



Bloodstain Pattern Analysis Test No. 18-5601/2/5 Summary Report

Each sample pack consisted of digitally produced photographs (18-5601), a DVD containing digital images (18-5602), or directly downloadable digital images (18-5605) of bloodstains for Angle of Impact Determination and Pattern Description. Data were returned from 182 participants: 102 for 18-5601, 50 for 18-5602, and 30 for 18-5605 and are compiled into the following tables:

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

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

Manufacturer's Information

Each sample set contained the following images: Angle of Impact Determination Stains A - E (Item 1), Pattern Description: Mechanism of Deposition (Items 2, 3, and 4), and Pattern Description: Recognition and Description (Item 5) provided in photographic (5601), DVD (5602), or digital download (5605) form. Participants were requested to determine the angle of impact of Stains A - E (Item 1), identify the pattern for Items 2 - 4, and write a brief description of the pattern(s) for Item 5.

SAMPLE SET ASSEMBLY:

Once sample preparation was done, verification was completed, and photos produced, each photo set was placed into a pre-labeled sample pack envelope, sealed with evidence tape, and initialed with "CTS". Each DVD was checked to ensure all images were accessible. Digital download media were provided as a zipped file on the CTS portal.

VERIFICATION:

Laboratories that conducted the predistribution examination of the Angle of Impact stains reported consistent results for each of the Angle of Impact Stains A - E, and their findings were comparable to the Preparation Angles. The responses of predistribution laboratories were consistent with the expected pattern identifications for Items 2 - 4 and the pattern description for Item 5.

 SAMPLE PREPARATION: All stains were produced using human whole blood.

ANGLE OF IMPACT DETERMINATION:

For each impact, blood was released from a pipette at a height of approximately thirty-six inches above the impact surface. White posterboard targets were placed on an inclined plane at the following predetermined angles from the vertical:

<u>Stain</u>	<u>Preparation Angle</u>
A	31.9°
B	14.9°
C	44.0°
D	22.9°
E	32.0°

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

Manufacturer's Information, continued

PATTERN DESCRIPTION

Pattern 2: A screwdriver was dipped into blood, then swung in a downward direction several times in front of the target, redipping before each swing.

Pattern 3: Blood was placed onto the surface of a mousetrap, then activated adjacent to the target.

Pattern 4: Several drops of blood were deposited onto the target and allowed to partially dry. A dry rag was moved through the blood from left to right, then lifted away.

Pattern 5: Several individual blood drops were deposited linearly across the target from a dropper bottle. The bottle was held in place at the lower right corner of the target and several blood drops released. A bloody rag was moved across the upper right corner of the target twice, the second movement intersecting the first.

Summary Comments

Introduction

This test consisted of two sections: Angle of Impact Determination and Pattern Description. Participants had the option of receiving the stains and patterns for examination in the form of photographs, digital images on a DVD, or directly downloadable digital images.

Angle of Impact

For angle of impact determination, participants were provided with images of five impact stains prepared at known angles from the vertical (see table below). Results marked with an "X" in Table 1 are greater than or equal to ± 3 standard deviations (STD) from the grand mean (GM). These results have been excluded from the statistical calculations presented at the end of each Stain table. Each exclusion was determined independently of other values (i.e. Length exclusion based only on Length GM; CalcAng exclusion based only on CalcAng GM). Exclusions were caused by significantly discrepant length/width measurements, potentially due to providing the measurements of digitally magnified drops or using different units of measurement. Examples of these are apparent, as their Width and Length values are excluded, but their Angle and Calculated Angle are included due to the ratio of their values corresponding with the other participants. The Grand Mean and Standard Deviation are shown below, based on each Calculated Angle.

<u>Stain</u>	<u>Preparation Angle</u>	<u>Grand Mean</u>	<u>Standard Deviation</u>
A	31.9°	33.88°	1.95
B	14.9°	14.84°	0.89
C	44.0°	45.13°	1.54
D	22.9°	23.51°	1.45
E	32.0°	32.78°	1.82

Pattern Description

The pattern description was divided into two separate parts. Part one consisted of three patterns (two vertical targets of white containerboard, one horizontal target on smooth vinyl tile), and participants were asked to select the single pattern type that best described the mechanism of deposition. The second part of the pattern description section consisted of one horizontal target on white foamboard, and participants were asked to provide a detailed description of the possible bloodstain patterns or events that created the final result. Please refer to the Manufacturer's Information for detailed explanations of how the patterns were created.

For part one, Item 2, 95% of participants reported "Cast-off Pattern". Alternate responses provided were "Projected Pattern," "Cessation Pattern," and "Impact Pattern". For Item 3, 85% of participants reported "Impact", while the common alternative response was "Expiration Pattern". Several participants observed that a determination of "Forward Spatter Pattern" would be useful for this specific pattern, but was not listed among the options. For Item 4, 93% of participants reported a "Wipe"; ten participants identified the pattern as a "Drip Stain" and two identified "Drip Pattern", due to the analysis of the original placement of the blood onto the substrate and considering that the method of deposition.

For part two, Item 5, the majority of participants reported the following distinct pattern types: 1) Drip Trail, sometimes classified as only linear Drip Stains due to lack of directionality. 2) Drip Pattern, often acknowledging its accompanying satellite stains and its association with the aforementioned Drip Trail. 3) Swipe Stains, with two overlapping events. Many participants were able to successfully sequence the two movements as a horizontally oriented swipe followed by an overlapping diagonal swipe. Some also indicated directionality for these movements, with most indicating overall right to left movement for both actions (which is consistent with the production of the patterns). Some participants only classified these patterns as Transfer Stains rather than evaluate the likelihood of a swipe versus wipe stain.

Basic scenario details were introduced to this section as a means to make the examination more casework-like and to allow the examiner to better narrow their choices. While responses to this change were positive in the test verification stage, some test participants felt that any scenario details could introduce bias. CTS strives to continually evolve this test to ensure an examiner's skills are appropriately challenged within the confines and parameters of an artificial testing environment.

Angle of Impact Determination

TABLE 1

Table Explanation

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

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

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

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

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

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

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

TABLE 1
Stain A

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
26PFXR-5601	3.18	-0.07	-0.47	5.81	-0.02	-0.07	33.18	-0.61	-0.31	33.18
2AFQ66-5601	3.00	-0.25	-1.78	6.00	0.17	0.61	30.00	-3.79	-1.95	30.00
2GJPML-5601	3.40	0.15	1.12	5.90	0.07	0.25	35.20	1.41	0.73	35.19
3BAUHC-5602	2.62	-0.63	-4.53X	4.83	-1.00	-3.55X	32.90	-0.89	-0.46	32.85
3BP7QG-5605	3.32	0.07	0.54	6.04	0.21	0.75	33.00	-0.79	-0.41	33.34
3LPL7L-5601	3.29	0.04	0.33	5.89	0.06	0.22	34.00	0.21	0.11	33.96
3QM69K-5601	3.20	-0.05	-0.33	5.70	-0.13	-0.46	34.20	0.41	0.21	34.15
3UJQX3-5601	3.00	-0.25	-1.78	5.50	-0.33	-1.17	33.10	-0.69	-0.35	33.06
444EC2-5601	3.30	0.05	0.40	6.20	0.37	1.32	32.16	-1.63	-0.84	32.16
4DVZDT-5601	3.40	0.15	1.12	5.87	0.04	0.15	35.40	1.61	0.83	35.40
4L3NYE-5601	3.00	-0.25	-1.78	5.40	-0.43	-1.52	34.00	0.21	0.11	33.75
4LN8VY-5602	3.38	0.13	0.95	6.01	0.18	0.65	34.16	0.37	0.19	34.16
4T7JAZ-5602	3.10	-0.15	-1.05	6.00	0.17	0.61	31.76	-2.03	-1.04	31.11
4T8C88-5602	6.00	2.75	19.98X	3.50	-2.33	-8.27X	35.70	1.91	0.99	X
62QEHE-5605	3.10	-0.15	-1.05	5.74	-0.09	-0.32	32.65	-1.14	-0.59	32.69
636PCD-5601	3.10	-0.15	-1.05	6.00	0.17	0.61	31.10	-2.69	-1.39	31.11
66RBAU-5602	3.20	-0.05	-0.33	5.80	-0.03	-0.10	33.00	-0.79	-0.41	33.49
6MAGEY-5601	3.30	0.05	0.40	5.80	-0.03	-0.10	34.70	0.91	0.47	34.68
6PFWRW-5605	3.10	-0.15	-1.05	6.50	0.67	2.38	28.48	-5.31	-2.74	28.48
6ZMEPU-5601	3.25	0.00	0.04	5.77	-0.06	-0.21	34.30	0.51	0.26	34.28
72QT6Y-5601	3.20	-0.05	-0.33	5.50	-0.33	-1.17	35.60	1.81	0.93	35.58

TABLE 1
Stain A, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
7BDRW4-5605	3.20	-0.05	-0.33	5.70	-0.13	-0.46	34.10	0.31	0.16	34.15
7Y39E9-5601	3.50	0.25	1.85	6.00	0.17	0.61	54.30	20.51	10.57 X	35.69
83G8FU-5602	3.00	-0.25	-1.78	5.50	-0.33	-1.17	33.10	-0.69	-0.35	33.06
83WFH4-5602	3.00	-0.25	-1.78	5.50	-0.33	-1.17	33.00	-0.79	-0.41	33.06
84AZBD-5602	3.10	-0.15	-1.05	6.00	0.17	0.61	31.00	-2.79	-1.44	31.11
8B9PRH-5602	3.30	0.05	0.40	6.20	0.37	1.32	32.20	-1.59	-0.82	32.16
8HQ7EZ-5601	3.20	-0.05	-0.33	5.80	-0.03	-0.10	33.50	-0.29	-0.15	33.49
8JLLNC-5605	3.20	-0.05	-0.33	5.50	-0.33	-1.17	35.60	1.81	0.93	35.58
8ZUFH7-5605	3.40	0.15	1.12	6.20	0.37	1.32	33.30	-0.49	-0.25	33.26
9DG3AJ-5605	3.20	-0.05	-0.33	6.00	0.17	0.61	32.00	-1.79	-0.92	32.23
9L4C67-5601	3.05	-0.20	-1.41	4.75	-1.08	-3.83X	40.00	6.21	3.20 X	39.95 X
A3BGKW-5601	3.30	0.05	0.40	5.80	-0.03	-0.10	34.70	0.91	0.47	34.68
A4LJ9F-5602	3.20	-0.05	-0.33	6.10	0.27	0.96	31.70	-2.09	-1.08	31.64
AAQFRF-5602	3.25	0.00	0.04	5.90	0.07	0.25	33.00	-0.79	-0.41	33.43
BFA33C-5601	3.20	-0.05	-0.33	5.70	-0.13	-0.46	34.15	0.36	0.19	34.15
BGMQ96-5601	3.31	0.06	0.47	5.80	-0.03	-0.10	34.00	0.21	0.11	34.80
BHLKJW-5601	3.23	-0.02	-0.11	6.02	0.19	0.68	32.45	-1.34	-0.69	32.45
BMT7AE-5601	3.35	0.10	0.76	6.12	0.29	1.03	33.19	-0.60	-0.31	33.19
BN2CH9-5601	3.07	-0.18	-1.27	5.51	-0.32	-1.13	34.00	0.21	0.11	33.86
BN43L7-5601	3.04	-0.21	-1.49	6.62	0.79	2.81	27.34	-6.45	-3.32 X	27.34 X
C2BDNQ-5602	3.30	0.05	0.40	5.70	-0.13	-0.46	35.00	1.21	0.62	35.38

TABLE 1
Stain A, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
C9RUFZ-5605	3.27	0.02	0.18	5.88	0.05	0.18	33.79	0.00	0.00	33.79
CBWHT6-5602	3.30	0.05	0.40	5.80	-0.03	-0.10	34.10	0.31	0.16	34.68
CFMY2P-5601	3.40	0.15	1.12	6.60	0.77	2.74	31.00	-2.79	-1.44	31.01
CGPLLA-5601	3.00	-0.25	-1.78	6.00	0.17	0.61	30.00	-3.79	-1.95	30.00
CMN9CN-5601	3.30	0.05	0.40	5.60	-0.23	-0.81	36.10	2.31	1.19	36.11
CNX8F6-5601	3.10	-0.15	-1.05	5.70	-0.13	-0.46	33.00	-0.79	-0.41	32.95
CPDGGH-5601	3.20	-0.05	-0.33	6.00	0.17	0.61	32.23	-1.56	-0.80	32.23
CWWH4M-5601	3.20	-0.05	-0.33	5.80	-0.03	-0.10	33.50	-0.29	-0.15	33.49
CZE3NG-5601	3.30	0.05	0.40	5.80	-0.03	-0.10	34.70	0.91	0.47	34.68
D4R8TQ-5605	3.20	-0.05	-0.33	5.70	-0.13	-0.46	34.10	0.31	0.16	34.15
D7WVCL-5601	3.48	0.23	1.70	5.78	-0.05	-0.17	37.00	3.21	1.66	37.02
D8FCWV-5601	3.40	0.15	1.12	6.00	0.17	0.61	34.50	0.71	0.37	34.52
DAJA4G-5601	3.20	-0.05	-0.33	5.80	-0.03	-0.10	33.00	-0.79	-0.41	33.49
DG49VB-5601	3.30	0.05	0.40	5.80	-0.03	-0.10	34.68	0.89	0.46	34.68
DHTJNP-5605	3.10	-0.15	-1.05	5.50	-0.33	-1.17	34.30	0.51	0.26	34.31
DL9BFH-5601	3.00	-0.25	-1.78	5.80	-0.03	-0.10	31.15	-2.64	-1.36	31.15
DT8ZWL-5605	3.30	0.05	0.40	5.90	0.07	0.25	34.00	0.21	0.11	34.01
DTU6VN-5601	3.20	-0.05	-0.33	5.50	-0.33	-1.17	35.60	1.81	0.93	35.58
EE8AYN-5602	3.30	0.05	0.40	5.80	-0.03	-0.10	35.00	1.21	0.62	34.68
EGFLE6-5602	3.36	0.11	0.83	5.97	0.14	0.50	34.25	0.46	0.24	34.25
EHQACJ-5601	3.20	-0.05	-0.33	5.70	-0.13	-0.46	34.20	0.41	0.21	34.15

TABLE 1
Stain A, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
EMLZKF-5601	3.20	-0.05	-0.33	5.80	-0.03	-0.10	33.50	-0.29	-0.15	33.49
ENV6VJ-5602	3.00	-0.25	-1.78	5.50	-0.33	-1.17	33.00	-0.79	-0.41	33.06
EVEBUB-5601	3.20	-0.05	-0.33	6.00	0.17	0.61	32.20	-1.59	-0.82	32.23
EXNF9Y-5602	2.43	-0.82	-5.91X	4.31	-1.52	-5.40X	34.30	0.51	0.26	34.32
FBQ7MC-5605	3.20	-0.05	-0.33	5.80	-0.03	-0.10	33.00	-0.79	-0.41	33.49
FD7VU3-5601	3.10	-0.15	-1.05	6.50	0.67	2.38	28.50	-5.29	-2.73	28.48
FMJTT8-5601	3.40	0.15	1.12	5.60	-0.23	-0.81	37.40	3.61	1.86	37.38
GAPV6E-5601	3.30	0.05	0.40	5.70	-0.13	-0.46	35.38	1.59	0.82	35.38
GEGZXH-5601	3.40	0.15	1.12	5.70	-0.13	-0.46	37.00	3.21	1.66	36.62
GJR93U-5601	3.30	0.05	0.40	5.90	0.07	0.25	34.00	0.21	0.11	34.01
GK7HEF-5601	3.20	-0.05	-0.33	5.50	-0.33	-1.17	35.60	1.81	0.93	35.58
GMC44Z-5605	3.30	0.05	0.40	5.90	0.07	0.25	34.00	0.21	0.11	34.01
GW4G7L-5602	3.20	-0.05	-0.33	5.40	-0.43	-1.52	36.00	2.21	1.14	36.34
H2PTF9-5602	3.30	0.05	0.40	5.90	0.07	0.25	34.00	0.21	0.11	34.01
HBWDWH-5605	3.50	0.25	1.85	6.00	0.17	0.61	36.00	2.21	1.14	35.69
HG8L7Z-5602	3.18	-0.07	-0.47	5.88	0.05	0.18	32.70	-1.09	-0.56	32.74
HXRAEA-5601	3.20	-0.05	-0.33	5.80	-0.03	-0.10	33.50	-0.29	-0.15	33.49
HZTHED-5605	3.20	-0.05	-0.33	5.60	-0.23	-0.81	35.00	1.21	0.62	34.85
JB8YLB-5602	3.00	-0.25	-1.78	5.00	-0.83	-2.95	37.00	3.21	1.66	36.87
JBUZV9-5605	3.30	0.05	0.40	6.10	0.27	0.96	32.75	-1.04	-0.53	32.75
JMLRFC-5601	3.30	0.05	0.40	5.80	-0.03	-0.10	34.70	0.91	0.47	34.68

TABLE 1
Stain A, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
JTRK9L-5605	3.00	-0.25	-1.78	6.00	0.17	0.61	30.00	-3.79	-1.95	30.00
JYG8WZ-5605	3.40	0.15	1.12	5.80	-0.03	-0.10	35.90	2.11	1.09	35.89
K648ZJ-5602	3.30	0.05	0.40	6.00	0.17	0.61	34.00	0.21	0.11	33.37
KAHQFF-5601	3.50	0.25	1.85	5.50	-0.33	-1.17	40.00	6.21	3.20 X	39.52
KEDGNC-5601	3.26	0.01	0.11	5.79	-0.04	-0.14	34.30	0.51	0.26	34.27
KENLTN-5601	3.40	0.15	1.12	6.00	0.17	0.61	34.67	0.88	0.45	34.52
KMKFT8-5601	3.30	0.05	0.40	5.90	0.07	0.25	34.00	0.21	0.11	34.01
KRDDNQ-5601	3.30	0.05	0.40	6.00	0.17	0.61	33.36	-0.43	-0.22	33.37
KRTQXV-5601	3.03	-0.22	-1.56	5.41	-0.42	-1.49	34.00	0.21	0.11	34.06
KWA6TG-5602	3.30	0.05	0.40	6.80	0.97	3.45X	29.00	-4.79	-2.47	29.03
L6HYMA-5601	3.00	-0.25	-1.78	5.80	-0.03	-0.10	31.10	-2.69	-1.39	31.15
LBMU7A-5601	3.20	-0.05	-0.33	5.80	-0.03	-0.10	33.50	-0.29	-0.15	33.49
LHLGZU-5602	3.38	0.13	0.98	5.63	-0.20	-0.71	36.90	3.11	1.60	36.90
LJF6G6-5602	3.20	-0.05	-0.33	5.80	-0.03	-0.10	33.50	-0.29	-0.15	33.49
LKTHJF-5601	3.30	0.05	0.40	6.00	0.17	0.61	33.40	-0.39	-0.20	33.37
LQ2ZH9-5601	3.30	0.05	0.40	5.80	-0.03	-0.10	34.70	0.91	0.47	34.68
LUXPYF-5601	3.20	-0.05	-0.33	5.90	0.07	0.25	32.50	-1.29	-0.66	32.85
M7KBJ2-5601	3.31	0.06	0.47	5.93	0.10	0.36	33.90	0.11	0.06	33.93
MBF3UJ-5602	3.40	0.15	1.12	5.70	-0.13	-0.46	37.00	3.21	1.66	36.62
MHJUEA-5602	3.00	-0.25	-1.78	4.20	-1.63	-5.79X	46.00	12.21	6.29 X	45.58 X
N2PNJL-5601	3.20	-0.05	-0.33	6.00	0.17	0.61	32.20	-1.59	-0.82	32.23

TABLE 1
Stain A, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
NBDHVH-5602	3.00	-0.25	-1.78	5.00	-0.83	-2.95	36.90	3.11	1.60	36.87
NMD47M-5601	3.40	0.15	1.12	5.97	0.14	0.50	34.75	0.96	0.50	34.72
NUBVEG-5601	3.27	0.02	0.18	5.51	-0.32	-1.13	36.40	2.61	1.35	36.40
P8TARF-5601	3.50	0.25	1.85	6.00	0.17	0.61	35.70	1.91	0.99	35.69
PBRJZW-5602	3.30	0.05	0.40	6.00	0.17	0.61	33.00	-0.79	-0.41	33.37
PFQXML-5601	3.30	0.05	0.40	5.90	0.07	0.25	34.00	0.21	0.11	34.01
PWBQA4-5601	3.00	-0.25	-1.78	6.00	0.17	0.61	30.00	-3.79	-1.95	30.00
Q4LCR7-5602	3.10	-0.15	-1.05	5.90	0.07	0.25	31.70	-2.09	-1.08	31.70
QE8BQP-5602	2.48	-0.77	-5.55X	4.50	-1.33	-4.72X	33.00	-0.79	-0.41	33.44
QKV29D-5601	3.44	0.19	1.41	5.90	0.07	0.25	36.10	2.31	1.19	35.67
QKWT7L-5601	3.40	0.15	1.12	5.00	-0.83	-2.95	42.84	9.05	4.67 X	42.84 X
QL7Z8T-5602	3.40	0.15	1.12	5.90	0.07	0.25	35.00	1.21	0.62	35.19
QRVD9G-5601	3.30	0.05	0.40	5.90	0.07	0.25	34.00	0.21	0.11	34.01
R46DFU-5601	33.00	29.75	215.81X	59.00	53.17	188.88X	34.00	0.21	0.11	34.01
RH4GKK-5602	1.53	-1.72	-12.44X	2.67	-3.16	-11.22X	35.00	1.21	0.62	34.96
RP896C-5602	3.00	-0.25	-1.78	6.00	0.17	0.61	30.00	-3.79	-1.95	30.00
RXJHEQ-5602	3.30	0.05	0.40	5.50	-0.33	-1.17	37.00	3.21	1.66	36.87
RYWRPC-5602	3.40	0.15	1.12	6.30	0.47	1.67	32.75	-1.04	-0.53	32.66
RZ7YT6-5601	3.35	0.10	0.76	5.86	0.03	0.11	34.90	1.11	0.57	34.87
T39EGL-5601	3.30	0.05	0.40	5.50	-0.33	-1.17	36.80	3.01	1.55	36.87
T9W2DD-5605	3.10	-0.15	-1.05	5.60	-0.23	-0.81	34.09	0.30	0.16	33.61

TABLE 1
Stain A, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
TAN8LQ-5605	3.12	-0.13	-0.91	5.48	-0.35	-1.24	34.70	0.91	0.47	34.70
TCX3EA-5602	3.20	-0.05	-0.33	6.00	0.17	0.61	32.23	-1.56	-0.80	32.23
TH2UY2-5601	3.50	0.25	1.85	6.00	0.17	0.61	30.00	-3.79	-1.95	35.69
TJEH3D-5602	3.30	0.05	0.40	6.00	0.17	0.61	33.00	-0.79	-0.41	33.37
TJFDRB-5602	3.33	0.08	0.62	6.21	0.38	1.35	32.50	-1.29	-0.66	32.43
TLL23U-5601	3.30	0.05	0.40	5.80	-0.03	-0.10	34.67	0.88	0.45	34.68
TR8W4X-5601	3.20	-0.05	-0.33	5.80	-0.03	-0.10	33.00	-0.79	-0.41	33.49
TZZ8EU-5601	3.30	0.05	0.40	5.80	-0.03	-0.10	34.00	0.21	0.11	34.68
U28QV3-5605	3.50	0.25	1.85	6.00	0.17	0.61	36.00	2.21	1.14	35.69
U3KDDG-5601	3.30	0.05	0.40	5.60	-0.23	-0.81	36.10	2.31	1.19	36.11
UBBZZ7-5605	3.20	-0.05	-0.33	5.80	-0.03	-0.10	33.50	-0.29	-0.15	33.49
UJANWC-5601	3.18	-0.07	-0.47	5.83	0.00	0.00	33.00	-0.79	-0.41	33.06
UUTZCV-5602	3.34	0.09	0.69	5.76	-0.07	-0.25	35.00	1.21	0.62	35.44
UV4ZBB-5601	3.30	0.05	0.40	5.90	0.07	0.25	34.01	0.22	0.11	34.01
VCQFA2-5601	3.20	-0.05	-0.33	5.70	-0.13	-0.46	34.00	0.21	0.11	34.15
VLVR4A-5602	3.20	-0.05	-0.33	6.20	0.37	1.32	31.00	-2.79	-1.44	31.07
VMQ6TN-5602	3.40	0.15	1.12	5.40	-0.43	-1.52	39.00	5.21	2.69	39.02
VTRGPK-5602	3.20	-0.05	-0.33	5.40	-0.43	-1.52	36.00	2.21	1.14	36.34
VU4BBM-5601	3.10	-0.15	-1.05	6.50	0.67	2.38	28.50	-5.29	-2.73	28.48
W3XQNX-5601	3.30	0.05	0.40	6.40	0.57	2.03	31.00	-2.79	-1.44	31.04
W3ZE9H-5602	803.00	799.75	5800.45X	1372.00	1366.17	4853.13X	35.80	2.01	1.04	35.82

TABLE 1
Stain A, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
W47YWH- 5602	3.60	0.35	2.57	6.40	0.57	2.03	34.20	0.41	0.21	34.23
W62GWX- 5601	3.40	0.15	1.12	5.90	0.07	0.25	35.20	1.41	0.73	35.19
WBTR7W- 5605	3.10	-0.15	-1.05	5.80	-0.03	-0.10	32.00	-1.79	-0.92	32.31
WCLHCB- 5601	3.30	0.05	0.40	5.80	-0.03	-0.10	35.00	1.21	0.62	34.68
WDVPE4- 5605	3.20	-0.05	-0.33	5.20	-0.63	-2.23	38.00	4.21	2.17	37.98
WPBCTB- 5601	3.40	0.15	1.12	6.00	0.17	0.61	34.50	0.71	0.37	34.52
WW9ADR- 5601	3.23	-0.02	-0.11	5.90	0.07	0.25	33.20	-0.59	-0.30	33.19
WX26UA- 5601	3.40	0.15	1.12	5.90	0.07	0.25	35.00	1.21	0.62	35.19
X4MCZK- 5602	3.30	0.05	0.40	5.90	0.07	0.25	34.00	0.21	0.11	34.01
X8MK6V- 5601	3.20	-0.05	-0.33	5.60	-0.23	-0.81	34.80	1.01	0.52	34.85
XKCKVX- 5601	3.21	-0.04	-0.25	5.86	0.03	0.11	33.20	-0.59	-0.30	33.21
XNB277- 5601	3.60	0.35	2.57	6.40	0.57	2.03	34.20	0.41	0.21	34.23
XVU4D9- 5601	3.25	0.00	0.04	6.32	0.49	1.74	31.00	-2.79	-1.44	30.95
XVUZ37- 5602	2.94	-0.31	-2.21	5.24	-0.59	-2.09	34.00	0.21	0.11	34.13
Y3QE2D- 5601	3.20	-0.05	-0.33	5.80	-0.03	-0.10	33.00	-0.79	-0.41	33.49
Y9V3UE- 5601	3.40	0.15	1.12	6.03	0.20	0.71	34.30	0.51	0.26	34.32
Y9WVU8- 5602	3.00	-0.25	-1.78	6.00	0.17	0.61	30.00	-3.79	-1.95	30.00
YAPQDA- 5601	3.30	0.05	0.40	6.00	0.17	0.61	33.40	-0.39	-0.20	33.37
YBL7ML- 5605	3.00	-0.25	-1.78	6.00	0.17	0.61	30.00	-3.79	-1.95	30.00
YCUEW7- 5601	3.20	-0.05	-0.33	5.80	-0.03	-0.10	33.40	-0.39	-0.20	33.49
YCV7UD- 5601	3.30	0.05	0.40	5.00	-0.83	-2.95	41.30	7.51	3.87 X	41.30 X

TABLE 1
Stain A, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
YFBXGZ- 5601	3.00	-0.25	-1.78	5.75	-0.08	-0.28	31.40	-2.39	-1.23	31.45
YGP763- 5605	3.22	-0.03	-0.18	5.65	-0.18	-0.64	34.70	0.91	0.47	34.74
YW2L6D- 5601	3.30	0.05	0.40	5.70	-0.13	-0.46	35.00	1.21	0.62	35.38
YYNHFP- 5601	3.30	0.05	0.40	5.70	-0.13	-0.46	35.40	1.61	0.83	35.38
Z2PNN4- 5601	3.50	0.25	1.85	5.75	-0.08	-0.28	38.00	4.21	2.17	37.50
Z6UC8Y- 5602	3.30	0.05	0.40	6.00	0.17	0.61	33.37	-0.42	-0.22	33.37
ZQR37B- 5601	3.30	0.05	0.40	5.40	-0.43	-1.52	37.70	3.91	2.02	37.67
Grand Mean	3.25			5.83			33.79			33.88
Standard Deviation	0.14			0.28			1.94			1.95
Participants Included in calculations	168			165			168			169
Participants excluded from calculations (indicated by X)	7			10			7			6

Stain A Preparation Angle: 31.9°

TABLE 1
Stain B

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
26PFXR-5601	1.78	-0.15	-1.58	7.69	0.17	0.54	13.39	-1.45	-1.70	13.38
2AFQ66-5601	2.00	0.07	0.79	7.50	-0.02	-0.07	15.00	0.16	0.18	15.47
2GJPML-5601	2.00	0.07	0.79	7.60	0.08	0.25	15.30	0.46	0.53	15.26
3BAUHC-5602	1.41	-0.52	-5.58X	5.70	-1.82	-5.90X	14.30	-0.54	-0.63	14.32
3BP7QG-5605	1.94	0.01	0.14	7.76	0.24	0.77	14.00	-0.84	-0.98	14.48
3LPL7L-5601	1.88	-0.05	-0.50	7.54	0.02	0.06	14.40	-0.44	-0.52	14.44
3QM69K-5601	1.80	-0.13	-1.37	7.50	-0.02	-0.07	13.90	-0.94	-1.10	13.89
3UJQX3-5601	1.75	-0.18	-1.91	7.25	-0.27	-0.88	14.00	-0.84	-0.98	13.97
444EC2-5601	2.00	0.07	0.79	7.90	0.38	1.22	14.66	-0.18	-0.21	14.66
4DVZDT-5601	2.07	0.14	1.55	7.42	-0.10	-0.33	16.20	1.36	1.59	16.20
4L3NYE-5601	1.70	-0.23	-2.45	7.20	-0.32	-1.04	14.00	-0.84	-0.98	13.66
4LN8VY-5602	1.96	0.03	0.30	7.87	0.34	1.12	14.39	-0.45	-0.53	14.39
4T7JAZ-5602	2.00	0.07	0.79	7.70	0.18	0.58	14.92	0.08	0.09	15.05
4T8C88-5602	7.70	5.77	62.29X	2.00	-5.52	-17.88X	15.10	0.26	0.30	X
62QEHE-5605	1.97	0.04	0.47	7.12	-0.40	-1.30	16.08	1.24	1.45	16.06
636PCD-5601	2.00	0.07	0.79	7.00	-0.52	-1.69	16.60	1.76	2.05	16.60
66RBAU-5602	2.00	0.07	0.79	7.30	-0.22	-0.72	16.00	1.16	1.35	15.90
6MAGEY-5601	1.90	-0.03	-0.29	7.60	0.08	0.25	14.50	-0.34	-0.40	14.48
6PFWRW-5605	2.00	0.07	0.79	8.00	0.48	1.55	14.48	-0.36	-0.42	14.48
6ZMEPU-5601	1.97	0.04	0.47	7.79	0.27	0.87	14.60	-0.24	-0.28	14.65
72QT6Y-5601	1.90	-0.03	-0.29	6.90	-0.62	-2.01	16.00	1.16	1.35	15.98

TABLE 1
Stain B, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
7BDRW4-5605	1.80	-0.13	-1.37	7.30	-0.22	-0.72	14.30	-0.54	-0.63	14.27
7Y39E9-5601	1.90	-0.03	-0.29	8.50	0.98	3.17X	77.00	62.16	72.63 X	12.92
83G8FU-5602	1.50	-0.43	-4.60X	7.50	-0.02	-0.07	11.50	-3.34	-3.91 X	11.54 X
83WFH4-5602	2.00	0.07	0.79	7.00	-0.52	-1.69	16.60	1.76	2.05	16.60
84AZBD-5602	2.00	0.07	0.79	8.00	0.48	1.55	15.00	0.16	0.18	14.48
8B9PRH-5602	1.90	-0.03	-0.29	7.00	-0.52	-1.69	15.70	0.86	1.00	15.75
8HQ7EZ-5601	1.80	-0.13	-1.37	7.80	0.28	0.90	13.30	-1.54	-1.80	13.34
8JLLNC-5605	1.80	-0.13	-1.37	7.30	-0.22	-0.72	14.30	-0.54	-0.63	14.27
8ZUFH7-5605	1.90	-0.03	-0.29	7.60	0.08	0.25	14.50	-0.34	-0.40	14.48
9DG3AJ-5605	2.00	0.07	0.79	8.00	0.48	1.55	14.00	-0.84	-0.98	14.48
9L4C67-5601	1.75	-0.18	-1.91	7.00	-0.52	-1.69	14.50	-0.34	-0.40	14.48
A3BGKW-5601	2.00	0.07	0.79	7.70	0.18	0.58	15.00	0.16	0.18	15.05
A4LJ9F-5602	1.80	-0.13	-1.37	7.30	-0.22	-0.72	14.50	-0.34	-0.40	14.27
AAQFRF-5602	2.00	0.07	0.79	7.50	-0.02	-0.07	15.00	0.16	0.18	15.47
BFA33C-5601	1.90	-0.03	-0.29	7.60	0.08	0.25	14.48	-0.36	-0.42	14.48
BGMQ96-5601	1.74	-0.19	-2.01	7.20	-0.32	-1.04	14.00	-0.84	-0.98	13.98
BHLKJW-5601	1.95	0.02	0.25	7.86	0.34	1.09	14.36	-0.48	-0.56	14.36
BMT7AE-5601	1.94	0.01	0.14	7.64	0.12	0.38	14.71	-0.13	-0.15	14.71
BN2CH9-5601	1.78	-0.15	-1.58	7.15	-0.37	-1.20	14.00	-0.84	-0.98	14.42
BN43L7-5601	1.80	-0.13	-1.37	7.04	-0.48	-1.56	14.81	-0.03	-0.04	14.81
C2BDNQ-5602	2.00	0.07	0.79	7.50	-0.02	-0.07	15.00	0.16	0.18	15.47

TABLE 1
Stain B, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
C9RUFZ-5605	1.93	0.00	0.03	7.50	-0.02	-0.07	14.91	0.07	0.08	14.91
CBWHT6-5602	1.90	-0.03	-0.29	7.60	0.08	0.25	14.70	-0.14	-0.17	14.48
CFMY2P-5601	2.10	0.17	1.87	7.00	-0.52	-1.69	17.40	2.56	2.99	17.46
CGPLLA-5601	2.00	0.07	0.79	8.00	0.48	1.55	15.00	0.16	0.18	14.48
CMN9CN-5601	2.00	0.07	0.79	7.40	-0.12	-0.40	15.70	0.86	1.00	15.68
CNX8F6-5601	1.90	-0.03	-0.29	7.60	0.08	0.25	15.00	0.16	0.18	14.48
CPDGGH-5601	2.00	0.07	0.79	7.40	-0.12	-0.40	15.68	0.84	0.98	15.68
CWWH4M-5601	2.00	0.07	0.79	7.60	0.08	0.25	15.30	0.46	0.53	15.26
CZE3NG-5601	2.00	0.07	0.79	7.40	-0.12	-0.40	15.70	0.86	1.00	15.68
D4R8TQ-5605	1.90	-0.03	-0.29	7.00	-0.52	-1.69	15.74	0.90	1.05	15.75
D7WVCL-5601	1.89	-0.04	-0.40	7.37	-0.15	-0.49	14.80	-0.04	-0.05	14.86
D8FCWV-5601	1.90	-0.03	-0.29	7.70	0.18	0.58	14.30	-0.54	-0.63	14.29
DAJA4G-5601	1.80	-0.13	-1.37	7.60	0.08	0.25	14.00	-0.84	-0.98	13.70
DG49VB-5601	1.90	-0.03	-0.29	7.60	0.08	0.25	14.48	-0.36	-0.42	14.48
DHTJNP-5605	1.80	-0.13	-1.37	7.10	-0.42	-1.37	14.60	-0.24	-0.28	14.69
DL9BFH-5601	2.00	0.07	0.79	7.60	0.08	0.25	15.26	0.42	0.49	15.26
DT8ZWL-5605	1.90	-0.03	-0.29	7.80	0.28	0.90	14.10	-0.74	-0.87	14.10
DTU6VN-5601	1.90	-0.03	-0.29	7.50	-0.02	-0.07	14.70	-0.14	-0.17	14.67
EE8AYN-5602	2.00	0.07	0.79	7.50	-0.02	-0.07	15.00	0.16	0.18	15.47
EGFLE6-5602	1.92	-0.01	-0.07	7.81	0.29	0.93	14.23	-0.61	-0.72	14.23
EHQACJ-5601	1.80	-0.13	-1.37	7.40	-0.12	-0.40	14.10	-0.74	-0.87	14.08

TABLE 1
Stain B, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
EMLZKF-5601	1.90	-0.03	-0.29	7.80	0.28	0.90	14.10	-0.74	-0.87	14.10
ENV6VJ-5602	1.80	-0.13	-1.37	7.00	-0.52	-1.69	15.00	0.16	0.18	14.90
EVEBUB-5601	1.90	-0.03	-0.29	7.70	0.18	0.58	14.30	-0.54	-0.63	14.29
EXNF9Y-5602	1.20	-0.73	-7.84X	4.62	-2.90	-9.39X	15.10	0.26	0.30	15.05
FBQ7MC-5605	2.00	0.07	0.79	7.60	0.08	0.25	15.00	0.16	0.18	15.26
FD7VU3-5601	1.90	-0.03	-0.29	7.00	-0.52	-1.69	15.70	0.86	1.00	15.75
FMJTT8-5601	1.80	-0.13	-1.37	7.40	-0.12	-0.40	14.10	-0.74	-0.87	14.08
GAPV6E-5601	1.90	-0.03	-0.29	7.60	0.08	0.25	14.48	-0.36	-0.42	14.48
GEGZXH-5601	1.90	-0.03	-0.29	7.80	0.28	0.90	14.00	-0.84	-0.98	14.10
GJR93U-5601	1.80	-0.13	-1.37	7.80	0.28	0.90	13.34	-1.50	-1.76	13.34
GK7HEF-5601	1.85	-0.08	-0.83	7.42	-0.10	-0.33	14.40	-0.44	-0.52	14.44
GMC44Z-5605	1.90	-0.03	-0.29	7.80	0.28	0.90	14.00	-0.84	-0.98	14.10
GW4G7L-5602	1.80	-0.13	-1.37	7.40	-0.12	-0.40	14.00	-0.84	-0.98	14.08
H2PTF9-5602	2.00	0.07	0.79	7.70	0.18	0.58	15.00	0.16	0.18	15.05
HBWDWH-5605	2.00	0.07	0.79	7.00	-0.52	-1.69	16.00	1.16	1.35	16.60
HG8L7Z-5602	1.94	0.01	0.14	7.27	-0.25	-0.82	15.50	0.66	0.77	15.48
HXRAEA-5601	2.00	0.07	0.79	7.40	-0.12	-0.40	15.70	0.86	1.00	15.68
HZTHED-5605	1.90	-0.03	-0.29	7.40	-0.12	-0.40	15.00	0.16	0.18	14.88
JB8YLB-5602	2.00	0.07	0.79	7.00	-0.52	-1.69	17.00	2.16	2.52	16.60
JBUZV9-5605	2.00	0.07	0.79	8.10	0.58	1.87	14.29	-0.55	-0.65	14.29
JMLRFC-5601	2.00	0.07	0.79	7.80	0.28	0.90	14.90	0.06	0.07	14.86

TABLE 1
Stain B, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
JTRK9L-5605	2.00	0.07	0.79	8.00	0.48	1.55	14.00	-0.84	-0.98	14.48
JYG8WZ-5605	2.00	0.07	0.79	7.50	-0.02	-0.07	15.50	0.66	0.77	15.47
K648ZJ-5602	1.90	-0.03	-0.29	7.80	0.28	0.90	14.00	-0.84	-0.98	14.10
KAHQFF-5601	2.00	0.07	0.79	7.00	-0.52	-1.69	17.00	2.16	2.52	16.60
KEDGNC-5601	1.82	-0.11	-1.15	7.34	-0.18	-0.59	14.40	-0.44	-0.52	14.36
KENLTN-5601	2.00	0.07	0.79	7.90	0.38	1.22	14.63	-0.21	-0.25	14.66
KMKFT8-5601	1.80	-0.13	-1.37	7.70	0.18	0.58	13.51	-1.33	-1.56	13.52
KRDDNQ-5601	1.90	-0.03	-0.29	7.90	0.38	1.22	13.97	-0.87	-1.02	13.92
KRTQXV-5601	1.72	-0.21	-2.23	7.00	-0.52	-1.69	14.22	-0.62	-0.73	14.22
KWA6TG-5602	1.90	-0.03	-0.29	7.00	-0.52	-1.69	16.00	1.16	1.35	15.75
L6HYMA-5601	1.90	-0.03	-0.29	7.50	-0.02	-0.07	14.70	-0.14	-0.17	14.67
LBMU7A-5601	2.00	0.07	0.79	7.40	-0.12	-0.40	15.70	0.86	1.00	15.68
LHLGZU-5602	1.93	0.00	0.03	6.68	-0.84	-2.73	16.80	1.96	2.29	16.79
LJF6G6-5602	2.00	0.07	0.79	7.50	-0.02	-0.07	15.50	0.66	0.77	15.47
LKTHJF-5601	2.00	0.07	0.79	7.50	-0.02	-0.07	15.50	0.66	0.77	15.47
LQ2ZH9-5601	1.90	-0.03	-0.29	7.70	0.18	0.58	14.30	-0.54	-0.63	14.29
LUXPYF-5601	1.50	-0.43	-4.60X	7.60	0.08	0.25	11.22	-3.62	-4.23 X	11.38 X
M7KBJ2-5601	2.00	0.07	0.79	7.88	0.36	1.16	14.70	-0.14	-0.17	14.70
MBF3UJ-5602	2.00	0.07	0.79	7.60	0.08	0.25	15.00	0.16	0.18	15.26
MHJUEA-5602	1.60	-0.33	-3.53X	5.00	-2.52	-8.16X	18.70	3.86	4.51 X	18.66 X
N2PNJL-5601	1.80	-0.13	-1.37	7.30	-0.22	-0.72	14.20	-0.64	-0.75	14.27

TABLE 1
Stain B, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
NBDHVH-5602	1.50	-0.43	-4.60X	7.00	-0.52	-1.69	12.40	-2.44	-2.85	12.37
NMD47M-5601	2.00	0.07	0.79	7.73	0.21	0.67	15.07	0.23	0.27	14.99
NUBVEG-5601	1.72	-0.21	-2.23	7.66	0.14	0.45	12.98	-1.86	-2.18	12.98
P8TARF-5601	2.00	0.07	0.79	8.00	0.48	1.55	14.50	-0.34	-0.40	14.48
PBRJZW-5602	2.00	0.07	0.79	7.60	0.08	0.25	15.00	0.16	0.18	15.26
PFQXML-5601	1.90	-0.03	-0.29	7.80	0.28	0.90	14.10	-0.74	-0.87	14.10
PWBQA4-5601	2.00	0.07	0.79	8.00	0.48	1.55	14.00	-0.84	-0.98	14.48
Q4LCR7-5602	2.00	0.07	0.79	7.30	-0.22	-0.72	15.90	1.06	1.24	15.90
QE8BQP-5602	1.44	-0.49	-5.25X	5.77	-1.75	-5.67X	15.00	0.16	0.18	14.45
QKV29D-5601	2.20	0.27	2.95	7.70	0.18	0.58	16.00	1.16	1.35	16.60
QKWT7L-5601	1.80	-0.13	-1.37	7.40	-0.12	-0.40	14.07	-0.77	-0.90	14.08
QL7Z8T-5602	2.00	0.07	0.79	7.70	0.18	0.58	15.00	0.16	0.18	15.05
QRVD9G-5601	1.90	-0.03	-0.29	7.80	0.28	0.90	14.10	-0.74	-0.87	14.10
R46DFU-5601	19.00	17.07	184.20X	77.00	69.48	224.91X	14.00	-0.84	-0.98	14.29
RH4GKK-5602	1.19	-0.74	-7.95X	4.69	-2.83	-9.17X	15.00	0.16	0.18	14.70
RP896C-5602	2.00	0.07	0.79	8.00	0.48	1.55	14.50	-0.34	-0.40	14.48
RXJHEQ-5602	1.50	-0.43	-4.60X	7.00	-0.52	-1.69	12.00	-2.84	-3.32 X	12.37
RYWRPC-5602	2.10	0.17	1.87	7.80	0.28	0.90	15.14	0.30	0.35	15.62
RZ7YT6-5601	1.98	0.05	0.57	7.42	-0.10	-0.33	15.50	0.66	0.77	15.48
T39EGL-5601	1.90	-0.03	-0.29	7.30	-0.22	-0.72	15.10	0.26	0.30	15.09
T9W2DD-5605	2.00	0.07	0.79	7.30	-0.22	-0.72	15.78	0.94	1.10	15.90

TABLE 1
Stain B, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
TAN8LQ-5605	1.71	-0.22	-2.34	7.27	-0.25	-0.82	13.60	-1.24	-1.45	13.60
TCX3EA-5602	2.00	0.07	0.79	7.70	0.18	0.58	15.05	0.21	0.24	15.05
TH2UY2-5601	2.00	0.07	0.79	8.00	0.48	1.55	14.00	-0.84	-0.98	14.48
TJEH3D-5602	1.90	-0.03	-0.29	7.80	0.28	0.90	14.00	-0.84	-0.98	14.10
TJFDRB-5602	1.90	-0.03	-0.29	8.05	0.53	1.71	13.60	-1.24	-1.45	13.65
TLL23U-5601	1.80	-0.13	-1.37	7.30	-0.22	-0.72	14.27	-0.57	-0.67	14.27
TR8W4X-5601	2.00	0.07	0.79	7.30	-0.22	-0.72	16.00	1.16	1.35	15.90
TZZ8EU-5601	2.00	0.07	0.79	7.70	0.18	0.58	15.00	0.16	0.18	15.05
U28QV3-5605	3.00	1.07	11.58X	8.00	0.48	1.55	22.00	7.16	8.36 X	22.02 X
U3KDDG-5601	1.90	-0.03	-0.29	6.90	-0.62	-2.01	16.00	1.16	1.35	15.98
UBBZZ7-5605	1.90	-0.03	-0.29	7.60	0.08	0.25	14.50	-0.34	-0.40	14.48
UJANWC-5601	1.84	-0.09	-0.94	7.66	0.14	0.45	13.80	-1.04	-1.22	13.90
UUTZCV-5602	1.86	-0.07	-0.72	7.62	0.10	0.32	14.00	-0.84	-0.98	14.13
UV4ZBB-5601	1.90	-0.03	-0.29	7.90	0.38	1.22	13.92	-0.92	-1.08	13.92
VCQFA2-5601	1.90	-0.03	-0.29	7.40	-0.12	-0.40	15.00	0.16	0.18	14.88
VLVR4A-5602	2.00	0.07	0.79	7.80	0.28	0.90	15.00	0.16	0.18	14.86
VMQ6TN-5602	1.90	-0.03	-0.29	7.00	-0.52	-1.69	16.00	1.16	1.35	15.75
VTRGPK-5602	2.00	0.07	0.79	7.70	0.18	0.58	15.00	0.16	0.18	15.05
VU4BBM-5601	2.00	0.07	0.79	7.00	-0.52	-1.69	16.60	1.76	2.05	16.60
W3XQNX-5601	2.10	0.17	1.87	7.60	0.08	0.25	19.00	4.16	4.86 X	16.04
W3ZE9H-5602	401.00	399.07	4305.46X	1453.00	1445.48	4679.20X	16.00	1.16	1.35	16.02

TABLE 1
Stain B, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
W47YWH- 5602	2.10	0.17	1.87	7.60	0.08	0.25	16.00	1.16	1.35	16.04
W62GWX- 5601	2.00	0.07	0.79	7.70	0.18	0.58	15.10	0.26	0.30	15.05
WBTR7W- 5605	2.00	0.07	0.79	7.60	0.08	0.25	14.80	-0.04	-0.05	15.26
WCLHCB- 5601	2.00	0.07	0.79	7.70	0.18	0.58	15.00	0.16	0.18	15.05
WDVPE4- 5605	1.90	-0.03	-0.29	6.40	-1.12	-3.63X	17.00	2.16	2.52	17.27
WPBCTB- 5601	2.00	0.07	0.79	7.80	0.28	0.90	14.90	0.06	0.07	14.86
WW9ADR- 5601	1.78	-0.15	-1.58	7.41	-0.11	-0.36	13.90	-0.94	-1.10	13.90
WX26UA- 5601	1.90	-0.03	-0.29	7.70	0.18	0.58	14.00	-0.84	-0.98	14.29
X4MCZK- 5602	1.90	-0.03	-0.29	7.70	0.18	0.58	15.00	0.16	0.18	14.29
X8MK6V- 5601	2.00	0.07	0.79	7.00	-0.52	-1.69	16.60	1.76	2.05	16.60
XKCKVX- 5601	1.95	0.02	0.25	7.74	0.22	0.71	14.60	-0.24	-0.28	14.59
XNB277- 5601	2.00	0.07	0.79	8.20	0.68	2.19	14.10	-0.74	-0.87	14.12
XVU4D9- 5601	2.02	0.09	1.01	7.87	0.35	1.13	15.00	0.16	0.18	14.87
XVUZ37- 5602	1.71	-0.22	-2.34	6.37	-1.15	-3.73X	15.00	0.16	0.18	15.57
Y3QE2D- 5601	1.90	-0.03	-0.29	7.60	0.08	0.25	14.00	-0.84	-0.98	14.48
Y9V3UE- 5601	2.02	0.09	1.01	7.82	0.30	0.96	14.96	0.12	0.14	14.97
Y9WVU8- 5602	1.90	-0.03	-0.29	7.50	-0.02	-0.07	15.00	0.16	0.18	14.67
YAPQDA- 5601	1.90	-0.03	-0.29	7.70	0.18	0.58	14.28	-0.56	-0.66	14.29
YBL7ML- 5605	2.00	0.07	0.79	7.80	0.28	0.90	15.00	0.16	0.18	14.86
YCUEW7- 5601	2.00	0.07	0.79	7.50	-0.02	-0.07	15.40	0.56	0.65	15.47
YCV7UD- 5601	2.00	0.07	0.79	7.50	-0.02	-0.07	15.50	0.66	0.77	15.47

TABLE 1
Stain B, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
YFBXGZ- 5601	1.75	-0.18	-1.91	7.00	-0.52	-1.69	14.50	-0.34	-0.40	14.48
YGP763- 5605	1.72	-0.21	-2.23	7.40	-0.12	-0.40	13.40	-1.44	-1.69	13.44
YW2L6D- 5601	1.90	-0.03	-0.29	7.30	-0.22	-0.72	15.00	0.16	0.18	15.09
YYNHFP- 5601	2.00	0.07	0.79	7.60	0.08	0.25	15.30	0.46	0.53	15.26
Z2PNN4- 5601	2.00	0.07	0.79	7.38	-0.14	-0.46	16.00	1.16	1.35	15.72
Z6UC8Y- 5602	1.90	-0.03	-0.29	7.70	0.18	0.58	14.29	-0.55	-0.65	14.29
ZQR37B- 5601	2.00	0.07	0.79	7.10	-0.42	-1.37	16.30	1.46	1.70	16.36
Grand Mean	1.93			7.52			14.84			14.84
Standard Deviation	0.09			0.31			0.86			0.89
Participants Included in calculations	162			164			168			170
Participants excluded from calculations (indicated by X)	13			11			7			5

Stain B Preparation Angle: 14.9°

TABLE 1
Stain C

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
26PFXR- 5601	4.74	-0.11	-0.81	6.89	0.04	0.19	43.47	-1.53	-0.91	43.47
2AFQ66- 5601	5.00	0.15	1.14	7.00	0.15	0.74	45.00	0.00	0.00	45.58
2GJFML- 5601	4.90	0.05	0.39	6.90	0.05	0.24	45.20	0.20	0.12	45.25
3BAUHC- 5602	2.01	-2.84	-21.37X	2.85	-4.00	-19.80X	44.90	-0.10	-0.06	44.85
3BP7QG- 5605	4.93	0.08	0.62	7.12	0.27	1.33	44.00	-1.00	-0.59	43.82
3LPL7L- 5601	4.85	0.00	0.02	6.92	0.07	0.34	44.50	-0.50	-0.30	44.50
3QM69K- 5601	4.80	-0.05	-0.36	6.60	-0.25	-1.24	46.70	1.70	1.00	46.66
3UJQX3- 5601	4.75	-0.10	-0.74	6.50	-0.35	-1.74	47.00	2.00	1.18	46.95
444EC2- 5601	5.00	0.15	1.14	7.00	0.15	0.74	45.58	0.58	0.34	45.58
4DVZDT- 5601	4.93	0.08	0.62	6.98	0.13	0.64	44.90	-0.10	-0.06	44.93
4L3NYE- 5601	4.80	-0.05	-0.36	6.50	-0.35	-1.74	48.00	3.00	1.77	47.60
4LN8VY- 5602	4.88	0.03	0.21	6.99	0.14	0.69	44.23	-0.77	-0.46	44.23
4T7JAZ- 5602	4.90	0.05	0.39	6.90	0.05	0.24	44.85	-0.15	-0.09	45.25
4T8C88- 5602	7.00	2.15	16.20X	5.00	-1.85	-9.16X	45.60	0.60	0.35	X
62QEHE- 5605	4.81	-0.04	-0.29	6.74	-0.11	-0.55	45.54	0.54	0.32	45.53
636PCD- 5601	4.80	-0.05	-0.36	7.00	0.15	0.74	43.30	-1.70	-1.01	43.29
66RBAU- 5602	4.90	0.05	0.39	6.90	0.05	0.24	45.00	0.00	0.00	45.25
6MAGEY- 5601	4.80	-0.05	-0.36	6.60	-0.25	-1.24	47.00	2.00	1.18	46.66
6PFWRW- 5605	5.00	0.15	1.14	7.00	0.15	0.74	45.58	0.58	0.34	45.58
6ZMEPU- 5601	4.80	-0.05	-0.36	6.83	-0.02	-0.10	44.60	-0.40	-0.24	44.65
72QT6Y- 5601	4.80	-0.05	-0.36	6.70	-0.15	-0.75	45.80	0.80	0.47	45.76

TABLE 1
Stain C, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
7BDRW4- 5605	4.60	-0.25	-1.87	6.90	0.05	0.24	41.80	-3.20	-1.89	41.81
7Y39E9- 5601	5.00	0.15	1.14	7.10	0.25	1.23	45.00	0.00	0.00	44.77
83G8FU- 5602	4.50	-0.35	-2.62	7.00	0.15	0.74	40.00	-5.00	-2.96	40.01 X
83WFH4- 5602	4.50	-0.35	-2.62	7.00	0.15	0.74	40.00	-5.00	-2.96	40.01 X
84AZBD- 5602	4.80	-0.05	-0.36	6.90	0.05	0.24	44.00	-1.00	-0.59	44.08
8B9PRH- 5602	4.90	0.05	0.39	6.80	-0.05	-0.25	46.10	1.10	0.65	46.10
8HQ7EZ- 5601	4.80	-0.05	-0.36	6.80	-0.05	-0.25	44.90	-0.10	-0.06	44.90
8JLLNC- 5605	4.60	-0.25	-1.87	6.40	-0.45	-2.23	46.00	1.00	0.59	45.95
8ZUFH7- 5605	4.90	0.05	0.39	6.90	0.05	0.24	45.20	0.20	0.12	45.25
9DG3AJ- 5605	5.00	0.15	1.14	6.80	-0.05	-0.25	47.00	2.00	1.18	47.33
9L4C67- 5601	4.60	-0.25	-1.87	6.50	-0.35	-1.74	45.00	0.00	0.00	45.05
A3BGKW- 5601	5.00	0.15	1.14	6.80	-0.05	-0.25	47.30	2.30	1.36	47.33
A4LJ9F- 5602	4.50	-0.35	-2.62	7.30	0.45	2.22	41.80	-3.20	-1.89	38.06 X
AAQFRF- 5602	4.90	0.05	0.39	6.90	0.05	0.24	45.00	0.00	0.00	45.25
BFA33C- 5601	4.80	-0.05	-0.36	6.70	-0.15	-0.75	45.76	0.76	0.45	45.76
BGMQ96- 5601	4.80	-0.05	-0.36	6.40	-0.45	-2.23	48.50	3.50	2.07	48.59
BHLKJW- 5601	4.92	0.07	0.54	6.99	0.14	0.69	44.74	-0.26	-0.16	44.74
BMT7AE- 5601	4.80	-0.05	-0.36	7.11	0.26	1.28	42.46	-2.54	-1.50	42.46
BN2CH9- 5601	4.70	-0.15	-1.11	6.58	-0.27	-1.34	46.00	1.00	0.59	45.58
BN43L7- 5601	4.68	-0.17	-1.26	7.64	0.79	3.91 X	37.78	-7.22	-4.27 X	37.78 X
C2BDNQ- 5602	5.00	0.15	1.14	6.70	-0.15	-0.75	48.00	3.00	1.77	48.27

TABLE 1
Stain C, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
C9RUFZ-5605	4.86	0.01	0.09	6.97	0.12	0.59	44.21	-0.79	-0.47	44.21
CBWHT6-5602	4.80	-0.05	-0.36	6.80	-0.05	-0.25	45.30	0.30	0.18	44.90
CFMY2P-5601	4.90	0.05	0.39	6.80	-0.05	-0.25	46.10	1.10	0.65	46.10
CGPLLA-5601	5.00	0.15	1.14	7.00	0.15	0.74	46.00	1.00	0.59	45.58
CMN9CN-5601	5.00	0.15	1.14	7.00	0.15	0.74	45.60	0.60	0.35	45.58
CNX8F6-5601	4.80	-0.05	-0.36	6.70	-0.15	-0.75	45.00	0.00	0.00	45.76
CPDGGH-5601	5.00	0.15	1.14	6.80	-0.05	-0.25	47.33	2.33	1.38	47.33
CWWH4M-5601	4.80	-0.05	-0.36	6.60	-0.25	-1.24	46.70	1.70	1.00	46.66
CZE3NG-5601	5.00	0.15	1.14	6.90	0.05	0.24	46.40	1.40	0.83	46.44
D4R8TQ-5605	4.90	0.05	0.39	6.80	-0.05	-0.25	46.10	1.10	0.65	46.10
D7WVCL-5601	5.03	0.18	1.37	6.67	-0.18	-0.89	48.90	3.90	2.31	48.95
D8FCWV-5601	4.70	-0.15	-1.11	6.60	-0.25	-1.24	45.40	0.40	0.24	45.41
DAJA4G-5601	4.80	-0.05	-0.36	7.00	0.15	0.74	43.00	-2.00	-1.18	43.29
DG49VB-5601	4.80	-0.05	-0.36	6.80	-0.05	-0.25	44.90	-0.10	-0.06	44.90
DHTJNP-5605	4.60	-0.25	-1.87	6.60	-0.25	-1.24	44.10	-0.90	-0.53	44.18
DL9BFH-5601	5.00	0.15	1.14	7.00	0.15	0.74	45.58	0.58	0.34	45.58
DT8ZWL-5605	4.90	0.05	0.39	6.90	0.05	0.24	45.20	0.20	0.12	45.25
DTU6VN-5601	4.80	-0.05	-0.36	6.80	-0.05	-0.25	44.90	-0.10	-0.06	44.90
EE8AYN-5602	4.90	0.05	0.39	6.60	-0.25	-1.24	48.00	3.00	1.77	47.94
EGFLE6-5602	4.85	0.00	0.02	6.77	-0.08	-0.40	45.76	0.76	0.45	45.76
EHQACJ-5601	4.80	-0.05	-0.36	6.80	-0.05	-0.25	44.90	-0.10	-0.06	44.90

TABLE 1
Stain C, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
EMLZKF-5601	4.60	-0.25	-1.87	6.60	-0.25	-1.24	44.20	-0.80	-0.47	44.18
ENV6VJ-5602	4.50	-0.35	-2.62	6.60	-0.25	-1.24	43.00	-2.00	-1.18	42.99
EVEBUB-5601	4.90	0.05	0.39	7.20	0.35	1.73	42.90	-2.10	-1.24	42.89
EXNF9Y-5602	2.89	-1.96	-14.74X	3.92	-2.93	-14.51X	47.50	2.50	1.48	47.50
FBQ7MC-5605	4.80	-0.05	-0.36	6.80	-0.05	-0.25	45.00	0.00	0.00	44.90
FD7VU3-5601	4.80	-0.05	-0.36	7.00	0.15	0.74	43.30	-1.70	-1.01	43.29
FMJTT8-5601	4.80	-0.05	-0.36	6.80	-0.05	-0.25	44.90	-0.10	-0.06	44.90
GAPV6E-5601	4.70	-0.15	-1.11	6.70	-0.15	-0.75	44.55	-0.45	-0.27	44.55
GEGZXH-5601	4.70	-0.15	-1.11	7.30	0.45	2.22	40.00	-5.00	-2.96	40.08 X
GJR93U-5601	4.90	0.05	0.39	6.90	0.05	0.24	45.24	0.24	0.14	45.25
GK7HEF-5601	4.75	-0.10	-0.74	6.75	-0.10	-0.50	44.70	-0.30	-0.18	44.72
GMC44Z-5605	5.00	0.15	1.14	7.00	0.15	0.74	46.00	1.00	0.59	45.58
GW4G7L-5602	4.80	-0.05	-0.36	6.60	-0.25	-1.24	47.00	2.00	1.18	46.66
H2PTF9-5602	4.90	0.05	0.39	7.00	0.15	0.74	44.00	-1.00	-0.59	44.43
HBWDWH-5605	4.80	-0.05	-0.36	6.50	-0.35	-1.74	47.00	2.00	1.18	47.60
HG8L7Z-5602	4.81	-0.04	-0.29	6.90	0.05	0.24	44.20	-0.80	-0.47	44.19
HXRAEA-5601	4.80	-0.05	-0.36	6.70	-0.15	-0.75	45.80	0.80	0.47	45.76
HZTHED-5605	4.70	-0.15	-1.11	6.80	-0.05	-0.25	44.00	-1.00	-0.59	43.72
JB8YLB-5602	4.00	-0.85	-6.38X	6.00	-0.85	-4.21X	42.00	-3.00	-1.78	41.81
JBUZV9-5605	4.90	0.05	0.39	6.90	0.05	0.24	45.25	0.25	0.15	45.25
JMLRFC-5601	4.80	-0.05	-0.36	7.00	0.15	0.74	43.30	-1.70	-1.01	43.29

TABLE 1
Stain C, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
JTRK9L-5605	5.00	0.15	1.14	7.00	0.15	0.74	46.00	1.00	0.59	45.58
JYG8WZ-5605	4.90	0.05	0.39	6.80	-0.05	-0.25	46.10	1.10	0.65	46.10
K648ZJ-5602	3.70	-1.15	-8.64X	5.40	-1.45	-7.18X	44.00	-1.00	-0.59	43.25
KAHQFF-5601	5.00	0.15	1.14	7.00	0.15	0.74	46.00	1.00	0.59	45.58
KEDGNC-5601	4.81	-0.04	-0.29	7.18	0.33	1.63	42.10	-2.90	-1.72	42.06
KENLTN-5601	4.80	-0.05	-0.36	7.10	0.25	1.23	42.94	-2.06	-1.22	42.54
KMKFT8-5601	4.80	-0.05	-0.36	6.90	0.05	0.24	44.10	-0.90	-0.53	44.08
KRDDNQ-5601	4.90	0.05	0.39	6.90	0.05	0.24	45.24	0.24	0.14	45.25
KRTQXV-5601	4.80	-0.05	-0.36	6.34	-0.51	-2.53	49.20	4.20	2.48	49.21
KWA6TG-5602	5.00	0.15	1.14	6.80	-0.05	-0.25	47.00	2.00	1.18	47.33
L6HYMA-5601	4.80	-0.05	-0.36	7.00	0.15	0.74	43.30	-1.70	-1.01	43.29
LBMU7A-5601	5.10	0.25	1.90	6.70	-0.15	-0.75	49.60	4.60	2.72	49.57
LHLGZU-5602	4.83	-0.02	-0.14	6.12	-0.73	-3.62X	52.10	7.10	4.20 X	52.11 X
LJF6G6-5602	4.80	-0.05	-0.36	6.90	0.05	0.24	44.10	-0.90	-0.53	44.08
LKTHJF-5601	5.00	0.15	1.14	7.00	0.15	0.74	45.50	0.50	0.29	45.58
LQ2ZH9-5601	4.80	-0.05	-0.36	6.80	-0.05	-0.25	44.90	-0.10	-0.06	44.90
LUXPYF-5601	4.60	-0.25	-1.87	6.90	0.05	0.24	41.48	-3.52	-2.08	41.81
M7KBJ2-5601	4.81	-0.04	-0.29	6.95	0.10	0.49	43.80	-1.20	-0.71	43.80
MBF3UJ-5602	4.90	0.05	0.39	6.70	-0.15	-0.75	47.00	2.00	1.18	47.00
MHJUEA-5602	4.60	-0.25	-1.87	5.80	-1.05	-5.20X	52.30	7.30	4.32 X	52.48 X
N2PNJL-5601	4.90	0.05	0.39	6.90	0.05	0.24	45.20	0.20	0.12	45.25

TABLE 1
Stain C, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
NBDHVH-5602	5.00	0.15	1.14	7.00	0.15	0.74	45.60	0.60	0.35	45.58
NMD47M-5601	5.00	0.15	1.14	7.00	0.15	0.74	45.23	0.23	0.13	45.58
NUBVEG-5601	4.74	-0.11	-0.81	6.83	-0.02	-0.10	43.95	-1.05	-0.62	43.95
P8TARF-5601	5.00	0.15	1.14	6.50	-0.35	-1.74	50.30	5.30	3.13 X	50.28 X
PBRJZW-5602	5.00	0.15	1.14	7.00	0.15	0.74	46.00	1.00	0.59	45.58
PFQXML-5601	5.00	0.15	1.14	6.90	0.05	0.24	46.40	1.40	0.83	46.44
PWBQA4-5601	4.80	-0.05	-0.36	7.00	0.15	0.74	43.00	-2.00	-1.18	43.29
Q4LCR7-5602	4.80	-0.05	-0.36	6.80	-0.05	-0.25	44.90	-0.10	-0.06	44.90
QE8BQP-5602	3.71	-1.14	-8.57X	5.30	-1.55	-7.68X	44.00	-1.00	-0.59	44.43
QKV29D-5601	5.08	0.23	1.75	7.10	0.25	1.23	46.00	1.00	0.59	45.68
QKWT7L-5601	4.90	0.05	0.39	6.30	-0.55	-2.73	51.05	6.05	3.58 X	51.06 X
QL7Z8T-5602	4.90	0.05	0.39	6.80	-0.05	-0.25	46.00	1.00	0.59	46.10
QRVD9G-5601	4.90	0.05	0.39	7.20	0.35	1.73	42.89	-2.11	-1.25	42.89
R46DFU-5601	49.00	44.15	332.45X	69.00	62.15	307.66X	45.00	0.00	0.00	45.25
RH4GKK-5602	2.66	-2.19	-16.47X	3.75	-3.10	-15.35X	45.00	0.00	0.00	45.18
RP896C-5602	5.00	0.15	1.14	7.00	0.15	0.74	45.60	0.60	0.35	45.58
RXJHEQ-5602	4.90	0.05	0.39	6.70	-0.15	-0.75	47.00	2.00	1.18	47.00
RYWRPC-5602	5.00	0.15	1.14	7.00	0.15	0.74	45.66	0.66	0.39	45.58
RZ7YT6-5601	4.94	0.09	0.69	6.89	0.04	0.19	45.80	0.80	0.47	45.81
T39EGL-5601	4.80	-0.05	-0.36	6.80	-0.05	-0.25	44.90	-0.10	-0.06	44.90
T9W2DD-5605	4.90	0.05	0.39	6.90	0.05	0.24	45.04	0.04	0.02	45.25

TABLE 1
Stain C, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
TAN8LQ-5605	4.47	-0.38	-2.85	6.51	-0.34	-1.69	43.36	-1.64	-0.97	43.36
TCX3EA-5602	4.90	0.05	0.39	7.10	0.25	1.23	43.64	-1.36	-0.81	43.64
TH2UY2-5601	5.00	0.15	1.14	7.00	0.15	0.74	36.00	-9.00	-5.33 X	45.58
TJEH3D-5602	4.90	0.05	0.39	7.00	0.15	0.74	44.00	-1.00	-0.59	44.43
TJFDRB-5602	4.83	-0.02	-0.14	7.59	0.74	3.66X	39.50	-5.50	-3.26 X	39.52 X
TLL23U-5601	4.80	-0.05	-0.36	6.80	-0.05	-0.25	44.90	-0.10	-0.06	44.90
TR8W4X-5601	4.90	0.05	0.39	6.80	-0.05	-0.25	46.00	1.00	0.59	46.10
TZZ8EU-5601	4.90	0.05	0.39	6.90	0.05	0.24	45.00	0.00	0.00	45.25
U28QV3-5605	5.00	0.15	1.14	7.00	0.15	0.74	46.00	1.00	0.59	45.58
U3KDDG-5601	4.80	-0.05	-0.36	6.80	-0.05	-0.25	45.00	0.00	0.00	44.90
UBBZZ7-5605	4.80	-0.05	-0.36	7.00	0.15	0.74	43.30	-1.70	-1.01	43.29
UJANWC-5601	4.70	-0.15	-1.11	6.82	-0.03	-0.15	43.50	-1.50	-0.89	43.56
UUTZCV-5602	4.64	-0.21	-1.57	6.97	0.12	0.59	42.00	-3.00	-1.78	41.74
UV4ZBB-5601	4.90	0.05	0.39	7.00	0.15	0.74	44.42	-0.58	-0.34	44.43
VCQFA2-5601	4.70	-0.15	-1.11	6.50	-0.35	-1.74	46.00	1.00	0.59	46.31
VLVR4A-5602	4.80	-0.05	-0.36	7.20	0.35	1.73	42.00	-3.00	-1.78	41.81
VMQ6TN-5602	4.90	0.05	0.39	6.60	-0.25	-1.24	48.00	3.00	1.77	47.94
VTRGPK-5602	4.90	0.05	0.39	7.00	0.15	0.74	44.00	-1.00	-0.59	44.43
VU4BBM-5601	4.90	0.05	0.39	7.00	0.15	0.74	44.40	-0.60	-0.36	44.43
W3XQNX-5601	4.90	0.05	0.39	7.20	0.35	1.73	42.90	-2.10	-1.24	42.89
W3ZE9H-5602	955.00	950.15	7154.39X	1300.00	1293.15	6401.42X	47.30	2.30	1.36	47.27

TABLE 1
Stain C, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
W47YWH- 5602	3.60	-1.25	-9.40X	5.10	-1.75	-8.67X	44.90	-0.10	-0.06	44.90
W62GWX- 5601	4.90	0.05	0.39	7.00	0.15	0.74	44.40	-0.60	-0.36	44.43
WBTR7W- 5605	4.90	0.05	0.39	6.80	-0.05	-0.25	45.60	0.60	0.35	46.10
WCLHCB- 5601	4.80	-0.05	-0.36	6.80	-0.05	-0.25	45.00	0.00	0.00	44.90
WDVPE4- 5605	4.80	-0.05	-0.36	6.50	-0.35	-1.74	48.00	3.00	1.77	47.60
WPBCTB- 5601	5.00	0.15	1.14	7.00	0.15	0.74	45.60	0.60	0.35	45.58
WW9ADR- 5601	4.67	-0.18	-1.34	6.85	0.00	0.00	43.00	-2.00	-1.18	42.98
WX26UA- 5601	5.00	0.15	1.14	6.90	0.05	0.24	46.00	1.00	0.59	46.44
X4MCZK- 5602	4.90	0.05	0.39	6.90	0.05	0.24	46.00	1.00	0.59	45.25
X8MK6V- 5601	4.80	-0.05	-0.36	7.00	0.15	0.74	43.30	-1.70	-1.01	43.29
XKCKVX- 5601	4.85	0.00	0.02	6.93	0.08	0.39	44.40	-0.60	-0.36	44.42
XNB277- 5601	5.20	0.35	2.65	7.40	0.55	2.72	44.60	-0.40	-0.24	44.64
XVU4D9- 5601	5.05	0.20	1.52	7.10	0.25	1.23	45.00	0.00	0.00	45.34
XVUZ37- 5602	4.40	-0.45	-3.37X	6.35	-0.50	-2.48	43.00	-2.00	-1.18	43.86
Y3QE2D- 5601	4.80	-0.05	-0.36	6.70	-0.15	-0.75	46.00	1.00	0.59	45.76
Y9V3UE- 5601	4.86	0.01	0.09	6.91	0.06	0.29	44.69	-0.31	-0.18	44.69
Y9WVU8- 5602	5.00	0.15	1.14	6.70	-0.15	-0.75	48.00	3.00	1.77	48.27
YAPQDA- 5601	4.80	-0.05	-0.36	6.90	0.05	0.24	44.08	-0.92	-0.55	44.08
YBL7ML- 5605	4.80	-0.05	-0.36	7.00	0.15	0.74	43.00	-2.00	-1.18	43.29
YCUEW7- 5601	5.00	0.15	1.14	7.00	0.15	0.74	45.50	0.50	0.29	45.58
YCV7UD- 5601	5.00	0.15	1.14	7.00	0.15	0.74	45.50	0.50	0.29	45.58

TABLE 1
Stain C, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
YFBXGZ- 5601	4.50	-0.35	-2.62	6.50	-0.35	-1.74	43.80	-1.20	-0.71	43.81
YGP763- 5605	4.60	-0.25	-1.87	6.78	-0.07	-0.35	42.70	-2.30	-1.36	42.72
YW2L6D- 5601	4.70	-0.15	-1.11	6.80	-0.05	-0.25	44.00	-1.00	-0.59	43.72
YYNHFP- 5601	4.90	0.05	0.39	6.80	-0.05	-0.25	46.10	1.10	0.65	46.10
Z2PNN4- 5601	5.00	0.15	1.14	6.63	-0.22	-1.09	49.00	4.00	2.37	48.95
Z6UC8Y- 5602	4.90	0.05	0.39	7.00	0.15	0.74	44.43	-0.57	-0.34	44.43
ZQR37B- 5601	5.00	0.15	1.14	6.30	-0.55	-2.73	52.50	7.50	4.44 X	52.53 X
Grand Mean	4.85			6.85			45.00			45.13
Standard Deviation	0.13			0.20			1.69			1.54
Participants Included in calculations	164			161			167			163
Participants excluded from calculations (indicated by X)	11			14			8			12

Stain C Preparation Angle: 44.0°

TABLE 1
Stain D

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
26PFXR-5601	2.23	-0.03	-0.19	5.72	0.07	0.27	22.95	-0.57	-0.40	22.95
2AFQ66-5601	2.00	-0.26	-1.88	5.50	-0.15	-0.55	21.00	-2.52	-1.77	21.32
2GJPML-5601	2.40	0.14	1.06	5.80	0.15	0.57	24.40	0.88	0.62	24.44
3BAUHC-5602	1.78	-0.48	-3.49X	4.90	-0.75	-2.78	21.30	-2.22	-1.56	21.30
3BP7QG-5605	2.37	0.11	0.84	5.93	0.28	1.06	24.00	0.48	0.33	23.56
3LPL7L-5601	2.26	0.00	0.03	5.65	0.00	0.01	23.60	0.08	0.05	23.58
3QM69K-5601	2.20	-0.06	-0.41	5.60	-0.05	-0.17	23.10	-0.42	-0.30	23.13
3UJQX3-5601	2.00	-0.26	-1.88	5.50	-0.15	-0.55	21.30	-2.22	-1.56	21.32
444EC2-5601	2.20	-0.06	-0.41	6.10	0.45	1.69	21.14	-2.38	-1.67	21.14
4DVZDT-5601	2.37	0.11	0.84	5.54	-0.11	-0.40	25.30	1.78	1.25	25.33
4L3NYE-5601	2.25	-0.01	-0.04	5.20	-0.45	-1.67	26.00	2.48	1.74	25.64
4LN8VY-5602	2.36	0.11	0.78	5.98	0.33	1.23	23.28	-0.24	-0.17	23.28
4T7JAZ-5602	2.40	0.14	1.06	5.80	0.15	0.57	24.26	0.74	0.52	24.44
4T8C88-5602	5.70	3.44	25.29X	2.20	-3.45	-12.85X	22.70	-0.82	-0.58	X
62QEHE-5605	2.34	0.08	0.62	5.33	-0.32	-1.18	24.70	1.18	0.83	26.04
636PCD-5601	2.00	-0.26	-1.88	5.50	-0.15	-0.55	21.30	-2.22	-1.56	21.32
66RBAU-5602	2.20	-0.06	-0.41	5.80	0.15	0.57	22.00	-1.52	-1.07	22.29
6MAGEY-5601	2.30	0.04	0.33	5.60	-0.05	-0.17	24.20	0.68	0.48	24.25
6PFWRW-5605	2.10	-0.16	-1.14	5.50	-0.15	-0.55	22.45	-1.07	-0.75	22.45
6ZMEPU-5601	2.20	-0.06	-0.41	5.69	0.04	0.16	22.70	-0.82	-0.58	22.75
72QT6Y-5601	2.30	0.04	0.33	5.70	0.05	0.20	23.80	0.28	0.19	23.80

TABLE 1
Stain D, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
7BDRW4-5605	2.20	-0.06	-0.41	5.60	-0.05	-0.17	23.10	-0.42	-0.30	23.13
7Y39E9-5601	2.30	0.04	0.33	6.00	0.35	1.32	67.40	43.88	30.82 X	22.54
83G8FU-5602	2.00	-0.26	-1.88	5.75	0.10	0.39	20.40	-3.12	-2.19	20.35
83WFH4-5602	2.00	-0.26	-1.88	5.50	-0.15	-0.55	21.30	-2.22	-1.56	21.32
84AZBD-5602	2.10	-0.16	-1.14	5.80	0.15	0.57	21.00	-2.52	-1.77	21.23
8B9PRH-5602	2.30	0.04	0.33	5.50	-0.15	-0.55	24.70	1.18	0.83	24.72
8HQ7EZ-5601	2.30	0.04	0.33	5.80	0.15	0.57	23.40	-0.12	-0.09	23.36
8JLLNC-5605	2.20	-0.06	-0.41	5.50	-0.15	-0.55	23.60	0.08	0.05	23.58
8ZUFH7-5605	2.50	0.24	1.80	6.00	0.35	1.32	24.60	1.08	0.76	24.62
9DG3AJ-5605	2.20	-0.06	-0.41	6.00	0.35	1.32	22.00	-1.52	-1.07	21.51
9L4C67-5601	2.00	-0.26	-1.88	5.30	-0.35	-1.29	22.00	-1.52	-1.07	22.17
A3BGKW-5601	2.30	0.04	0.33	5.70	0.05	0.20	23.80	0.28	0.19	23.80
A4LJ9F-5602	2.60	0.34	2.53	6.70	1.05	3.93X	22.70	-0.82	-0.58	22.83
AAQFRF-5602	2.30	0.04	0.33	5.80	0.15	0.57	23.00	-0.52	-0.37	23.36
BFA33C-5601	2.20	-0.06	-0.41	5.60	-0.05	-0.17	23.13	-0.39	-0.28	23.13
BGMQ96-5601	2.00	-0.26	-1.88	5.20	-0.45	-1.67	23.00	-0.52	-0.37	22.62
BHLKJW-5601	2.25	-0.01	-0.04	6.00	0.35	1.32	22.02	-1.50	-1.06	22.02
BMT7AE-5601	2.32	0.06	0.47	5.91	0.26	0.98	23.11	-0.41	-0.29	23.11
BN2CH9-5601	2.11	-0.15	-1.07	5.11	-0.54	-2.00	24.00	0.48	0.33	24.39
BN43L7-5601	2.13	-0.13	-0.92	5.74	0.09	0.35	21.78	-1.74	-1.22	21.78
C2BDNQ-5602	2.30	0.04	0.33	5.50	-0.15	-0.55	24.00	0.48	0.33	24.72

TABLE 1
Stain D, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
C9RUFZ- 5605	2.24	-0.02	-0.11	5.82	0.17	0.65	22.64	-0.88	-0.62	22.64
CBWHT6- 5602	2.30	0.04	0.33	5.90	0.25	0.94	22.60	-0.92	-0.65	22.94
CFMY2P- 5601	2.50	0.24	1.80	5.20	-0.45	-1.67	28.70	5.18	3.64 X	28.74 X
CGPLLA- 5601	2.50	0.24	1.80	6.00	0.35	1.32	25.00	1.48	1.04	24.62
CMN9CN- 5601	2.30	0.04	0.33	5.80	0.15	0.57	23.40	-0.12	-0.09	23.36
CNX8F6- 5601	2.30	0.04	0.33	5.70	0.05	0.20	23.00	-0.52	-0.37	23.80
CPDGGH- 5601	2.40	0.14	1.06	5.40	-0.25	-0.92	26.39	2.87	2.01	26.39
CWWH4M- 5601	2.20	-0.06	-0.41	5.80	0.15	0.57	22.30	-1.22	-0.86	22.29
CZE3NG- 5601	2.40	0.14	1.06	5.60	-0.05	-0.17	25.40	1.88	1.32	25.38
D4R8TQ- 5605	2.20	-0.06	-0.41	5.50	-0.15	-0.55	23.50	-0.02	-0.02	23.58
D7WVCL- 5601	2.24	-0.02	-0.11	5.41	-0.24	-0.88	24.50	0.98	0.69	24.46
D8FCWV- 5601	2.20	-0.06	-0.41	5.70	0.05	0.20	22.70	-0.82	-0.58	22.70
DAJA4G- 5601	2.20	-0.06	-0.41	5.60	-0.05	-0.17	23.00	-0.52	-0.37	23.13
DG49VB- 5601	2.30	0.04	0.33	5.80	0.15	0.57	23.36	-0.16	-0.11	23.36
DHTJNP- 5605	2.10	-0.16	-1.14	5.30	-0.35	-1.29	23.30	-0.22	-0.16	23.34
DL9BFH- 5601	2.20	-0.06	-0.41	5.60	-0.05	-0.17	23.13	-0.39	-0.28	23.13
DT8ZWL- 5605	2.30	0.04	0.33	5.70	0.05	0.20	23.80	0.28	0.19	23.80
DTU6VN- 5601	2.20	-0.06	-0.41	5.60	-0.05	-0.17	23.10	-0.42	-0.30	23.13
EE8AYN- 5602	2.30	0.04	0.33	5.80	0.15	0.57	23.00	-0.52	-0.37	23.36
EGFLE6- 5602	2.27	0.01	0.11	5.88	0.23	0.87	22.71	-0.81	-0.57	22.71
EHQACJ- 5601	2.20	-0.06	-0.41	5.60	-0.05	-0.17	23.10	-0.42	-0.30	23.13

TABLE 1
Stain D, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
EMLZKF-5601	2.40	0.14	1.06	5.60	-0.05	-0.17	25.40	1.88	1.32	25.38
ENV6VJ-5602	2.00	-0.26	-1.88	5.50	-0.15	-0.55	21.00	-2.52	-1.77	21.32
EVEBUB-5601	2.20	-0.06	-0.41	6.00	0.35	1.32	21.50	-2.02	-1.42	21.51
EXNF9Y-5602	2.27	0.01	0.11	5.75	0.10	0.39	23.30	-0.22	-0.16	23.25
FBQ7MC-5605	2.20	-0.06	-0.41	5.40	-0.25	-0.92	24.00	0.48	0.33	24.04
FD7VU3-5601	2.00	-0.26	-1.88	5.20	-0.45	-1.67	22.60	-0.92	-0.65	22.62
FMJTT8-5601	2.20	-0.06	-0.41	5.60	-0.05	-0.17	23.10	-0.42	-0.30	23.13
GAPV6E-5601	2.20	-0.06	-0.41	5.70	0.05	0.20	22.70	-0.82	-0.58	22.70
GEGZXH-5601	2.40	0.14	1.06	5.90	0.25	0.94	24.00	0.48	0.33	24.00
GJR93U-5601	2.30	0.04	0.33	6.00	0.35	1.32	22.54	-0.98	-0.69	22.54
GK7HEF-5601	2.00	-0.26	-1.88	5.30	-0.35	-1.29	22.20	-1.32	-0.93	22.17
GMC44Z-5605	2.40	0.14	1.06	5.80	0.15	0.57	24.00	0.48	0.33	24.44
GW4G7L-5602	2.20	-0.06	-0.41	5.40	-0.25	-0.92	24.00	0.48	0.33	24.04
H2PTF9-5602	2.30	0.04	0.33	5.90	0.25	0.94	23.00	-0.52	-0.37	22.94
HBWDWH-5605	2.20	-0.06	-0.41	5.00	-0.65	-2.41	26.00	2.48	1.74	26.10
HG8L7Z-5602	2.26	0.00	0.03	5.44	-0.21	-0.77	24.60	1.08	0.76	24.55
HXRAEA-5601	2.20	-0.06	-0.41	5.50	-0.15	-0.55	23.60	0.08	0.05	23.58
HZTHED-5605	2.20	-0.06	-0.41	5.60	-0.05	-0.17	23.00	-0.52	-0.37	23.13
JB8YLB-5602	2.00	-0.26	-1.88	5.00	-0.65	-2.41	23.50	-0.02	-0.02	23.58
JBUZV9-5605	2.40	0.14	1.06	5.70	0.05	0.20	24.90	1.38	0.97	24.90
JMLRFC-5601	2.30	0.04	0.33	5.60	-0.05	-0.17	24.20	0.68	0.48	24.25

TABLE 1
Stain D, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
JTRK9L- 5605	2.00	-0.26	-1.88	6.00	0.35	1.32	19.00	-4.52	-3.18 X	19.47
JYG8WZ- 5605	2.30	0.04	0.33	5.40	-0.25	-0.92	25.20	1.68	1.18	25.21
K648ZJ- 5602	1.80	-0.46	-3.34X	4.60	-1.05	-3.90X	23.00	-0.52	-0.37	23.04
KAHQFF- 5601	2.00	-0.26	-1.88	5.00	-0.65	-2.41	24.00	0.48	0.33	23.58
KEDGNC- 5601	2.26	0.00	0.03	5.45	-0.20	-0.73	24.50	0.98	0.69	24.50
KENLTN- 5601	2.20	-0.06	-0.41	6.10	0.45	1.69	21.50	-2.02	-1.42	21.14
KMKFT8- 5601	2.30	0.04	0.33	5.80	0.15	0.57	23.40	-0.12	-0.09	23.36
KRDDNQ- 5601	2.30	0.04	0.33	6.00	0.35	1.32	22.54	-0.98	-0.69	22.54
KRTQXV- 5601	2.25	-0.01	-0.04	5.37	-0.28	-1.03	24.77	1.25	0.88	24.77
KWA6TG- 5602	2.40	0.14	1.06	5.60	-0.05	-0.17	25.00	1.48	1.04	25.38
L6HYMA- 5601	2.00	-0.26	-1.88	5.50	-0.15	-0.55	21.30	-2.22	-1.56	21.32
LBMU7A- 5601	2.30	0.04	0.33	5.60	-0.05	-0.17	24.30	0.78	0.55	24.25
LHLGZU- 5602	2.30	0.04	0.33	5.29	-0.36	-1.33	25.80	2.28	1.60	25.77
LJF6G6- 5602	2.20	-0.06	-0.41	5.40	-0.25	-0.92	25.20	1.68	1.18	24.04
LKTHJF- 5601	2.30	0.04	0.33	5.20	-0.45	-1.67	26.30	2.78	1.95	26.25
LQ2ZH9- 5601	2.20	-0.06	-0.41	5.70	0.05	0.20	22.70	-0.82	-0.58	22.70
LUXPYF- 5601	2.20	-0.06	-0.41	5.80	0.15	0.57	22.17	-1.35	-0.95	22.29
M7KBJ2- 5601	2.34	0.08	0.62	5.87	0.22	0.83	23.50	-0.02	-0.02	23.49
MBF3UJ- 5602	2.30	0.04	0.33	5.60	-0.05	-0.17	24.00	0.48	0.33	24.25
MHJUEA- 5602	2.00	-0.26	-1.88	4.20	-1.45	-5.39X	28.40	4.88	3.43 X	28.44 X
N2PNJL- 5601	2.00	-0.26	-1.88	5.30	-0.35	-1.29	22.20	-1.32	-0.93	22.17

TABLE 1
Stain D, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
NBDHVH-5602	2.00	-0.26	-1.88	6.00	0.35	1.32	19.50	-4.02	-2.83	19.47
NMD47M-5601	2.40	0.14	1.06	5.93	0.28	1.06	23.58	0.06	0.04	23.87
NUBVEG-5601	2.20	-0.06	-0.41	5.70	0.05	0.20	22.70	-0.82	-0.58	22.70
P8TARF-5601	2.00	-0.26	-1.88	5.20	-0.45	-1.67	22.60	-0.92	-0.65	22.62
PBRJZW-5602	2.40	0.14	1.06	5.70	0.05	0.20	25.00	1.48	1.04	24.90
PFQXML-5601	2.30	0.04	0.33	5.90	0.25	0.94	22.90	-0.62	-0.44	22.94
PWBQA4-5601	2.20	-0.06	-0.41	6.00	0.35	1.32	22.00	-1.52	-1.07	21.51
Q4LCR7-5602	2.30	0.04	0.33	5.70	0.05	0.20	23.80	0.28	0.19	23.80
QE8BQP-5602	1.56	-0.70	-5.11X	4.08	-1.57	-5.84X	23.00	-0.52	-0.37	22.48
QKV29D-5601	2.60	0.34	2.53	6.20	0.55	2.06	24.70	1.18	0.83	24.79
QKWT7L-5601	2.30	0.04	0.33	5.30	-0.35	-1.29	25.71	2.19	1.54	25.72
QL7Z8T-5602	2.30	0.04	0.33	5.70	0.05	0.20	24.00	0.48	0.33	23.80
QRVD9G-5601	2.30	0.04	0.33	6.00	0.35	1.32	22.54	-0.98	-0.69	22.54
R46DFU-5601	24.00	21.74	159.67X	60.00	54.35	202.65X	24.00	0.48	0.33	23.58
RH4GKK-5602	1.47	-0.79	-5.77X	3.55	-2.10	-7.82X	25.00	1.48	1.04	24.46
RP896C-5602	2.00	-0.26	-1.88	6.00	0.35	1.32	19.50	-4.02	-2.83	19.47
RXJHEQ-5602	2.20	-0.06	-0.41	5.60	-0.05	-0.17	23.00	-0.52	-0.37	23.13
RYWRPC-5602	2.40	0.14	1.06	5.80	0.15	0.57	24.33	0.81	0.57	24.44
RZ7YT6-5601	2.37	0.11	0.84	5.51	-0.14	-0.51	25.50	1.98	1.39	25.48
T39EGL-5601	2.30	0.04	0.33	5.50	-0.15	-0.55	24.70	1.18	0.83	24.72
T9W2DD-5605	2.30	0.04	0.33	5.50	-0.15	-0.55	25.24	1.72	1.21	24.72

TABLE 1
Stain D, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
TAN8LQ-5605	2.14	-0.12	-0.85	5.21	-0.44	-1.63	24.25	0.73	0.51	24.25
TCX3EA-5602	2.30	0.04	0.33	6.10	0.45	1.69	22.15	-1.37	-0.96	22.15
TH2UY2-5601	2.50	0.24	1.80	6.00	0.35	1.32	23.00	-0.52	-0.37	24.62
TJEH3D-5602	2.30	0.04	0.33	5.90	0.25	0.94	23.00	-0.52	-0.37	22.94
TJFDRB-5602	2.30	0.04	0.33	5.86	0.21	0.80	23.10	-0.42	-0.30	23.11
TLL23U-5601	2.20	-0.06	-0.41	5.30	-0.35	-1.29	24.52	1.00	0.70	24.53
TR8W4X-5601	2.20	-0.06	-0.41	5.40	-0.25	-0.92	24.00	0.48	0.33	24.04
TZZ8EU-5601	2.40	0.14	1.06	5.90	0.25	0.94	24.00	0.48	0.33	24.00
U28QV3-5605	2.50	0.24	1.80	6.00	0.35	1.32	25.00	1.48	1.04	24.62
U3KDDG-5601	2.30	0.04	0.33	5.60	-0.05	-0.17	24.20	0.68	0.48	24.25
UBBZZ7-5605	2.30	0.04	0.33	5.70	0.05	0.20	23.80	0.28	0.19	23.80
UJANWC-5601	2.29	0.03	0.25	5.44	-0.21	-0.77	24.80	1.28	0.90	24.89
UUTZCV-5602	2.04	-0.22	-1.58	5.85	0.20	0.76	20.00	-3.52	-2.47	20.41
UV4ZBB-5601	2.30	0.04	0.33	6.00	0.35	1.32	22.54	-0.98	-0.69	22.54
VCQFA2-5601	2.20	-0.06	-0.41	5.60	-0.05	-0.17	23.00	-0.52	-0.37	23.13
VLVR4A-5602	2.30	0.04	0.33	5.70	0.05	0.20	24.00	0.48	0.33	23.80
VMQ6TN-5602	2.30	0.04	0.33	5.20	-0.45	-1.67	26.00	2.48	1.74	26.25
VTRGPK-5602	2.30	0.04	0.33	5.80	0.15	0.57	24.00	0.48	0.33	23.36
VU4BBM-5601	2.10	-0.16	-1.14	5.50	-0.15	-0.55	22.40	-1.12	-0.79	22.45
W3XQNX-5601	2.30	0.04	0.33	5.60	-0.05	-0.17	24.20	0.68	0.48	24.25
W3ZE9H-5602	638.00	635.74	4668.13X	1486.00	1480.35	5519.27X	25.40	1.88	1.32	25.43

TABLE 1
Stain D, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
W47YWH-5602	2.40	0.14	1.06	5.70	0.05	0.20	24.90	1.38	0.97	24.90
W62GWX-5601	2.40	0.14	1.06	5.90	0.25	0.94	24.00	0.48	0.33	24.00
WBTR7W-5605	2.40	0.14	1.06	5.90	0.25	0.94	23.70	0.18	0.12	24.00
WCLHCB-5601	2.30	0.04	0.33	5.90	0.25	0.94	23.00	-0.52	-0.37	22.94
WDVPE4-5605	2.30	0.04	0.33	5.10	-0.55	-2.04	27.00	3.48	2.44	26.81
WPBCTB-5601	2.40	0.14	1.06	6.10	0.45	1.69	23.20	-0.32	-0.23	23.17
WW9ADR-5601	2.22	-0.04	-0.26	5.77	0.12	0.46	22.60	-0.92	-0.65	22.63
WX26UA-5601	2.30	0.04	0.33	5.90	0.25	0.94	23.00	-0.52	-0.37	22.94
X4MCZK-5602	2.30	0.04	0.33	5.70	0.05	0.20	24.00	0.48	0.33	23.80
X8MK6V-5601	2.20	-0.06	-0.41	5.00	-0.65	-2.41	26.00	2.48	1.74	26.10
XKCKVX-5601	2.38	0.12	0.91	5.84	0.19	0.72	24.10	0.58	0.41	24.05
XNB277-5601	2.50	0.24	1.80	6.60	0.95	3.55X	22.30	-1.22	-0.86	22.26
XVU4D9-5601	2.49	0.23	1.72	5.57	-0.08	-0.29	27.00	3.48	2.44	26.55
XVUZ37-5602	1.96	-0.30	-2.17	4.79	-0.86	-3.19X	24.00	0.48	0.33	24.15
Y3QE2D-5601	2.40	0.14	1.06	5.80	0.15	0.57	24.00	0.48	0.33	24.44
Y9V3UE-5601	2.40	0.14	1.06	5.88	0.23	0.87	24.08	0.56	0.39	24.09
Y9WVU8-5602	2.00	-0.26	-1.88	5.50	-0.15	-0.55	21.00	-2.52	-1.77	21.32
YAPQDA-5601	2.30	0.04	0.33	5.90	0.25	0.94	22.94	-0.58	-0.41	22.94
YBL7ML-5605	2.10	-0.16	-1.14	6.00	0.35	1.32	21.00	-2.52	-1.77	20.49
YCUEW7-5601	2.20	-0.06	-0.41	5.50	-0.15	-0.55	23.50	-0.02	-0.02	23.58
YCV7UD-5601	2.30	0.04	0.33	5.50	-0.15	-0.55	24.70	1.18	0.83	24.72

TABLE 1
Stain D, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
YFBXGZ- 5601	2.50	0.24	1.80	5.50	-0.15	-0.55	27.00	3.48	2.44	27.04
YGP763- 5605	2.30	0.04	0.33	5.60	-0.05	-0.17	24.20	0.68	0.48	24.25
YW2L6D- 5601	2.20	-0.06	-0.41	5.50	-0.15	-0.55	24.00	0.48	0.33	23.58
YYNHFP- 5601	2.40	0.14	1.06	5.80	0.15	0.57	24.40	0.88	0.62	24.44
Z2PNN4- 5601	2.50	0.24	1.80	5.50	-0.15	-0.55	27.00	3.48	2.44	27.04
Z6UC8Y- 5602	2.30	0.04	0.33	5.90	0.25	0.94	22.94	-0.58	-0.41	22.94
ZQR37B- 5601	2.30	0.04	0.33	5.30	-0.35	-1.29	25.70	2.18	1.53	25.72
Grand Mean	2.26			5.65			23.52			23.51
Standard Deviation	0.14			0.27			1.42			1.45
Participants Included in calculations	168			165			171			172
Participants excluded from calculations (indicated by X)	7			10			4			3

Stain D Preparation Angle: 22.9°

TABLE 1
Stain E

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
26PFXR-5601	3.21	-0.01	-0.06	5.92	-0.03	-0.13	32.83	0.07	0.04	32.84
2AFQ66-5601	3.00	-0.22	-1.58	6.00	0.05	0.23	30.00	-2.76	-1.51	30.00
2GJFML-5601	3.30	0.08	0.59	6.00	0.05	0.23	33.40	0.64	0.35	33.37
3BAUHC-5602	2.68	-0.54	-3.89X	5.04	-0.91	-4.18X	32.10	-0.66	-0.36	32.12
3BP7QG-5605	3.26	0.04	0.30	6.14	0.19	0.88	32.00	-0.76	-0.41	32.07
3LPL7L-5601	3.30	0.08	0.59	6.05	0.10	0.46	33.10	0.34	0.18	33.06
3QM69K-5601	3.20	-0.02	-0.14	5.80	-0.15	-0.68	33.50	0.74	0.40	33.49
3UJQX3-5601	3.00	-0.22	-1.58	5.75	-0.20	-0.91	31.40	-1.36	-0.74	31.45
444EC2-5601	3.20	-0.02	-0.14	6.20	0.25	1.15	31.07	-1.69	-0.92	31.07
4DVZDT-5601	3.34	0.12	0.88	6.09	0.14	0.65	33.20	0.44	0.24	33.26
4L3NYE-5601	3.15	-0.07	-0.50	5.35	-0.60	-2.75	36.00	3.24	1.77	36.07
4LN8VY-5602	3.31	0.09	0.62	6.20	0.25	1.13	32.24	-0.52	-0.28	32.24
4T7JAZ-5602	3.20	-0.02	-0.14	6.10	0.15	0.69	31.37	-1.39	-0.76	31.64
4T8C88-5602	6.00	2.78	20.10X	3.20	-2.75	-12.63X	32.20	-0.56	-0.31	X
62QEHE-5605	3.10	-0.12	-0.86	5.73	-0.22	-1.01	32.76	0.00	0.00	32.75
636PCD-5601	3.00	-0.22	-1.58	6.00	0.05	0.23	30.00	-2.76	-1.51	30.00
66RBAU-5602	3.10	-0.12	-0.86	6.00	0.05	0.23	31.00	-1.76	-0.96	31.11
6MAGEY-5601	3.30	0.08	0.59	6.00	0.05	0.23	33.40	0.64	0.35	33.37
6PFWRW-5605	3.10	-0.12	-0.86	6.00	0.05	0.23	31.11	-1.65	-0.90	31.11
6ZMEPU-5601	3.18	-0.04	-0.28	5.96	0.01	0.05	32.20	-0.56	-0.31	32.25
72QT6Y-5601	3.20	-0.02	-0.14	5.60	-0.35	-1.60	34.80	2.04	1.11	34.85

TABLE 1
Stain E, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
7BDRW4-5605	3.10	-0.12	-0.86	5.90	-0.05	-0.23	31.70	-1.06	-0.58	31.70
7Y39E9-5601	3.30	0.08	0.59	6.20	0.25	1.15	57.80	25.04	13.65 X	32.16
83G8FU-5602	3.00	-0.22	-1.58	6.00	0.05	0.23	30.00	-2.76	-1.51	30.00
83WFH4-5602	3.00	-0.22	-1.58	5.50	-0.45	-2.06	33.00	0.24	0.13	33.06
84AZBD-5602	3.40	0.18	1.31	6.40	0.45	2.07	32.00	-0.76	-0.41	32.09
8B9PRH-5602	3.30	0.08	0.59	6.40	0.45	2.07	31.00	-1.76	-0.96	31.04
8HQ7EZ-5601	3.20	-0.02	-0.14	6.00	0.05	0.23	32.20	-0.56	-0.31	32.23
8JLLNC-5605	3.10	-0.12	-0.86	5.80	-0.15	-0.68	32.30	-0.46	-0.25	32.31
8ZUFH7-5605	3.40	0.18	1.31	6.10	0.15	0.69	33.90	1.14	0.62	33.87
9DG3AJ-5605	3.40	0.18	1.31	6.00	0.05	0.23	35.00	2.24	1.22	34.52
9L4C67-5601	3.20	-0.02	-0.14	5.75	-0.20	-0.91	34.00	1.24	0.68	33.82
A3BGKW-5601	3.20	-0.02	-0.14	5.90	-0.05	-0.23	32.80	0.04	0.02	32.85
A4LJ9F-5602	3.30	0.08	0.59	6.70	0.75	3.45X	30.00	-2.76	-1.51	29.51
AAQFRF-5602	3.30	0.08	0.59	5.90	-0.05	-0.23	34.00	1.24	0.68	34.01
BFA33C-5601	3.20	-0.02	-0.14	5.90	-0.05	-0.23	32.84	0.08	0.04	32.85
BGMQ96-5601	3.20	-0.02	-0.14	5.80	-0.15	-0.68	33.50	0.74	0.40	33.49
BHLKJW-5601	3.24	0.02	0.15	6.14	0.19	0.88	31.85	-0.91	-0.50	31.85
BMT7AE-5601	3.31	0.09	0.66	6.26	0.31	1.43	31.92	-0.84	-0.46	31.92
BN2CH9-5601	3.12	-0.10	-0.71	5.79	-0.16	-0.73	33.00	0.24	0.13	32.61
BN43L7-5601	2.97	-0.25	-1.80	6.32	0.37	1.70	28.03	-4.73	-2.58	28.03
C2BDNQ-5602	3.30	0.08	0.59	5.70	-0.25	-1.14	35.00	2.24	1.22	35.38

TABLE 1
Stain E, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
C9RUFZ- 5605	3.25	0.03	0.22	6.09	0.14	0.65	32.25	-0.51	-0.28	32.25
CBWHT6- 5602	3.30	0.08	0.59	6.00	0.05	0.23	33.10	0.34	0.18	33.37
CFMY2P- 5601	3.40	0.18	1.31	6.90	0.95	4.37X	29.50	-3.26	-1.78	29.52
CGPLLA- 5601	3.00	-0.22	-1.58	6.00	0.05	0.23	30.00	-2.76	-1.51	30.00
CMN9CN- 5601	3.40	0.18	1.31	5.90	-0.05	-0.23	35.20	2.44	1.33	35.19
CNX8F6- 5601	3.00	-0.22	-1.58	5.10	-0.85	-3.90X	35.00	2.24	1.22	36.03
CPDGGH- 5601	3.40	0.18	1.31	5.80	-0.15	-0.68	35.89	3.13	1.71	35.89
CWWH4M- 5601	3.20	-0.02	-0.14	6.00	0.05	0.23	32.20	-0.56	-0.31	32.23
CZE3NG- 5601	3.30	0.08	0.59	6.00	0.05	0.23	33.40	0.64	0.35	33.37
D4R8TQ- 5605	3.10	-0.12	-0.86	6.00	0.05	0.23	31.10	-1.66	-0.91	31.11
D7WVCL- 5601	3.33	0.11	0.80	5.53	-0.42	-1.92	37.00	4.24	2.31	37.03
D8FCWV- 5601	3.30	0.08	0.59	6.00	0.05	0.23	33.30	0.54	0.29	33.37
DAJA4G- 5601	3.20	-0.02	-0.14	6.00	0.05	0.23	32.00	-0.76	-0.41	32.23
DG49VB- 5601	3.30	0.08	0.59	6.00	0.05	0.23	33.37	0.61	0.33	33.37
DHTJNP- 5605	3.00	-0.22	-1.58	5.60	-0.35	-1.60	32.40	-0.36	-0.20	32.39
DL9BFH- 5601	3.20	-0.02	-0.14	6.00	0.05	0.23	32.23	-0.53	-0.29	32.23
DT8ZWL- 5605	3.20	-0.02	-0.14	6.00	0.05	0.23	32.20	-0.56	-0.31	32.23
DTU6VN- 5601	3.00	-0.22	-1.58	6.00	0.05	0.23	30.00	-2.76	-1.51	30.00
EE8AYN- 5602	3.20	-0.02	-0.14	5.90	-0.05	-0.23	33.00	0.24	0.13	32.85
EGFLE6- 5602	3.27	0.05	0.37	6.01	0.06	0.28	32.96	0.20	0.11	32.96
EHQACJ- 5601	3.20	-0.02	-0.14	6.00	0.05	0.23	32.20	-0.56	-0.31	32.23

TABLE 1
Stain E, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
EMLZKF-5601	3.00	-0.22	-1.58	5.80	-0.15	-0.68	31.10	-1.66	-0.91	31.15
ENV6VJ-5602	3.00	-0.22	-1.58	5.80	-0.15	-0.68	31.00	-1.76	-0.96	31.15
EVEBUB-5601	3.30	0.08	0.59	6.20	0.25	1.15	32.20	-0.56	-0.31	32.16
EXNF9Y-5602	2.89	-0.33	-2.38	5.27	-0.68	-3.12X	33.30	0.54	0.29	33.26
FBQ7MC-5605	3.20	-0.02	-0.14	6.00	0.05	0.23	32.00	-0.76	-0.41	32.23
FD7VU3-5601	3.00	-0.22	-1.58	6.00	0.05	0.23	30.00	-2.76	-1.51	30.00
FMJTT8-5601	3.20	-0.02	-0.14	5.60	-0.35	-1.60	34.80	2.04	1.11	34.85
GAPV6E-5601	3.20	-0.02	-0.14	6.00	0.05	0.23	32.23	-0.53	-0.29	32.23
GEGZXH-5601	3.30	0.08	0.59	6.10	0.15	0.69	33.00	0.24	0.13	32.75
GJR93U-5601	3.30	0.08	0.59	6.00	0.05	0.23	33.36	0.60	0.33	33.37
GK7HEF-5601	3.00	-0.22	-1.58	5.75	-0.20	-0.91	31.40	-1.36	-0.74	31.45
GMC44Z-5605	3.40	0.18	1.31	6.00	0.05	0.23	37.00	4.24	2.31	34.52
GW4G7L-5602	3.20	-0.02	-0.14	5.60	-0.35	-1.60	35.00	2.24	1.22	34.85
H2PTF9-5602	3.30	0.08	0.59	6.10	0.15	0.69	33.00	0.24	0.13	32.75
HBWDWH-5605	3.20	-0.02	-0.14	5.20	-0.75	-3.44X	38.00	5.24	2.86	37.98
HG8L7Z-5602	3.22	0.00	0.01	6.05	0.10	0.46	32.20	-0.56	-0.31	32.16
HXRAEA-5601	3.10	-0.12	-0.86	5.90	-0.05	-0.23	31.70	-1.06	-0.58	31.70
HZTHED-5605	3.20	-0.02	-0.14	5.70	-0.25	-1.14	34.00	1.24	0.68	34.15
JB8YLB-5602	3.00	-0.22	-1.58	6.00	0.05	0.23	30.00	-2.76	-1.51	30.00
JBUZV9-5605	3.30	0.08	0.59	6.00	0.05	0.23	33.37	0.61	0.33	33.37
JMLRFC-5601	3.20	-0.02	-0.14	6.20	0.25	1.15	31.10	-1.66	-0.91	31.07

TABLE 1
Stain E, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
JTRK9L-5605	3.00	-0.22	-1.58	6.00	0.05	0.23	30.00	-2.76	-1.51	30.00
JYG8WZ-5605	3.20	-0.02	-0.14	5.90	-0.05	-0.23	32.80	0.04	0.02	32.85
K648ZJ-5602	3.30	0.08	0.59	6.10	0.15	0.69	32.00	-0.76	-0.41	32.75
KAHQFF-5601	3.00	-0.22	-1.58	5.50	-0.45	-2.06	33.00	0.24	0.13	33.06
KEDGNC-5601	3.37	0.15	1.09	6.16	0.21	0.97	33.20	0.44	0.24	33.17
KENLTN-5601	3.20	-0.02	-0.14	6.10	0.15	0.69	31.95	-0.81	-0.44	31.64
KMKFT8-5601	3.30	0.08	0.59	6.00	0.05	0.23	33.40	0.64	0.35	33.37
KRDDNQ-5601	3.30	0.08	0.59	6.00	0.05	0.23	33.36	0.60	0.33	33.37
KRTQXV-5601	3.26	0.04	0.30	5.36	-0.59	-2.71	37.46	4.70	2.56	37.46
KWA6TG-5602	3.40	0.18	1.31	6.10	0.15	0.69	34.00	1.24	0.68	33.87
L6HYMA-5601	3.00	-0.22	-1.58	6.00	0.05	0.23	30.00	-2.76	-1.51	30.00
LBMU7A-5601	3.30	0.08	0.59	5.60	-0.35	-1.60	36.10	3.34	1.82	36.11
LHLGZU-5602	3.33	0.11	0.80	5.67	-0.28	-1.28	36.00	3.24	1.77	35.97
LJF6G6-5602	3.20	-0.02	-0.14	6.00	0.05	0.23	32.20	-0.56	-0.31	32.23
LKTHJF-5601	3.30	0.08	0.59	6.00	0.05	0.23	33.40	0.64	0.35	33.37
LQ2ZH9-5601	3.20	-0.02	-0.14	5.90	-0.05	-0.23	32.80	0.04	0.02	32.85
LUXPYF-5601	3.00	-0.22	-1.58	6.00	0.05	0.23	30.00	-2.76	-1.51	30.00
M7KBJ2-5601	3.30	0.08	0.59	6.03	0.08	0.37	33.20	0.44	0.24	33.18
MBF3UJ-5602	3.30	0.08	0.59	5.90	-0.05	-0.23	34.00	1.24	0.68	34.01
MHJUEA-5602	3.00	-0.22	-1.58	3.80	-2.15	-9.87X	52.00	19.24	10.49 X	52.14 X
N2PNJL-5601	3.10	-0.12	-0.86	6.00	0.05	0.23	31.10	-1.66	-0.91	31.11

TABLE 1
Stain E, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
NBDHVH-5602	3.00	-0.22	-1.58	6.00	0.05	0.23	30.00	-2.76	-1.51	30.00
NMD47M-5601	3.37	0.15	1.09	6.03	0.08	0.37	34.06	1.30	0.71	33.98
NUBVEG-5601	3.19	-0.03	-0.21	6.02	0.07	0.33	32.00	-0.76	-0.41	32.00
P8TARF-5601	3.00	-0.22	-1.58	5.50	-0.45	-2.06	33.10	0.34	0.18	33.06
PBRJZW-5602	3.30	0.08	0.59	6.00	0.05	0.23	33.00	0.24	0.13	33.37
PFQXML-5601	3.30	0.08	0.59	6.00	0.05	0.23	33.40	0.64	0.35	33.37
PWBQA4-5601	3.40	0.18	1.31	6.20	0.25	1.15	33.00	0.24	0.13	33.26
Q4LCR7-5602	3.10	-0.12	-0.86	6.10	0.15	0.69	30.50	-2.26	-1.23	30.54
QE8BQP-5602	2.49	-0.73	-5.27X	4.75	-1.20	-5.51X	32.00	-0.76	-0.41	31.62
QKV29D-5601	3.50	0.28	2.03	6.27	0.32	1.47	34.00	1.24	0.68	33.93
QKWT7L-5601	3.40	0.18	1.31	5.40	-0.55	-2.52	39.02	6.26	3.41 X	39.02 X
QL7Z8T-5602	3.30	0.08	0.59	6.10	0.15	0.69	33.00	0.24	0.13	32.75
QRVD9G-5601	3.30	0.08	0.59	6.10	0.15	0.69	32.75	-0.01	-0.01	32.75
R46DFU-5601	33.00	29.78	215.24X	61.00	55.05	252.85X	33.00	0.24	0.13	32.75
RH4GKK-5602	2.49	-0.73	-5.27X	4.55	-1.40	-6.43X	33.00	0.24	0.13	33.18
RP896C-5602	3.00	-0.22	-1.58	6.00	0.05	0.23	30.00	-2.76	-1.51	30.00
RXJHEQ-5602	3.30	0.08	0.59	5.70	-0.25	-1.14	35.00	2.24	1.22	35.38
RYWRPC-5602	3.40	0.18	1.31	6.20	0.25	1.15	33.60	0.84	0.46	33.26
RZ7YT6-5601	3.37	0.15	1.09	6.13	0.18	0.83	33.40	0.64	0.35	33.35
T39EGL-5601	3.30	0.08	0.59	5.80	-0.15	-0.68	34.70	1.94	1.06	34.68
T9W2DD-5605	3.20	-0.02	-0.14	6.10	0.15	0.69	31.47	-1.29	-0.70	31.64

TABLE 1
Stain E, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
TAN8LQ-5605	2.95	-0.27	-1.94	5.54	-0.41	-1.88	32.17	-0.59	-0.32	32.17
TCX3EA-5602	3.40	0.18	1.31	6.40	0.45	2.07	32.08	-0.68	-0.37	32.09
TH2UY2-5601	3.50	0.28	2.03	6.00	0.05	0.23	30.00	-2.76	-1.51	35.69
TJEH3D-5602	3.40	0.18	1.31	6.10	0.15	0.69	34.00	1.24	0.68	33.87
TJFDRB-5602	3.28	0.06	0.44	6.90	0.95	4.37X	28.40	-4.36	-2.38	28.38
TLL23U-5601	3.30	0.08	0.59	5.90	-0.05	-0.23	34.00	1.24	0.68	34.01
TR8W4X-5601	3.10	-0.12	-0.86	5.90	-0.05	-0.23	32.00	-0.76	-0.41	31.70
TZZ8EU-5601	3.40	0.18	1.31	6.00	0.05	0.23	35.00	2.24	1.22	34.52
U28QV3-5605	3.50	0.28	2.03	6.00	0.05	0.23	36.00	3.24	1.77	35.69
U3KDDG-5601	3.30	0.08	0.59	5.70	-0.25	-1.14	35.30	2.54	1.38	35.38
UBBZZ7-5605	3.20	-0.02	-0.14	6.00	0.05	0.23	32.20	-0.56	-0.31	32.23
UJANWC-5601	2.94	-0.28	-2.02	5.91	-0.04	-0.18	29.80	-2.96	-1.61	29.83
UUTZCV-5602	3.06	-0.16	-1.15	5.94	-0.01	-0.04	31.00	-1.76	-0.96	31.01
UV4ZBB-5601	3.25	0.03	0.22	6.10	0.15	0.69	32.19	-0.57	-0.31	32.19
VCQFA2-5601	3.10	-0.12	-0.86	5.70	-0.25	-1.14	33.00	0.24	0.13	32.95
VLVR4A-5602	3.10	-0.12	-0.86	6.10	0.15	0.69	31.00	-1.76	-0.96	30.54
VMQ6TN-5602	3.40	0.18	1.31	5.80	-0.15	-0.68	36.00	3.24	1.77	35.89
VTRGPK-5602	3.20	-0.02	-0.14	6.10	0.15	0.69	32.00	-0.76	-0.41	31.64
VU4BBM-5601	3.40	0.18	1.31	6.80	0.85	3.91X	30.00	-2.76	-1.51	30.00
W3XQNX-5601	3.30	0.08	0.59	6.60	0.65	2.99	30.00	-2.76	-1.51	30.00
W3ZE9H-5602	1128.00	1124.78	8129.11X	1826.00	1820.05	8359.43X	38.20	5.44	2.97	38.15

TABLE 1
Stain E, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
W47YWH- 5602	3.20	-0.02	-0.14	5.90	-0.05	-0.23	32.80	0.04	0.02	32.85
W62GWX- 5601	3.40	0.18	1.31	6.10	0.15	0.69	33.80	1.04	0.57	33.87
WBTR7W- 5605	3.20	-0.02	-0.14	5.90	-0.05	-0.23	32.60	-0.16	-0.09	32.85
WCLHCB- 5601	3.20	-0.02	-0.14	6.00	0.05	0.23	32.00	-0.76	-0.41	32.23
WDVPE4- 5605	3.20	-0.02	-0.14	5.40	-0.55	-2.52	36.00	3.24	1.77	36.34
WPBCTB- 5601	3.40	0.18	1.31	6.10	0.15	0.69	33.90	1.14	0.62	33.87
WW9ADR- 5601	3.18	-0.04	-0.28	5.99	0.04	0.19	32.10	-0.66	-0.36	32.07
WX26UA- 5601	3.30	0.08	0.59	6.00	0.05	0.23	33.00	0.24	0.13	33.37
X4MCZK- 5602	3.30	0.08	0.59	6.00	0.05	0.23	33.00	0.24	0.13	33.37
X8MK6V- 5601	3.00	-0.22	-1.58	5.40	-0.55	-2.52	33.70	0.94	0.51	33.75
XKCKVX- 5601	3.25	0.03	0.22	6.19	0.24	1.11	31.70	-1.06	-0.58	31.67
XNB277- 5601	3.40	0.18	1.31	6.40	0.45	2.07	32.10	-0.66	-0.36	32.09
XVU4D9- 5601	3.36	0.14	1.02	6.05	0.10	0.46	34.00	1.24	0.68	33.74
XVUZ37- 5602	3.02	-0.20	-1.44	5.38	-0.57	-2.61	34.00	1.24	0.68	34.15
Y3QE2D- 5601	3.40	0.18	1.31	6.00	0.05	0.23	35.00	2.24	1.22	34.52
Y9V3UE- 5601	3.31	0.09	0.66	6.08	0.13	0.60	32.98	0.22	0.12	32.98
Y9WVU8- 5602	3.00	-0.22	-1.58	6.00	0.05	0.23	30.00	-2.76	-1.51	30.00
YAPQDA- 5601	3.30	0.08	0.59	6.00	0.05	0.23	33.36	0.60	0.33	33.37
YBL7ML- 5605	3.10	-0.12	-0.86	6.00	0.05	0.23	31.00	-1.76	-0.96	31.11
YCUEW7- 5601	3.20	-0.02	-0.14	6.00	0.05	0.23	32.20	-0.56	-0.31	32.23
YCV7UD- 5601	3.20	-0.02	-0.14	5.50	-0.45	-2.06	35.60	2.84	1.55	35.58

TABLE 1
Stain E, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
YFBXGZ- 5601	3.00	-0.22	-1.58	6.00	0.05	0.23	30.00	-2.76	-1.51	30.00
YGP763- 5605	3.08	-0.14	-1.00	5.78	-0.17	-0.78	32.20	-0.56	-0.31	32.20
YW2L6D- 5601	3.40	0.18	1.31	5.80	-0.15	-0.68	36.00	3.24	1.77	35.89
YYNHFP- 5601	3.30	0.08	0.59	6.00	0.05	0.23	33.40	0.64	0.35	33.37
Z2PNN4- 5601	3.38	0.16	1.16	6.00	0.05	0.23	34.00	1.24	0.68	34.29
Z6UC8Y- 5602	3.40	0.18	1.31	6.20	0.25	1.15	33.26	0.50	0.27	33.26
ZQR37B- 5601	3.30	0.08	0.59	5.60	-0.35	-1.60	36.10	3.34	1.82	36.11
Grand Mean	3.22			5.95			32.76			32.78
Standard Deviation	0.14			0.22			1.83			1.82
Participants Included in calculations	169			161			172			172
Participants excluded from calculations (indicated by X)	6			14			3			3

Stain E Preparation Angle: 32.0°

Pattern Description, Part 1

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

TABLE 2: Mechanism of Deposition

Item 2

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
26PFXR-5601	Cast-off Pattern	6PFWRW-5605	Cast-off Pattern
2AFQ66-5601	Cast-off Pattern	6ZMEPU-5601	Cast-off Pattern
2GJPML-5601	Cast-off Pattern	72QT6Y-5601	Cast-off Pattern
3BAUHC-5602	Cast-off Pattern	7BDRW4-5605	Cast-off Pattern
3BP7QG-5605	Cast-off Pattern	7Y39E9-5601	Projected Pattern
3LPL7L-5601	Cast-off Pattern	83G8FU-5602	Cast-off Pattern
3QM69K-5601	Cast-off Pattern	83WFH4-5602	Cessation Pattern
3UJQX3-5601	Cast-off Pattern	84AZBD-5602	Cast-off Pattern
444EC2-5601	Cast-off Pattern	8B9PRH-5602	Cast-off Pattern
4DVZDT-5601	Cast-off Pattern	8HQ7EZ-5601	Cast-off Pattern
4L3NYE-5601	Cast-off Pattern	8JLLNC-5605	Cast-off Pattern
4LN8VY-5602	Cast-off Pattern	8ZUFH7-5605	Cast-off Pattern
4T7JAZ-5602	Cast-off Pattern	9DG3AJ-5605	Cast-off Pattern
4T8C88-5602	Cast-off Pattern	9L4C67-5601	Cast-off Pattern
4WL9BN-5602	Cessation Pattern	A3BGKW-5601	Cast-off Pattern
62QEHE-5605	Cast-off Pattern	A4LJ9F-5602	Cast-off Pattern
636PCD-5601	Cast-off Pattern	AAQFRF-5602	Cast-off Pattern
66RBAU-5602	Cast-off Pattern	BFA33C-5601	Cast-off Pattern
6MAGEY-5601	Cast-off Pattern	BGMQ96-5601	Cast-off Pattern

TABLE 2: Mechanism of Deposition

Item 2, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
BHLKJW-5601	Cast-off Pattern	DTU6VN-5601	Cast-off Pattern
BMT7AE-5601	Cast-off Pattern	EE8AYN-5602	Cast-off Pattern
BN2CH9-5601	Cast-off Pattern	EGFLE6-5602	Impact Pattern
BN43L7-5601	Cast-off Pattern	EHQACJ-5601	Cast-off Pattern
C2BDNQ-5602	Cast-off Pattern	EMLZKF-5601	Cast-off Pattern
C9RUFZ-5605	Cast-off Pattern	ENV6VJ-5602	Cast-off Pattern
CBWHT6-5602	Cast-off Pattern	EVEBUB-5601	Cast-off Pattern
CFMY2P-5601	Cast-off Pattern	EXNF9Y-5602	Projected Pattern
CGPLLA-5601	Cast-off Pattern	FBQ7MC-5605	Cast-off Pattern
CMN9CN-5601	Cast-off Pattern	FD7VU3-5601	Cast-off Pattern
CNX8F6-5601	Cast-off Pattern	FMJTT8-5601	Cast-off Pattern
CPDGGH-5601	Cast-off Pattern	FZJU4M-5605	Cast-off Pattern
CWWH4M-5601	Cast-off Pattern	GAPV6E-5601	Cast-off Pattern
CZE3NG-5601	Cast-off Pattern	GEGZXH-5601	Cast-off Pattern
D4R8TQ-5605	Cast-off Pattern	GJR93U-5601	Cast-off Pattern
D7WVCL-5601	Cast-off Pattern	GK7HEF-5601	Cast-off Pattern
D8FCWV-5601	Cast-off Pattern	GMC44Z-5605	Cast-off Pattern
DAJA4G-5601	Cast-off Pattern	GV3TFV-5605	Cast-off Pattern
DG49VB-5601	Cast-off Pattern	GW4G7L-5602	Cast-off Pattern
DHTJNP-5605	Cast-off Pattern	H2PTF9-5602	Cast-off Pattern
DL9BFH-5601	Cast-off Pattern	HBWDWH-5605	Cast-off Pattern
DT8ZWL-5605	Cast-off Pattern	HG8L7Z-5602	Cast-off Pattern

TABLE 2: Mechanism of Deposition

Item 2, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
HXRAEA-5601	Cast-off Pattern	M7KBJ2-5601	Cast-off Pattern
HZTHED-5605	Cast-off Pattern	MBF3UJ-5602	Cast-off Pattern
JB8YLB-5602	Cast-off Pattern	MHJUEA-5602	Cast-off Pattern
JBUZV9-5605	Cast-off Pattern	N2PNJL-5601	Cast-off Pattern
JMLRFC-5601	Cast-off Pattern	NBDHVH-5602	Cast-off Pattern
JTRK9L-5605	Cast-off Pattern	NJPX4H-5601	Cast-off Pattern
JYG8WZ-5605	Cast-off Pattern	NMCB9F-5605	Cast-off Pattern
K648ZJ-5602	Cessation Pattern	NMD47M-5601	Cast-off Pattern
KAHQFF-5601	Cast-off Pattern	NUBVEG-5601	Cast-off Pattern
KEDGNC-5601	Cast-off Pattern	P8TARF-5601	Cast-off Pattern
KENLTN-5601	Cast-off Pattern	PBRJZW-5602	Cast-off Pattern
KMKFT8-5601	Cast-off Pattern	PFQXML-5601	Cast-off Pattern
KRDDNQ-5601	Cast-off Pattern	PWBQA4-5601	Cast-off Pattern
KRTQXV-5601	Cast-off Pattern	Q4LCR7-5602	Cast-off Pattern
KWA6TG-5602	Cast-off Pattern	QE8BQP-5602	Cast-off Pattern
L6HYMA-5601	Cast-off Pattern	QKV29D-5601	Cast-off Pattern
LBMU7A-5601	Cast-off Pattern	QKWT7L-5601	Cast-off Pattern
LHLGZU-5602	Cast-off Pattern	QL7Z8T-5602	Cast-off Pattern
LJF6G6-5602	Cast-off Pattern	QRVD9G-5601	Cast-off Pattern
LKTHJF-5601	Cast-off Pattern	R46DFU-5601	Cast-off Pattern
LQ2ZH9-5601	Cast-off Pattern	RH4GKK-5602	Cast-off Pattern
LUXPYF-5601	Cast-off Pattern	RP896C-5602	Cast-off Pattern

TABLE 2: Mechanism of Deposition

Item 2, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
RXJHEQ-5602	Cast-off Pattern	VTRGPK-5602	Cast-off Pattern
RYWRPC-5602	Cast-off Pattern	VU4BBM-5601	Cast-off Pattern
RZ7YT6-5601	Cast-off Pattern	W3XQNX-5601	Cast-off Pattern
T39EGL-5601	Cast-off Pattern	W3ZE9H-5602	Cast-off Pattern
T9W2DD-5605	Cast-off Pattern	W47YWH-5602	Cast-off Pattern
TAN8LQ-5605	Cast-off Pattern	W62GWX-5601	Cast-off Pattern
TCX3EA-5602	Cast-off Pattern	WBTR7W-5605	Cast-off Pattern
TH2UY2-5601	Cast-off Pattern	WCLHCB-5601	Cast-off Pattern
TJEH3D-5602	Cast-off Pattern	WDVPE4-5605	Cast-off Pattern
TJFDRB-5602	Cast-off Pattern	WPBCTB-5601	Cast-off Pattern
TLL23U-5601	Cast-off Pattern	WW9ADR-5601	Cast-off Pattern
TR8W4X-5601	Cast-off Pattern	WX26UA-5601	Projected Pattern
TZZ8EU-5601	Cast-off Pattern	X4MCZK-5602	Cast-off Pattern
U28QV3-5605	Projected Pattern	X8MK6V-5601	Cast-off Pattern
U3KDDG-5601	Cast-off Pattern	XKCKVX-5601	Cast-off Pattern
UBBZZ7-5605	Cast-off Pattern	XNB277-5601	Cast-off Pattern
UJANWC-5601	Cast-off Pattern	XVU4D9-5601	Cast-off Pattern
UUTZCV-5602	Cast-off Pattern	XVUZ37-5602	Cast-off Pattern
UV4ZBB-5601	Cast-off Pattern	Y3QE2D-5601	Cast-off Pattern
VCQFA2-5601	Cast-off Pattern	Y9V3UE-5601	Cast-off Pattern
VLVR4A-5602	Cessation Pattern	Y9WVU8-5602	Cast-off Pattern
VMQ6TN-5602	Cast-off Pattern	YAPQDA-5601	Cast-off Pattern

TABLE 2: Mechanism of Deposition

Item 2, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
YBL7ML-5605	Projected Pattern		
YCUEW7-5601	Cast-off Pattern		
YCV7UD-5601	Cast-off Pattern		
YFBXGZ-5601	Cast-off Pattern		
YGP763-5605	Cast-off Pattern		
YHXHHX-5601	Cast-off Pattern		
YW2L6D-5601	Cast-off Pattern		
YYNHFP-5601	Cast-off Pattern		
Z2PNN4-5601	Cast-off Pattern		
Z6UC8Y-5602	Cast-off Pattern		
ZQQA84-5605	Cast-off Pattern		
ZQR37B-5601	Cast-off Pattern		

**Pattern Types reported for Item 2
(Total Participants Responding = 182)**

<u>Pattern Type</u>	<u>Percent Reported</u>
Cast-off Pattern	172 (94.5%)
Projected Pattern	5 (2.7%)
Cessation Pattern	4 (2.2%)
Impact Pattern	1 (0.5%)

TABLE 2: Mechanism of Deposition

Item 3

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
26PFXR-5601	Expiration Pattern	7BDRW4-5605	Impact Pattern
2AFQ66-5601	Impact Pattern	7Y39E9-5601	Impact Pattern
2GJPML-5601	Impact Pattern	83G8FU-5602	Impact Pattern
3BAUHC-5602	Expiration Pattern	83WFH4-5602	Impact Pattern
3BP7QG-5605	Impact Pattern	84AZBD-5602	Expiration Pattern
3LPL7L-5601	Impact Pattern	8B9PRH-5602	Impact Pattern
3QM69K-5601	Impact Pattern	8HQ7EZ-5601	Impact Pattern
3UJQX3-5601	Impact Pattern	8JLLNC-5605	Impact Pattern
444EC2-5601	Impact Pattern	8ZUFH7-5605	Impact Pattern
4DVZDT-5601	Impact Pattern	9DG3AJ-5605	Impact Pattern
4L3NYE-5601	Impact Pattern	9L4C67-5601	Impact Pattern
4LN8VY-5602	Impact Pattern	A3BGKW-5601	Expiration Pattern
4T7JAZ-5602	Impact Pattern	A4LJ9F-5602	Impact Pattern
4T8C88-5602	Impact Pattern	AAQFRF-5602	Impact Pattern
4WL9BN-5602	Projected Pattern	BFA33C-5601	Impact Pattern
62QEHE-5605	Impact Pattern	BGMQ96-5601	Impact Pattern
636PCD-5601	Impact Pattern	BHLKJW-5601	Impact Pattern
66RBAU-5602	Impact Pattern	BMT7AE-5601	Impact Pattern
6MAGEY-5601	Impact Pattern	BN2CH9-5601	Impact Pattern
6PFWRW-5605	Impact Pattern	BN43L7-5601	Expiration Pattern
6ZMEPU-5601	Impact Pattern	C2BDNQ-5602	Expiration Pattern
72QT6Y-5601	Impact Pattern	C9RUFZ-5605	Impact Pattern

TABLE 2: Mechanism of Deposition

Item 3, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
CBWHT6-5602	Impact Pattern	EVEBUB-5601	Impact Pattern
CFMY2P-5601	Impact Pattern	EXNF9Y-5602	Expiration Pattern
CGPLLA-5601	Impact Pattern	FBQ7MC-5605	Impact Pattern
CMN9CN-5601	Impact Pattern	FD7VU3-5601	Impact Pattern
CNX8F6-5601	Impact Pattern	FMJTT8-5601	Impact Pattern
CPDGGH-5601	Expiration Pattern	FZJU4M-5605	Impact Pattern
CWWH4M-5601	Impact Pattern	GAPV6E-5601	Impact Pattern
CZE3NG-5601	Impact Pattern	GEGZXH-5601	Impact Pattern
D4R8TQ-5605	Impact Pattern	GJR93U-5601	Impact Pattern
D7WVCL-5601	Impact Pattern	GK7HEF-5601	Impact Pattern
D8FCWV-5601	Impact Pattern	GMC44Z-5605	Impact Pattern
DAJA4G-5601	Impact Pattern	GV3TFV-5605	Impact Pattern
DG49VB-5601	Impact Pattern	GW4G7L-5602	Impact Pattern
DHTJNP-5605	Impact Pattern	H2PTF9-5602	Impact Pattern
DL9BFH-5601	Expiration Pattern	HBWDWH-5605	Impact Pattern
DT8ZWL-5605	Impact Pattern	HG8L7Z-5602	Impact Pattern
DTU6VN-5601	Impact Pattern	HXRAEA-5601	Impact Pattern
EE8AYN-5602	Impact Pattern	HZTHED-5605	Impact Pattern
EGFLE6-5602	Impact Pattern	JB8YLB-5602	Projected Pattern
EHQACJ-5601	Impact Pattern	JBUZV9-5605	Impact Pattern
EMLZKF-5601	Impact Pattern	JMLRFC-5601	Expiration Pattern
ENV6VJ-5602	Impact Pattern	JTRK9L-5605	Impact Pattern

TABLE 2: Mechanism of Deposition

Item 3, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
JYG8WZ-5605	Impact Pattern	NMCB9F-5605	Impact Pattern
K648ZJ-5602	Expiration Pattern	NMD47M-5601	Impact Pattern
KAHQFF-5601	Impact Pattern	NUBVEG-5601	Impact Pattern
KEDGNC-5601	Impact Pattern	P8TARF-5601	Impact Pattern
KENLTN-5601	Impact Pattern	PBRJZW-5602	Impact Pattern
KMKFT8-5601	Impact Pattern	PFQXML-5601	Impact Pattern
KRDDNQ-5601	Impact Pattern	PWBQA4-5601	Impact Pattern
KRTQXV-5601	Impact Pattern	Q4LCR7-5602	Impact Pattern
KWA6TG-5602	Impact Pattern	QE8BQP-5602	Impact Pattern
L6HYMA-5601	Impact Pattern	QKV29D-5601	Expiration Pattern
LBMU7A-5601	Impact Pattern	QKWT7L-5601	Impact Pattern
LHLGZU-5602	Expiration Pattern	QL7Z8T-5602	Impact Pattern
LJF6G6-5602	Impact Pattern	QRVD9G-5601	Impact Pattern
LKTHJF-5601	Impact Pattern	R46DFU-5601	Impact Pattern
LQ2ZH9-5601	Impact Pattern	RH4GKK-5602	Impact Pattern
LUXPYF-5601	Impact Pattern	RP896C-5602	Impact Pattern
M7KBJ2-5601	Impact Pattern	RXJHEQ-5602	Expiration Pattern
MBF3UJ-5602	Impact Pattern	RYWRPC-5602	Projected Pattern
MHJUEA-5602	Expiration Pattern	RZ7YT6-5601	Impact Pattern
N2PNJL-5601	Impact Pattern	T39EGL-5601	Impact Pattern
NBDHVH-5602	Impact Pattern	T9W2DD-5605	Impact Pattern
NJPX4H-5601	Impact Pattern	TAN8LQ-5605	Impact Pattern

TABLE 2: Mechanism of Deposition

Item 3, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
TCX3EA-5602	Expiration Pattern	WBTR7W-5605	Impact Pattern
TH2UY2-5601	Impact Pattern	WCLHCB-5601	Expiration Pattern
TJEH3D-5602	Impact Pattern	WDVPE4-5605	Impact Pattern
TJFDRB-5602	Impact Pattern	WPBCTB-5601	Impact Pattern
TLL23U-5601	Impact Pattern	WW9ADR-5601	Impact Pattern
TR8W4X-5601	Impact Pattern	WX26UA-5601	Impact Pattern
TZZ8EU-5601	Impact Pattern	X4MCZK-5602	Expiration Pattern
U28QV3-5605	Impact Pattern	X8MK6V-5601	Impact Pattern
U3KDDG-5601	Impact Pattern	XKCKVX-5601	Impact Pattern
UBBZZ7-5605	Impact Pattern	XNB277-5601	Impact Pattern
UJANWC-5601	Impact Pattern	XVU4D9-5601	Impact Pattern
UUTZCV-5602	Impact Pattern	XVUZ37-5602	Impact Pattern
UV4ZBB-5601	Impact Pattern	Y3QE2D-5601	Impact Pattern
VCQFA2-5601	Impact Pattern	Y9V3UE-5601	Expiration Pattern
VLVR4A-5602	Impact Pattern	Y9WVU8-5602	Impact Pattern
VMQ6TN-5602	Expiration Pattern	YAPQDA-5601	Projected Pattern
VTRGPK-5602	Impact Pattern	YBL7ML-5605	Expiration Pattern
VU4BBM-5601	Impact Pattern	YCUEW7-5601	Impact Pattern
W3XQNX-5601	Impact Pattern	YCV7UD-5601	Impact Pattern
W3ZE9H-5602	Impact Pattern	YFBXGZ-5601	Impact Pattern
W47YWH-5602	Expiration Pattern	YGP763-5605	Impact Pattern
W62GWX-5601	Impact Pattern	YHXHHX-5601	Impact Pattern

TABLE 2: Mechanism of Deposition

Item 3, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
YW2L6D-5601	Expiration Pattern		
YYNHFP-5601	Impact Pattern		
Z2PNN4-5601	Impact Pattern		
Z6UC8Y-5602	Impact Pattern		
ZQQA84-5605	Impact Pattern		
ZQR37B-5601	Impact Pattern		

**Pattern Types reported for Item 3
(Total Participants Responding = 182)**

<u>Pattern Type</u>	<u>Percent Reported</u>
Impact Pattern	155 (85.2%)
Expiration Pattern	23 (12.6%)
Projected Pattern	4 (2.2%)

TABLE 2: Mechanism of Deposition

Item 4

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
26PFXR-5601	Drip Stain	7BDRW4-5605	Wipe
2AFQ66-5601	Wipe	7Y39E9-5601	Wipe
2GJPML-5601	Wipe	83G8FU-5602	Wipe
3BAUHC-5602	Wipe	83WFH4-5602	Wipe
3BP7QG-5605	Wipe	84AZBD-5602	Wipe
3LPL7L-5601	Wipe	8B9PRH-5602	Wipe
3QM69K-5601	Wipe	8HQ7EZ-5601	Drip Stain
3UJQX3-5601	Drip Stain	8JLLNC-5605	Wipe
444EC2-5601	Swipe	8ZUFH7-5605	Wipe
4DVZDT-5601	Wipe	9DG3AJ-5605	Wipe
4L3NYE-5601	Wipe	9L4C67-5601	Wipe
4LN8VY-5602	Wipe	A3BGKW-5601	Wipe
4T7JAZ-5602	Wipe	A4LJ9F-5602	Wipe
4T8C88-5602	Wipe	AAQFRF-5602	Wipe
4WL9BN-5602	Wipe	BFA33C-5601	Wipe
62QEHE-5605	Wipe	BGMQ96-5601	Wipe
636PCD-5601	Wipe	BHLKJW-5601	Wipe
66RBAU-5602	Wipe	BMT7AE-5601	Wipe
6MAGEY-5601	Wipe	BN2CH9-5601	Wipe
6PFWRW-5605	Wipe	BN43L7-5601	Wipe
6ZMEPU-5601	Wipe	C2BDNQ-5602	Wipe
72QT6Y-5601	Wipe	C9RUFZ-5605	Wipe

TABLE 2: Mechanism of Deposition

Item 4, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
CBWHT6-5602	Wipe	EVEBUB-5601	Wipe
CFMY2P-5601	Wipe	EXNF9Y-5602	Wipe
CGPLLA-5601	Wipe	FBQ7MC-5605	Wipe
CMN9CN-5601	Wipe	FD7VU3-5601	Wipe
CNX8F6-5601	Wipe	FMJTT8-5601	Wipe
CPDGGH-5601	Wipe	FZJU4M-5605	Wipe
CWWH4M-5601	Wipe	GAPV6E-5601	Wipe
CZE3NG-5601	Wipe	GEGZXH-5601	Drip Stain
D4R8TQ-5605	Wipe	GJR93U-5601	Wipe
D7WVCL-5601	Wipe	GK7HEF-5601	Wipe
D8FCWV-5601	Wipe	GMC44Z-5605	Wipe
DAJA4G-5601	Wipe	GV3TFV-5605	Wipe
DG49VB-5601	Wipe	GW4G7L-5602	Wipe
DHTJNP-5605	Drip Stain	H2PTF9-5602	Wipe
DL9BFH-5601	Wipe	HBWDWH-5605	Wipe
DT8ZWL-5605	Wipe	HG8L7Z-5602	Wipe
DTU6VN-5601	Wipe	HXRAEA-5601	Wipe
EE8AYN-5602	Wipe	HZTHED-5605	Wipe
EGFLE6-5602	Drip Stain	JB8YLB-5602	Wipe
EHQACJ-5601	Wipe	JBUZV9-5605	Wipe
EMLZKF-5601	Wipe	JMLRFC-5601	Wipe
ENV6VJ-5602	Wipe	JTRK9L-5605	Wipe

TABLE 2: Mechanism of Deposition

Item 4, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
JYG8WZ-5605	Wipe	NMCB9F-5605	Wipe
K648ZJ-5602	Wipe	NMD47M-5601	Wipe
KAHQFF-5601	Drip Stain	NUBVEG-5601	Wipe
KEDGNC-5601	Wipe	P8TARF-5601	Wipe
KENLTN-5601	Wipe	PBRJZW-5602	Wipe
KMKFT8-5601	Wipe	PFQXML-5601	Wipe
KRDDNQ-5601	Wipe	PWBQA4-5601	Wipe
KRTQXV-5601	Wipe	Q4LCR7-5602	Wipe
KWA6TG-5602	Wipe	QE8BQP-5602	Wipe
L6HYMA-5601	Wipe	QKV29D-5601	Wipe
LBMU7A-5601	Wipe	QKWT7L-5601	Wipe
LHLGZU-5602	Wipe	QL7Z8T-5602	Wipe
LJF6G6-5602	Drip Pattern	QRVD9G-5601	Wipe
LKTHJF-5601	Wipe	R46DFU-5601	Wipe
LQ2ZH9-5601	Wipe	RH4GKK-5602	Wipe
LUXPYF-5601	Wipe	RP896C-5602	Drip Stain
M7KBJ2-5601	Wipe	RXJHEQ-5602	Wipe
MBF3UJ-5602	Wipe	RYWRPC-5602	Wipe
MHJUEA-5602	Wipe	RZ7YT6-5601	Wipe
N2PNJL-5601	Wipe	T39EGL-5601	Wipe
NBDHVH-5602	Wipe	T9W2DD-5605	Wipe
NJPX4H-5601	Wipe	TAN8LQ-5605	Wipe

TABLE 2: Mechanism of Deposition

Item 4, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
TCX3EA-5602	Wipe	WBTR7W-5605	Wipe
TH2UY2-5601	Wipe	WCLHCB-5601	Wipe
TJEH3D-5602	Wipe	WDVPE4-5605	Wipe
TJFDRB-5602	Wipe	WPBCTB-5601	Wipe
TLL23U-5601	Wipe	WW9ADR-5601	Wipe
TR8W4X-5601	Wipe	WX26UA-5601	Drip Stain
TZZ8EU-5601	Wipe	X4MCZK-5602	Wipe
U28QV3-5605	Wipe	X8MK6V-5601	Wipe
U3KDDG-5601	Wipe	XKCKVX-5601	Wipe
UBBZZ7-5605	Wipe	XNB277-5601	Wipe
UJANWC-5601	Wipe	XVU4D9-5601	Wipe
UUTZCV-5602	Wipe	XVUZ37-5602	Wipe
UV4ZBB-5601	Drip Stain	Y3QE2D-5601	Wipe
VCQFA2-5601	Wipe	Y9V3UE-5601	Wipe
VLVR4A-5602	Wipe	Y9WVU8-5602	Wipe
VMQ6TN-5602	Wipe	YAPQDA-5601	Wipe
VTRGPK-5602	Wipe	YBL7ML-5605	Wipe
VU4BBM-5601	Wipe	YCUEW7-5601	Wipe
W3XQNX-5601	Wipe	YCV7UD-5601	Wipe
W3ZE9H-5602	Wipe	YFBXGZ-5601	Wipe
W47YWH-5602	Drip Pattern	YGP763-5605	Wipe
W62GWX-5601	Wipe	YHXHHX-5601	Wipe

TABLE 2: Mechanism of Deposition

Item 4, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
YW2L6D-5601	Wipe		
YYNHFP-5601	Wipe		
Z2PNN4-5601	Wipe		
Z6UC8Y-5602	Wipe		
ZQQA84-5605	Wipe		
ZQR37B-5601	Wipe		

**Pattern Types reported for Item 4
(Total Participants Responding = 182)**

<u>Pattern Type</u>	<u>Percent Reported</u>
Wipe	169 (92.9%)
Drip Stain	10 (5.5%)
Drip Pattern	2 (1.1%)
Swipe	1 (0.5%)

Pattern Description, Part 2

TABLE 3: Recognition and Description

Item 5

WebCode-Test	Detailed Pattern Description
26PFXR-5601	Drip trail (from the upper left corner to the lower right corner). Drip Pattern (in bottom right corner). Swipe (upper right corner)
2AFQ66-5601	There is a drip trail between top left and bottom right, culminating in a drip pattern at the bottom right (NB can't determine the direction of travel). At the top right there are 2 swipes; one with right to left motion and the other after that moving from bottom right to top left. These are lighter than the drips indicating that this blood may be slightly dilute.
2GJPML-5601	Seven (7) drips stains are present in a linear fashion across the target (top left and bottom right). This can technically be categorized as a drip trail; however, since the distance covered by these stains is ~23cm, it would not be prudent to do so in practice. A drip pattern is located in the bottom right of the target with associated satellite stains. Two (2) overlapping swipes are present in the top right area of the target. The direction of movement for these two (2)swipes cannot be determined conclusively.
3BAUHC-5602	7 drip stains are located across the target diagonally and are ~ 1-1.5cm in size and circular in shape. There is a drip pattern in the bottom lower right hand corner of the target. Satellite stains ~1mm in size and circular to elliptical in shape are noted in a random distribution surrounding the drip pattern. Several of the drip stains and a portion of the drip pattern have an altered appearance consistent with dried blood flaking off the surface. A swipe pattern (diagonal orientation on target) is observed on top of a swipe pattern (horizontal orientation) in the upper right hand corner of the target. Both of these stains have feathered edge characteristics on one side.
3BP7QG-5605	There is a drip trail between the top left and the bottom right of the image. The drip stains are round and have diameters of approximately 14-16mm. There is a small pool of blood in the bottom right corner of the image that measures approximately 29mm x 39mm. The pool is possibly the accumulation of drip stains. There is one rounded edge of a drip stain visible and another possible rounded edge visible. The pool is surrounded by small, approximately 1mm to 5mm, satellite stains that vary in angle and shape (round to oval to elongated). It is consistent with a blood into blood drip pattern. There are two swipe patterns in the upper right area of the image. One of the swipes goes over the other. One swipe is parallel to the top of the image. It is darker on the right side and thins out on the left side. There are striations within the pattern showing movement. There is feathering on the left side of the pattern. The second swipe is at an approximate 45 degree angle to the first swipe. It is darker on the right side and has striations within the pattern showing movement. There is feathering on the left side of the swipe.
3LPL7L-5601	There is a drip trail composed of drip stains between the upper left corner and lower right corner of the target. There is a drip pattern comprised of a parent stain surrounded by satellite stains in the lower right corner of the target. There are two (2) swipe patterns in the upper right corner of the target.
3QM69K-5601	A drip pattern is present on the lower right corner of the target with associated satellite stains. A drip trail extends from near the drip pattern diagonally towards the upper left corner. Two (2) overlapping swipes are present in the upper right corner of the target.
3UJQX3-5601	Seven stains in a linear orientation from upper left to lower right consistent with drip stains. Stain in lower right corner consistent with a drip pattern. Two stains in upper right consistent with altered stains, a wipe or a swipe.
444EC2-5601	I have identified the following patterns. I see two intersecting swipe patterns in the upper right hand corner of the provided foam board. I also see a drip pattern, a drip stain, and drip trail. Around the drip pattern, there are numerous satellite stains projecting out from the parent stain.

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
4DVZDT-5601	A DRIP TRAIL extends between the upper left and lower right corners of the target. A DRIP PATTERN is located in the lower right corner of the target. Two (2) SWIPES, one (1) of which is also a WIPE where it overlaps the other, in the upper right corner of the target.
4L3NYE-5601	Bottom right corner is a drip pattern. It is formed when liquid blood drips into blood or another liquid. We see a large central body with droplets showing outward directionality. There is a concentric circle of droplets. Top left to middle right are drip stains. These are drops formed due to gravity. Top right are two swipe patterns. They are formed by a bloody object coming into contact with a non-bloody surface and there is movement between the two objects. Striations can be seen through the body of the swipe pattern. By looking at the feathered ends, movement is from right to left for the first swipe pattern made and from bottom right to top left for the second swipe pattern.
4LN8VY-5602	Several drip stains make up a curvy drip trail between the upper left and the lower right corners. A drip pattern, consisting of at least a few blood into blood passive drip stains with associated satellite stains, is present at the lower right corner. Two transfer stains (would be called smears in my report) intersect at the upper right corner. Both of these long, wide transfer stains exhibit signs of motion (smearing and variable blood volume). However, there is not enough information to enable the identification of swipe or wipe patterns nor directionality of deposition. The diagonal transfer crosses over the horizontal transfer, suggesting that the horizontal transfer occurred first.
4T7JAZ-5602	Seven drip stains are present in the upper left corner area of the image going down toward the lower right corner of the image. There appears to be a drip pattern to the right of the last drip stain in the lower right corner of the image. There are two possible swipe stains in the upper right corner of the image. One that is almost straight across the image and the other is diagonal across the image. It appears that the swipe pattern that is straight across the image was created first with the second diagonal swipe pattern being created after the first, crossing over the middle of the first pattern. There also appears to be some type of transfer pattern present at the right end of both swipe patterns. Both swipe patterns appear to demonstrate a left to right directionality.
4T8C88-5602	Six drop stains extend from the left to the lower right, and the diameters of the blood are between 13.8 mm and 15.9 mm. Drip pattern is seen in the lower right corner. The size of the parent stain is about 39 mm in width and 29 mm in length, with irregular boundaries and cracks on the inside. There are irregularly scattered satellite stains with a length of about 2 to 4 mm around the blood. At the top right, you can see two wipes, one in the horizontal direction and the other in the 45 degree angle, from the lower right to the upper left. It can be seen from the shape that the traces of both wipes start from the right and extend to the left. In the case of the wipe, the amount of blood is reduced in the direction of wiping and thinned. Because the diagonal wipe erased the wipe in the transverse direction, it could be seen that the wipe in the horizontal direction is ahead of the other.
4WL9BN-5602	1. Diagonal Drip Trail from top left to bottom right (or visa-versa); 2. Drip pattern on bottom right; 3. Two swipes in top right corner, the first from left to right, the second- diagonal from top to right side
62QEHE-5605	Item 5 is a photograph of bloodstains on white foam board in the horizontal plane. The photo shows two distinct areas with bloodstains. In one area there are eight dried stains that lie in a rough line running from the top left corner to the lower right. Seven of stains are typical of drips stains resulting from a falling drops that formed due to gravity. The eighth stain is in the lower right corner of the photo. Emanating out and around the stain are satellite stains; this stain has the classic appearance of a drip pattern of blood drops into blood drops. Together the eight stains form a drip trail that runs diagonally across the photo. In the upper right corner of the photo are two stains with similar appearance; a horizontal one and one running at a diagonal across the horizontal one. Both stains have relatively even distribution across the majority of the length. The diagonal stain was deposited after the horizontal stain. Both stains have striations

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
	running the length of the stains showing directionality. The striations in the horizontal stain are altered where the diagonal stain wiped through the horizontal one. This shows the diagonal stain was deposited on the target after the horizontal one. Both stains have characteristics of a transfer stain with a swipe pattern showing directionality from left to right. The diagonal swipe stain has directionality left to right and downward.
636PCD-5601	From top left to the bottom right of the area - 7 (seven) individual drip stains and an 8th (eighth) stain were visible. the eight stain, bottom right, displays a satellite stain pattern - a parent stain with multi-directional satellite stains. The angle of impact for the first 7 drip stains - very close to 90 degrees. The drip stain - eight at bottom right - with distinct multi- directional satellite spatter stains - shows a slight discoloration towards the right side - much darker than the left side of the stain. In the right top corner there are two distinct swipes. The one deposited before the other with a time interval. For both swipes the directional movement is from right to left. For the first swipe that was deposited first - straight movement - difference in width of the swipe from right to left. For the 2nd swipe with an upward directional movement from right to left the width of the swipe similar width. The 2nd swipe didn't alter the first swipe.
66RBAU-5602	Diagonally from upper left to lower right a drip trail is seen. It is not possible to determine the direction, could be from left to right, or from right to left. In the lower right a small drip pattern is seen adjacent to the beginning or the end of the drip trail. In the upper right two swipes are seen – one horizontal from left to right and a subsequent crossing swipe from above down to the right. Both swipes ends in a transfer stain (print).
6MAGEY-5601	In my opinion there are three distinguishable bloodstains patterns: 1: a drip pattern located in the bottom right hand corner with multiple satellite stains around the parent stain. 2: a drip trail of seven individual spherical stains, It extends from the left of the drip pattern previously described to the upper left hand corner (no digital direction). 3: Two swipe stains located in the upper right hand corner. The first one (14cm length) that extends leftwards and the second one extends upwards, from right to left passing over the first swipe (overlaps)
6PFWRW-5605	A drip pattern is present at the bottom right corner of the image indicating that the blood source was stationary above this point for a period of time. There is a drip trail between the drip pattern and the top left corner of the photograph. There are two transfer stains with associated swipe in the right top corner of the image one in a horizontal plane and the other dissecting this on the diagonal.
6ZMEPU-5601	Three major pattern types are observed in Item 5: a drip trail, a drip pattern, and a swipe pattern. The drip trail consists of a series of seven circular drip stains in a curvilinear orientation. All seven stains appear relatively uniform in spacing and size (approx. 15mm diameter). The drip pattern is characterized by overlapping drips or volume accumulation on the target, surrounded by a random distribution of satellite spatter. The swipe pattern is comprised of two lateral transfers or striated smears, one oriented horizontally followed by the other oriented diagonally between the northwest and southeast directions.
72QT6Y-5601	Seven drip stains all measuring approximately 15mm by 15mm diameter, extend from the top left of the target to the lower right. Each stain exhibits smooth edge characteristics consistent with 90 degree passive drips with no clear directionality. Because directionality cannot be confirmed it cannot be referred to as a drip trail. Each stain appears to have the same heavy volume and size. A drip pattern is located at the end of the line of drip stains at the bottom right of the target. The pattern measures approximately 50mm by 20mm. Satellite spatter stains ranging in size from approximately 1 to 3mm and with random directionality radiate from the pool. Some drip stains and the drip pattern exhibit signs of drying with cracks and areas where the stains appear to have small pieces that have flaked away. The stains and pattern may be drying but have not been wiped through so no signs of skeletonization or perimeter stains. Two swipe patterns are located at the top right of the target. Both are approximately 6" long and 1 1/2" wide. One stain has a directionality of right to left horizontally across the target. The second stain occurred after the first

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
	<p>since it wipes through the middle of the first stain in a diagonal and upward direction right to left. No perimeter stains are visible on the edges of the first swipe so it appears they were deposited in succession. Both stains start with a transfer of something irregular in shape as it contacts the target but with uniform margins as it swipes along the surface. Long linear striations and porous looking areas are observed in the length of the pattern. Decreased volume and feathering are located on the left (terminating) end of both stains. There are no satellite stains from the drip pattern located in the swipe pattern and no evidence of perimeter stains from prior deposited satellite stains in the swipes. Therefore it is undetermined which patterns came first, the drip pattern or the swipe patterns.</p>
7BDRW4-5605	<p>There is a slightly sinuous drip trail from the upper left corner of the image to the bottom right. At the bottom right portion of this trail is a drip pattern. The drip trail has no directionality indicating that the movement of the source object was either very slow or at a great enough distance from the impact surface to eliminate the horizontal movement. This indicates the possibility that the source was either stationary at a location above the drip pattern and then moved towards the upper left end of the trail, or the movement ended where the drip pattern is located. In the upper right corner of the image is a swipe pattern consisting of two swipes. The first is in a horizontal direction (from approximately 9:00 to 3:00) and the second is in a crossing direction to the first (from approximately 10:00 to 4:00).</p>
7Y39E9-5601	<p>On the lower right-hand portion of the target is a drip pattern apparently created by multiple drops of blood impacting a small area of the target. Satellite stains are present surrounding the drip pattern. Between the drip pattern on the lower right-hand side of the target and the upper left-hand side of the target is a drip trail. The individual drips stains in the pattern show no signs of directionality. In the upper right-hand portion of the target are two swipes. The swipe deposited first runs horizontally. The second swipe runs at an approximate 45 degree angle to the first swipe and passes through the first swipe.</p>
83G8FU-5602	<p>There is an apparent drip trail diagonally from the top left corner to the bottom right corner with circular stains ranging in size from 1.2 centimeters to 1.6 centimeters. In the bottom right corner is an apparent drip pattern measuring approximately 3 centimeters by 4 centimeters with satellite stains emanating out from the parent stain. In the top right corner are two apparent swipe patterns that move from left to right.</p>
83WFH4-5602	<p>A number of three patterns were recognized. A diagonal drip trail with closely spaced circular drips was observed to the left of the space. The close proximity of the 7 drips to each other indicates slow movement. Next to the drip trail on the lower right of the space, a drip pattern surrounded by satellites was found. Both patterns have started flaking which indicates that they have been deposited for some time. In addition, a third swipe pattern with two motions was observed. The overlapping swipe patterns have a feathering effect indicating direction of motion. Noticeably, one of the swipe patterns has been deposited first; the horizontal pattern with the direction of motion from right to left. The second swipe pattern was deposited after and on top of the first with direction of motion from lower right to upper left corner.</p>
84AZBD-5602	<p>There is a drip trail from the top left to the bottom right corner visible. In the bottom right corner there can be a drip pattern observed. In the top right corner there are two swipes visible (first one in a horizontal and second one in an diagonal direction).</p>
8B9PRH-5602	<p>This complex pattern consists of a Drip Trail extending between the upper left (as imaged) and the lower right. At the lower right end of the drip trail a Drip Pattern is noted. Directly above this drip pattern (as imaged) two distinct swipes cross. The first extends horizontally (as imaged) with the second crossing over it at approximately a forty-five degree angle (with the left side higher than the right). A pattern Transfer Stain is evident in the lower right of the angled swipe. Noted Mechanisms: Drip Trail, Drip Pattern, Swipe, Transfer Stain</p>
8HQ7EZ-5601	<p>Three distinct patterns observed: 1) Series of circular (approx. 1.5cm diameter) drip stains</p>

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
8JLLNC-5605	<p>forming a drip pattern. 2) Lower right section of the board: reasonably large volume bloodstain with irregular edges (smooth edges visible within stain) and associated with satellite bloodstains. In my opinion, results from blood dripping whilst source of blood is stationary forming a drip pattern. 3) Upper right section of board: two smeared transfer stains. In my opinion, movement occurred during deposition, indicating these are 'swipes'. Swipe running horizontally deposited first.</p> <p>Item 5 consists of three patterns in the horizontal plane that I labeled as A, B, and C. Pattern A is a diagonal pattern on the left side (as facing) of the image. Pattern A consists of 7 approximately circular stains that are arranged in an approximately diagonal line. The 7 stains have ruffled edges and appear to travel in a line connecting two points together. Many of the drip stains also have cracking visible on the surface. The shapes of the stains are consistent with the blood striking the foam board perpendicularly/at an angle of approximately 90 degrees. The pattern I labeled A is consistent with a drip trail. The second pattern in Item 5 is in the lower right (as facing) corner of the image and consists of an irregularly shaped stain surrounded by smaller satellite stains. The smaller stains are distributed around the central stain and some of these satellite stains have direction moving away from the central stain. The pattern in B is consistent with a drip pattern. The third and final pattern, designated as C, in Item 5 is in the upper right (as facing) portion of the image. It consists of 2 stains, one on top of the other, in an approximate "X" shape. These stains do not contain skeletonized areas and do not look like stains that have been deposited and then disturbed. The stains in C have a portion at the R side (as facing) that is irregularly shaped and appears to be a heavier deposit where the blood appears to have soaked into the paper. The pattern continues away from these heavier portions of the stains in an approximate linear fashion resulting in a feathered, lighter colored smear. Within these smeared portions, movement and direction are both detectable and the stains each originate at the irregular, more heavily deposited area. These patterns are consistent with a transfer pattern and more specifically with overlapping swipe patterns (where a bloody object contacted the surface and moves against it).</p>
8ZUFH7-5605	<p>A collection of seven drip stains from nearly straight above aligned in a drip trail. Additional blood into blood drops create a drip pattern toward the right of the drip trail. The drip pattern created satellite stains. In the upper right area are two swipes appearing to show motion from right to left. The upper, horizontal swipe was altered by the second diagonal swipe.</p>
9DG3AJ-5605	<p>The photograph consisted of three main patterned areas. The left side of the image showed seven individual drip stains in a linear pattern consistent with a drip trail. The lower right of the image showed an area where there appeared to have been several drip stains in one location that overlap each other. Satellite stains were observed surrounding the stain pattern and were directional away from the central dense staining. This area was consistent with a drip pattern. The upper right corner of the image had two patterns overlapping. The diagonal stain pattern appeared to have been made after the horizontal stain. There appeared to be feathering on the left side of each pattern and a denser area on the right. The patterns were consistent with transfer stains with movement, and more specifically a swipe pattern. However the second stain would also be considered a wipe stain as it wiped through the first.</p>
9L4C67-5601	<p>Several drip stains form a drip trail that extends from the upper left of the image and to the right and downward as viewed in the image. A drip pattern is located near the bottom right of the image with associated satellite stains around the parent stain. Two swipe patterns are present in the upper right side of the image.</p>
A3BGKW-5601	<p>A series of seven drip stains are present on the image. These drip stains are visible in the upper left hand side of the image and also lower and more toward the center of the image. The drip stains measure approximately 15 mm by 15 mm and travel in a curvilinear line creating a drip trail. Satellite stains are also noted around some of these drip stains thus, making them parent stains. On the lower right-hand side of the image is a drip pattern measuring approximately 3</p>

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
	<p>cm by 4 cm. The drip pattern has associated circular to elliptical satellite stains that surround it and primarily have a directionality away from the drip pattern. The satellite spatter stains range in size from approximately <1 mm by 2 mm for the smaller bloodstains to 2 mm by 5 mm for the larger bloodstains. On the upper right-hand side of the image are two linear bloodstains with well-defined margins. One appears to move horizontally to the center of the image and the other appears to move to the left and upward on the image. The direction of movement is determined by both of the bloodstains appearing to have a thicker component on the right hand edge and having striations as they move to the left culminating in feathering on the left-hand edges of the stains. Both stains measure approximately 15 cm in length. One stain measures approximately 3 cm in width and the other stain approximately 3.5 cm. The bloodstain that appears to move horizontally towards the center of the image appears to be underneath the bloodstain that moves to upward and to the left indicating that the bloodstain that moves horizontally towards the center was placed on the target first. These stains are suggestive of swipe patterns. However, it should be noted that the characteristics of these two bloodstain patterns are not definitive enough to determine if existing bloodstains were present on the target that would have resulted in wipe patterns or if the bloodstains are not from preexisting stains to create swipe patterns.</p>
A4LJ9F-5602	<p>There is a drip pattern in the lower right. There is a drip trail orientated approximately diagonally lower right to upper left. The direction of the trail is not clear from the stains as they all appear to be approximately 90°. Two swipes are in the upper right corner. One travels approximately straight from right to left. The other travels diagonally from the lower right to the upper left and overlaps the other swipe.</p>
AAQFRF-5602	<p>There is a complex bloodstain pattern spanning across the entire board. Two overlapping transfer swipe stains are noted at the upper right margin of the board. Multiple drip stains span from the lower middle of the board to the upper left. There is also a drip pattern at the lower right of the board with associated satellite stains.</p>
BFA33C-5601	<p>A drip pattern was observed in the lower right corner of the target. A drip trail was observed diagonally across the target from upper left to lower right. No directionality of the drip trail could be determined. Two (2) swipes were observed in the upper right corner of the target. One (1) swipe is horizontal and the second swipe passes diagonally through the horizontal swipe causing a wipe. No directionality of the swipes were determined.</p>
BGMQ96-5601	<p>Seven circular shaped drip stains (possible drip trail) between the upper left corner and bottom right corner of the photograph. Lower right corner of the photograph is a drip pattern resulting from blood dripping into liquid blood. Top right corner contains 2 swipe patterns. One with directionality from lower right to upper left. The other has directionality from right to left. The lower of the two swipe patterns proceeds up through the right to left swipe pattern located above it. The lower swipe came after the upper, right to left swipe. pattern.</p>
BHLKJW-5601	<p>This group of patterns includes apparent drip stains diagonally from the upper left corner to the lower right corner with no observable directionality (the characteristic of a bloodstain that indicates the direction blood was moving at the time of deposition). A drip stain is a bloodstain resulting from a falling drop that formed due to gravity. These drip stains are indicative of an apparent drip trail, which is a bloodstain pattern resulting from the movement of a source of drip stains between two points. The apparent drip stains within the drip pattern are circular in nature with no apparent satellite stains and are primarily 10 mm in diameter. In the lower right hand corner, there appears to be a drip pattern, a bloodstain pattern resulting from a liquid that dripped into another liquid, at least one of which was blood. The apparent drip pattern and some of the drip stains seem to be apparent altered stains, meaning that the bloodstain has characteristics that indicate a physical change has occurred. The apparent drip pattern created apparent satellite stains, which are smaller bloodstains that originated during the formation of the parent stain as a result of blood impacting a surface. On the upper right corner are two apparent swipes. A swipe is a bloodstain resulting from the transfer of blood from a</p>

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
BMT7AE-5601	blood-bearing surface onto another surface, with characteristics that indicate relative motion between the two surfaces. It appears that the first apparent swipe went from right to left starting at the upper right corner to approximately the middle top section of the board. The second apparent swipe was deposited from approximately the mid right section of the board towards the upper, almost middle section, and across/over the first apparent swipe.
BN2CH9-5601	Between the top left and the lower right there is a series of drip stains in a linear alignment producing a drip trail. There is a drip pattern in the lower right which produced satellite spatter from the parent stain. There are two (2) swipe patterns in the upper right quadrant of the photo.
BN43L7-5601	Drip stain - bloodstain resulting from falling drop that formed due to gravity. Drip pattern - a bloodstain pattern resulting from a liquid that dripped into another liquid, at least one of which was blood. 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.
C2BDNQ-5602	Seven circular drip stains oriented in a Linear Curvilinear Drip trail. Drip pattern with small circular to elliptical stains that surround an accumulation of blood (pool) and the stains indicate directionality toward the pool. Two bloodstains with the first oriented east to west and the second is oriented from southeast to northwest and is over the top of the first. Both swipe bloodstains have feathering and striations present in the stains.
C9RUFZ-5605	This target displays a Drip Trail consisting of seven single 90 degree drops of blood, travelling from the upper left corner to the lower right corner. At the end of this Drip Trail, there is a Drip Pattern consisting of what would be the eighth drop in trail. The Drip Pattern displays indication of several blood drops impacting an existing blood drop of the floor, creating the smaller Satellite stains emanating from this Drip Pattern. The Drip Trail and Drip Pattern show indication of drying and flaking beginning, indicating passage of time. Additionally, there are two Swipe Patterns in the upper right hand corner. The Swipe patterns result from an unknown blood covered object contacting the floor and transferring blood to it, and displaying characteristics of motion. The first of two Swipes created: contacted the floor in the upper right hand corner and shows movement towards the upper center of the target. The second of two Swipes: started just below the First swipe, and moved upwards, at a diagonal, crossing over top of the first swipe and ending in the upper middle area of the target.
CBWHT6-5602	Drip stains form a drip trail diagonally from the upper left to lower right. A drip pattern with satellite stains is formed in the lower right. Two swipes are located in the upper right - a horizontal one under a diagonal one, the latter running upper left to lower right.
CFMY2P-5601	There is a Drip pattern on the lower right side of the target's surface. Seven Drip stains on the target surface, top left-bottom right. Two Transfer stains on the upper right side of the target's surface, becoming 2 Swipe patterns. The upper Swipe pattern was deposited before the lower Swipe pattern. The upper Swipe pattern is from right to left. The lower Swipe pattern is from right to left and from bottom to top.
CGPLLA-5601	Bottom right of the photograph: Drip pattern with satellite stains around the periphery of the central parent stains. Drip trail in the area between the aforementioned drip pattern and the top left corner of the photograph. Top right quadrant of the photograph: One horizontally oriented swipe pattern, which is also an altered stain as the result of one additional swipe pattern that wiped through the aforementioned swipe pattern.
CGPLLA-5601	A drip trail consisting of seven clearly defined drip stains making up a linear/ curvilinear pattern. At the end of the drip trail most distant from the scale is a suspected drip stain partially obscured by a larger parent stain with numerous satellite stains. There is also an altered swip pattern which appears to have been made with diluted blood. This swipe pattern is altered by an overlaying swipe pattern (also appears to be made with dilute blood). The primary swipe pattern runs horizontally with the second swipe pattern crossing over it diagonally.

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
CMN9CN-5601	Drip pattern at bottom right with associated satellite stains surrounding. Drip stains distributed between bottom right and top left corners, forming a drip trail. 2 x swipe stains and resultant transfer stains in top right corner. The angled swipe stain occurred after the horizontal swipe stain.
CNX8F6-5601	Drip Pattern, right bottom corner, a bloodstain resulting from a liquid blood that dripped into blood on surface, creating satellite spatter radiating outwards from parent stain. Description and observations: Non-spatter bloodstain observed on surface. The bloodstain is described as a bloodstain with volume accumulation, irregular margin and randomly distributed satellite spatter around margin of parent stain. The non-spatter bloodstain is further classified as a drip pattern. The bloodstain identified, suggest gravity as the possible deposition mechanism. The bloodstain was created as a result of blood dripping from a source perpendicular to and above the drip pattern, which resulted in the creation of the bloodstain observed. Drip Trail, across image, left upper corner to Drip pattern in right bottom corner. Bloodstain pattern resulting from the movement of a source of drip stains between two points. Description and observations: Seven circular shaped bloodstain with an average diameter of between 13.3mm and 16.3mm with direction undetermined. The bloodstains identified, suggest gravity as the possible deposition mechanism. The bloodstains were created as a result of blood dripping from a moving object, perpendicular to and above the surface. Two transfer stains in right upper corner, bloodstains resulting from contact between a blood-bearing surface and another surface. Description and observations: Non-spatter bloodstains are observed on the surface, right upper corner. The non-spatter bloodstains are described as a regular shaped bloodstain with no recognizable pattern in the bloodstains. The bloodstains are further classified as two transfer bloodstains. The bloodstains identified, suggest contact as the possible deposition mechanism. The bloodstains were created as a result of contact between a blood stained object(s) and the surface, resulting in blood being transferred from the object(s) onto the surface. Two swipe patterns originating from two transfer stains, bloodstains resulting from the transfer of blood from a blood-bearing surface onto another surface, with characteristics that indicate relative motion between the two surfaces. Characteristics identified within two swipe patterns, diminishing staining from right to left, striations within patterns and feathered edges on the left of patterns. Sequencing observed between two swipe patterns. The top (horizontal) transfer stain with swipe pattern was created before the swipe pattern created at an angle.
CPDGGH-5601	Based on the choices provided by CTS, this target surface possessed the following bloodstain patterns: A drip trail was visible across the target surface. A drip pattern was visible to the right of the drip trail. The drip pattern has satellite stains extending from it. Some stains appear to be altered, possibly from drying. Two transfer patterns were visible at the right top corner with overlapping swipe patterns extending from each.
CWWH4M-5601	Right side of target - near bottom - Drip Pattern. To left and up to near top of target - drip trail - 7 stains - several with small areas of possible bubble rings (3, 5, 6, 7 - if 1 is nearest to drip pattern). At top right- two transfer stains - possible swipes - one more horizontal - created 1st - one more diagonal created 2nd. Both appear to originate from right and move to left.
CZE3NG-5601	Item 5 is a photograph of a complex bloodstain pattern on foamboard. A drip pattern is towards the bottom right corner of the image. The drip pattern is ~ 4 cm by 3 cm in size and is surrounded by a random distribution of more than 50 satellite spatter bloodstains that range in size from less than 1 mm to ~ 5 mm by 1.5 mm. The drip pattern appears to have dried and is cracking and flaking away from the foamboard. Seven drip bloodstains are oriented diagonally in the image from the top left corner towards the bottom right corner adjacent the drip pattern. Each drip bloodstain is circular in shape and range in diameter from ~ 1.4 cm to ~ 1.6 cm. The drip stains appear to have dried with cracks present and several with blood flaking away. A swipe/wipe pattern that comprises of a swipe bloodstain and a swipe/wipe bloodstain is towards the top right of the image. Both bloodstains are ~ 15 cm in length and ~ 3 cm to 3.5 cm in

TABLE 3: Recognition and Description

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WebCode-Test	Detailed Pattern Description
	width at their widest. The swipe bloodstain is oriented horizontally while the swipe/wipe is oriented diagonally from top left to bottom right. The diagonally oriented swipe/wipe starts as a swipe bloodstain that wipes through the horizontally oriented swipe stain, so this pattern comprises of two swipes with elements of a wipe as well. Striations are present in both of the bloodstains with feathering at the left ends. There is a textured appearance on the right side of each stain. Directionality could not be conclusively determined.
D4R8TQ-5605	The target surface has a ruler in the upper left hand corner. The upper right hand corner has 2 swipe marks with one crossing over the other. There are eight drip stains from the upper left to the lower right with the eighth stain being a drip pattern. The eighth stain in the lower right has directionality toward the lower right corner with satellite stains surrounding their parent stain.
D7WVCL-5601	There are seven drip stains forming a slightly sinuous line between the upper left and the lower centre of the photo. These may form a drip trail but if so, there is no directionality evident in these stains to indicate which way the blood source was moving. Just to the right of the furthest right drip stain is a drip pattern, where drips of blood have coincided, creating a small, irregularly shaped pool with satellites of varying directionality. Above the drip pattern are two transfer patterns, the upper of which comprises a horizontal swipe from the right towards the left. The second, also a swipe, has occurred after the horizontal swipe, as it has obliterated it as it crossed over, most likely in a direction from lower right towards the upper left.
D8FCWV-5601	Upper right - two swipes across the foamboard surface with a blood-bearing surface (s) wet with blood, indicating relative motion between the two surfaces. One swipe (the horizontal one) was deposited before the other swipe (the diagonal one). Lower right - drip pattern resulting from blood dripping and splashing, creating satellite stains as a result of blood impacting the surface. Also a drip trail (comprising 7 drip stains) in an upper left/lower right orientation resulting from the movement of a source of drip stains between these two points. The drip pattern and drip trail have dried and cracked in places, creating altered blood stains.
DAJA4G-5601	There are 7 drip stains oriented diagonally from the upper left to the lower right resulting in a drip trail. There is a drip pattern with associated satellite stains in the lower right corner of the image. There are two swipes with left to right motion in the upper right corner of the image. The diagonal swipe alters the left-right swipe and occurred second.
DG49VB-5601	A drip trail is present across the target from the upper left corner to near the lower right corner; however, the direction of travel was not determined. A drip pattern is present in the lower right corner of the target. Two (2) swipes are present in the upper right corner of the target, the swipes are overlapping, one is horizontal and the other is angled toward the lower right; however, the directions of travel were not determined. One swipe moves through the other swipe, creating a wipe. The sequence of events was not determined.
DHTJNP-5605	There is a drip trail located in the upper left corner of the target traveling to the lower right corner. Unknown direction of travel, however, the lower right stain is a drip pattern caused as a result of the drip trail ceasing movement and the subsequent drops landing in the same area resulting in the larger stain with accompanying satellite stains. In the upper right quadrant of the target are two wipe patterns. The one closest to the top of the target (traveling horizontally from right to left) was the first pattern created, as evident by the disruption of the top pattern by the bottom pattern (traveling from lower right to upper left).
DL9BFH-5601	Based on the choices provided, the following patterns were observed: A drip trail was visible extending from the top left to the bottom right of the foamboard. Some of the stains appear to have been altered, possibly from drying. A drip pattern was visible on the bottom right of the foamboard. Some of the stain appeared to have been altered, possibly from drying. Satellite stains were visible, as well. Two transfer patterns with overlapping swipe patterns were visible on the top right of the foamboard.

TABLE 3: Recognition and Description

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WebCode-Test	Detailed Pattern Description
DT8ZWL-5605	Item 5 is a horizontal surface with at least three patterns. A drip pattern with associated satellite spatter is located on the lower right side of the target. A drip trail that may be related to the drip pattern is present diagonally between the drip pattern and the upper left side of the target. A smear stain crossing diagonally over a similar smear stain is present in the upper right corner of the target. Since no obvious perimeter stains are visible, a swipe or a wipe pattern should be considered. Directionality of the smear stains were not determined.
DTU6VN-5601	There is a diagonal series of seven drip stains located in the upper, left hand corner that extends near to the lower, right hand corner of the image. The drip stains are between ~13-15mm in diameter. There is a drip pattern in the lower, right hand corner of the image. There are two overlapping (but distinct) swipe patterns in the upper, right corner of the image. The first swipe pattern was created in a horizontal fashion (~30mm in diameter). The second swipe pattern was created in a diagonal fashion and was deposited over the top of the horizontal swipe pattern (~38mm in diameter). Both swipe patterns display darker, more intense staining on the right side of the pattern and both display less intense, feathered characteristics on the left side of the pattern. It's possible that the same bloodied object or person created both swipe patterns.
EE8AYN-5602	Two overlapping swipes are observed in the upper right corner of the image. In the first swipe, the blood-bearing surface travels approximately 4 inches to the right in a straight line before being lifted off the target. The second swipe starts slightly above and in the middle of the first swipe, and the blood-bearing surface travels approximately 3.5 inches diagonally down and to the right before being lifted off the target. The path of the second swipe travels across the path of the first swipe, allowing for sequencing of the two patterns. The type of blood-bearing object(s) that created the two swipes cannot be determined. A drip pattern is observed in the lower right corner of the image. Multiple satellite stains are observed surrounding the central stain of the drip pattern. A drip trail is observed on the left side/center area of the image. The trail consists of seven individual circular drip stains. The directionality of the drip trail cannot be determined.
EGFLE6-5602	Drip stains, creating drip trail (on a diagonal of photo), are observed. A drip pattern is observed at one of the ends of the drip trail. Stains creating the drip trail as well as the drip pattern reveal features of altered stains, i.e. they are partially crushed. In the right upper corner of the photo, there are probably two swipe patterns, which intersect. A swipe pattern made on a path "parallel" to a diagonal of the photo was probably created as a second one.
EHQACJ-5601	A drip trail is observed on the target between the upper left corner and lower right quadrant of the target in a diagonal orientation. A drip pattern with associated satellite stains is observed in the lower right corner of the target. Two (2) overlapping swipes are observed in the upper right quadrant of the target, with the swipe in the horizontal orientation appearing to be an altered stain.
EMLZKF-5601	The image depicted a drip trail of seven drip bloodstains extending in a curvilinear fashion from the upper left portion of the image toward the lower right portion of the image. A drip pattern with surrounding satellite spatter bloodstains was located at the lower right portion of the image, to the right of the blood drip trail. An area of overlapping swipe bloodstains was located above the drip pattern in the upper right portion of the image. Drip Trail: The drip trail consisted of 7 individual drip bloodstains. The bloodstains were all nearly circular in shape and ranged in diameter from 1.4cm to 1.6cm. The drip trail covered an area that measured 2.5cm wide by 23.5cm long. The drip stains each exhibited a dried and cracked appearance likely due to the drying of liquid blood. Some of the stains had contiguous areas of blood missing due to the flaking of dried blood within the stain. Drip Pattern: The drip pattern in the lower right portion of the image was irregular in shape and exhibited irregular margins. The main area of the drip pattern covered an area that measures 3cm by 4.5cm with associated satellite spatter bloodstains covering an area 14.5cm wide by 12.5cm. An additional spatter bloodstain was located 16.5cm from the center of the drip pattern along the upper left portion of the image, adjacent to a drip bloodstain. This spatter bloodstain may be associated with the drip pattern or

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
	with the drip trail. The satellite spatter from the drip pattern exhibited varying shapes and directionalities and ranged in size from less than 1mm to 2mm by 5mm. Overlapping Swipe Patterns: Two overlapping swipe patterns were located along the upper right portion of the image. The first swipe pattern extended 15cm left-right across the image and was 3cm wide. This swipe pattern had an irregular edge along the right side and gradually feathered to the left. It was interrupted by a swipe pattern the crossed its long axis in a diagonal fashion. The second swipe pattern measured 14cm in length and spanned diagonally from the upper left to the lower right, crossing over the first swipe pattern. The second swipe pattern was 3cm wide and exhibited mostly regular margins along the long axis. There was a grouping of irregular-shaped bloodstaining along the lower right portion of this swipe.
ENV6VJ-5602	Drip trail from top left to right. Drip pattern in bottom right corner with satellite stains. Upper right corner has 2 swipe stains, bottom stain has right to left directionality and was deposited first. Top swipe stain has right to left and upward, diagonal directionality through the first swipe stain.
EVEBUB-5601	There is a drip trail diagonally through the target, which is made up of a series of drip stains. A drip pattern is in the lower right corner. It is made up of a parent stain with satellite stains around it. A swipe pattern is in the upper right corner of the target.
EXNF9Y-5602	Target is on a horizontal plane. A drip trail is observed between the upper left portion of the target and the lower middle portion of the target. No directionality is observed in the drip trail. Each stain is circular in appearance and approximately 1.5cm in diameter. A drip pattern is located at the lower right corner of the target. The main stain is approximately 3.5cm x 4.5cm. Satellite spatter is observed around the main stain (length ~2mm-3mm). Scalloped edges are observed around the main stain as well. Two possible wipe/swipe patterns are in the upper right portion of the target. One is horizontal (left to right) and one is diagonal (upper left to lower right).
FBQ7MC-5605	Item 5 was a photograph of bloodstains* on white foamboard in a horizontal plane. There was a series of seven circular bloodstains ranging in size from 13.8mm to 16 mm. These stains were consistent with drip stains* and created a drip trail*, but the direction of movement could not be determined. At the lower right of the drip trail was an irregular shaped stain with associated elliptical and circular satellite stains* and was consistent with a drip pattern*. Two linear bloodstain patterns, consistent with swipes*, were present in the upper right corner of the target. The object that initially contacted the surface along the right side of the patterns could not be determined. The two transfer* patterns were designated 'A' (horizontal) and 'B' (diagonal) for documentation purposes. Both 'A' and 'B' had directionality* of movement from right to left, with 'B' occurring after 'A'.
FD7VU3-5601	Drip stains positioned diagonally across the target with no definite directionality. Drip pattern near bottom right corner with associated multi- directional satellite spatter. Two(2) swipe patterns near top right. Edge characteristics in both stains indicate movement from the right to the left. Stains deposited contemporarily with the bottom most swipe moving upward, and across the uppermost stain before it had dried.
FMJTT8-5601	A drip trail is oriented diagonally across the target between the upper left and lower right corners. A drip pattern is present in the lower right corner. Swipes are noted in the upper right corner.
FZJU4M-5605	There are circular stains measuring ~14mm in a linear fashion located in the upper left through to the lower right center of the picture. These drip stains make up a drip trail. A drip pattern is present on the bottom right corner of the picture. There are satellite spatter stains measuring approximately <1 to 2.5 mm in width and they appear to be traveling in different directions around the center stain. The majority of the stains measure <1mm in size. The center stain is irregular in shape. In the upper right corner, there are two irregular shaped stains crossing over one another. Striations are observed as well as feathering on the left side of the patterns and

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
	welling in the right side of the patterns. The volume diminishes on the left side of the patterns. These patterns are swipe patterns.
GAPV6E-5601	There are multiple patterns observed for Item 5. A drip trail is observed from the top left corner to the bottom right corner. A drip trail is a bloodstain pattern resulting from the movement of a source of drip stains between two points. The stains within the drip trail are circular in shape and appear to have started to dry due to the small flakey appearance within some stains. The approximate angles of impact for the stains are ninety degrees. In the bottom right hand corner of the stain, the examiner observed 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. There is a larger volume of blood in the parent stain and satellite spatter/spines are observed off the parent stain. Two swipe patterns are observed on the top right hand side of the target surface. A swipe pattern is a bloodstain pattern resulting from the transfer of blood from a blood-bearing surface onto another surface, with characteristics that indicate relative motion between the two surfaces. The examiner believes that it was a blood-bearing surface that deposited the stain due to the linear demarcations/ border of the bloodstain. One swipe pattern is moving from right to left and the other swipe pattern is moving right to left and upward, which was determined due to the appearance and color of the stain. The bloodstains have more volume on the right side of the stains and appear to lighten as they move right to left.
GEGZXH-5601	At the lower right corner of the image there is an irregular-shaped stain with associated satellite stains. This is a drip pattern. Associated with the drip pattern is a linear series of circular stains approximately 16mm in diameter, between the drip pattern and the upper left corner. In my opinion this is a drip trail. At the upper right corner there are two swipe or wipe stains that have resulted from either a blood-stained object or objects coming into contact with the surface and moving across the surface, or as a result of existing stains having been wiped. The stains overlap, with the upper stain having been deposited first and the other stain moving across the first stain at an angle. At the right end of each stain there is an irregular-shaped stain which would have come from the object or objects producing the swipe stains, or altered stains as a result of a wipe. I am unable to determine the movement direction of the swipe/wipe stains.
GJR93U-5601	drip stain and a drip trail begin in the upper left corner and end with a drip pattern in the lower right corner. upper right corner has two swipe patterns one of which crosses through the other.
GK7HEF-5601	There is a drip trail across the target consisting of seven (7) total drip stains. In the lower right corner of the target, there is a drip pattern with an irregularly shaped parent stain and surrounding satellite stains. In the upper right corner of the target, there are overlapping transfer stains with swipes.
GMC44Z-5605	A drip pattern is on a right lower corner. A drip trail is between the drip pattern and upper left corner. Two swipes partially overlapping each other on upper right corner. The other one is from left to right and the one over the first one has directionality from upper left downwards to the right.
GV3TFV-5605	Drip trail, formed from drip stains. Drip stains formed pool resulting in drip pattern and satellite stains surrounding the 'parent stain'. Overlapping swipe patterns.
GW4G7L-5602	Two swipe patterns are observed in the top right corner of the image. The horizontally oriented swipe is deposited prior to the diagonally oriented swipe. Both swipe patterns show lateral motion from left to right in the image. Multiple drip stains are observed in the left/center portion of the image. The drip stains form a drip trail. The directionality of the drip trail cannot be determined. A drip pattern is observed in the lower right corner of the image.
H2PTF9-5602	A drip trail was observed spanning from the upper left corner to the lower right/ approximate center of the foamboard. A drip pattern (consisting of a pool with surrounding spatter) was observed in the lower right corner adjacent to one end of the drip trail. Some randomly dispersed small satellite stains were also observed that could be attributed to the drip trail or the drip

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
	pattern. Two overlapping swipe stains were observed in the upper right corner.
HBWDWH-5605	A series of drip stains are present between the upper left and the lower right corners of the image. A blood-into-blood drip pattern is present at the lower right corner of the image. Two swipe stains are present at the upper right of the photograph. One swipe stain is oriented horizontally and shows directionality from left to right. The second swipe stain crosses over the first, thereby sequencing it as the second swipe stain, and is oriented diagonally with directionality from the upper left to the lower right.
HG8L7Z-5602	5A (diagonal upper left to lower right): A series of drip stains consistent with a drip trail. 5B (lower right): A drip pattern. 5C (upper right): Two transfer stains with indications of movement as seen by the presence of linear striae, classified as swipe/wipe patterns. One of the transfer stains had a horizontal aspect, the other a diagonal aspect. The diagonal stain appeared to have wiped through the horizontal stain.
HXRAEA-5601	Stain pattern A: Located in the upper right of the image are two bisecting bloodstains each approximately 15 cm long by 3 to 4 cm wide with varying densities of lengthwise banding made up of lighter and darker staining. Both of these have a darker stained area at one end and a lighter stained feathering at the other. One has horizontal orientation on the page with the other placed after and bisecting the first in roughly the middle, has a diagonal orientation of upper left and bottom right. The bisecting stain is continuous throughout its length while the bisected stain is discontinuous where the two meet. Unable to conclusively determine if these are swipe patterns, wipe patterns or a combination of the two. The bloodstain pattern is consistent with a sequence of transfer stains with indications of motion. Stain pattern B: Diagonally oriented on the image's top left corner and bottom right (approximately 23 cm long) is a series of 7 circular drip stains some of which have partially scalloped edges and/or voids within (apparent dried and flaked off areas of stain) that are approximately 8 to 10 mm in diameter. The bloodstain pattern is consistent with a Drip trail. Stain pattern C: Present in the lower right of the image is an irregular shaped stain with scalloped edges (approximately 3 x 4 cm) that is surrounded by 10's of satellite stains (mostly elliptical, approximately 1-2 mm wide by 1-5 mm long, and mostly showing directionality away from the parent stain) with the highest density of these in an approximately 12 cm diameter area around the parent stain. Note: on other areas of the image are additional spatter stains (approximately 15, circular and elliptical, approximately 1 mm or less in width by <1 to 2mm in length) however whether these are satellite stains from the drip stains in Stain Pattern B or from this Stain Pattern C cannot be conclusively discerned. The bloodstain pattern is consistent with a drip pattern however a splash pattern cannot be ruled out.
HZTHED-5605	Drip stains are present on the left side of the picture (oriented in a linear fashion). A drip pattern is present to the right of the drip stains. Above the drip pattern are two transfer stains.
JB8YLB-5602	PASSIVE DRIP STAINS X7 FORMING A DRIP TRAIL. DRIP PATTERN, RESULTING FROM BLOOD BEING DRIPPED INTO BLOOD. 2X SWIPE PATTERNS FROM RIGHT TO LEFT, ONE SWIPE OVERLAYING THE OTHER.
JBUZV9-5605	Drip trail (some drips stains are altered-as though it dried and was flaking off). Drip stains within the trail are approximately 15 mm. Drip pattern is on the bottom right corner, creating satellite stains. Towards the upper, right of the target, is a transfer stain; likely a swipe (without directly observing the edges of the pattern, could not differentiate definitively into a swipe or a wipe). This stain appears as two stains, with one swipe/wipe and then another swipe/wipe on top of that. Movement of the transfer stains could not be definitively determined, but could be moving from right to left on the stain that is parallel to the target's ruler. Slightly upwards and to the left on the transfer that is at a near 45 degree angle to the target's ruler.
JMLRFC-5601	A Drip pattern is present in the lower right corner of the photograph. A drip trail is oriented diagonally from the top left to the lower right, however, the directionality is undetermined. Two swipe patterns of similar width and length are present in the upper right portion of the

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
	<p>photograph. Swipe pattern one shows directionality from right to left. Swipe pattern two shows diagonal directionality from the right, upward to the left. Swipe pattern two overlaps swipe pattern one.</p>
JTRK9L-5605	<p>Two major groupings were observed. One grouping consisted of circular drip stains that formed a drip trail. A small pool was at the trail end with a drip pattern. The second grouping were two swipe patterns (one over the other). The stains appeared possibly dilute.</p>
JYG8WZ-5605	<p>Several apparent bloodstain patterns are displayed in Item 5. The pattern in the top right of the foamboard is consistent with a swipe pattern moving relatively straight from right to left, and another swipe pattern below it moving diagonally over the first swipe pattern from lower right to upper left. These two swipe patterns, which display relative motion by the appearance of the feathered edges and striations, resulted from the transfer of blood from a blood bearing surface(s) onto the foamboard. The pattern positioned diagonally across the foamboard from the upper left corner to the lower right corner, appears to be a drip trail consisting of approximately 7 to 8 apparent blood drops, caused by the movement of an apparent blood source between two points. The pattern in the lower right corner of the foamboard appears to be a pool of apparent blood with satellite stains and is best described as a drip pattern resulting from a liquid that dripped into another liquid, at least one of which was blood.</p>
K648ZJ-5602	<p>Bloodstain pattern item 5 consists of a pattern of different Formation mechanisms covering an area of about 22 by 30 cm. i) A chain of seven round shaped and slightly altered blood stains of similar sizes progressing from the top left hand corner to the bottom right hand one. No direction information can be deducted, for the smooth drop's outline lacks any edge characteristic and therefore gives no hint for horizontal dynamics. ii) Pattern i) ends in the right bottom corner near a structure of an uneven shaped blood stain featuring many little satellite stains. Due to the satellite stains the uneven shaped spot can be interpreted as a drip pattern of blood in blood. The satellite's directional information leads towards two centers within the spot, one at it's left side another one at the middle top, leading to the conclusion, that at least two drops dripping into an already deposited spot may be taken into consideration. iii) A structure at the top right hand corner shows the features of a contact stain. Directional Information can be seen from right to left. Even a chronology can be deducted with a first swipe from right to left succeeded by a second swipe from bottom right to top left.</p>
KAHQFF-5601	<p>There was what appeared to be a line of seven large circular spots of blood extending between the upper left corner to the lower centre of the image. In my opinion, each of these were each drip stains and they ranged between approximately 13 and 17 millimetres in diameter. A drip stain is a blood stain that has resulted by a falling drop of blood that is formed primarily due to gravity. In the lower right corner of the image was an irregularly shaped blood stain surround surrounded by numerous smaller spots of blood. In my opinion this was a drip pattern pattern. A drip pattern is a blood stain that results from a liquid dripping into an into another liquid, at least one of which is blood. In the upper right corner of the images were two bands of blood staining. One stain stain was approximately 3 centimetres wide and approximately 14 centimetres long long and extended horizontally across the image. In my opinion, this is a swipe swipe stain of blood. A swipe results from the transfer of blood from a blood bloodied surface to another surface, with characteristics that indicate relat relative motion between the two surfaces. The second stain, was also approximately 3 centimetres wide and approximately 14 14 centimetres long and extended diagonally across the image and passed through the the first swipe stain. At the lower right end of this second stain is an irr irregular shaped pattern of staining. In my opinion this is a combination of a tra transfer stain and a swipe stain. A transfer blood stain results from contact bet between bloodied object and another surface.</p>
KEDGNC-5601	<p>There is a drip pattern consisting of a parent stain surrounded by satellite stains in the lower right corner. There is a drip trail consisting of drip stains running diagonally across the target surface. There are two (2) swipe patterns in the upper right corner of the target.</p>

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
KENLTN-5601	There are three different major types of Bloodstain patterns on Item 5, which are a swipe pattern (upper right), drip stains (left) and a drip pattern (lower right).
KMKFT8-5601	Drip trail present from upper left corner, no directionality. Pool with satellite stains present in lower right corner. Two (2) swipe stains present; one crossing over the other.
KRDDNQ-5601	Beginning at the upper left of the target, a drip trail is noted, from the upper left diagonally to the lower right of the target. A small drip pattern (blood dripping into blood) is noted at the lower right corner of the target, with accompanying satellite stains surrounding it. In the upper right corner of the target are what appear to be two possible transfer patterns. A swipe pattern was then produced from each of these; the first moving horizontally right to left, the second diagonally upward right to left.
KRTQXV-5601	Located in the bottom right corner is a drip pattern. The body of the stain has irregularly shaped edge characteristics surrounded by small satellite stains distributed randomly around the parent stain. Located in a linear fashion are seven (7) drip stains located diagonally between the top left corner of the target and the drip pattern located in the bottom right corner creating a drip trail. The drip stains are circular in shape indicating that the droplets impacted the foamboard at approximately a 90° angle. Unable to determine direction of travel between the two points. Located on the top right corner of the target are two (2) swipe patterns. The first stain deposited shows blood transferred to the foamboard at the top right corner of the surface followed by movement to the left. The leftward directionality in the swipe is evident by the thinning distribution of blood in the linear features of the stain. Feathering is also located at the end of this stain where contact between the bloody object begins to lose contact with the target surface. The second swipe is located below the first. The motion of the second swipe is up and to the left which again is indicated by the thinning distribution and feathery appearance at the top left. It was created after the first swipe as it goes through the first swipe creating an alteration to the original stain.
KWA6TG-5602	Drip trail comprising of 7 drip stains distributed diagonally from top left to bottom right of image. At bottom right of image is a drip pattern. Two transfer stains in top right in form of swipes one horizontal the second overlapping moving 45 degrees top left to bottom right.
L6HYMA-5601	A drip trail is present on the left side of the image. A drip pattern is present on the bottom right side of the image. At least two transfers are present in the top right side of the image. Swipes are also present.
LBMU7A-5601	Drip Trail: Seven circular drip stains in a linear distribution from the top left of the image diagonally across the photograph to the lower right corner. The stains were approximately fourteen to fifteen millimeters (mm) in length. There are altered stain characteristics to the pattern observed as cracking and flaking within the stains. Drip Pattern: The pattern was created through liquid blood dripping into liquid blood. The pattern is located at the lower right corner. There is volume to the stain with irregular margins and associated satellite spatter around the body of the stain. There are altered stain characteristics to the pattern observed as cracking and flaking within the main body of the pattern. Swipe and Wipe Pattern: Both patterns are located in the upper right corner of the image. Swipe Pattern: The pattern is oriented horizontally with a right to left directionality. Diminishing volume can be observed on the left edge of the stain. Wipe Pattern: The pattern moves diagonally across the swipe pattern. There is a possible directionality from the left and downward to the right.
LHLGZU-5602	Seven individual drip stains in a curved row at the left and bottom side of the target. a Drip pattern surrounded by radiating satellite stains, located in the right lower corner of the target. Two partly overlapping swipes at the right upper corner. One with a left to right directionality. The second (swiped over the first) with a downward directionality, left to right too. No unambiguously indication for the sequence of 'events'.
LJF6G6-5602	Drip trail - traversing between upper left corner and lower right corner. Stains in this pattern show

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
	drying/ flaking, resulting in altered stains. Drip pattern - lower right corner, blood into blood creating a parent stain with accompanying satellite spatter. Swipe patterns - two (2) - swipe stain deposited moving left to right, ending in a transfer stain. A second stain, swipe, was deposited above the 1st stain with movement to the right at a downward angle. The second swipe stain crosses through the 1st, indication order of deposition. The second stain also ends in a transfer stain.
LKTHJF-5601	There is a drip trail consisting of at least seven drip stains extending diagonally between the top left and bottom right of the image. At the bottom right of the image is a drip pattern and associated satellite spatter stains. At the top right, there are two linear shaped stains with associated movement. The right hand end of these stains appears to be an initial blood deposit, which has then been wiped across the surface. One extends in a horizontal plane and the second, which partially overlaps and was deposited after the first, extends in a diagonal direction.
LQ2ZH9-5601	Pattern is a complex pattern (A-C). Pattern A is a drip trail that consists of seven near circular drip bloodstains in a curvilinear line. The stains range in size from 13x13mm to 15x15mm. The pattern covers an area from the top left corner to just right of the center line. The stains have a dried appearance with some flaking. Pattern B is a drip bloodstain pattern that consists of an irregular shaped stain (1.5"x1.25") with scalloped edges in the lower right corner of the page. Approximately 100 radiating stains surround the parent stain and range in size from sub-1mm to 5x2mm. This pattern also has a dried appearance with flaking. Pattern C is a swipe bloodstain that consists of two irregular shaped, overlapping patterns in the top right corner of the page. The stains are 6"x1.5" each and have a dilute appearance. The horizontal stain was deposited prior to the diagonal stain.
LUXPYF-5601	Extending diagonally across the image is a Drip trail between the lower right and upper left corners. A drip pattern exists in the lower right corner of the image. There are two altered bloodstains on the upper right corner of the image. The top bloodstain is a wipe pattern that extends from the right side of the image to the left. Edge characteristics are visible at the start of the pattern on the right side. The second bloodstain is a wipe pattern that starts below the first pattern but extends diagonally up the page and overlaps the first wipe pattern.
M7KBJ2-5601	A drip trail, consisting of multiple drip stains, is present diagonally across the target, between the upper left corner and the bottom right corner. A drip pattern, consisting of a parent stain with surrounding satellite stains, is present in the bottom right corner of the target. Two (2) swipes are present in the upper right corner of the target.
MBF3UJ-5602	The digital image (item 1-1-5) depicting bloodstain patterns was examined visually and stereoscopically. The following are descriptions as viewed facing the image. A drip trail pattern was oriented diagonally from the upper left to the lower right. The individual drip stains within the drip trail lacked sufficient characteristics to determine the directionality of the drip trail. A drip pattern is located at the lower right of the drip trail pattern. This pattern consists of a small volume of blood surrounded by satellite stains. Two swipe pattern stains were located in the upper right. These two patterns are overlapping. One of the swipe stains is oriented horizontally with a right to left directionality. The other swipe stain is oriented diagonally with a right to left and upward directionality.
MHJUEA-5602	Photo showing a foam board on a horizontal plane with a drip trail going from top left hand corner to lower right hand corner. The drip trail ends with a drip pattern and blood into blood causing various satellite stains. In the top right hand corner are two swipe patterns, one going more horizontally from right to left which was deposited first, and a second swipe going more diagonally from lower right to upper middle. These stains are consistent with multiple events occurring in this area.
N2PNJL-5601	Between top left hand side and bottom right hand side there is a drip trail. To the lower right of this (bottom right hand side) is a drip pattern (probably blood into blood) with satellite stains. On

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
	the upper right hand side are two swipe stains travelling, possibly right to left, one with upward motion (couldn't rule out other direction)
NBDHVH-5602	In the upper, from the left and to the right, we found a drip trail. Further there are upper to the right, transfer stain, where blood-bearing surface moving from left to right, get a swipe. This had happened twice. First moving from left to right, on the horizontal. The second swipe pattern going towards the right, is over the first horizontal swipe pattern. Down to the right there is a drip pattern. Around the drip pattern there are several small satellite stain (parent stain.)
NJPX4H-5601	In my opinion, this pattern is made up of a drip trail on the left. The blood staining in the lower right hand corner is, in my opinion, a drip pattern resulting in smaller satellite stains surrounding the parent stain. In my view, the stains in the upper right hand corner consist of two swipes with one travelling from right to left, and the other travelling diagonally from bottom right to top left. In my opinion, the stain travelling from right to left was deposited first.
NMCB9F-5605	Several red-brown stains were observed on the target surface. Several circular drip stains (A) measuring approximately 13 mm - 15mm in diameter were observed between the upper left corner and lower right side of the surface, creating a drip trail. A drip pattern (B) was observed on the lower right hand corner of the surface. Satellite stains were observed around the perimeter of the parent stain within this pattern. Two transfer stains (C), one on top of another, were observed in the upper right hand corner.
NMD47M-5601	There is a drip trail leading left to right composed of circular droplets with regular edge characteristics. The drip trail terminates in a drip pattern with a parent stain possessing scalloped edge characteristics and elongated satellite stains with regular edge characteristics. A transfer stain is present in the upper right corner of the field, this stain is composed of a swipe with a wipe over top of it. These stains possess both regular and irregular edge characteristics; with feathered edges at their termination point. The swipe begins in the upper right corner and moves horizontally toward the left. The wipe begins below the swipe and goes upward at an angle through the swipe.
NUBVEG-5601	A drip pattern is located in the lower right corner of Item 5 with numerous satellite stains. The bloodstain pattern (drip pattern) is an altered stain in that drying has occurred and cracking and flaking are evident. Extending from the drip pattern to the upper left of item 5 are 7 drip stains that are also altered due to drying with cracking and flaking visible. The drip stains are aligned in a manner to suggest a drip trail, however each stain is 90, or near 90, degrees. In the upper right corner there are 2 transfer stains (swipes); the 1st is horizontal right to left and the 2nd extends vertically at an angle from the lower right to the upper left crossing over the 1st stain.
P8TARF-5601	A drip trail consisting of 7 stains with diameter of approximately 15mm was observed. The pattern is visible from the upper left down diagonally to the lower right, ending in a pattern of blood-in-to-blood (drip pattern) stain that demonstrates satellite spatter approximately 7cm outside of parent stain. Two wipe/ swipe stains were observed in the upper right corner. Overall measurements approximately 10cm x 15cm. One wipe/ swipe crosses over the other.
PBRJZW-5602	Stains forming a drip trail. diagonal across photo. Drip pattern in the lower right corner. Upper right corner a horizontal swipe left to right and then a swipe over the first down and towards the right.
PFQXML-5601	A swipe pattern from right to left in the upper right hand corner followed by another (2nd) swipe pattern from lower right to upper left in the upper right hand corner where the 2nd swipe pattern crossed over the 1st swipe pattern. A drip trail from the upper left hand corner to the lower right hand corner with the last drip stain also creating a drip pattern (from blood dripping into blood) with numerous satellite stains around it. Satellite stains near one end of the 1st swipe pattern indicates the swipe patterns came before the drip pattern. The edge characteristics of some of the drip stains shows flaking to indicate the blood has been dry for a period of time.

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
PWBQA4-5601	7 circular stains between 14-16mm in diameter, in linear formation from upper left to lower right. At the end of this trail of stains is a 4cm x 3cm stain with regular and scalloped margins and a pattern of satellite spatter stains surrounding the parent stain. The spatter stains are elliptical, but not elongated. The overall dimensions of the parent and satellite stains are 14cm wide x 18cm high. In the upper right corner is a pair of overlapping bloodstains with smooth margins, feathering, and apparent wicking on the right-most ends. One stain is straight across and the other is diagonal (lower right to upper left) and appears to be over the top of the straight stain. Each stain is 3-3.5cm in width and 15cm long. Conclusions: Drip pattern with a drip trail and two swipe bloodstains.
Q4LCR7-5602	The blood patterns in the upper right corner are swipes. And the patterns in the lower right corner are parent stains, satellite spatters and drip pattern. And the patterns of the seven blood drops on the left are drip stains and they also formed a drip trail.
QE8BQP-5602	Several large circular shaped drip stains are present diagonally across the target forming a drip trail between the top left and bottom right quadrants. The drip stains suggest no apparent directionality. A drip pattern with associated satellite stains occupies the bottom right quadrant of the target. Two overlapping swipes occur in the top right quadrant of the target. The first of the two swipes is in a left to right direction where the blood-bearing object was then lifted from the target and wiped through the first stain in a diagonal top left to bottom right direction. No recognizable impression is evident as a result of the blood-bearing object.
QKV29D-5601	This scenario involves mainly 3 groups of bloodstain patterns: 1) Drip trail -pattern of mainly 7 circular stains with a linear orientation. The stains have approximately the same diameter, indicating the blood source dropped from a consistent height and falling due to gravity at approximately 90 degrees to the floor. The stains have regular edge characteristics, indicating an equal volume of blood falling at a consistent level. A possible directionality of this drip trail may be from the north-west corner towards the south-east corner, ending in a pool of blood. The irregular edge characteristic of this pool of blood indicates that blood was accumulating in this pool and caused a random spatter pattern around the parent stain's perimeter. One of the satellite spatter drops appears to have landed on top of the closest circular drip stain. This overlap could only occur if the circular stain existed before the spatter drop landed. 2) Complex pattern -pool pattern and a drip pattern. The drip pattern is observed because additional drops of blood fell into the existing stain causing an irregular edge characteristic as the volume of blood accumulated. A random spatter pattern of satellite stains surrounds this main bloodstain. The lack of spines on the bloodstain perimeter indicates that the blood source, dripping onto the existing bloodstain did not fall with a lot of energy nor did each drop contained a significant volume. It appears that the source is a steady drop due to the short distance of the spatter pattern surrounds the parent stain. As the parent stain began drying, the additional volume created a series of impact onto the surface of the stain, as observed in the cracking and flaking of the drying bloodstain. 3) Swipe pattern –irregular pattern resulting from the transfer of blood from another surface with characteristics that indicate motion occurred between the two surfaces. The irregular edge characteristic, no volume accumulation, and no recognizable pattern indicates this is a swipe pattern. There are two swipe movements. The first swipe is moving straight and did not have much time to dry for a perimeter stain (skeleton) to form. The second swipe pattern moving diagonally overlays a portion of the first swipe, but does not leave any perimeter stain of the first swipe. Each pattern has a striation pattern on the 'streak' area of the swipe which then ends in an abrupt stop or perhaps began with a saturated source. The irregular bloodstain pattern at each end of the streaks appears to have volume accumulation, as either the object was lifted off or pressed down.
QKWT7L-5601	A drip trail can be observed moving from the top left of the target to the bottom right corner of the target. At the bottom right of the target, a small pool of suspected blood can be seen and satellite stains can be observed radiating out from the parent stain. At the top right of the target 2 swipe stains are observed. One of the swipe stains is observed to run parallel to the top of the

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
	target and appears to have been placed first due to the second swipe running across the middle of the first stain. Relative motion can be observed on both swipe patterns with the motion running from the right side of the target towards to the left.
QL7Z8T-5602	In the lower right corner was a drip pattern (blood into blood). This is characterized by a small pool with irregular margins surrounded by small elongated spatter that radiat away from it. Between the drip pattern and upper left corner was a drip trail comprised of 7 circular stains. In the upper right corner were 2 swipe patterns. The first was from left to right. The second passed over the first from left to right and down slightly.
QRVD9G-5601	Swipe patterns in the top right hand corner - intial horizontal swipe with diagonal swipe after. Possibly both going from a right to left direction. Drip trail, drip pattern and drip stains. diagonal swipe after. Possibly both going from a right to left direction. Drip trail, drip pattern and drip stains.
R46DFU-5601	There is a drip pattern on the lower right side of the target measuring approximately 39mm X 29mm accompanied by numerous satellite stains. There is a drip trail containing approximately seven drops that are similar in size (about 15mm X 15mm) with no apparent directionality. The drip trail runs from the lower right corner of the target near the parent drop to the upper left corner of the target. There are two swipe patterns in the upper right corner that overlap each other in a criss cross pattern. It appears that the lower swipe pattern crosses on top of the upper swipe pattern.
RH4GKK-5602	On the left half of the target there are seven stains that form a linear pattern. The stains are circular and all approximately 1.5cm in diameter. Each of these stains is a drip stain that together are a drip trail. At the lower right-hand corner of the target is a central pool of blood (with what appears to be a drip stain at the left edge of the pool). Circumferentially surrounding the central pool of blood are satellite spatter stains exhibiting irregular shapes and varying directionality. This pattern is a drip pattern resulting from blood dripping into blood. At the upper right-hand corner of the target is an area with non-spatter staining that appears to be two separate events. Movement is associated with each of the irregularly-shaped stains and the left/right (not indicating directionality) horizontal stain occurred first. Both stains are swipes. The direction of the movement cannot be determined.
RP896C-5602	Drip trail/drip pattern diagonally across horizontal plane adjacent to drip pattern there are two overlaid swipes of blood. Spatter associated with drip created as a consequence of blood dripping into blood. In my opinion this bloodstaining is compatible with a bloodstained individual/item moving whilst dripping blood
RXJHEQ-5602	There appear to be three distinctive patterns on the target; a drip trail, a drip pattern and a swipe. The drip trail consists of several drip stains; it is located on the top left side of the board and extends downward toward the bottom right corner of the board. The angle of impact of the drip stains on the target are approximately 90 degrees and fell a result of gravity. Although there is no obvious directionality, there is still movement from the source of blood in the scene. On the lower right side of the foam board there is a drip pattern resulting from blood dripping into blood. There edge characteristics with this drip pattern are consistent with blood dripping into blood with the irregular edges and irregular satellite stains surrounding the parent stain. On the top right corner of the board there is a swipe pattern. It appears blood was transferred onto the target from a blood bearing surface in two places. The blood swipe on top appears was made first, with the direction of movement from right to left. The second swipe is below the first one, with the direction of movement also from right to left, but upward and through the first stain. Since the lower stain moves through the preexisting wet blood stain, it is also considered a wipe.
RYWRPC-5602	A line of bloodstain patterns start in the top left corner towards the middle and continues to the bottom right corner. They are all consistent in size and would be described as drip stains. In the bottom right corner appears to be a drip pattern with satellite stains surrounding it. In the upper

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
	right corner are two linear wide blood patterns. The straight one travels from left to right and was present first and is consistent with a swipe pattern. The second stain starts above the straight on but travels downward in a left to right direction at a slight 45 degree angle. The stain travels over the first stain. This second pattern is consistent with a swipe.
RZ7YT6-5601	There is a drip pattern located in the lower right hand corner of the target with a parent stain surrounded by satellite stains. There is a drip trail located across the target between the lower right side and the upper left hand corner consisting of several drip stains. There are swipe patterns located in the upper right hand corner.
T39EGL-5601	There are three distinct suspected bloodstain patterns. The first is a drip pattern, a total of 7 stains. The second is a blood into blood pattern with a larger stain with volume and several smaller satellite spatter stains emanating from the larger main stain. The third are 2 separate and distinct wipe patterns. The first wipe pattern occurred horizontally across the target. The second wipe pattern was at an angle or diagonal, crossing over the first horizontal wipe pattern.
T9W2DD-5605	On the left side and in the middle of the picture there is a drip trail. Unable to orient the direction of movement of the blood source. On the right and at the bottom of the picture there is a drip pattern. On the right and at the top of the picture, there are two swipe pattern. One oriented in a upward movement from right to left. Another horizontal oriented from right to left. The horizontal swipe pattern was created in first. The swipe pattern (oriented in a upward movement) is superimposed.
TAN8LQ-5605	The photo of Item 5 shows three distinctly different patterns: 1) There is a drip trail consisting of several stains between the upper left side of the photo and the lower right side of the photo; 2) There is a drip pattern in the lower right hand side of the photo which appears to be part of the drip trail pattern described above; 3) On the upper right hand side of the photo, there are two swipe patterns, with the upper swipe pattern having been deposited before the lower swipe pattern.
TCX3EA-5602	We observed 7 drops of blood indicating movement of the source that produced them (drips Stains). The source that projects blood stops and a pattern of blood called drip pattern. We observe two transfer patterns, the first from right to left and the second transversal from right to left and from bottom to top.
TH2UY2-5601	From top left to bottom right is a closely spaced drip pattern. At the lower right corner blood droplets have fallen onto a parent stain causing a number of small satellite stains. At the top right there are two overlying swipes. The right to left horizontal swipe has been deposited first and the slightly upward directional right to left diagonal swipe second.
TJEH3D-5602	A drip trail was observed along the diagonal between the upper, left corner and the lower, right corner (if the ruler is oriented in the upper, left hand corner of the image). The trail was comprised of 7 round drip stains with smooth edges. The drip stains had diameters of approximately 13.5 to 16mm. No direction of travel could be determined for the drip trail. To the lower right of the drip trail was a drip pattern. The concentrated area of bloodstaining in the drip pattern measured approximately 1.25" x 1.5". Satellite stains surrounded the drip pattern with most of them elliptical shaped and concentrated within 2" of the perimeter of the concentrated bloodstaining. In the upper, right corner of the image were two swipes. There was one swipe with a darker hue on the right side and feathering edges on the left, indicating possible movement from right to left. The pattern of this swipe was interrupted by another swipe that travelled over it, possibly moving diagonally from lower right to upper left.
TJFDRB-5602	Upper right region: Swipe pattern from left to right, then another swipe from up and left to down and right, across the first swipe. They can be made by the same object, a piece of sponge (based on the bubbles in patterns) swiping diameter: 3cm, pushed onto the surface at the end of movements. Diagonal drip trail (7 drops) and a drip pattern at the bottom right corner (at least 4 drops) from height less than 50 cm (no spikes).

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
TLL23U-5601	A drip trail extends diagonally through the middle of the target, with one (1) end of the drip trail located near the upper left corner of the target and one (1) end of the drip trail located near the lower middle area of the target. The directionality of the drip trail cannot be determined. A drip pattern, with associated satellite stains, is located near the lower right corner of the target near one (1) end of the drip trail. The drip pattern and some of the drip stains within the drip trail appear to be altered by potential drying/flaking. Two (2) swipe patterns are located near the upper right corner of the target. One (1) swipe pattern is in a horizontal orientation and one (1) swipe pattern is in a diagonal orientation. The two (2) swipe patterns intersect creating a wipe pattern.
TR8W4X-5601	A drip trail runs diagonally across the foam board (top left/ bottom right). Direction of travel cannot be determined. At the bottom right corner of the drip trail is a drip pattern with satellite stains. In the top right corner of the foam board are two swipe patterns. The direction of travel of the first is horizontally from left to right. The second swipe overlays the first swipe and the direction of travel is diagonally from top to bottom over the first swipe.
TZZ8EU-5601	A drip trail is observed extending from the upper left of the image to the lower right. The stains measure approximately 1.3cm to 1.5cm in diameter. A drip pattern is observed in the lower right of the image with satellite staining present around the drip pattern. In the top right corner of the image there are two swipe patterns intersecting each other. The upper most swipe pattern measures approximately 15cm in length by 3cm in width at it's widest point. There appears to be right to left motion. The lower most swipe pattern measures approximately 14.5cm in length by 3.7cm at it's widest point. There appears to be a right to left upward diagonal motion. The lower most swipe pattern appears to have been deposited over the upper most swipe pattern.
U28QV3-5605	There are several dripped stains that were formed at nearly 90 degree angles. There is a dripped pattern, blood into blood, with resulting satellite stains. There are two swipe patterns present in which one crosses the other. The first swipe is lateral across the surface from right to left which occurred first. The second swipe is diagonal across the surface, lower right to upper left, and occurred after the first due to it being visible on top of the first stain.
U3KDDG-5601	I observed a central bloodstain surrounded by satellite stains: drip pattern. There is a series of circular blood stains greater than 10mm with regular margins forming a drip trail. Two transferred blood stains on the target when an item with blood moved across the surface, with one stain overlapping the other - swipe stains.
UBBZZ7-5605	There are three major bloodstain patterns in this item: First, there is a pool of blood in the lower right quadrant of the image, with at least one drip stain into the edge of the pool. The pool of blood is also a parent stain, and is surrounded by satellite stains. The pool of blood with the drip stain into it and the satellite stains constitute a drip pattern. Second, there is a series of seven drip stains spread diagonally across the image, from the pool of blood in the lower right quadrant to the upper left quadrant of the image. Lastly, there are two transfer bloodstains in the upper right quadrant of the image, both with swipe patterns. One swipe pattern is horizontal, travelling from right to left away from the transfer bloodstain. The second swipe is diagonal, travelling up and to the left away from the transfer bloodstain. The diagonal swipe crosses on top of the horizontal swipe, indicating the horizontal swipe was made first.
UJANWC-5601	Seven drip stains occupied the top left and center areas of the plane. The drip stains were circular, and consistent in size. No direction of travel was evident other than downward. A drip pattern was located in the right lower quadrant of the plane to the right of the drip stains. It was irregular shaped with satellite stains surrounding it. Two swipe patterns occupied the top right quadrant of the plane. The first swipe pattern deposited was oriented horizontally on the page with a direction of travel from left to right. The second swipe pattern was deposited on top of the first pattern with a direction of travel from left to right and top to bottom.

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
UUTZCV-5602	There is a drip pattern on the lower right corner of the target. There is a drip trail diagonally across the target. There are two swipe patterns on the upper right corner of the target.
UV4ZBB-5601	There are three patterns present in the photograph. From the top left of the photo moving diagonally towards the bottom right of the photo there is a drip trail, blood falling under gravity from an object. As the drops are falling perpendicular to the floor I am unable to determine the direction of the trail. At the bottom right of the photo there is a parent stain and a satellite stain caused by blood dripping into blood forming a drip pattern. At the top right of the photo there are two swipe patterns. One of the swipe patterns has been deposited one on top of the other.
VCQFA2-5601	Drip trail diagonally across target (comprised of seven (7) drip stains). Drip pattern with associated satellite spatter in lower right corner. Overlapping swipe stains in the upper right corner.
VLVR4A-5602	I observed a drip trail consisting of several drip stains extending from the upper left to the lower right (no directionality implied), a drip pattern with satellite stains on the lower right, and an altered stain consisting of two swipes that intersect causing a wipe on the upper right.
VMQ6TN-5602	In the upper right hand corner of the image there is two overlapping swipe patterns thus giving us a swipe and a wipe pattern. A drip trail is visible between the upper left hand corner and the center of the image. In the lower right hand corner, there is a drip pattern.
VTRGPK-5602	7 circular 'drip stains' (from top left to bottom right). At the bottom right: an irregular shaped parent stain with satellite stains around it; 'drip pattern'. Top right: two patterns of around 16 cm long and 4 cm wide. Both patterns show parallel lines: two 'swipe patterns'. The horizontal oriented pattern was created first, the diagonal second.
VU4BBM-5601	The most obvious pattern is the 7 drip stains forming a drip trail, the drip trail extends from top left to bottom right. A drip pattern can be seen in the bottom right corner with blood dripping into blood. This means that the source of blood paused. It is difficult to say if the drip pattern was caused first and the source then moved, or if the drip pattern is where the drip trail stops. 2 further bloodstain patterns can be seen in the upper right hand corner. Most striking is that the pattern (swipe pattern) that goes straight from right to left was made first and then that the second swipe pattern was made diagonally from bottom right to top left.
W3XQNX-5601	Two apparent bloodstain patterns are visible: 1. At least eight near-circular bloodstains form an apparent drip trail; the directionality cannot be determined. There is a drip pattern (blood into blood) at one end of the drip trail. 2. Two apparent swipes are seen overlapping each other. The directionality of both swipes appear to be from right to left. The swipe running parallel to the ruler was deposited before the swipe running in an upward diagonal direction.
W3ZE9H-5602	This target appears to have 3 different blood spatter events associated with it. Event #1 was observed on the left side of the target and encompasses the left approximate 2/3 of the target. This event is consistent with a spatter pattern. The stains within this pattern are circular in nature. These stains do not exhibit any directionality and are consistent with a series of drip stains resulting in a drip trail. Event #2 was observed towards the lower right corner at the right side of the drip trail. This event is consistent with a spatter pattern. The event appears to be blood dripping into blood in the same location resulting in a larger bloodstain creating a drip pattern. As a result of the continuous drip pattern, satellite stains were created radiating in all directions from the parent stain. Event #3 was observed at the upper right corner of the target. This event is consistent with a non-spatter pattern. This event is consistent with a blood bearing surface coming into contact with the target with movement two separate times. One stain was deposited with an approximate 3:00 to 9:00 directionality and the other stain was deposited in an approximate 4:30 to 11:00 directionality. These stains are consistent with swipes due to the presence of movement observed within the stains and the lack of perimeter staining from a preexisting stain.

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
W47YWH-5602	Conclusion for Item #5: Drip Trail, Drip Pattern, Swipe. Drip trail of undetermined direction, upper left to lower center of target. A drip pattern in the lower right of the target. Two swipes, one over the other, in the upper right of the target.
W62GWX-5601	Item 5 is an image of bloodstains on a horizontal surface with an L-scale in the upper left corner. The image is of bloodstains on a floor from a scene of a fatal beating. The image covers an area of 9 inches by 12.5 inches. There are 3 patterns present: Pattern 1: 7 near circular stains in curvilinear pattern that extends from upper left of image to lower right. Pattern 2: Near the lower right corner of the image, near right end of pattern 1, is an irregular shaped stain with satellite stains around it. Pattern 3: Near the upper right corner of the image are two overlapping rectangular stains. Pattern 1: The 7 stains extend in a curvilinear pattern approximately 9 inches. The stains appear relatively uniform in size and shape. They are all approximately 15 mm in diameter. No impact angle change along length of pattern. These stains do not have scalloped edges and there are no associated satellite stains. DRIP TRAIL. Pattern 2: The irregular shaped stain is 40 mm x 31 mm. More than 50 satellite stains surround the irregular-shaped stain in a pattern of 5 inches x 6 inches, with some outliers up to 11.5 inches from the center of the irregular-shaped stain. The satellite stains are randomly distributed around the irregular shaped stain. DRIP PATTERN. Pattern 3: This pattern consists of 2 overlapping stains, both which are nearly rectangular. One stain goes diagonally from lower right to upper left and the other stain is nearly horizontal from right to left. The diagonal stain is approximately 5.75 inches x 1.5 inches. The horizontal stain is approximately 6 inches x 1.25 inches. In both stains there are striations present and there is feathering at the left end of each stain and blood accumulation at the right edge of each stain. The diagonal stain appears to be on top of the horizontal stain as it has the appearance of cutting the horizontal stain into two parts. SWIPE (based on experiments, no direction of travel was determined)
WBTR7W-5605	With the photograph in the proper orientation, there were two (2) stains in the upper right area. These stains measured approximately 35mm x 140mm and were linear in shape. One (1) of the stains was horizontal in orientation while the other stain was diagonal from upper left to lower right. These stains had striations throughout with contiguous boundaries on one (1) side and feathered boundaries on the other side. They both had feathered edges on their leftmost sides and sections with heavier depositions of blood on their rightmost sides. These stains were swipes. I am not able to determine directionality of the swipes with any certainty. Based on the overlap of the edges, the horizontal swipe came first and the diagonal swipe came second. In the lower right area of the photograph was a pattern with an irregular shape and irregular margins. There was random spatter on the margin of the stain, and random satellite spatter around the parent stain. The parent stain measured approximately 32mm x 40mm. The parent stain was dried and parts of it had flaked away. This pattern is a drip pattern. From the upper left corner down toward the drip pattern was a series of seven (7) stains, circular in shape, with regular margins. These stains measured from 12mm to 13mm in diameter. These stains were all dried and cracked. Portions of some of the stains had flaked away. Several satellite stains were present. This pattern was a drip trail.
WCLHCB-5601	ITEM 5: Bloodstain Pattern on white foamboard in a horizontal plane. TYPE: Drip trail; BRIEF DESCRIPTION: Non-directional stains in a linear orientation. TYPE: Drip pattern; BRIEF DESCRIPTION: One irregular shaped stain with small spatter stains around it. TYPE: Two swipe patterns; BRIEF DESCRIPTION: One swipe pattern with a second swipe pattern that bisects it.
WDVPE4-5605	A drip trail, comprising a series of circular stains, extends between the upper left corner and lower right corner of the board. In the lower right corner is a drip pattern with surrounding satellite spatter. In the upper right corner are two swipe patterns. The swipe pattern running horizontally was deposited prior to the swipe pattern running diagonally.
WPBCTB-5601	Drip trail and drip pattern with satellite stains. 2x transfer stain and swipe - first movement from right to left then second over top of first with movement from bottom right to top left.

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
WW9ADR-5601	There are seven (7) round drip stains each approximately 15 mm in size oriented between the upper left and lower right of the target. These seven (7) stains constitute a drip trail. At the lower right corner of the target, there is an irregularly shaped approximately 30 mm by 40 mm stain surrounded by numerous smaller oval shaped stains that lack clear directionality back to a common location. No spines were observed, but some of the edges of the large stain are scalloped. The irregularly shaped stain is a parent stain while the surrounding smaller stains are satellite spatters together comprising a drip pattern in the lower right corner of the target. Finally, there appears to be two (2) smears of blood each with at least one (1) feathered edge located in the the upper right corner of the target. There does not appear to be any existing staining that was wiped through, and there are no perimeter stains. The stains in the upper right corner of the target are swipe stains.
WX26UA-5601	Top left towards bottom right of the board: uniform sized drips of blood forming a drip trail. At the bottom right hand corner of the board is a drip pattern where blood has dripped into blood forming a characteristic satellite spots radiating from the parent stain. Right top corner of the board: two swipes of blood moving right to left where the diagonal swipe overlays the horizontal swipe.
X4MCZK-5602	A drip trail is observed between the upper left corner and the lower right corner of the target. In the lower right corner few drip stains felt onto each other, giving a drip pattern. In the upper right corner there is two blood swipe patterns, one of wich passed onto the other and caused a wipe pattern.
X8MK6V-5601	A drip bloodstain pattern that measured 3 cm by 4 cm and exhibited satellite spatter was located in the lower right corner of the image. Seven drip bloodstains measuring approximately 1.5 cm in diameter formed a drip trail that was 24 centimeters in length. The drip trail was generally linear and located diagonally from the top left corner of the image to the lower right corner and adjacent to the left side of the drip pattern. Two swipe bloodstain patterns were observed near the top right corner of the image. Both were approximately 14 cm in length and 3 cm in width. One was oriented horizontally (left and right) and exhibited striations indicating motion. Blood accumulation was observed on the right side of the swipe bloodstain and feathering was observed on the left side. The second swipe bloodstain bisects the horizontal swipe diagonally near the middle. It was oriented from the upper left to the lower right. Striations were present in the body of the bloodstain. It exhibited feathering at the upper left end and blood accumulation at the bottom right.
XKCKVX-5601	A drip trail consisting of a series of seven (7) drip stains was observed spanning an area between the upper left and lower right corners. A drip pattern with associated satellite spatter was observed in the lower right corner. Transfer stains consisting of two (2) overlapping swipe stains were observed in the upper right corner.
XNB277-5601	Two contact transfer patterns were present in the upper right corner. Seven bloodstains were located from the upper left corner to the lower right corner. A drip pattern was present in the lower right corner.
XVU4D9-5601	A drip trail is located between the top left and the bottom right corners of the foamboard. A drip pattern is also located at the bottom right corner of the foamboard. A horizontal swipe is located at the top right corner of the foamboard. A diagonal swipe is located on top of the horizontal swipe.
XVUZ37-5602	Item #5 in the horizontal plane displays a blood drip pattern essentially moving from the upper left to the lower right of the foam-board target and ends with blood dripping into blood resulting in secondary satellite spatters radiating outwards. On the upper right-hand side of the foam-board target is one contact transfer/swipe that traveled horizontally from right-to-left after initial contact as exhibited by feathering of the blood. This was followed by a diagonal contact transfer/swipe that started below the first swipe pattern and traveled the lower right to upper left

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
	after initial contact and through the first swipe as exhibited by feathering of the blood.
Y3QE2D-5601	The upper right hand corner of pattern contains two swipes. The horizontal swipe was applied 1st and measures approx. 6" in length and 1" in width and was applied in a right to left direction. The diagonal swipe was applied 2nd in an upward direction and measures approx. 5 3/4" in length and 1 1/2" in width. There is a drip trail consisting of 7 drip stains that are circular in shape and measure approx. 1 3/10 cm to 1 1/2 cm in width. The lower right hand corner has a blood pool resulting from a drip pattern. There are satellite stains around the periphery of the pool that measure approx. 1 1/2 mm to 4 1/2 mm in length.
Y9V3UE-5601	There are 7 circular bloodstains, ~1.5cm diameters, located from approximately 4 o'clock to 10 o'clock of the photo. These are Drip Stains forming a Drip Trail. The direction is not discernible with any certainty as the edges are too smooth. At the 4 o'clock end are circular overlapping bloodstains with broken edges with small elliptical (satellite) stains radiating outward from the parent stain, a Drip Pattern. In the upper right side of the photo are two overlapping linear stains, ~ 3.5 to 4 cm wide and ~15 cm long. One stain is horizontal while the overlapping stain is oriented on the diagonal. The stains have a darker appearance on the right and become lighter at the opposite edge which appears feathered. These stains are the result of blood contacting the surface with movement right to left for the bottom stain and from the ~4 o'clock to ~10-11 o'clock for the overlapping stain, both are Swipes.
Y9WVU8-5602	The result of my evaluation of bloodstain pattern is as follows: Drip pattern - Drip pattern is located on the lower right portion of the target surface. Satellite stains - Satellite stains are located in close proximity to the drip pattern and were likely produced from the drip pattern. Drip stains - Drip stains are located on the upper left portion of the target surface and travels diagonally towards the lower right portion of the target surface. Drip trail pattern - A drip trail is located on the upper left portion of the target surface and travels diagonally towards the lower right portion of the target surface. Transfer stains - Two transfer stains are present on the upper right portion of the target surface. Swipe pattern - A swipe pattern is located on the upper right portion of the target surface. Swipe/Wipe pattern - A second swipe pattern is located on the right portion of the target surface. This swipe forms a wipe pattern when contacting another existing swipe pattern
YAPQDA-5601	A drip trail of several large blood spots, no indication of directionality. 1x drip pattern to bottom right (outward directionality indicating repeated drips into parent stain). 2x swipes with blood being swiped whilst still wet. Swipe running right to left being created first & swipe running bottom right to top left having been created afterwards.
YBL7ML-5605	Drip pattern from upper left to lower right (~15 mm diameter drops). A splash pattern (~30 mm x ~ 40 mm) in lower right corner with satellite stains (~1 mm diameter). In upper right corner is a swipe (right to left, ~135 mm x ~ 25 mm wide) with a second swipe (~145 mm x 35 mm wide) going through it, down and to the right.
YCUEW7-5601	Observed seven (7) passive drip stains in a trail, each measuring approx. 15mm in diameter with no obvious directionality. An approximate 30mm x 40mm parent stain consistent with being created by blood dripping into blood, surrounded by secondary satellite stains. The total length of drip trail, including parent stain, was approx. 12" extending from upper left target to lower right. Two (2) swipe or wipe patterns, each measuring approximately 6"L x 1" and 1 1/2" wide. One pattern overlaps the other at a 45° angle, located in upper right of target.
YCV7UD-5601	This R/O observed a small pool of suspected blood in the lower right hand corner with smaller satellite stains around the small pool. This R/O observed a suspected drip trail beginning in the upper left corner and ending in the lower right hand corner at the small pool of suspected blood. This R/O observed the initial swipe running parallel with the plane and observed a secondary swipe running through the initial swipe.

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
YFBXGZ-5601	Seven circular stains 13 -16mm diameter between top left hand side of the target to the bottom right side. These are Drip stains forming a short trail. In bottom right corner of the target is a large stain with some rounded edges and small oval stains traveling away from the large stain. This is a Drip pattern wth associated satellite spatter. Part of the large pattern and some of drip stains have some flaking of dried blood within the stains. In the top right corner of the target are two linear stains, one of which overlaps the other on an angle. Both have width between 30-35mm with irregular staining at one end. This is consistent with transfer stains and the transfer on the angle overtop the horizontal stain has occurred after the horizontal stain and there is some possible feathering of the stain towards one end, so I can't exclude the possibility of some form of lateral movement associated this transfer stain.
YGP763-5605	The following description is given with the photo orientated with the ruler in the top left hand corner. In the bottom right hand corner is a drip pattern. The dimensions of the drip stain is approximately 30mm x 40mm with associated satellite stains radiating out in all directions from the middle of the drip pattern. There are more than 50 satellite stains with most of them between 30-40mm from the edge of the centre of the drip pattern. Although there are some satellite stains that have radiated further than this. Between the drip pattern and the top left hand corner of the image are seven drip stains. These drip stains have formed a drip trail. The individual drip stains are all circular and have a diameter ranging from 13mm to 15mm. No direction of travel of the trail can be determined based on the information contained in the image. Therefore it can't be determined if the drip trail is from or to the drip pattern. In the top right of the image are two transfer stains. Transfer stain 1 measures approximately 145mm x 30mm. It has the appearance of a swipe stain with a movement from right to left. It should be considered that the transfer stain could also be a wipe pattern where a wipe from right to left has occurred through an existing bloodstain on the target surface. Transfer stain 2 has been deposited at a time after the deposition of transfer stain 1. The transfer stain measures approximately 135mm x 35mm. It has the appearance of a swipe stain with movement up to the left, going through transfer stain 1. As with transfer stain 1, it should be considered that the transfer stain could also be a wipe pattern where a wipe has moved up to the left through an existing stain of unknown deposition mechanism.
YHXHHX-5601	7 circular bloodstains approx. 1 cm diameter, no directional information - drips of blood. Drip pattern with satellite stains (secondary spatter) as blood drips into blood. Drips of blood could be a drip trail, although limited information, could be travelling either towards the drip pattern or away from it. So something dripping blood, with replenishment either at start of the end it paused where the drip pattern formed. two swipes of blood (transfer stains with characteristics of swipes), appears to be right to left ie blood transferred and swiped to the left - linear movement. Stains appear similar in appearance, made in a similar way. One on top of the other (upper first then lower one was second and across the first. Cannot tell if a swipe then transfer on top or transfer then swipe across. feathering at edge where lifted off. NB a site of a beating - no impact spatter seen.
YW2L6D-5601	Seven drip stains are present. One drip pattern is also present. Two altered bloodstains are present, both of which appear to be swipes.
YYNHFP-5601	Seven (7) drip stains forming an apparent drip trail were noted as present extending between the upper left and lower central portion of the target. A drip pattern with associated satellite stains was noted as present in the lower right side of the target. Two (2) overlapping swipes were noted as present in the upper right side of the target.
Z2PNN4-5601	Drip stains from top left of photograph to bottom right, diagonally. 7 x stains each measuring approximately 15mm in diameter). Lower right of image exhibits a drip pattern i.e. blood into blood with associated satellite spatter. Top right of image displays 2 x swipe marks. 1 x swipe horizontal, travelling from right to left. 1x swipe mark travels over right to upper left and intersects with horizontal swipe. Both swipes approximately 150mm in length.

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
Z6UC8Y-5602	A drip trail was observed across the foamboard diagonally at the upper left to bottom right and a drip pattern with satellite stains was observed on the bottom right corner. A swipe pattern crossing another horizontal swipe pattern were observed on the upper right corner.
ZQQA84-5605	Drip stains were noted from the top left edge of the surface to the bottom right edge. A drip pattern was noted in the bottom right corner. The top right corner of the surface is a transfer stain.
ZQR37B-5601	Between the upper left corner and bottom right corner there is a drip trail on the target surface. The bottom right corner has a drip pattern in which a satellite stain was created from blood dripping into the parent stain. The top right corner has two swipe patterns. The motion of the bottom swipe pattern is from right to left. The second swipe pattern crosses overtop of the first swipe pattern in an upward and to the left direction.

Additional Comments

TABLE 4

WebCode-Test	Additional Comments
3BAUHC-5602	Angle of impact measurements were done in PowerPoint and are not in mm
3UJQX3-5601	For item 4 - as stated in instructions, I indicated the method of deposition and did not mark the action (wipe) after the blood was present.
4LN8VY-5602	Our lab has taken a step back on identification of and directionality determinations related to swipe and wipe patterns. This was in large part due to the JFS technical note, "The Reliability of Swipe/Wipe Classification and Directionality Determination Methods in Bloodstain Pattern Analysis" by Sita Et. Al.
6MAGEY-5601	About the item 3 the possibility of an expiration pattern cannot be excluded (just using the image as a reference)
6ZMEPU-5601	Angle of impact determinations are not routinely calculated when BPA is performed in my laboratory. In addition, bloodstain patterns are more often visually described, and not necessarily associated with a single mechanism of deposition.
72QT6Y-5601	Item 4 (additional comments): I am reporting that this pattern is a wipe because that's the overall stain type visualized on the surface. The instructions mention deposition and refer to cleanup of a scene so selecting drip stain may also have been appropriate. Our laboratory procedures and per our normal casework, seeing a pattern that encompasses more than one stain type we would report out both stains. Your instructions require me to select a single type so I chose wipe since a wipe always comes after an initial deposition of blood and therefore may be the most prominent stain type.
83WFH4-5602	All descriptions of Item 5 were made relative to the ruler being in the upper left hand corner of the space.
8JLLNC-5605	<p>1. In real life, when a pattern like the one in Item 3 was encountered, I would not have made a decision of a SINGLE pattern type based on the information that was provided. If incomplete patterns are going to continue to be provided, then they either need to be completely unambiguous OR additional information needs to be provided. Asking for a decision to be made regarding that image in Item 3 is forcing an examiner to make decision that would not be made in casework. This pattern is one where I felt the argument could be made for 2 pattern types as possibilities. Since only one pattern is allowed to be selected, I think this is asking for someone to risk making a mistake on a proficiency test that they would not necessarily make in casework. 2. The patterns provided (particularly Items 2 and 3) are not complete patterns. Asking someone to make a conclusion regarding a pattern, without all of the information and with only part of the pattern provided, is unrealistic. It is not something that should be done in casework. Since proficiencies are tests that are supposed to mimic casework, this is a poorly designed test. 3. Surfaces that involve paper really are not ideal to use for patterns that involve aqueous substances. The risk of distortion or artifacts that arise as a result of the substrate may complicate interpretation. The last beating scene I went to did not occur in room constructed of foam core boards. 4. How the pattern is made complicates the interpretation (e.g. Item 3). It is often easier to determine how the pattern was made vs. what type of pattern is being mimicked. 5. The quality of the scans/images are low. With minimal zooming, the blood stains become heavily pixelated. This was especially an issue with the drops/stains in Item 3. 6. The angle of impact exercise should be reported as approximate and not as an absolute angle since we are calculating an estimate.</p>
9DG3AJ-5605	Item 2: other possibilities included: cessation, expiration, impact. Item 3: other possibilities included: expiration. Item 4: other possibilities included: drip stain, swipe, transfer
AAQFRF-5602	Since patterns 2-4 are supposed to be categorized as a single stain type they should be prepared that way. Stain 2 has multiple cast-off patterns on it rather than a single pattern and Stain 4 has a wipe traveling across a series of blood drips (again not a single pattern).

TABLE 4

WebCode-Test	Additional Comments
BN2CH9-5601	Drip stain(s) is/are situated from the top left corner towards the drip pattern at the bottom right corner. Swipe is at the top right corner, the first is from left to right and the second passes the first at an angle towards the bottom right corner.
CFMY2P-5601	Check pattern on photograph 3 for amylase. Also check autopsy report for blood in airway.
D7WVCL-5601	1. With respect to ITEM 3: In my opinion this is the type of pattern that I would usually call a mist pattern (no longer in the glossary given), or a forward spatter pattern (in the glossary, but not one of the options given as an answer). I think there are insufficient characteristics in this pattern to call it an expiration pattern (no beaded stains, 'dumbbells' or bubble rings seen, no obvious dilution, no large irregular stains included). Therefore I have selected 'impact pattern' as the best of the options given. 2. Relating to ITEM 5: the two transfer stains appear to be slightly diluted.
EGFLE6-5602	Item 4: A drip stain mechanism was selected as a wipe pattern, also observed, was excluded taking into account information that "pattern was found on the floor in a scene with evidence of some cleanup following a bloodletting event".
EXNF9Y-5602	Section I [Table 1: Angle of Impact Determination] was done in a PowerPoint presentation. The values for length and width are not in mm, rather a ratio developed by PowerPoint.
FZJU4M-5605	My laboratory does not conduct angle of impact determination. Section 1 not examined [Table 1: Angle of Impact Determination].
GMC44Z-5605	Suggested terminology should have had own page numbers as now it was difficult to print differently.
GV3TFV-5605	Item 4: Drip stains which have pooled and been altered by a wipe of the blood.
HXRAEA-5601	Supporting case notes for Items 2, 3, and 4 are included here. Item 2: Consists of an image with 100's of spatter stains generally continuous staining circular to elliptical shape of sizes ranging from approximately <1 to 6 mm in width by <1 to 10 mm in length. The majority of the elliptical stains have general directionality downward from the top of the page to the bottom and the majority of those > 2 mm or so in width are darker at bottom of stain. Satellite stains of >1 mm in size are located adjacent to the directional stains. Directional stains are intermixed in linear arrangements that have both downward and slightly to the right and downward and slightly to the left directionalities demonstrating more than one spatter producing event for these stains. Following the paths of spatter stains with similar directionalities indicates multiple different vertical linear arrangements of stains with overall directionality from top of page to bottom yet varying from slightly to the left or right. This is consistent with a cast-off pattern. Item 3: Consists of an image with 100's to 1000's of spatter stains circular to elliptical shape ranging in size from approximately <1 to 3 mm in width by <1 to 4 mm in length with the majority of stains < 1 mm in diameter. The majority of the elliptical stains approximately 10 have general directionality downward or from the top of the page to the bottom. The greatest density of staining is present in a vertical band approximately 10 cm wide that mostly runs through the center of the target. Spatter pattern(s) consistent with impact pattern however an expiration pattern cannot be ruled out. Item 4: Consists of an image whereas in the lower left are two circular bloodstains with scalloped edges (one above the other) that are approximately 15 mm in diameter each that are drip stains. Above the drip stains is an area of partially discontinuous bloodstaining (approximately 15 by 25 cm) with varying densities of horizontal banding of alternating lighter and darker staining that runs roughly through the center of the image. At the bottom and top left corners of this banding stain (above the drip stains) are darker stained areas each being approximately 4 x 1.5 to 2 cm. Satellite stains (3 approximately 1-2 mm each) are present above the top left corner stain. The left border of this banding stain has perimeter stains with dark rounded scalloped edges and the right border has generally darker staining with feathering indicating a directionality from left to right. The bloodstain pattern is consistent with drip stains below and an altered stain above (with indications of including additional drip stains) by a wipe pattern with directionality from left to right.

TABLE 4

WebCode-Test	Additional Comments
KAHQFF-5601	Additional comments: For the purposes of this statement all stains having the visual appearance of blood will be reported as blood.
KWA6TG-5602	Item 3: Looks most like a forward spatter pattern but this is not an available option. Item 4: Was initially a drip trail which has been wiped thru. There are still 2 x drip stains present - wipe chosen as the dominate stain type.
LJF6G6-5602	Item #4 also contains a wipe stain.
NJPX4H-5601	Section 1 [Table 1: Angle of Impact Determination] of this test has not been completed as we do not calculate angle of impact in day to day casework. In relation to item 3, although this blood pattern can be described as impact spatter, in my opinion, the fine nature of the blood spots suggest that the pattern could have been caused as a result of a high velocity impact such as backspatter from a gun shot wound.
NMCB9F-5605	Pattern Description Part 1 - To appropriately evaluate the stain pattern, additional photos of the overall stain/pattern (and not a portion of the stain/pattern) would be beneficial to the analyst. Additionally, I believe that with the addition of scenarios in this Part of the proficiency test could create bias and the additional information is not necessarily needed to interpret the stain pattern if solely based on sight recognition. Lastly, it would be beneficial to have more general (spatter pattern) or additional terms available for answer selection.
Q4LCR7-5602	The blood patterns in the upper right corner are swipes. The two swipes are partially overlapped. We can conclude that the one in the upper layer was formed after the one under it . The blood drops in the drip trail are nearly circular and the peripheries of these drops are smooth and the foamboard is hard smooth water-resistant, so we can conclude that the bleeding source was moving very slowly. The satellite spatters indicate that the bleeding source stopped there for a moment. However, we can not determine whether the bleeding source moved form the upper left to the lower right or otherwise. Besides, the large volume and shapes of these blood drops tell us that it is more likely that the blood dripped from a wounded body rather than from weapons or other things. However, we can not determine whether the blood belong to the perpetrator or the victim. As a result, we strongly suggest the blood drops should be taken for DNA test to determine the bleeding source.
QE8BQP-5602	For Section I: ANGLE OF IMPACT DETERMINATION, I did not measure the actual lengths and widths of each stain in millimeters. Instead, I used the ellipse tool in PowerPoint and then used the ratio of the the values of length to width to determine the angle of impact.
QKV29D-5601	The photos included with the test would be easier to work with if they were not a glossy print, but rather a matte print.
RH4GKK-5602	For Item 1: Angle of Impact Determination (and also for two stains for Item 2), PowerPoint was used to discern stain sizes. Therefore, the measurements documented for the length and width of each stain are not in mm and were used solely as a ratio to calculate the angle.
TH2UY2-5601	In respect of item 4 the presented staining cannot be accurately described by limiting oneself to only one of the categories provided. The unaltered stains towards the lower aspect of the pattern are formed from blood drips and there are features to the associated disturbed staining to suggest that much, if not all, of the blood was deposited in the same way. The mechanism of blood deposition would therefore best be described as 'blood dripping'. The overarching feature of the staining is, however, the swipe pattern and this is arguably the most pertinent pattern descriptor. The test requests comment on 'Mechanism of deposition' but under the heading of 'Pattern description' and therefore it is unclear whether the focus of the exercise is to comment on how blood was deposited onto the tile or how the main pattern was created. I have opted for the latter, however in a real world setting both would be equally relevant and the staining would be best described as a wiped drip pattern, i.e. requiring an amalgamation of two of the test categories.

TABLE 4

WebCode-Test	Additional Comments
TJEH3D-5602	Please include photographs of the entire pattern and all bloodstaining created when making the patterns. To assist in our review of results, is it possible to make a video of the creation of the patterns?
UUTZCV-5602	Item 4 displayed two patterns. The most obvious/prominent pattern was reported. The directions aren't very clear- if that was the desired pattern it would help if the directions included "most obvious/prominent".
UV4ZBB-5601	for items 2 to 4 further descriptive terminology could be used to further describe these stains.
VTRGPK-5602	General comment on items 2 to 4: we often (also with previous CTS BPA tests) get a feeling that bloodstain patterns are not showed fully. With a real case scenario, one would prefer to assess the complete pattern(s). Otherwise this could be potentially a limitation to the classification(s). Item 3: with classifying bloodstain patterns, the analyst would like to be able to select the most suitable pattern type (unbiased). By missing the option 'forward spatter' in the list of options, you create bias in the test (to our opinion). Additionally, by assuming that the lists of options show pure classifications, in stead of groups (like forward spatter could be a type of impact pattern), it would be impossible to choose 'impact pattern', because the item does not show any specific characteristics for that (v-shaped pattern etc.). Thinking like this, the analyst could only end up with 'expiration pattern' whereas the item does not show any clear characteristics of this pattern type either. On the other hand, if the analyst thinks of 'impact pattern' as a group (taxonomy wise), this would be a possible correct answer afterall. To go short: depending on the way the analyst thinks, classification could result in either 'expired pattern' and/or an 'impact pattern'. To summarize: the way the item is presented, including the option list, it would in a real case scenario not be possible to choose an answer (and a good analyst wouldn't!), while in the test you are forced to pick one. For classification purposes, we would therefore plead for blind classification, i.e. showing the pattern and letting the participant choose from the suggested terminology list him-/herself (also without providing any background information!).
VU4BBM-5601	The second swipe pattern was made while the first swipe pattern was still in liquid form. Both the swipe patterns appear to have been made by diluted blood.
W3XQNX-5601	Pattern replication using an object similar to the one used to create the swipes is needed in order to confirm the association of width and directionality.
W3ZE9H-5602	Angle of Impact measurements were made electronically in powerpoint.
W47YWH-5602	Item #1 no units of measure was used, as the ellipses were measured in power point, and mm was not the unit of measure.
WBTR7W-5605	On Item 3 I chose a category because I had to. But in real case work, without more information, I would have called the pattern spatter stains.
WCLHCB-5601	ITEM 4: Bloodstain Pattern on smooth vinyl tile in a horizontal plane; TYPE: Drip stains, with possible drip pattern. BRIEF DESCRIPTION: Non-directional stains with distinct edge characteristics.
WX26UA-5601	Difficult to interpret item two. I would need additional information to fully interpret the pattern, such as: is this the whole pattern or just part of it, what is the height of the pattern from the floor and where was the victim in assaulted in relation to this pattern. What position was the victim in during the incident. What are the nature of the victim's injuries, specifically, has an artery/vein been breached.
XVU4D9-5601	Item 2 and Item 3 both only show a portion of the patterns. The patterns were identified from the list of possible pattern types that I felt likely resembled the most
YFBXGZ-5601	For pattern Item 3 - I do not feel that there is enough information in the pattern to choose one pattern type over another pattern. While given the size and the number of stains could be consistent with impact, there is no radiating pattern and very few directional stains. There is also

TABLE 4

WebCode-Test	Additional Comments
	some lighter coloured stains which might indicate dilution, but no other obvious characteristics of expiration. In this instance I would report as only spatter stains and that I could not exclude either impact or expiration as a method of deposition.
YHXHHX-5601	The Lab has not completed the angles section of the test as this activity is not carried out by the Lab.
Z2PNN4-5601	Item 4 shows drip stains with a wipe through them. However, portal will only allow the selection of one stain type.

-End of Report-
(Appendix may follow)

Appendix: Data Sheet

Collaborative Testing Services ~ Forensic Testing Program

Test No. 18-5601: Bloodstain Pattern Analysis

DATA MUST BE RECEIVED BY August 20, 2018 TO BE INCLUDED IN THE REPORT

Participant Code:

WebCode:

Accreditation Release Statement

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

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

This test is divided into two sections: Angle of Impact Determination and Pattern Description. Patterns provided in the Pattern Description section of the test now offer a simulated scenario for each item.

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

Item 1 - Examine bloodstains A through 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 coated posterboard targets at predetermined angles from the vertical.

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

<u>Stain</u>	<u>Width (mm)</u>	<u>Length (mm)</u>	<u>Angle of Impact (degrees)</u>
A	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>
B	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>
C	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>
D	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>
E	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>

Please return all pages of this data sheet.

Page 1 of 4

Section II: PATTERN DESCRIPTION

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

Part 1 - Mechanism of Deposition: For each of the following patterns, indicate the **single** pattern type that best describes the mechanism of deposition. 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 is a piece of white containerboard in the vertical plane. Pattern was recovered from a wall in a scene in which a victim was stabbed several times.

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

Item 3: Target is a piece of white containerboard in the vertical plane. Pattern was found on a wall adjacent to a gunshot victim.

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

Item 4: Target is a smooth vinyl tile in the horizontal plane. Pattern was found on the floor in a scene with evidence of some cleanup following a bloodletting event.

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

Please return all pages of this data sheet.

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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.

Item 5: Target is a piece of white foamboard in the horizontal plane. Pattern was found on the floor at the scene of a fatal beating.

Additional Comments

Return Instructions: Data must be received via online data entry, fax (please include a cover sheet), or mail by **August 20, 2018** to be included in the report. Emailed data sheets are not accepted.

QUESTIONS?

TEL: +1-571-434-1925 (8 am - 4:30 pm EST)
EMAIL: forensics@cts-interlab.com
www.ctsforensics.com

Participant Code:

ONLINE DATA ENTRY: www.cts-portal.com

FAX: +1-571-434-1937

MAIL: Collaborative Testing Services, Inc.
P.O. Box 650820
Sterling, VA 20165-0820 USA

Please return all pages of this data sheet.

Collaborative Testing Services - Forensic Testing Program

RELEASE OF DATA TO ACCREDITATION BODIES

The following Accreditation Releases will apply only to:

Participant Code:

WebCode:

for Test No. **18-5601: Bloodstain Pattern Analysis**

This release page must be completed and received by **August 20, 2018** to have this participant's submitted data included in the reports forwarded to the respective Accreditation Bodies.

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

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

ANAB Certificate No. _____

(Include ASCLD/LAB Certificate here)

A2LA Certificate No. _____

Step 2: Complete the Laboratory Identifying Information in its entirety

Signature and Title _____

Laboratory Name _____

Location (City/State) _____

Accreditation Release	
<u>Return Instructions</u> <i>Please submit the completed Accreditation Release at the same time as your full data sheet. See Data Sheet Return Instructions on the previous page.</i>	<i>Questions? Contact us 8 am-4:30 pm EST Telephone: +1-571-434-1925 email: forensics@cts-interlab.com</i>

Please return all pages of this data sheet.

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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.

Test No. 18-5601/2/5 Data Sheet, continued

Appendix: Page 2 of 2

Flow	A bloodstain resulting from the movement of a volume of blood on a surface due to gravity or movement of the target.
Forward Spatter Pattern	A bloodstain pattern resulting from blood drops which can be produced when a projectile creates an exit wound.
Impact Pattern	A bloodstain pattern resulting from an object striking liquid blood.
Insect Stain	A bloodstain resulting from insect activity.
Parent Stain	A bloodstain from which a satellite stain(s) originated.
Perimeter Stain	An altered stain consisting of its edge characteristics, the central area having been partially or entirely removed.
Pool	A bloodstain resulting from an accumulation of liquid blood on a surface.
Projected Pattern	A bloodstain pattern resulting from the ejection of blood under hydraulic pressure, typically from a breach in the circulatory system.
Satellite Stain	A smaller bloodstain that originated during the formation of the parent stain as a result of blood impacting a surface.
Saturation Stain	A bloodstain resulting from the accumulation of liquid blood in an absorbent material.
Serum Stain	The stain resulting from the liquid portion of blood (serum) that separates during coagulation.
Spatter Stain	A bloodstain resulting from an airborne blood drop created when external force is applied to liquid blood.
Splash Pattern	A bloodstain pattern created from a large volume of liquid blood falling onto a surface.
Swipe	A bloodstain resulting from the transfer of blood from a blood-bearing surface onto another surface, with characteristics that indicate relative motion between the two surfaces.
Target	A surface onto which blood has been deposited.
Transfer Stain	A bloodstain resulting from contact between a blood-bearing surface and another surface.
Void	An absence of blood in an otherwise continuous bloodstain or bloodstain pattern.
Wipe	An altered stain resulting from an object moving through a preexisting wet bloodstain.

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