodstain Pattern Analysis Proficiency will not be perform, as our laboratory does not include procedures for the determination of the angle of impact and this is not an analytical procedure that is performed during bloodstain pattern analysis.
PA9KKH- 5601	Please note that Item 4 most aligned with a projected stain, due to the flow patterns formed from the spatter, but it has to be stated that a high volume cast off close to the wall has to be considered depending on any scene context. (The rapid drop off of the spatter makes this scenario less likely)
PRTCJH- 5601	In relation to Item 5, I have not categorised two small areas on the page. One of these is a bloodstain to the left of the drip pattern. At least two of the three oval spatter stains above and to the right of this appear to originate from this bloodstain, and are therefore satellite stains. The other area I have not categorised is the heavy, irregularly-shaped bloodstain just below, and approximately half-way along, the lower edge of the large transfer stain. There are six nearly-circular spatter stains around this, one of which is within one of the voids in the transfer stain.
QGNPXQ- 5605	In the Scope of discipline i do not have the calculations of the angles of the drops, I did them in practice mode.
QRLNFA- 5601	Angle of Impact Determination was not completed, as our laboratory does not provide this service.
RKJ22E- 5605	Taking into account the information provided in the statement of ITEM 4 (victim who suffered a possible arterial laceration) and according to the characteristics of the pattern, it can be determined that it is a PROJECTED PATTERN. In the case of not having this information, having only the image, it could be stated that it corresponds to a CAST OFF PATTERN, since there are no intermittent projections characteristic of a blood stain caused by an arterial wound, but rather it is only observed one projection.
UKTQFB- 5605	PowerPoint was used for Section I measurements for angle of impact. These measurements are in inches rather than mm.
UWPUJ6- 5601	Angle of impact determination was not completed as our laboratory does not provide this service.
VVCK2J- 5605	Next time you have a target with more than one pattern please designate the patterns to be identified such as I have done as Pattern Areas 5A, 5B, and 5C. Please find some people with many years of experience to do the pre-tests. Whoever is producing the targets needs some help.
X8C6J8- 5605	The Powerpoint Shape Tool and Shape Format sizes were used to measure the stains A-E. So the measurements might not reflect the actual physical sizes of the stains according to the scale present.
YB98NY- 5601	The angle of impact determination section was not completed as our laboratory does not offer this service.
YF6W67- 5605	Section 1 measurements taken using PowerPoint, so they are not in millimeters.

WebCode- Test	Additional Comments
YHT4UA- 5601	Section 1 - Angle of impact determination was intentionally left blank. The laboratory currently does not have a procedure for this determination. [Initials] 8/12/2024
YTBPWH- 5601	Angle of Impact Determination was not completed, as our laboratory does not provide this service.

Test No. 24-5601: Bloodstain Pattern Analysis

DATA MUST BE SUBMITTED BY Aug. 19, 2024, 11:59 p.m. EDT TO BE INCLUDED IN THE REPORT

Participant Code: U1234A

WebCode: B4AHCC

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 provided are simulations and are cropped to meet the purposes of this proficiency test where necessary. 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>	
Α				
В				
С				
D				
Е				

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 poster board in the vertical plane. Pattern was found in a room containing a deceased victim with fatal injuries to the face and head.

- Cast-off Pattern
- Cessation Pattern

Expiration Pattern

- Orip Pattern Orip Stain
- Forward Spatter Pattern
- Impact Pattern
- Projected Pattern

 - Saturation Stain
- Splash Pattern Swipe
- Transfer Stain
- Wipe

Item 3: Target was a white poster board in the vertical plane. Pattern was found in a bar where a physical fight broke out between two individuals.

- Cast-off Pattern
- Cessation Pattern
- Orip Pattern
- Orip Stain
- Expiration Pattern
- Forward Spatter Pattern
- Impact Pattern
 - Projected Pattern
 - Saturation Stain
- Splash Pattern Swipe Transfer Stain Wipe

Item 4: Target was a white poster board in the vertical plane. Pattern was found on a wall near a victim who sustained a possible arterial laceration.

- Cast-off Pattern Forward Spatter Pattern
- Cessation Pattern Impact Pattern
 - Projected Pattern
 - Saturation Stain
- Expiration Pattern

Orip Pattern

Orip Stain

- Splash Pattern Swipe Transfer Stain
- Wipe

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 is a smooth vinyl tile in the horizontal plane. Pattern was found in the home of 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 pat

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

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