



Bloodstain Pattern Analysis

Test No. 22-5601/5 Summary Report

Each sample pack consisted of digitally produced photographs (22-5601) or directly downloadable digital images (22-5605) of bloodstains for Angle of Impact Determination and Pattern Description. Data were returned from 172 participants: 61 for 22-5601 and 111 for 22-5605 and are compiled into the following tables:

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

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

Manufacturer's Information

Each sample set contained the following images: Angle of Impact Determination Stains A - E (Item 1), Pattern Description: Single Pattern Recognition (Items 2, 3, and 4), and Pattern Description: Recognition and Description (Item 5) provided in photographic (5601) or digital download (5605) form. Participants were requested to determine the angle of impact of Stains A - E (Item 1), identify the pattern for Items 2 - 4, and write a brief description of the pattern(s) for Item 5. A digital download supplemental of the entire target image for Items 2-5 was provided to all participants as a courtesy.

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". 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	11.5°
B	24.4°
C	12.0°
D	19.5°
E	17.7°

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 small volume of blood was deposited onto the center of the target. A dry gloved hand was moved through the blood and across the target towards the left, pushing the blood to the edge of the tile.

Pattern 3: A screwdriver handle was dipped in blood and swung one time across the vertical target.

Pattern 4: A small volume of blood was deposited onto target. A dry cloth rag was placed on top of blood and allowed to absorb naturally.

Pattern 5: A hatchet was placed on a vinyl surface (target) and a small volume of blood was deposited over top of the hatchet. The blade of the bloody hatchet was dragged downward across the surface. The hatchet was removed and held above the target, allowing the blood to fall from the hatchet and onto the target.

Summary Comments

Introduction

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

Angle of Impact

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

<u>Stain</u>	<u>Preparation Angle</u>	<u>Grand Mean</u>	<u>Standard Deviation</u>
A	11.5°	11.59°	0.75
B	24.4°	22.78°	0.81
C	12.0°	11.87°	1.10
D	19.5°	17.81°	1.15
E	17.7°	15.76°	1.04

Pattern Description

The pattern description was divided into two separate parts. Part one consisted of three patterns (one vertical target of posterboard, two horizontal targets of smooth vinyl tile), and participants were asked to select the single pattern type that best described the pattern contained in the image. The second part of the pattern description section consisted of one horizontal target of vinyl tile, 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, 65.7% of participants reported "Swipe", with 22.7% reporting "Transfer Stain" and 11.6% reporting "Wipe". For Item 3, 86.6% of participants reported a "Cast-off Pattern." For item 4, 98.8% of participants reported "Saturation Stain".

For part two, Item 5, the majority of participants reported the following distinct pattern types: 1) Drip Stain, occurring throughout the image. 2) Transfer Stain, surrounded by satellite and spatter stains. This stain was also classified as a wipe or swipe by some participants. 3) Void Stain, occurring in the center of the image. Finally, many participants also documented the Cast-off Pattern.

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	
2HR23R- 5605	2.30	0.21	2.21	10.80	0.35	0.62	12.30	0.71	0.95	12.30
2UKKJH- 5605	2.00	-0.09	-0.91	10.00	-0.45	-0.79	11.53	-0.06	-0.08	11.54
2X3GQG- 5605	2.20	0.11	1.17	10.90	0.45	0.79	11.80	0.21	0.28	11.64
3228GT- 5601	2.00	-0.09	-0.91	10.50	0.05	0.09	11.00	-0.59	-0.78	10.98
36WZ83- 5605	2.00	-0.09	-0.91	10.00	-0.45	-0.79	12.00	0.41	0.55	11.54
3T6JCA- 5605	2.00	-0.09	-0.91	10.00	-0.45	-0.79	11.54	-0.05	-0.06	11.54
3X6KV2- 5605	2.00	-0.09	-0.91	10.25	-0.20	-0.35	11.25	-0.34	-0.45	11.25
3ZL6AK- 5601	2.17	0.08	0.86	10.30	-0.15	-0.26	12.20	0.61	0.81	12.16
48GCHR- 5605	2.00	-0.09	-0.91	11.00	0.55	0.97	10.48	-1.11	-1.47	10.48
49EKUH- 5601	2.12	0.03	0.34	10.56	0.11	0.20	11.58	-0.01	-0.01	11.58
4BJCF4- 5605	2.20	0.11	1.17	10.80	0.35	0.62	11.75	0.16	0.22	11.75
4EJJ22- 5605	2.00	-0.09	-0.91	9.00	-1.45	-2.54	12.80	1.21	1.61	12.84
4J2G7Z- 5605	2.10	0.01	0.13	10.80	0.35	0.62	11.20	-0.39	-0.51	11.21
4JUE26- 5605	2.00	-0.09	-0.91	11.00	0.55	0.97	10.48	-1.11	-1.47	10.48
4JX2HH- 5601	2.02	-0.07	-0.70	11.20	0.75	1.32	10.40	-1.19	-1.58	10.39
669GFZ- 5605	2.10	0.01	0.13	10.20	-0.25	-0.44	12.00	0.41	0.55	11.88
67339R- 5605	32.70	30.61	317.88X	142.00	131.55	231.00X	13.30	1.71	2.27	13.31
67NXCE- 5605	2.10	0.01	0.13	10.10	-0.35	-0.61	12.00	0.41	0.55	12.00
6CBTAC- 5605	2.20	0.11	1.17	10.90	0.45	0.79	12.00	0.41	0.55	11.64

TABLE 1
Stain A, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
6EVHR4-5601	2.00	-0.09	-0.91	10.80	0.35	0.62	10.60	-0.99	-1.31	10.67
7JN2BE-5601	2.10	0.01	0.13	10.00	-0.45	-0.79	12.12	0.53	0.71	12.12
7NKN43-5605	2.20	0.11	1.17	10.20	-0.25	-0.44	12.00	0.41	0.55	12.46
7RHBEH-5601	2.00	-0.09	-0.91	11.00	0.55	0.97	10.47	-1.12	-1.48	10.48
7RYDCH-5605	2.10	0.01	0.13	10.49	0.04	0.07	11.50	-0.09	-0.12	11.55
84CMQV-5605	2.10	0.01	0.13	10.40	-0.05	-0.08	11.65	0.06	0.08	11.65
8EBG7D-5601	2.10	0.01	0.13	10.70	0.25	0.44	11.00	-0.59	-0.78	11.32
8M324Y-5605	2.20	0.11	1.17	11.50	1.05	1.85	11.00	-0.59	-0.78	11.03
8Q6PTM-5601	2.00	-0.09	-0.91	10.60	0.15	0.27	11.00	-0.59	-0.78	10.88
8YX3TL-5601	2.10	0.01	0.13	10.60	0.15	0.27	11.40	-0.19	-0.25	11.43
99YWCD-5605	2.20	0.11	1.17	10.60	0.15	0.27	12.00	0.41	0.55	11.98
9ABKZJ-5605	2.10	0.01	0.13	11.30	0.85	1.50	11.00	-0.59	-0.78	10.71
9ABTJ3-5601	2.30	0.21	2.21	10.10	-0.35	-0.61	13.00	1.41	1.87	13.16
9DRAYM-5605	2.00	-0.09	-0.91	11.00	0.55	0.97	10.28	-1.31	-1.74	10.48
9L3BGG-5605	0.20	-1.89	-19.60 X	1.10	-9.35	-16.42 X	11.80	0.21	0.28	10.48
9M3BKM-5601	2.50	0.41	4.28 X	11.50	1.05	1.85	13.00	1.41	1.87	12.56
9T4UE7-5605	2.00	-0.09	-0.91	10.00	-0.45	-0.79	11.54	-0.05	-0.06	11.54
A3LN8E-5601	2.10	0.01	0.13	10.30	-0.15	-0.26	11.80	0.21	0.28	11.76
AFC83J-5605	2.10	0.01	0.13	10.60	0.15	0.27	11.40	-0.19	-0.25	11.43

TABLE 1
Stain A, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
AFRQMG-5605	2.00	-0.09	-0.91	10.20	-0.25	-0.44	11.30	-0.29	-0.38	11.31
AMTY9B-5601	2.07	-0.02	-0.18	10.06	-0.39	-0.68	11.87	0.28	0.37	11.87
ANLWFH-5601	2.13	0.04	0.44	10.02	-0.43	-0.75	12.27	0.68	0.91	12.27
AVB8YT-5605	2.14	0.05	0.54	10.03	-0.42	-0.73	12.30	0.71	0.95	12.32
AXCDBD-5605	2.20	0.11	1.17	11.20	0.75	1.32	11.30	-0.29	-0.38	11.33
B2B7MM-5601	2.10	0.01	0.13	11.10	0.65	1.14	10.90	-0.69	-0.91	10.91
B344WF-5605	2.00	-0.09	-0.91	9.50	-0.95	-1.67	12.10	0.51	0.68	12.15
B8XYW2-5605	2.10	0.01	0.13	10.80	0.35	0.62	11.21	-0.38	-0.50	11.21
BUV6RK-5605	0.97	-1.12	-11.61 X	4.67	-5.78	-10.15 X	12.00	0.41	0.55	11.99
BV4P88-5601	2.02	-0.07	-0.70	11.00	0.55	0.97	10.58	-1.01	-1.34	10.58
C4BLTP-5605	2.02	-0.07	-0.70	11.12	0.67	1.18	10.00	-1.59	-2.11	10.47
C8F8MH-5601	2.10	0.01	0.13	10.60	0.15	0.27	11.40	-0.19	-0.25	11.43
CTR634-5605	2.18	0.09	0.96	10.36	-0.09	-0.16	12.15	0.56	0.75	12.15
CWEQT7-5601	2.00	-0.09	-0.91	10.80	0.35	0.62	10.67	-0.92	-1.22	10.67
DDXTCF-5601	2.20	0.11	1.17	10.40	-0.05	-0.08	12.20	0.61	0.81	12.21
DE7CQ3-5605	2.10	0.01	0.13	10.80	0.35	0.62	11.20	-0.39	-0.51	11.21
DKUYJM-5601	1.98	-0.11	-1.12	9.20	-1.25	-2.19	12.43	0.84	1.12	12.43
DMP9ZJ-5601	2.04	-0.05	-0.49	10.60	0.15	0.27	11.00	-0.59	-0.78	11.10
DPB84F-5605	2.00	-0.09	-0.91	11.00	0.55	0.97	10.50	-1.09	-1.44	10.48

TABLE 1
Stain A, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
DW9RAH-5601	0.19	-1.90	-19.70 X	1.04	-9.41	-16.52 X	10.52	-1.07	-1.42	10.53
DX3FTD-5605	2.10	0.01	0.13	10.50	0.05	0.09	11.50	-0.09	-0.12	11.54
EQF6Y9-5601	2.10	0.01	0.13	9.96	-0.49	-0.86	12.17	0.58	0.77	12.17
ERA33A-5601	2.10	0.01	0.13	11.10	0.65	1.14	10.91	-0.68	-0.90	10.91
F4HVDL-5605	2.20	0.11	1.17	10.10	-0.35	-0.61	12.60	1.01	1.34	12.58
G78NNV-5605	2.00	-0.09	-0.91	10.80	0.35	0.62	11.00	-0.59	-0.78	10.67
G8GT2J-5605	2.20	0.11	1.17	10.60	0.15	0.27	11.90	0.31	0.41	11.98
G8WYGA-5601	1.80	-0.29	-2.99	11.00	0.55	0.97	9.41	-2.18	-2.89	9.42
G9BGKF-5605	1.89	-0.20	-2.05	9.10	-1.35	-2.37	12.00	0.41	0.55	11.99
GBW4C3-5601	2.00	-0.09	-0.91	10.20	-0.25	-0.44	11.30	-0.29	-0.38	11.31
GFNCGA-5601	2.00	-0.09	-0.91	11.00	0.55	0.97	10.00	-1.59	-2.11	10.48
GG4P67-5605	10.85	8.76	90.99 X	2.30	-8.15	-14.31 X	12.00	0.41	0.55	X
GNPPHX-5605	2.00	-0.09	-0.91	10.00	-0.45	-0.79	11.50	-0.09	-0.12	11.54
GU9RLU-5605	2.10	0.01	0.13	10.70	0.25	0.44	11.32	-0.27	-0.36	11.32
H97JHH-5605	2.17	0.08	0.86	10.88	0.43	0.76	11.49	-0.10	-0.13	11.50
HAZ6FF-5605	2.20	0.11	1.17	11.10	0.65	1.14	11.40	-0.19	-0.25	11.43
HJPXLK-5605	2.15	0.06	0.65	10.73	0.28	0.49	12.00	0.41	0.55	11.56
HKE7TZ-5601	2.20	0.11	1.17	11.20	0.75	1.32	11.30	-0.29	-0.38	11.33
HMP7U2-5601	2.10	0.01	0.13	10.10	-0.35	-0.61	12.00	0.41	0.55	12.00

TABLE 1
Stain A, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
HMRUDZ-5605	2.16	0.07	0.75	10.26	-0.19	-0.33	12.15	0.56	0.75	12.15
HV4T6Q-5605	2.00	-0.09	-0.91	9.40	-1.05	-1.84	12.00	0.41	0.55	12.28
JF4DDV-5601	2.10	0.01	0.13	11.00	0.55	0.97	11.00	-0.59	-0.78	11.01
JFHYPH-5605	2.10	0.01	0.13	11.10	0.65	1.14	10.90	-0.69	-0.91	10.91
JM3VYY-5605	2.00	-0.09	-0.91	10.20	-0.25	-0.44	11.30	-0.29	-0.38	11.31
JX4BP4-5605	2.20	0.11	1.17	11.20	0.75	1.32	11.33	-0.26	-0.34	11.33
KADF7J-5601	2.05	-0.04	-0.39	10.87	0.42	0.74	11.00	-0.59	-0.78	10.87
KFYBA9-5605	2.20	0.11	1.17	10.24	-0.21	-0.37	12.40	0.81	1.08	12.41
KJZGK9-5605	2.20	0.11	1.17	10.40	-0.05	-0.08	12.00	0.41	0.55	12.21
KMYU4R-5605	2.00	-0.09	-0.91	10.50	0.05	0.09	11.00	-0.59	-0.78	10.98
KZ6NZB-5601	2.00	-0.09	-0.91	11.00	0.55	0.97	10.50	-1.09	-1.44	10.48
L84VU4-5605	2.00	-0.09	-0.91	10.80	0.35	0.62	10.70	-0.89	-1.18	10.67
LAQEV2-5605	1.80	-0.29	-2.99	9.00	-1.45	-2.54	11.00	-0.59	-0.78	11.54
LDQHQU-5605	2.20	0.11	1.17	10.70	0.25	0.44	11.90	0.31	0.41	11.87
LDRHMN-5601	2.10	0.01	0.13	10.50	0.05	0.09	11.54	-0.05	-0.06	11.54
LH2V9T-5605	2.10	0.01	0.13	10.10	-0.35	-0.61	12.10	0.51	0.68	12.00
LTK6V2-5605	2.10	0.01	0.13	10.20	-0.25	-0.44	12.00	0.41	0.55	11.88
LUB7ZP-5605	2.00	-0.09	-0.91	9.50	-0.95	-1.67	12.50	0.91	1.21	12.15
LV7UDT-5601	2.20	0.11	1.17	10.40	-0.05	-0.08	12.21	0.62	0.83	12.21

TABLE 1
Stain A, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
M4H8VN-5605	2.00	-0.09	-0.91	10.00	-0.45	-0.79	12.00	0.41	0.55	11.54
MCCDUG-5605	2.20	0.11	1.17	10.70	0.25	0.44	12.00	0.41	0.55	11.87
MCNCKK-5605	2.18	0.09	0.96	10.52	0.07	0.13	12.00	0.41	0.55	11.96
MEWKU6-5605	2.20	0.11	1.17	10.40	-0.05	-0.08	12.20	0.61	0.81	12.21
MEWMGN-5605	2.00	-0.09	-0.91	10.60	0.15	0.27	10.86	-0.73	-0.97	10.88
MFTZ3V-5601	2.00	-0.09	-0.91	10.60	0.15	0.27	10.88	-0.71	-0.94	10.88
MQ9RNJ-5605	2.00	-0.09	-0.91	9.00	-1.45	-2.54	12.83	1.24	1.65	12.84
MTZQ7N-5601	2.10	0.01	0.13	10.20	-0.25	-0.44	11.90	0.31	0.41	11.88
MV3MRC-5605	2.10	0.01	0.13	11.30	0.85	1.50	10.71	-0.88	-1.17	10.71
N97C64-5605	2.00	-0.09	-0.91	8.60	-1.85	-3.25 X	13.40	1.81	2.41	13.45
NAENHY-5601	2.20	0.11	1.17	10.70	0.25	0.44	11.87	0.28	0.37	11.87
NBDPQC-5605	2.10	0.01	0.13	10.00	-0.45	-0.79	12.10	0.51	0.68	12.12
NRXFL6-5605	2.10	0.01	0.13	10.70	0.25	0.44	11.00	-0.59	-0.78	11.32
NUUP32-5601	2.00	-0.09	-0.91	10.20	-0.25	-0.44	11.00	-0.59	-0.78	11.31
P6LZJ8-5605	2.14	0.05	0.54	10.73	0.28	0.49	11.51	-0.08	-0.10	11.50
PCRCDG-5605	2.00	-0.09	-0.91	9.00	-1.45	-2.54	12.83	1.24	1.65	12.84
Q23Z9X-5605	2.20	0.11	1.17	11.00	0.55	0.97	11.50	-0.09	-0.12	11.54
Q3TBYQ-5605	2.00	-0.09	-0.91	10.60	0.15	0.27	11.00	-0.59	-0.78	10.88
Q68N8N-5605	2.00	-0.09	-0.91	10.00	-0.45	-0.79	11.50	-0.09	-0.12	11.54

TABLE 1
Stain A, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
QHLZUM-5605	2.20	0.11	1.17	10.30	-0.15	-0.26	12.00	0.41	0.55	12.33
QNATZV-5605	2.00	-0.09	-0.91	10.40	-0.05	-0.08	11.10	-0.49	-0.65	11.09
QT9ZPY-5605	2.00	-0.09	-0.91	9.30	-1.15	-2.02	12.40	0.81	1.08	12.42
QUWBKY-5605	2.15	0.06	0.65	11.41	0.96	1.69	10.84	-0.75	-0.99	10.86
R2TTAU-5605	2.11	0.02	0.23	9.36	-1.09	-1.91	13.00	1.41	1.87	13.03
RELA43-5605	2.00	-0.09	-0.91	11.00	0.55	0.97	10.50	-1.09	-1.44	10.48
RLBP6C-5605	2.00	-0.09	-0.91	10.00	-0.45	-0.79	11.50	-0.09	-0.12	11.54
RN87BV-5601	2.10	0.01	0.13	10.60	0.15	0.27	11.50	-0.09	-0.12	11.43
RP34BN-5601	2.10	0.01	0.13	10.50	0.05	0.09	12.00	0.41	0.55	11.54
RZJLAM-5605	2.10	0.01	0.13	10.20	-0.25	-0.44	11.90	0.31	0.41	11.88
T37GD8-5605	2.00	-0.09	-0.91	11.00	0.55	0.97	10.50	-1.09	-1.44	10.48
TF9BKA-5601	2.00	-0.09	-0.91	11.25	0.80	1.41	10.24	-1.35	-1.79	10.24
TMT7MY-5605	2.40	0.31	3.24 X	11.00	0.55	0.97	13.00	1.41	1.87	12.60
TPHJ6H-5605	2.00	-0.09	-0.91	11.00	0.55	0.97	10.50	-1.09	-1.44	10.48
TPUEM3-5605	2.00	-0.09	-0.91	9.50	-0.95	-1.67	12.00	0.41	0.55	12.15
TTUMRD-5601	2.30	0.21	2.21	10.60	0.15	0.27	12.30	0.71	0.95	12.53
UDYP69-5605	2.14	0.05	0.54	10.95	0.50	0.88	11.30	-0.29	-0.38	11.27
UERFEU-5605	2.00	-0.09	-0.91	10.00	-0.45	-0.79	12.00	0.41	0.55	11.54
V3EFHZ-5605	2.00	-0.09	-0.91	9.40	-1.05	-1.84	12.30	0.71	0.95	12.28

TABLE 1
Stain A, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
V7U6KN-5601	2.00	-0.09	-0.91	11.00	0.55	0.97	10.47	-1.12	-1.48	10.48
VM4PK2-5605	2.00	-0.09	-0.91	9.89	-0.56	-0.98	11.70	0.11	0.15	11.67
W2DZJ9-5601	2.30	0.21	2.21	9.90	-0.55	-0.96	13.00	1.41	1.87	13.43
W87Z4V-5605	2.00	-0.09	-0.91	11.00	0.55	0.97	10.50	-1.09	-1.44	10.48
WAQ2QV-5605	2.08	-0.01	-0.08	10.54	0.09	0.16	11.38	-0.21	-0.28	11.38
WBANMR-5605	2.20	0.11	1.17	10.90	0.45	0.79	11.60	0.01	0.02	11.64
WD997G-5605	2.15	0.06	0.65	10.16	-0.29	-0.51	12.00	0.41	0.55	12.22
WGWK89-5601	2.23	0.14	1.48	10.79	0.34	0.60	12.00	0.41	0.55	11.93
WJYNT4-5605	2.00	-0.09	-0.91	11.00	0.55	0.97	10.47	-1.12	-1.48	10.48
XDRCHN-5601	2.17	0.08	0.86	10.82	0.37	0.65	11.60	0.01	0.02	11.57
XEYWXB-5601	2.00	-0.09	-0.91	10.80	0.35	0.62	10.60	-0.99	-1.31	10.67
XMT2RC-5605	2.19	0.10	1.06	10.73	0.28	0.49	11.78	0.19	0.26	11.78
XUCZQX-5605	2.26	0.17	1.79	10.67	0.22	0.39	12.20	0.61	0.81	12.23
XV6ZLN-5601	2.10	0.01	0.13	10.10	-0.35	-0.61	12.00	0.41	0.55	12.00
XWYP4J-5605	2.00	-0.09	-0.91	9.00	-1.45	-2.54	10.48	-1.11	-1.47	12.84
YLEWVZ-5605	2.17	0.08	0.86	10.18	-0.27	-0.47	12.00	0.41	0.55	12.31
YW3JBW-5601	2.10	0.01	0.13	9.70	-0.75	-1.31	12.50	0.91	1.21	12.50
YZDYET-5605	2.00	-0.09	-0.91	9.00	-1.45	-2.54	12.84	1.25	1.66	12.84
Z4Q2WH-5601	2.36	0.27	2.83	10.60	0.15	0.27	12.90	1.31	1.74	12.86

TABLE 1
Stain A, continued

WebCode-Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
Z6NCRK-5601	2.22	0.13	1.38	10.20	-0.25	-0.44	12.60	1.01	1.34	12.57
ZHXMNN-5605	2.19	0.10	1.06	10.70	0.25	0.44	11.81	0.22	0.30	11.81
ZMQPP3-5605	2.20	0.11	1.17	10.00	-0.45	-0.79	12.70	1.11	1.48	12.71
ZYHBXH-5605	2.00	-0.09	-0.91	10.32	-0.13	-0.23	11.17	-0.42	-0.55	11.17
Grand Mean	2.09			10.45			11.59			11.59
Standard Deviation	0.10			0.57			0.75			0.75
Participants Included in calculations		149			150			156		155
Participants excluded from calculations (indicated by X)		7			6			0		1

Stain A Preparation Angle: 11.5°

TABLE 1
Stain B

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
2HR23R- 5605	9.40	0.24	1.47	22.80	-0.81	-0.99	24.30	1.52	1.83	24.35
2UKKJH- 5605	9.10	-0.06	-0.34	22.40	-1.21	-1.48	23.96	1.18	1.42	23.97
2X3GQG- 5605	9.30	0.14	0.87	23.00	-0.61	-0.75	24.00	1.22	1.47	23.85
3228GT- 5601	9.00	-0.16	-0.95	23.50	-0.11	-0.14	22.50	-0.28	-0.34	22.52
36WZ83- 5605	9.00	-0.16	-0.95	23.00	-0.61	-0.75	23.00	0.22	0.26	23.04
3T6JCA- 5605	8.30	-0.86	-5.19 X	22.00	-1.61	-1.97	22.16	-0.62	-0.75	22.16
3X6KV2- 5605	9.00	-0.16	-0.95	24.26	0.65	0.79	21.78	-1.00	-1.21	21.78
3ZL6AK- 5601	8.94	-0.22	-1.31	23.45	-0.16	-0.20	22.40	-0.38	-0.46	22.41
48GCHR- 5605	9.00	-0.16	-0.95	24.00	0.39	0.47	22.02	-0.76	-0.92	22.02
49EKUH- 5601	9.24	0.08	0.50	24.01	0.40	0.48	22.63	-0.15	-0.18	22.63
4BJCF4- 5605	9.20	0.04	0.26	25.00	1.39	1.69	21.59	-1.19	-1.43	21.59
4EJJ22- 5605	9.00	-0.16	-0.95	21.00	-2.61	-3.18 X	25.40	2.62	3.15 X	25.38 X
4J2G7Z- 5605	9.10	-0.06	-0.34	23.30	-0.31	-0.38	22.90	0.12	0.14	22.99
4JUE26- 5605	8.90	-0.26	-1.56	23.50	-0.11	-0.14	22.25	-0.53	-0.64	22.25
4JX2HH- 5601	9.37	0.21	1.29	24.83	1.22	1.48	22.20	-0.58	-0.70	22.17
669GFZ- 5605	8.80	-0.36	-2.16	23.00	-0.61	-0.75	22.00	-0.78	-0.94	22.50
67339R- 5605	57.00	47.84	289.94X	143.30	119.69	145.87X	23.40	0.62	0.74	23.44
67NXCE- 5605	9.20	0.04	0.26	23.00	-0.61	-0.75	24.00	1.22	1.47	23.58
6CBTAC- 5605	9.40	0.24	1.47	23.80	0.19	0.23	23.00	0.22	0.26	23.26

TABLE 1
Stain B, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
6EVHR4-5601	9.20	0.04	0.26	23.50	-0.11	-0.14	23.00	0.22	0.26	23.05
7JN2BE-5601	9.20	0.04	0.26	22.70	-0.91	-1.11	23.90	1.12	1.35	23.91
7NKN43-5605	9.20	0.04	0.26	22.50	-1.11	-1.36	24.00	1.22	1.47	24.14
7RHBEH-5601	9.00	-0.16	-0.95	24.00	0.39	0.47	22.02	-0.76	-0.92	22.02
7RYDCH-5605	9.40	0.24	1.47	23.17	-0.44	-0.54	23.90	1.12	1.35	23.93
84CMQV-5605	8.89	-0.27	-1.62	23.11	-0.50	-0.61	22.62	-0.16	-0.20	22.62
8EBG7D-5601	9.30	0.14	0.87	24.20	0.59	0.72	23.00	0.22	0.26	22.60
8M324Y-5605	9.50	0.34	2.08	25.00	1.39	1.69	22.00	-0.78	-0.94	22.33
8Q6PTM-5601	9.60	0.44	2.69	24.00	0.39	0.47	24.00	1.22	1.47	23.58
8YX3TL-5601	9.20	0.04	0.26	24.00	0.39	0.47	22.50	-0.28	-0.34	22.54
99YWCD-5605	9.30	0.14	0.87	24.20	0.59	0.72	22.60	-0.18	-0.22	22.60
9ABKZJ-5605	9.10	-0.06	-0.34	23.80	0.19	0.23	22.00	-0.78	-0.94	22.48
9ABTJ3-5601	8.90	-0.26	-1.56	19.80	-3.81	-4.65 X	27.00	4.22	5.08 X	26.71 X
9DRAYM-5605	9.00	-0.16	-0.95	23.50	-0.11	-0.14	22.31	-0.47	-0.57	22.52
9L3BGG-5605	0.90	-8.26	-50.04 X	2.30	-21.31	-25.97 X	23.30	0.52	0.62	23.04
9M3BKM-5601	9.00	-0.16	-0.95	23.50	-0.11	-0.14	23.00	0.22	0.26	22.52
9T4UE7-5605	9.00	-0.16	-0.95	24.00	0.39	0.47	22.02	-0.76	-0.92	22.02
A3LN8E-5601	9.20	0.04	0.26	24.20	0.59	0.72	22.30	-0.48	-0.58	22.34
AFC83J-5605	9.30	0.14	0.87	23.60	-0.01	-0.02	23.20	0.42	0.50	23.21

TABLE 1
Stain B, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
AFRQMG-5605	8.90	-0.26	-1.56	22.50	-1.11	-1.36	23.30	0.52	0.62	23.30
AMTY9B-5601	9.16	0.00	0.02	23.44	-0.17	-0.21	23.00	0.22	0.26	23.00
ANLWFH-5601	9.33	0.17	1.05	24.01	0.40	0.48	22.87	0.09	0.11	22.87
AVB8YT-5605	9.08	-0.08	-0.47	23.31	-0.30	-0.37	22.90	0.12	0.14	22.93
AXCDBD-5605	9.50	0.34	2.08	24.90	1.29	1.57	22.40	-0.38	-0.46	22.43
B2B7MM-5601	9.20	0.04	0.26	24.50	0.89	1.08	22.10	-0.68	-0.82	22.06
B344WF-5605	8.50	-0.66	-3.98 X	23.00	-0.61	-0.75	21.60	-1.18	-1.42	21.69
B8XYW2-5605	9.00	-0.16	-0.95	23.60	-0.01	-0.02	22.40	-0.38	-0.46	22.42
BUV6RK-5605	1.97	-7.19	-43.55 X	4.98	-18.63	-22.71 X	23.30	0.52	0.62	23.30
BV4P88-5601	9.03	-0.13	-0.77	25.00	1.39	1.69	21.17	-1.61	-1.94	21.17
C4BLTP-5605	9.24	0.08	0.50	24.86	1.25	1.52	22.00	-0.78	-0.94	21.82
C8F8MH-5601	9.20	0.04	0.26	23.80	0.19	0.23	22.70	-0.08	-0.10	22.74
CTR634-5605	9.21	0.05	0.32	23.88	0.27	0.33	22.69	-0.09	-0.11	22.69
CWEQT7-5601	9.00	-0.16	-0.95	25.00	1.39	1.69	21.10	-1.68	-2.02	21.10
DDXTCF-5601	9.20	0.04	0.26	23.60	-0.01	-0.02	22.90	0.12	0.14	22.94
DE7CQ3-5605	9.20	0.04	0.26	24.00	0.39	0.47	22.50	-0.28	-0.34	22.54
DKUYJM-5601	8.76	-0.40	-2.41	22.92	-0.69	-0.84	22.47	-0.31	-0.38	22.47
DMP9ZJ-5601	9.29	0.13	0.81	23.80	0.19	0.23	23.00	0.22	0.26	22.98
DPB84F-5605	9.00	-0.16	-0.95	25.00	1.39	1.69	21.10	-1.68	-2.02	21.10

TABLE 1
Stain B, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
DW9RAH-5601	0.90	-8.26	-50.04 X	2.32	-21.29	-25.95 X	22.82	0.04	0.05	22.83
DX3FTD-5605	9.20	0.04	0.26	22.00	-1.61	-1.97	24.70	1.92	2.31	24.72
EQF6Y9-5601	9.20	0.04	0.26	22.82	-0.79	-0.97	23.78	1.00	1.20	23.78
ERA33A-5601	9.30	0.14	0.87	25.00	1.39	1.69	21.84	-0.94	-1.13	21.84
F4HVLD-5605	9.30	0.14	0.87	23.00	-0.61	-0.75	23.80	1.02	1.23	23.85
G78NNV-5605	9.50	0.34	2.08	24.60	0.99	1.20	23.00	0.22	0.26	22.72
G8GT2J-5605	9.20	0.04	0.26	23.90	0.29	0.35	22.70	-0.08	-0.10	22.64
G8WYGA-5601	9.00	-0.16	-0.95	24.00	0.39	0.47	22.02	-0.76	-0.92	22.02
G9BGKF-5605	3.86	-5.30	-32.10 X	10.09	-13.52	-16.48 X	22.50	-0.28	-0.34	22.49
GBW4C3-5601	9.20	0.04	0.26	23.00	-0.61	-0.75	23.60	0.82	0.98	23.58
GFNCGA-5601	9.20	0.04	0.26	25.00	1.39	1.69	22.00	-0.78	-0.94	21.59
GG4P67-5605	23.65	14.49	87.83 X	9.35	-14.26	-17.38 X	23.00	0.22	0.26	X
GNPPHX-5605	9.10	-0.06	-0.34	23.00	-0.61	-0.75	23.30	0.52	0.62	23.31
GU9RLU-5605	9.20	0.04	0.26	24.20	0.59	0.72	22.00	-0.78	-0.94	22.34
H97JHH-5605	9.52	0.36	2.20	23.27	-0.34	-0.42	24.15	1.37	1.65	24.15
HAZ6FF-5605	9.30	0.14	0.87	25.10	1.49	1.81	21.75	-1.03	-1.24	21.75
HJPXLK-5605	9.19	0.03	0.20	23.72	0.11	0.13	23.00	0.22	0.26	22.80
HKE7TZ-5601	9.20	0.04	0.26	23.00	-0.61	-0.75	23.60	0.82	0.98	23.58
HMP7U2-5601	9.33	0.17	1.05	23.03	-0.58	-0.71	23.90	1.12	1.35	23.90

TABLE 1
Stain B, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
HMRUDZ-5605	9.28	0.12	0.75	23.48	-0.13	-0.16	23.28	0.50	0.60	23.28
HV4T6Q-5605	8.40	-0.76	-4.59 X	21.40	-2.21	-2.70	23.00	0.22	0.26	23.11
JF4DDV-5601	9.25	0.09	0.56	25.00	1.39	1.69	21.70	-1.08	-1.30	21.72
JFHYPH-5605	9.00	-0.16	-0.95	24.10	0.49	0.59	21.90	-0.88	-1.06	21.93
JM3VYY-5605	9.10	-0.06	-0.34	24.80	1.19	1.45	21.50	-1.28	-1.54	21.53
JX4BP4-5605	9.30	0.14	0.87	25.20	1.59	1.93	21.66	-1.12	-1.35	21.66
KADF7J-5601	9.07	-0.09	-0.53	23.94	0.33	0.40	22.00	-0.78	-0.94	22.26
KFYBA9-5605	9.46	0.30	1.84	23.37	-0.24	-0.30	23.90	1.12	1.35	23.88
KJZGK9-5605	9.20	0.04	0.26	23.90	0.29	0.35	23.00	0.22	0.26	22.64
KMYU4R-5605	9.00	-0.16	-0.95	22.50	-1.11	-1.36	24.00	1.22	1.47	23.58
KZ6NZB-5601	9.20	0.04	0.26	22.00	-1.61	-1.97	24.70	1.92	2.31	24.72
L84VU4-5605	9.00	-0.16	-0.95	24.00	0.39	0.47	22.00	-0.78	-0.94	22.02
LAQEV2-5605	7.00	-2.16	-13.07 X	19.00	-4.61	-5.62 X	21.60	-1.18	-1.42	21.62
LDQHQU-5605	9.30	0.14	0.87	23.50	-0.11	-0.14	23.20	0.42	0.50	23.31
LDRHMN-5601	9.30	0.14	0.87	23.00	-0.61	-0.75	23.85	1.07	1.29	23.85
LH2V9T-5605	9.20	0.04	0.26	23.10	-0.51	-0.62	23.60	0.82	0.98	23.47
LTK6V2-5605	9.20	0.04	0.26	23.30	-0.31	-0.38	23.00	0.22	0.26	23.26
LUB7ZP-5605	9.50	0.34	2.08	22.00	-1.61	-1.97	25.50	2.72	3.27 X	25.58 X
LV7UDT-5601	9.20	0.04	0.26	24.00	0.39	0.47	22.54	-0.24	-0.29	22.54

TABLE 1
Stain B, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
M4H8VN-5605	9.00	-0.16	-0.95	23.00	-0.61	-0.75	23.00	0.22	0.26	23.04
MCCDUG-5605	9.20	0.04	0.26	23.70	0.09	0.11	23.00	0.22	0.26	22.84
MCNCKK-5605	9.27	0.11	0.69	22.66	-0.95	-1.16	24.00	1.22	1.47	24.15
MEWKU6-5605	9.30	0.14	0.87	23.30	-0.31	-0.38	23.50	0.72	0.86	23.52
MEWMGN-5605	8.90	-0.26	-1.56	24.00	0.39	0.47	21.77	-1.01	-1.22	21.77
MFTZ3V-5601	9.20	0.04	0.26	23.80	0.19	0.23	22.74	-0.04	-0.05	22.74
MQ9RNJ-5605	9.00	-0.16	-0.95	23.00	-0.61	-0.75	23.03	0.25	0.30	23.04
MTZQ7N-5601	9.10	-0.06	-0.34	23.50	-0.11	-0.14	22.80	0.02	0.02	22.78
MV3MRC-5605	9.20	0.04	0.26	24.90	1.29	1.57	21.68	-1.10	-1.33	21.68
N97C64-5605	8.80	-0.36	-2.16	19.40	-4.21	-5.13 X	27.00	4.22	5.08 X	26.98 X
NAENHY-5601	9.20	0.04	0.26	24.20	0.59	0.72	22.34	-0.44	-0.53	22.34
NBDPQC-5605	9.10	-0.06	-0.34	22.90	-0.71	-0.87	23.40	0.62	0.74	23.41
NRXFL6-5605	9.30	0.14	0.87	23.70	0.09	0.11	23.00	0.22	0.26	23.10
NUUP32-5601	8.90	-0.26	-1.56	24.10	0.49	0.59	22.00	-0.78	-0.94	21.67
P6LZJ8-5605	9.16	0.00	0.02	23.35	-0.26	-0.32	23.14	0.36	0.43	23.10
PCRCDG-5605	9.00	-0.16	-0.95	22.00	-1.61	-1.97	24.15	1.37	1.65	24.15
Q23Z9X-5605	9.50	0.34	2.08	23.00	-0.61	-0.75	24.30	1.52	1.83	24.40
Q3TBYQ-5605	9.00	-0.16	-0.95	24.40	0.79	0.96	22.00	-0.78	-0.94	21.64
Q68N8N-5605	9.00	-0.16	-0.95	22.00	-1.61	-1.97	24.10	1.32	1.59	24.15

TABLE 1
Stain B, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
QHLZUM-5605	9.10	-0.06	-0.34	23.60	-0.01	-0.02	23.00	0.22	0.26	22.68
QNATZV-5605	8.60	-0.56	-3.37 X	23.00	-0.61	-0.75	22.00	-0.78	-0.94	21.96
QT9ZPY-5605	7.50	-1.66	-10.04 X	20.10	-3.51	-4.28 X	21.90	-0.88	-1.06	21.91
QUWBKY-5605	9.12	-0.04	-0.22	24.51	0.90	1.09	21.84	-0.94	-1.13	21.84
R2TTAU-5605	8.84	-0.32	-1.92	23.00	-0.61	-0.75	23.00	0.22	0.26	22.60
RELA43-5605	9.00	-0.16	-0.95	24.00	0.39	0.47	22.00	-0.78	-0.94	22.02
RLBP6C-5605	9.00	-0.16	-0.95	23.00	-0.61	-0.75	23.00	0.22	0.26	23.04
RN87BV-5601	9.20	0.04	0.26	24.70	1.09	1.33	21.90	-0.88	-1.06	21.87
RP34BN-5601	9.00	-0.16	-0.95	22.00	-1.61	-1.97	24.00	1.22	1.47	24.15
RZJLAM-5605	9.10	-0.06	-0.34	24.00	0.39	0.47	22.30	-0.48	-0.58	22.28
T37GD8-5605	9.50	0.34	2.08	25.00	1.39	1.69	21.10	-1.68	-2.02	22.33
TF9BKA-5601	9.00	-0.16	-0.95	24.00	0.39	0.47	22.02	-0.76	-0.92	22.02
TMT7MY-5605	9.30	0.14	0.87	25.00	1.39	1.69	22.00	-0.78	-0.94	21.84
TPHJ6H-5605	9.00	-0.16	-0.95	23.50	-0.11	-0.14	22.50	-0.28	-0.34	22.52
TPUEM3-5605	9.25	0.09	0.56	23.00	-0.61	-0.75	24.00	1.22	1.47	23.71
TTUMRD-5601	9.10	-0.06	-0.34	22.80	-0.81	-0.99	23.50	0.72	0.86	23.52
UDYP69-5605	9.22	0.06	0.38	24.24	0.63	0.76	22.40	-0.38	-0.46	22.36
UERFEU-5605	9.00	-0.16	-0.95	24.00	0.39	0.47	22.00	-0.78	-0.94	22.02
V3EFHZ-5605	9.00	-0.16	-0.95	23.00	-0.61	-0.75	23.00	0.22	0.26	23.04

TABLE 1
Stain B, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
V7U6KN-5601	9.20	0.04	0.26	24.60	0.99	1.20	21.96	-0.82	-0.99	21.96
VM4PK2-5605	3.34	-5.82	-35.25 X	8.88	-14.73	-17.96 X	22.10	-0.68	-0.82	22.09
W2DZJ9-5601	9.20	0.04	0.26	22.70	-0.91	-1.11	24.00	1.22	1.47	23.91
W87Z4V-5605	9.00	-0.16	-0.95	24.00	0.39	0.47	22.00	-0.78	-0.94	22.02
WAQ2QV-5605	9.12	-0.04	-0.22	23.36	-0.25	-0.31	22.98	0.20	0.24	22.98
WBANMR-5605	9.10	-0.06	-0.34	21.90	-1.71	-2.09	24.60	1.82	2.19	24.55
WD997G-5605	9.15	-0.01	-0.04	23.90	0.29	0.35	23.00	0.22	0.26	22.51
WGWK89-5601	9.26	0.10	0.62	24.40	0.79	0.96	22.00	-0.78	-0.94	22.30
WJYNT4-5605	9.00	-0.16	-0.95	25.00	1.39	1.69	21.10	-1.68	-2.02	21.10
XDRCHN-5601	9.34	0.18	1.11	23.77	0.16	0.19	23.10	0.32	0.38	23.14
XEYWXB-5601	9.10	-0.06	-0.34	23.00	-0.61	-0.75	23.30	0.52	0.62	23.31
XMT2RC-5605	9.32	0.16	0.99	23.88	0.27	0.33	22.98	0.20	0.24	22.97
XUCZQX-5605	3.86	-5.30	-32.10 X	9.89	-13.72	-16.72 X	23.00	0.22	0.26	22.97
XV6ZLN-5601	9.20	0.04	0.26	23.30	-0.31	-0.38	23.00	0.22	0.26	23.26
XWYP4J-5605	9.00	-0.16	-0.95	24.00	0.39	0.47	22.02	-0.76	-0.92	22.02
YLEWVZ-5605	9.13	-0.03	-0.16	23.42	-0.19	-0.23	23.00	0.22	0.26	22.94
YW3JBW-5601	9.20	0.04	0.26	20.70	-2.91	-3.55 X	26.40	3.62	4.35 X	26.39 X
YZDYET-5605	9.00	-0.16	-0.95	23.00	-0.61	-0.75	23.04	0.26	0.31	23.04
Z4Q2WH-5601	9.44	0.28	1.72	23.86	0.25	0.30	23.30	0.52	0.62	23.31

TABLE 1
Stain B, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
Z6NCRK- 5601	9.20	0.04	0.26	22.47	-1.14	-1.39	24.20	1.42	1.71	24.17
ZHXMNN- 5605	9.12	-0.04	-0.22	24.31	0.70	0.85	22.06	-0.72	-0.87	22.03
ZMQPP3- 5605	9.30	0.14	0.87	23.00	-0.61	-0.75	23.80	1.02	1.23	23.85
ZYHBXH- 5605	9.00	-0.16	-0.95	23.04	-0.57	-0.70	23.00	0.22	0.26	22.99
Grand Mean	9.16			23.61			22.78			22.78
Standard Deviation	0.17			0.82			0.83			0.81
Participants Included in calculations		142			142			151		150
Participants excluded from calculations (indicated by X)		14			14			5		6

Stain B Preparation Angle: 24.4°

TABLE 1
Stain C

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
2HR23R- 5605	1.40	0.19	1.60	6.00	0.11	0.29	13.50	1.57	1.44	13.49
2UKKJH- 5605	1.00	-0.21	-1.77	5.00	-0.89	-2.21	11.53	-0.40	-0.36	11.54
2X3GQG- 5605	1.30	0.09	0.76	5.90	0.01	0.04	13.00	1.07	0.98	12.73
3228GT- 5601	1.20	-0.01	-0.08	5.70	-0.19	-0.46	12.20	0.27	0.25	12.15
36WZ83- 5605	1.00	-0.21	-1.77	6.00	0.11	0.29	10.00	-1.93	-1.76	9.59
3T6JCA- 5605	1.20	-0.01	-0.08	5.20	-0.69	-1.71	13.34	1.41	1.29	13.34
3X6KV2- 5605	1.20	-0.01	-0.08	6.19	0.30	0.76	11.18	-0.75	-0.68	11.18
3ZL6AK- 5601	1.21	0.00	0.00	5.97	0.08	0.21	11.70	-0.23	-0.21	11.69
48GCHR- 5605	1.00	-0.21	-1.77	6.00	0.11	0.29	9.59	-2.34	-2.13	9.59
49EKUH- 5601	1.24	0.03	0.25	5.73	-0.16	-0.39	12.50	0.57	0.52	12.50
4BJCF4- 5605	1.20	-0.01	-0.08	5.80	-0.09	-0.21	11.94	0.01	0.01	11.94
4EJJ22- 5605	1.10	-0.11	-0.92	5.60	-0.29	-0.71	11.30	-0.63	-0.57	11.33
4J2G7Z- 5605	1.20	-0.01	-0.08	5.90	0.01	0.04	11.70	-0.23	-0.21	11.74
4JUE26- 5605	1.20	-0.01	-0.08	5.90	0.01	0.04	11.74	-0.19	-0.17	11.74
4JX2HH- 5601	1.29	0.08	0.68	6.26	0.37	0.94	11.90	-0.03	-0.03	11.89
669GFZ- 5605	1.20	-0.01	-0.08	5.90	0.01	0.04	12.00	0.07	0.07	11.74
67339R- 5605	28.70	27.49	231.37X	121.60	115.71	289.09X	13.70	1.77	1.62	13.65
67NXCE- 5605	1.20	-0.01	-0.08	5.70	-0.19	-0.46	12.00	0.07	0.07	12.15
6CBTAC- 5605	1.20	-0.01	-0.08	6.00	0.11	0.29	12.00	0.07	0.07	11.54

TABLE 1
Stain C, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
6EVHR4-5601	1.10	-0.11	-0.92	5.60	-0.29	-0.71	11.30	-0.63	-0.57	11.33
7JN2BE-5601	1.20	-0.01	-0.08	5.70	-0.19	-0.46	12.15	0.22	0.20	12.15
7NKN43-5605	1.20	-0.01	-0.08	5.30	-0.59	-1.46	13.00	1.07	0.98	13.09
7RHBEH-5601	1.00	-0.21	-1.77	6.00	0.11	0.29	9.59	-2.34	-2.13	9.59
7RYDCH-5605	1.16	-0.05	-0.42	5.96	0.07	0.19	11.20	-0.73	-0.66	11.22
84CMQV-5605	1.20	-0.01	-0.08	5.90	0.01	0.04	11.74	-0.19	-0.17	11.74
8EBG7D-5601	1.20	-0.01	-0.08	5.90	0.01	0.04	12.00	0.07	0.07	11.74
8M324Y-5605	1.30	0.09	0.76	6.50	0.61	1.54	12.00	0.07	0.07	11.54
8Q6PTM-5601	1.30	0.09	0.76	6.40	0.51	1.29	12.00	0.07	0.07	11.72
8YX3TL-5601	1.20	-0.01	-0.08	6.00	0.11	0.29	11.50	-0.43	-0.39	11.54
99YWCD-5605	1.30	0.09	0.76	6.10	0.21	0.54	12.30	0.37	0.34	12.30
9ABKZJ-5605	1.20	-0.01	-0.08	6.30	0.41	1.04	11.00	-0.93	-0.85	10.98
9ABTJ3-5601	1.20	-0.01	-0.08	5.40	-0.49	-1.21	14.00	2.07	1.89	12.84
9DRAYM-5605	1.50	0.29	2.44	6.00	0.11	0.29	14.28	2.35	2.15	14.48
9L3BGG-5605	0.10	-1.11	-9.34 X	0.60	-5.29	-13.20 X	12.70	0.77	0.70	9.59
9M3BKM-5601	1.50	0.29	2.44	6.50	0.61	1.54	13.00	1.07	0.98	13.34
9T4UE7-5605	1.00	-0.21	-1.77	6.00	0.11	0.29	9.59	-2.34	-2.13	9.59
A3LN8E-5601	1.20	-0.01	-0.08	5.90	0.01	0.04	11.70	-0.23	-0.21	11.74
AFC83J-5605	1.20	-0.01	-0.08	6.10	0.21	0.54	11.30	-0.63	-0.57	11.35

TABLE 1
Stain C, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
AFRQMG-5605	1.20	-0.01	-0.08	5.70	-0.19	-0.46	12.00	0.07	0.07	12.15
AMTY9B-5601	1.22	0.01	0.09	5.94	0.05	0.14	11.85	-0.08	-0.07	11.85
ANLWFH-5601	1.12	-0.09	-0.76	5.93	0.04	0.11	10.89	-1.04	-0.95	10.89
AVB8YT-5605	1.19	-0.02	-0.17	5.62	-0.27	-0.66	12.20	0.27	0.25	12.22
AXCDBD-5605	1.30	0.09	0.76	6.30	0.41	1.04	11.90	-0.03	-0.03	11.91
B2B7MM-5601	1.30	0.09	0.76	6.40	0.51	1.29	11.70	-0.23	-0.21	11.72
B344WF-5605	1.00	-0.21	-1.77	6.00	0.11	0.29	9.60	-2.33	-2.13	9.59
B8XYW2-5605	1.20	-0.01	-0.08	5.80	-0.09	-0.21	11.94	0.01	0.01	11.94
BUV6RK-5605	0.91	-0.30	-2.52	4.15	-1.74	-4.34 X	12.70	0.77	0.70	12.67
BV4P88-5601	1.30	0.09	0.76	6.00	0.11	0.29	12.51	0.58	0.53	12.51
C4BLTP-5605	1.24	0.03	0.25	6.51	0.62	1.56	11.00	-0.93	-0.85	10.98
C8F8MH-5601	1.20	-0.01	-0.08	6.10	0.21	0.54	11.30	-0.63	-0.57	11.35
CTR634-5605	1.25	0.04	0.34	5.99	0.10	0.26	12.05	0.12	0.11	12.05
CWEQT7-5601	1.20	-0.01	-0.08	6.00	0.11	0.29	11.54	-0.39	-0.35	11.54
DDXTCF-5601	1.20	-0.01	-0.08	5.80	-0.09	-0.21	11.90	-0.03	-0.03	11.94
DE7CQ3-5605	1.40	0.19	1.60	6.30	0.41	1.04	12.80	0.87	0.80	12.84
DKUYJM-5601	1.17	-0.04	-0.33	5.50	-0.39	-0.96	12.28	0.35	0.32	12.28
DMP9ZJ-5601	1.20	-0.01	-0.08	5.80	-0.09	-0.21	12.00	0.07	0.07	11.94
DPB84F-5605	1.00	-0.21	-1.77	6.00	0.11	0.29	9.60	-2.33	-2.13	9.59

TABLE 1
Stain C, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
DW9RAH-5601	0.11	-1.10	-9.26 X	0.55	-5.34	-13.33 X	11.53	-0.40	-0.36	11.54
DX3FTD-5605	1.20	-0.01	-0.08	5.90	0.01	0.04	11.70	-0.23	-0.21	11.74
EQF6Y9-5601	1.20	-0.01	-0.08	5.62	-0.27	-0.66	12.33	0.40	0.37	12.33
ERA33A-5601	1.20	-0.01	-0.08	6.50	0.61	1.54	10.64	-1.29	-1.18	10.64
F4HVDL-5605	1.30	0.09	0.76	6.00	0.11	0.29	12.50	0.57	0.52	12.51
G78NNV-5605	1.20	-0.01	-0.08	6.40	0.51	1.29	11.00	-0.93	-0.85	10.81
G8GT2J-5605	1.30	0.09	0.76	6.20	0.31	0.79	12.10	0.17	0.16	12.10
G8WYGA-5601	1.00	-0.21	-1.77	5.90	0.01	0.04	9.75	-2.18	-1.99	9.76
G9BGKF-5605	1.55	0.34	2.86	7.21	1.32	3.31 X	12.40	0.47	0.43	12.41
GBW4C3-5601	1.20	-0.01	-0.08	5.60	-0.29	-0.71	12.40	0.47	0.43	12.37
GFNCGA-5601	1.20	-0.01	-0.08	6.40	0.51	1.29	11.00	-0.93	-0.85	10.81
GG4P67-5605	6.00	4.79	40.32 X	1.35	-4.54	-11.33 X	13.00	1.07	0.98	X
GNPPHX-5605	1.20	-0.01	-0.08	5.50	-0.39	-0.96	12.60	0.67	0.61	12.60
GU9RLU-5605	1.20	-0.01	-0.08	6.00	0.11	0.29	11.54	-0.39	-0.35	11.54
H97JHH-5605	1.27	0.06	0.51	5.48	-0.41	-1.01	13.37	1.44	1.32	13.40
HAZ6FF-5605	1.20	-0.01	-0.08	6.40	0.51	1.29	10.81	-1.12	-1.02	10.81
HJPXLK-5605	1.24	0.03	0.25	6.00	0.11	0.29	12.00	0.07	0.07	11.93
HKE7TZ-5601	1.20	-0.01	-0.08	6.20	0.31	0.79	11.20	-0.73	-0.66	11.16
HMP7U2-5601	1.22	0.01	0.09	5.51	-0.38	-0.94	12.79	0.86	0.79	12.79

TABLE 1
Stain C, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
HMRUDZ-5605	1.22	0.01	0.09	6.08	0.19	0.49	11.58	-0.35	-0.32	11.58
HV4T6Q-5605	1.20	-0.01	-0.08	5.20	-0.69	-1.71	13.00	1.07	0.98	13.34
JF4DDV-5601	1.20	-0.01	-0.08	6.30	0.41	1.04	11.00	-0.93	-0.85	10.98
JFHYPH-5605	1.20	-0.01	-0.08	6.30	0.41	1.04	11.00	-0.93	-0.85	10.98
JM3VYY-5605	1.20	-0.01	-0.08	5.50	-0.39	-0.96	12.60	0.67	0.61	12.60
JX4BP4-5605	1.30	0.09	0.76	6.50	0.61	1.54	11.54	-0.39	-0.35	11.54
KADF7J-5601	1.29	0.08	0.68	5.50	-0.39	-0.96	14.00	2.07	1.89	13.56
KFYBA9-5605	1.25	0.04	0.34	5.78	-0.11	-0.26	12.50	0.57	0.52	12.49
KJZGK9-5605	1.20	-0.01	-0.08	6.00	0.11	0.29	12.00	0.07	0.07	11.54
KMYU4R-5605	1.20	-0.01	-0.08	5.50	-0.39	-0.96	13.00	1.07	0.98	12.60
KZ6NZB-5601	1.20	-0.01	-0.08	5.80	-0.09	-0.21	11.90	-0.03	-0.03	11.94
L84VU4-5605	1.10	-0.11	-0.92	6.00	0.11	0.29	10.60	-1.33	-1.21	10.56
LAQEV2-5605	1.00	-0.21	-1.77	4.50	-1.39	-3.46 X	12.00	0.07	0.07	12.84
LDQHQU-5605	1.30	0.09	0.76	5.80	-0.09	-0.21	12.90	0.97	0.89	12.95
LDRHMN-5601	1.20	-0.01	-0.08	5.80	-0.09	-0.21	12.12	0.19	0.18	11.94
LH2V9T-5605	1.20	-0.01	-0.08	5.80	-0.09	-0.21	12.10	0.17	0.16	11.94
LTK6V2-5605	1.20	-0.01	-0.08	5.60	-0.29	-0.71	12.00	0.07	0.07	12.37
LUB7ZP-5605	1.50	0.29	2.44	6.00	0.11	0.29	14.50	2.57	2.35	14.48
LV7UDT-5601	1.30	0.09	0.76	6.00	0.11	0.29	12.51	0.58	0.53	12.51

TABLE 1
Stain C, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
M4H8VN-5605	1.20	-0.01	-0.08	5.50	-0.39	-0.96	13.00	1.07	0.98	12.60
MCCDUG-5605	1.20	-0.01	-0.08	6.10	0.21	0.54	11.00	-0.93	-0.85	11.35
MCNCKK-5605	1.22	0.01	0.09	5.08	-0.81	-2.01	14.00	2.07	1.89	13.90
MEWKU6-5605	1.30	0.09	0.76	5.80	-0.09	-0.21	13.00	1.07	0.98	12.95
MEWMGN-5605	1.20	-0.01	-0.08	6.50	0.61	1.54	10.64	-1.29	-1.18	10.64
MFTZ3V-5601	1.20	-0.01	-0.08	6.00	0.11	0.29	11.54	-0.39	-0.35	11.54
MQ9RNJ-5605	1.00	-0.21	-1.77	5.00	-0.89	-2.21	11.53	-0.40	-0.36	11.54
MTZQ7N-5601	1.20	-0.01	-0.08	6.00	0.11	0.29	11.50	-0.43	-0.39	11.54
MV3MRC-5605	1.30	0.09	0.76	6.50	0.61	1.54	11.53	-0.40	-0.36	11.54
N97C64-5605	1.00	-0.21	-1.77	4.70	-1.19	-2.96	12.30	0.37	0.34	12.28
NAENHY-5601	1.20	-0.01	-0.08	6.00	0.11	0.29	11.54	-0.39	-0.35	11.54
NBDPQC-5605	1.20	-0.01	-0.08	5.80	-0.09	-0.21	11.90	-0.03	-0.03	11.94
NRXFL6-5605	1.20	-0.01	-0.08	6.00	0.11	0.29	11.00	-0.93	-0.85	11.54
NUUP32-5601	1.30	0.09	0.76	5.40	-0.49	-1.21	14.00	2.07	1.89	13.93
P6LZJ8-5605	1.31	0.10	0.84	6.05	0.16	0.41	12.51	0.58	0.53	12.51
PCRCDG-5605	1.00	-0.21	-1.77	5.00	-0.89	-2.21	11.54	-0.39	-0.35	11.54
Q23Z9X-5605	1.25	0.04	0.34	6.50	0.61	1.54	11.00	-0.93	-0.85	11.09
Q3TBYQ-5605	1.20	-0.01	-0.08	6.20	0.31	0.79	11.00	-0.93	-0.85	11.16
Q68N8N-5605	1.00	-0.21	-1.77	5.00	-0.89	-2.21	11.50	-0.43	-0.39	11.54

TABLE 1
Stain C, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
QHLZUM-5605	1.20	-0.01	-0.08	5.90	0.01	0.04	12.00	0.07	0.07	11.74
QNATZV-5605	1.20	-0.01	-0.08	5.80	-0.09	-0.21	11.90	-0.03	-0.03	11.94
QT9ZPY-5605	1.30	0.09	0.76	4.90	-0.99	-2.46	15.40	3.47	3.17 X	15.39 X
QUWBKY-5605	1.25	0.04	0.34	6.19	0.30	0.76	11.60	-0.33	-0.30	11.65
R2TTAU-5605	1.24	0.03	0.25	4.94	-0.95	-2.36	15.00	3.07	2.80	14.54
RELA43-5605	1.10	-0.11	-0.92	6.20	0.31	0.79	10.20	-1.73	-1.58	10.22
RLBP6C-5605	1.00	-0.21	-1.77	5.00	-0.89	-2.21	11.50	-0.43	-0.39	11.54
RN87BV-5601	1.50	0.29	2.44	6.10	0.21	0.54	14.20	2.27	2.07	14.24
RP34BN-5601	1.20	-0.01	-0.08	5.80	-0.09	-0.21	12.00	0.07	0.07	11.94
RZJLAM-5605	1.20	-0.01	-0.08	6.20	0.31	0.79	11.20	-0.73	-0.66	11.16
T37GD8-5605	1.50	0.29	2.44	6.50	0.61	1.54	13.30	1.37	1.25	13.34
TF9BKA-5601	1.00	-0.21	-1.77	6.25	0.36	0.91	9.21	-2.72	-2.48	9.21
TMT7MY-5605	1.30	0.09	0.76	6.40	0.51	1.29	12.00	0.07	0.07	11.72
TPHJ6H-5605	1.00	-0.21	-1.77	5.75	-0.14	-0.34	10.00	-1.93	-1.76	10.02
TPUEM3-5605	1.00	-0.21	-1.77	5.75	-0.14	-0.34	10.00	-1.93	-1.76	10.02
TTUMRD-5601	1.30	0.09	0.76	5.40	-0.49	-1.21	13.70	1.77	1.62	13.93
UDYP69-5605	1.16	-0.05	-0.42	6.11	0.22	0.56	10.90	-1.03	-0.94	10.94
UERFEU-5605	1.00	-0.21	-1.77	5.50	-0.39	-0.96	11.00	-0.93	-0.85	10.48
V3EFHZ-5605	1.20	-0.01	-0.08	5.60	-0.29	-0.71	12.40	0.47	0.43	12.37

TABLE 1
Stain C, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
V7U6KN-5601	1.20	-0.01	-0.08	6.30	0.41	1.04	10.98	-0.95	-0.87	10.98
VM4PK2-5605	1.52	0.31	2.61	7.62	1.73	4.33 X	11.50	-0.43	-0.39	11.51
W2DZJ9-5601	1.40	0.19	1.60	5.80	-0.09	-0.21	14.00	2.07	1.89	13.97
W87Z4V-5605	1.00	-0.21	-1.77	6.00	0.11	0.29	9.60	-2.33	-2.13	9.59
WAQ2QV-5605	1.19	-0.02	-0.17	5.78	-0.11	-0.26	11.88	-0.05	-0.04	11.88
WBANMR-5605	1.30	0.09	0.76	6.10	0.21	0.54	12.30	0.37	0.34	12.30
WD997G-5605	1.25	0.04	0.34	5.90	0.01	0.04	12.00	0.07	0.07	12.23
WGWK89-5601	1.28	0.07	0.59	5.87	-0.02	-0.04	13.00	1.07	0.98	12.59
WJYNT4-5605	1.20	-0.01	-0.08	6.50	0.61	1.54	10.63	-1.30	-1.19	10.64
XDRCHN-5601	1.28	0.07	0.59	5.98	0.09	0.24	12.40	0.47	0.43	12.36
XEYWXB-5601	1.20	-0.01	-0.08	5.90	0.01	0.04	11.70	-0.23	-0.21	11.74
XMT2RC-5605	1.25	0.04	0.34	6.11	0.22	0.56	11.81	-0.12	-0.11	11.81
XUCZQX-5605	1.87	0.66	5.56 X	8.56	2.67	6.68 X	12.60	0.67	0.61	12.62
XV6ZLN-5601	1.20	-0.01	-0.08	5.90	0.01	0.04	12.00	0.07	0.07	11.74
XWYP4J-5605	1.20	-0.01	-0.08	6.50	0.61	1.54	10.64	-1.29	-1.18	10.64
YLEWVZ-5605	1.31	0.10	0.84	5.95	0.06	0.16	13.00	1.07	0.98	12.72
YW3JBW-5601	1.20	-0.01	-0.08	5.30	-0.59	-1.46	13.10	1.17	1.07	13.09
YZDYET-5605	1.00	-0.21	-1.77	5.00	-0.89	-2.21	11.54	-0.39	-0.35	11.54
Z4Q2WH-5601	1.49	0.28	2.36	5.75	-0.14	-0.34	15.00	3.07	2.80	15.02

TABLE 1
Stain C, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
Z6NCRK- 5601	1.24	0.03	0.25	5.39	-0.50	-1.24	13.30	1.37	1.25	13.30
ZHXMNN- 5605	1.37	0.16	1.35	7.00	1.11	2.78	11.30	-0.63	-0.57	11.29
ZMQPP3- 5605	1.30	0.09	0.76	6.10	0.21	0.54	12.30	0.37	0.34	12.30
ZYHBXH- 5605	1.12	-0.09	-0.76	5.52	-0.37	-0.91	11.71	-0.22	-0.20	11.71
Grand Mean	1.21			5.89			11.93			11.87
Standard Deviation	0.12			0.40			1.10			1.10
Participants Included in calculations		151			147			155		154
Participants excluded from calculations (indicated by X)		5			9			1		2

Stain C Preparation Angle: 12.0°

TABLE 1
Stain D

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
2HR23R- 5605	2.50	0.15	1.14	7.60	-0.08	-0.20	19.20	1.29	1.27	19.20
2UKKJH- 5605	2.20	-0.15	-1.09	6.80	-0.88	-2.17	18.87	0.96	0.94	18.88
2X3GQG- 5605	2.40	0.05	0.40	7.90	0.22	0.54	18.00	0.09	0.09	17.69
3228GT- 5601	2.50	0.15	1.14	7.00	-0.68	-1.68	20.90	2.99	2.94	20.92
36WZ83- 5605	2.00	-0.35	-2.57	7.00	-0.68	-1.68	17.00	-0.91	-0.89	16.60
3T6JCA- 5605	2.20	-0.15	-1.09	7.20	-0.48	-1.18	17.79	-0.12	-0.12	17.79
3X6KV2- 5605	2.32	-0.03	-0.20	7.90	0.22	0.54	17.08	-0.83	-0.81	17.08
3ZL6AK- 5601	2.34	-0.01	-0.05	7.70	0.02	0.05	17.70	-0.21	-0.21	17.69
48GCHR- 5605	2.00	-0.35	-2.57	8.00	0.32	0.79	14.48	-3.43	-3.37 X	14.48
49EKUH- 5601	2.37	0.02	0.17	7.95	0.27	0.67	17.34	-0.57	-0.56	17.34
4BJCF4- 5605	2.30	-0.05	-0.34	7.60	-0.08	-0.20	17.62	-0.29	-0.28	17.62
4EJJ22- 5605	2.00	-0.35	-2.57	7.00	-0.68	-1.68	16.60	-1.31	-1.29	16.60
4J2G7Z- 5605	2.30	-0.05	-0.34	7.80	0.12	0.30	17.10	-0.81	-0.79	17.15
4JUE26- 5605	2.40	0.05	0.40	7.60	-0.08	-0.20	18.41	0.50	0.49	18.41
4JX2HH- 5601	2.35	0.00	0.03	7.83	0.15	0.37	17.50	-0.41	-0.40	17.47
669GFZ- 5605	2.20	-0.15	-1.09	7.60	-0.08	-0.20	17.00	-0.91	-0.89	16.83
67339R- 5605	37.70	35.35	261.72X	116.80	109.12	269.47X	18.80	0.89	0.87	18.83
67NXCE- 5605	2.40	0.05	0.40	7.40	-0.28	-0.69	19.00	1.09	1.07	18.92
6CBTAC- 5605	2.40	0.05	0.40	7.80	0.12	0.30	18.00	0.09	0.09	17.92

TABLE 1
Stain D, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
6EVHR4-5601	2.30	-0.05	-0.34	7.10	-0.58	-1.43	18.90	0.99	0.97	18.90
7JN2BE-5601	2.30	-0.05	-0.34	7.10	-0.58	-1.43	18.90	0.99	0.97	18.90
7NKN43-5605	2.40	0.05	0.40	7.80	0.12	0.30	18.00	0.09	0.09	17.92
7RHBEH-5601	2.00	-0.35	-2.57	7.50	-0.18	-0.44	15.46	-2.45	-2.41	15.47
7RYDCH-5605	2.45	0.10	0.77	7.79	0.11	0.27	18.40	0.49	0.48	18.33
84CMQV-5605	2.30	-0.05	-0.34	7.60	-0.08	-0.20	17.62	-0.29	-0.28	17.62
8EBG7D-5601	2.30	-0.05	-0.34	7.80	0.12	0.30	17.00	-0.91	-0.89	17.15
8M324Y-5605	2.50	0.15	1.14	8.50	0.82	2.03	17.00	-0.91	-0.89	17.10
8Q6PTM-5601	2.50	0.15	1.14	8.40	0.72	1.78	17.00	-0.91	-0.89	17.31
8YX3TL-5601	2.40	0.05	0.40	7.90	0.22	0.54	17.60	-0.31	-0.30	17.69
99YWCD-5605	2.50	0.15	1.14	7.90	0.22	0.54	18.40	0.49	0.48	18.45
9ABKZJ-5605	2.30	-0.05	-0.34	7.70	0.02	0.05	17.00	-0.91	-0.89	17.38
9ABTJ3-5601	2.40	0.05	0.40	7.10	-0.58	-1.43	20.00	2.09	2.05	19.76
9DRAYM-5605	2.50	0.15	1.14	8.00	0.32	0.79	18.12	0.21	0.21	18.21
9L3BGG-5605	0.20	-2.15	-15.89 X	0.80	-6.88	-16.99 X	18.10	0.19	0.19	14.48
9M3BKM-5601	3.00	0.65	4.84 X	8.00	0.32	0.79	22.00	4.09	4.02 X	22.02 X
9T4UE7-5605	2.00	-0.35	-2.57	8.00	0.32	0.79	14.48	-3.43	-3.37 X	14.48
A3LN8E-5601	2.40	0.05	0.40	7.50	-0.18	-0.44	18.70	0.79	0.78	18.66
AFC83J-5605	2.40	0.05	0.40	7.60	-0.08	-0.20	18.40	0.49	0.48	18.41

TABLE 1
Stain D, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
AFRQMG-5605	2.20	-0.15	-1.09	7.30	-0.38	-0.94	17.50	-0.41	-0.40	17.54
AMTY9B-5601	2.35	0.00	0.03	7.36	-0.32	-0.79	18.62	0.71	0.70	18.62
ANLWFH-5601	2.38	0.03	0.25	8.05	0.37	0.91	17.20	-0.71	-0.70	17.20
AVB8YT-5605	2.29	-0.06	-0.42	7.62	-0.06	-0.15	17.50	-0.41	-0.40	17.49
AXCDBD-5605	2.50	0.15	1.14	8.50	0.82	2.03	17.10	-0.81	-0.79	17.10
B2B7MM-5601	2.40	0.05	0.40	8.00	0.32	0.79	17.50	-0.41	-0.40	17.46
B344WF-5605	2.20	-0.15	-1.09	7.30	-0.38	-0.94	17.50	-0.41	-0.40	17.54
B8XYW2-5605	2.30	-0.05	-0.34	7.30	-0.38	-0.94	18.36	0.45	0.44	18.36
BUV6RK-5605	1.06	-1.29	-9.52 X	3.49	-4.19	-10.35 X	17.70	-0.21	-0.21	17.68
BV4P88-5601	2.40	0.05	0.40	7.00	-0.68	-1.68	20.05	2.14	2.10	20.05
C4BLTP-5605	2.34	-0.01	-0.05	8.26	0.58	1.43	16.00	-1.91	-1.87	16.46
C8F8MH-5601	2.30	-0.05	-0.34	7.80	0.12	0.30	17.10	-0.81	-0.79	17.15
CTR634-5605	2.31	-0.04	-0.27	7.86	0.18	0.45	17.09	-0.82	-0.80	17.09
CWEQT7-5601	2.40	0.05	0.40	8.00	0.32	0.79	17.46	-0.45	-0.44	17.46
DDXTCF-5601	2.40	0.05	0.40	7.80	0.12	0.30	17.90	-0.01	-0.01	17.92
DE7CQ3-5605	2.40	0.05	0.40	8.00	0.32	0.79	17.50	-0.41	-0.40	17.46
DKUYJM-5601	2.24	-0.11	-0.79	8.00	0.32	0.79	16.26	-1.65	-1.62	16.26
DMP9ZJ-5601	2.38	0.03	0.25	7.55	-0.13	-0.32	18.00	0.09	0.09	18.37
DPB84F-5605	2.00	-0.35	-2.57	7.50	-0.18	-0.44	15.50	-2.41	-2.37	15.47

TABLE 1
Stain D, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
DW9RAH-5601	0.23	-2.12	-15.67 X	0.79	-6.89	-17.01 X	16.92	-0.99	-0.97	16.93
DX3FTD-5605	2.30	-0.05	-0.34	7.50	-0.18	-0.44	17.90	-0.01	-0.01	17.86
EQF6Y9-5601	2.40	0.05	0.40	7.22	-0.46	-1.13	19.42	1.51	1.48	19.42
ERA33A-5601	2.30	-0.05	-0.34	8.20	0.52	1.29	16.29	-1.62	-1.59	16.29
F4HVDL-5605	2.40	0.05	0.40	7.50	-0.18	-0.44	18.70	0.79	0.78	18.66
G78NNV-5605	2.40	0.05	0.40	7.90	0.22	0.54	18.00	0.09	0.09	17.69
G8GT2J-5605	2.40	0.05	0.40	7.80	0.12	0.30	17.90	-0.01	-0.01	17.92
G8WYGA-5601	1.80	-0.55	-4.05 X	7.80	0.12	0.30	13.34	-4.57	-4.49 X	13.34 X
G9BGKF-5605	2.53	0.18	1.36	8.15	0.47	1.16	18.10	0.19	0.19	18.09
GBW4C3-5601	2.40	0.05	0.40	7.20	-0.48	-1.18	19.50	1.59	1.56	19.47
GFNCGA-5601	2.40	0.05	0.40	8.00	0.32	0.79	18.00	0.09	0.09	17.46
GG4P67-5605	7.90	5.55	41.11 X	2.50	-5.18	-12.79 X	18.00	0.09	0.09	X
GNPPHX-5605	2.40	0.05	0.40	7.50	-0.18	-0.44	18.70	0.79	0.78	18.66
GU9RLU-5605	2.30	-0.05	-0.34	7.70	0.02	0.05	17.38	-0.53	-0.52	17.38
H97JHH-5605	2.38	0.03	0.25	8.25	0.57	1.41	16.74	-1.17	-1.15	16.77
HAZ6FF-5605	2.40	0.05	0.40	8.50	0.82	2.03	16.40	-1.51	-1.48	16.40
HJPXLK-5605	2.38	0.03	0.25	7.90	0.22	0.54	18.00	0.09	0.09	17.53
HKE7TZ-5601	2.40	0.05	0.40	8.10	0.42	1.04	17.20	-0.71	-0.70	17.24
HMP7U2-5601	2.33	-0.02	-0.12	7.32	-0.36	-0.89	18.56	0.65	0.64	18.56

TABLE 1
Stain D, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
HMRUDZ-5605	2.39	0.04	0.32	7.67	-0.01	-0.02	18.40	0.49	0.48	18.16
HV4T6Q-5605	2.20	-0.15	-1.09	6.80	-0.88	-2.17	19.00	1.09	1.07	18.88
JF4DDV-5601	2.40	0.05	0.40	8.10	0.42	1.04	17.20	-0.71	-0.70	17.24
JFHYPH-5605	2.50	0.15	1.14	7.80	0.12	0.30	18.70	0.79	0.78	18.69
JM3VYY-5605	2.30	-0.05	-0.34	7.30	-0.38	-0.94	18.40	0.49	0.48	18.36
JX4BP4-5605	2.40	0.05	0.40	8.50	0.82	2.03	16.40	-1.51	-1.48	16.40
KADF7J-5601	2.35	0.00	0.03	7.78	0.10	0.25	18.00	0.09	0.09	17.58
KFYBA9-5605	2.38	0.03	0.25	7.67	-0.01	-0.02	18.00	0.09	0.09	18.08
KJZGK9-5605	2.40	0.05	0.40	7.70	0.02	0.05	18.00	0.09	0.09	18.16
KMYU4R-5605	2.20	-0.15	-1.09	7.50	-0.18	-0.44	17.00	-0.91	-0.89	17.06
KZ6NZB-5601	2.50	0.15	1.14	7.20	-0.48	-1.18	20.30	2.39	2.35	20.32
L84VU4-5605	2.20	-0.15	-1.09	8.00	0.32	0.79	16.00	-1.91	-1.87	15.96
LAQEV2-5605	1.90	-0.45	-3.31 X	6.00	-1.68	-4.15 X	18.50	0.59	0.58	18.46
LDQHQU-5605	2.50	0.15	1.14	7.70	0.02	0.05	18.70	0.79	0.78	18.95
LDRHMN-5601	2.40	0.05	0.40	7.30	-0.38	-0.94	19.27	1.36	1.34	19.19
LH2V9T-5605	2.40	0.05	0.40	7.60	-0.08	-0.20	18.20	0.29	0.29	18.41
LTK6V2-5605	2.40	0.05	0.40	7.50	-0.18	-0.44	19.00	1.09	1.07	18.66
LUB7ZP-5605	2.50	0.15	1.14	7.50	-0.18	-0.44	19.50	1.59	1.56	19.47
LV7UDT-5601	2.30	-0.05	-0.34	7.80	0.12	0.30	17.15	-0.76	-0.75	17.15

TABLE 1
Stain D, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
M4H8VN-5605	2.20	-0.15	-1.09	7.20	-0.48	-1.18	18.00	0.09	0.09	17.79
MCCDUG-5605	2.40	0.05	0.40	7.90	0.22	0.54	18.00	0.09	0.09	17.69
MCNCKK-5605	2.36	0.01	0.10	7.42	-0.26	-0.64	19.00	1.09	1.07	18.55
MEWKU6-5605	2.40	0.05	0.40	7.10	-0.58	-1.43	19.80	1.89	1.86	19.76
MEWMGN-5605	2.30	-0.05	-0.34	7.90	0.22	0.54	16.93	-0.98	-0.96	16.93
MFTZ3V-5601	2.30	-0.05	-0.34	7.40	-0.28	-0.69	18.11	0.20	0.20	18.11
MQ9RNJ-5605	2.50	0.15	1.14	7.00	-0.68	-1.68	20.92	3.01	2.96	20.92
MTZQ7N-5601	2.50	0.15	1.14	7.80	0.12	0.30	18.70	0.79	0.78	18.69
MV3MRC-5605	2.40	0.05	0.40	8.00	0.32	0.79	17.45	-0.46	-0.45	17.46
N97C64-5605	2.10	-0.25	-1.83	6.20	-1.48	-3.65 X	19.80	1.89	1.86	19.80
NAENHY-5601	2.40	0.05	0.40	8.20	0.52	1.29	17.02	-0.89	-0.87	17.02
NBDPQC-5605	2.40	0.05	0.40	7.80	0.12	0.30	17.90	-0.01	-0.01	17.92
NRXFL6-5605	2.40	0.05	0.40	7.70	0.02	0.05	18.00	0.09	0.09	18.16
NUUP32-5601	2.40	0.05	0.40	7.30	-0.38	-0.94	19.00	1.09	1.07	19.19
P6LZJ8-5605	2.38	0.03	0.25	7.57	-0.11	-0.27	18.35	0.44	0.43	18.32
PCRCDG-5605	2.00	-0.35	-2.57	6.50	-1.18	-2.91	17.92	0.01	0.01	17.92
Q23Z9X-5605	2.50	0.15	1.14	8.30	0.62	1.53	17.50	-0.41	-0.40	17.53
Q3TBYQ-5605	2.20	-0.15	-1.09	8.00	0.32	0.79	16.00	-1.91	-1.87	15.96
Q68N8N-5605	2.00	-0.35	-2.57	7.00	-0.68	-1.68	16.60	-1.31	-1.29	16.60

TABLE 1
Stain D, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
QHLZUM-5605	2.40	0.05	0.40	7.70	0.02	0.05	18.00	0.09	0.09	18.16
QNATZV-5605	2.20	-0.15	-1.09	7.60	-0.08	-0.20	16.80	-1.11	-1.09	16.83
QT9ZPY-5605	1.90	-0.45	-3.31 X	6.40	-1.28	-3.16 X	17.30	-0.61	-0.60	17.27
QUWBKY-5605	2.25	-0.10	-0.72	7.84	0.16	0.40	16.74	-1.17	-1.15	16.68
R2TTAU-5605	2.38	0.03	0.25	6.47	-1.21	-2.99	22.00	4.09	4.02 X	21.58 X
RELA43-5605	2.50	0.15	1.14	8.10	0.42	1.04	18.00	0.09	0.09	17.98
RLBP6C-5605	2.50	0.15	1.14	8.00	0.32	0.79	18.20	0.29	0.29	18.21
RN87BV-5601	2.50	0.15	1.14	8.40	0.72	1.78	17.40	-0.51	-0.50	17.31
RP34BN-5601	2.30	-0.05	-0.34	7.30	-0.38	-0.94	18.00	0.09	0.09	18.36
RZJLAM-5605	2.40	0.05	0.40	7.80	0.12	0.30	17.90	-0.01	-0.01	17.92
T37GD8-5605	2.50	0.15	1.14	8.00	0.32	0.79	18.20	0.29	0.29	18.21
TF9BKA-5601	2.00	-0.35	-2.57	8.00	0.32	0.79	14.48	-3.43	-3.37 X	14.48
TMT7MY-5605	2.50	0.15	1.14	8.40	0.72	1.78	17.00	-0.91	-0.89	17.31
TPHJ6H-5605	2.25	-0.10	-0.72	7.25	-0.43	-1.06	18.10	0.19	0.19	18.08
TPUEM3-5605	2.25	-0.10	-0.72	7.25	-0.43	-1.06	18.00	0.09	0.09	18.08
TTUMRD-5601	2.50	0.15	1.14	7.70	0.02	0.05	18.90	0.99	0.97	18.95
UDYP69-5605	2.31	-0.04	-0.27	7.84	0.16	0.40	17.20	-0.71	-0.70	17.14
UERFEU-5605	2.00	-0.35	-2.57	7.50	-0.18	-0.44	16.00	-1.91	-1.87	15.47
V3EFHZ-5605	2.30	-0.05	-0.34	7.30	-0.38	-0.94	18.40	0.49	0.48	18.36

TABLE 1
Stain D, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
V7U6KN-5601	2.40	0.05	0.40	8.00	0.32	0.79	17.45	-0.46	-0.45	17.46
VM4PK2-5605	2.66	0.31	2.32	8.75	1.07	2.64	17.70	-0.21	-0.21	17.70
W2DZJ9-5601	2.50	0.15	1.14	7.50	-0.18	-0.44	19.00	1.09	1.07	19.47
W87Z4V-5605	2.50	0.15	1.14	8.00	0.32	0.79	18.20	0.29	0.29	18.21
WAQ2QV-5605	2.32	-0.03	-0.20	7.58	-0.10	-0.25	17.82	-0.09	-0.09	17.82
WBANMR-5605	2.50	0.15	1.14	7.90	0.22	0.54	18.40	0.49	0.48	18.45
WD997G-5605	2.40	0.05	0.40	7.60	-0.08	-0.20	18.00	0.09	0.09	18.41
WGWK89-5601	2.37	0.02	0.17	7.76	0.08	0.20	18.00	0.09	0.09	17.78
WJYNT4-5605	2.20	-0.15	-1.09	8.10	0.42	1.04	15.75	-2.16	-2.12	15.76
XDRCHN-5601	2.40	0.05	0.40	7.75	0.07	0.17	18.00	0.09	0.09	18.04
XEYWXB-5601	2.30	-0.05	-0.34	7.10	-0.58	-1.43	18.90	0.99	0.97	18.90
XMT2RC-5605	2.40	0.05	0.40	7.80	0.12	0.30	17.92	0.01	0.01	17.92
XUCZQX-5605	2.46	0.11	0.84	7.70	0.02	0.05	18.60	0.69	0.68	18.63
XV6ZLN-5601	2.30	-0.05	-0.34	7.80	0.12	0.30	17.00	-0.91	-0.89	17.15
XWYP4J-5605	2.40	0.05	0.40	8.00	0.32	0.79	17.46	-0.45	-0.44	17.46
YLEWVZ-5605	2.33	-0.02	-0.12	7.85	0.17	0.42	17.00	-0.91	-0.89	17.27
YW3JBW-5601	2.40	0.05	0.40	7.40	-0.28	-0.69	18.90	0.99	0.97	18.92
YZDYET-5605	2.00	-0.35	-2.57	7.00	-0.68	-1.68	16.60	-1.31	-1.29	16.60
Z4Q2WH-5601	2.59	0.24	1.80	7.58	-0.10	-0.25	20.00	2.09	2.05	19.98

TABLE 1
Stain D, continued

WebCode- Test	Width			Length			Angle			<i>CalcAng</i>
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
Z6NCRK-5601	2.44	0.09	0.69	7.20	-0.48	-1.18	19.80	1.89	1.86	19.81
ZHXMNN-5605	2.38	0.03	0.25	7.91	0.23	0.57	17.47	-0.44	-0.43	17.51
ZMQPP3-5605	2.50	0.15	1.14	7.70	0.02	0.05	18.90	0.99	0.97	18.95
ZYHBXH-5605	2.26	-0.09	-0.64	7.92	0.24	0.59	16.58	-1.33	-1.31	16.58
Grand Mean	2.35			7.68			17.91			17.81
Standard Deviation	0.14			0.40			1.02			1.15
Participants Included in calculations		147			148			150		152
Participants excluded from calculations (indicated by X)		9			8			6		4

Stain D Preparation Angle: 19.5°

TABLE 1
Stain E

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
2HR23R- 5605	1.90	-0.07	-1.08	7.40	0.16	0.33	14.90	-0.87	-0.83	14.88
2UKKJH- 5605	1.90	-0.07	-1.08	6.60	-0.64	-1.36	16.73	0.96	0.92	16.73
2X3GQG- 5605	2.00	0.03	0.44	7.30	0.06	0.12	16.00	0.23	0.22	15.90
3228GT- 5601	2.00	0.03	0.44	7.00	-0.24	-0.51	16.60	0.83	0.79	16.60
36WZ83- 5605	2.00	0.03	0.44	7.00	-0.24	-0.51	17.00	1.23	1.17	16.60
3T6JCA- 5605	1.80	-0.17	-2.60	6.40	-0.84	-1.78	16.33	0.56	0.54	16.33
3X6KV2- 5605	1.83	-0.14	-2.14	7.75	0.51	1.07	13.66	-2.11	-2.01	13.66
3ZL6AK- 5601	1.97	0.00	-0.02	7.30	0.06	0.12	15.70	-0.07	-0.06	15.66
48GCHR- 5605	2.00	0.03	0.44	7.00	-0.24	-0.51	16.60	0.83	0.79	16.60
49EKUH- 5601	1.97	0.00	-0.02	7.41	0.17	0.36	15.41	-0.36	-0.34	15.42
4BJCF4- 5605	2.00	0.03	0.44	7.30	0.06	0.12	15.90	0.13	0.13	15.90
4EJJ22- 5605	1.90	-0.07	-1.08	6.60	-0.64	-1.36	16.70	0.93	0.89	16.73
4J2G7Z- 5605	2.00	0.03	0.44	7.40	0.16	0.33	15.60	-0.17	-0.16	15.68
4JUE26- 5605	2.00	0.03	0.44	7.60	0.36	0.76	15.26	-0.51	-0.48	15.26
4JX2HH- 5601	1.93	-0.04	-0.62	8.00	0.76	1.60	14.00	-1.77	-1.68	13.96
669GFZ- 5605	1.90	-0.07	-1.08	7.10	-0.14	-0.30	16.00	0.23	0.22	15.52
67339R- 5605	40.30	38.33	581.36X	128.90	121.66	257.31X	18.20	2.43	2.32	18.22
67NXCE- 5605	1.90	-0.07	-1.08	6.90	-0.34	-0.72	16.00	0.23	0.22	15.98
6CBTAC- 5605	2.00	0.03	0.44	7.50	0.26	0.55	16.00	0.23	0.22	15.47

TABLE 1
Stain E, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
6EVHR4-5601	2.10	0.13	1.95	7.30	0.06	0.12	16.70	0.93	0.89	16.72
7JN2BE-5601	1.90	-0.07	-1.08	6.80	-0.44	-0.93	16.22	0.45	0.43	16.23
7NKN43-5605	2.00	0.03	0.44	7.20	-0.04	-0.09	16.00	0.23	0.22	16.13
7RHBEH-5601	1.80	-0.17	-2.60	7.30	0.06	0.12	14.27	-1.50	-1.43	14.27
7RYDCH-5605	2.01	0.04	0.59	7.55	0.31	0.65	15.40	-0.37	-0.35	15.44
84CMQV-5605	1.90	-0.07	-1.08	7.30	0.06	0.12	15.09	-0.68	-0.65	15.09
8EBG7D-5601	2.00	0.03	0.44	7.20	-0.04	-0.09	16.00	0.23	0.22	16.13
8M324Y-5605	2.00	0.03	0.44	8.00	0.76	1.60	14.00	-1.77	-1.68	14.48
8Q6PTM-5601	1.90	-0.07	-1.08	7.60	0.36	0.76	14.00	-1.77	-1.68	14.48
8YX3TL-5601	2.00	0.03	0.44	7.50	0.26	0.55	15.50	-0.27	-0.25	15.47
99YWCD-5605	2.00	0.03	0.44	7.80	0.56	1.18	14.90	-0.87	-0.83	14.86
9ABKZJ-5605	2.00	0.03	0.44	7.30	0.06	0.12	16.00	0.23	0.22	15.90
9ABTJ3-5601	2.00	0.03	0.44	6.70	-0.54	-1.15	17.00	1.23	1.17	17.37
9DRAYM-5605	1.50	-0.47	-7.15 X	8.00	0.76	1.60	10.48	-5.29	-5.04 X	10.81 X
9L3BGG-5605	0.20	-1.77	-26.86 X	0.70	-6.54	-13.84 X	16.20	0.43	0.41	16.60
9M3BKM-5601	2.00	0.03	0.44	8.00	0.76	1.60	14.00	-1.77	-1.68	14.48
9T4UE7-5605	2.00	0.03	0.44	7.00	-0.24	-0.51	16.60	0.83	0.79	16.60
A3LN8E-5601	2.00	0.03	0.44	7.00	-0.24	-0.51	16.60	0.83	0.79	16.60
AFC83J-5605	2.00	0.03	0.44	7.50	0.26	0.55	15.50	-0.27	-0.25	15.47

TABLE 1
Stain E, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
AFRQMG-5605	1.90	-0.07	-1.08	7.10	-0.14	-0.30	15.50	-0.27	-0.25	15.52
AMTY9B-5601	1.92	-0.05	-0.78	6.87	-0.37	-0.79	16.23	0.46	0.44	16.23
ANLWFH-5601	2.04	0.07	1.04	7.25	0.01	0.02	16.34	0.57	0.55	16.34
AVB8YT-5605	1.89	-0.08	-1.23	7.46	0.22	0.46	14.60	-1.17	-1.11	14.68
AXCDBD-5605	2.00	0.03	0.44	8.00	0.76	1.60	14.50	-1.27	-1.21	14.48
B2B7MM-5601	2.00	0.03	0.44	7.80	0.56	1.18	14.90	-0.87	-0.83	14.86
B344WF-5605	1.90	-0.07	-1.08	7.00	-0.24	-0.51	15.70	-0.07	-0.06	15.75
B8XYW2-5605	2.00	0.03	0.44	6.90	-0.34	-0.72	16.84	1.07	1.02	16.85
BUV6RK-5605	1.20	-0.77	-11.70 X	4.29	-2.95	-6.24 X	16.20	0.43	0.41	16.24
BV4P88-5601	2.00	0.03	0.44	6.60	-0.64	-1.36	17.64	1.87	1.78	17.64
C4BLTP-5605	1.98	0.01	0.13	7.94	0.70	1.48	14.00	-1.77	-1.68	14.44
C8F8MH-5601	1.90	-0.07	-1.08	7.50	0.26	0.55	14.70	-1.07	-1.02	14.67
CTR634-5605	1.97	0.00	-0.02	7.25	0.01	0.02	15.77	0.00	0.00	15.77
CWEQT7-5601	2.00	0.03	0.44	7.60	0.36	0.76	15.25	-0.52	-0.49	15.26
DDXTCF-5601	2.00	0.03	0.44	7.20	-0.04	-0.09	16.10	0.33	0.32	16.13
DE7CQ3-5605	2.10	0.13	1.95	7.70	0.46	0.97	15.80	0.03	0.03	15.83
DKUYJM-5601	1.88	-0.09	-1.38	6.84	-0.40	-0.85	15.95	0.18	0.17	15.95
DMP9ZJ-5601	1.94	-0.03	-0.47	7.39	0.15	0.31	15.00	-0.77	-0.73	15.22
DPB84F-5605	1.80	-0.17	-2.60	7.00	-0.24	-0.51	14.90	-0.87	-0.83	14.90

TABLE 1
Stain E, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
DW9RAH-5601	0.19	-1.78	-27.02 X	0.73	-6.51	-13.77 X	15.08	-0.69	-0.65	15.09
DX3FTD-5605	2.00	0.03	0.44	7.50	0.26	0.55	15.50	-0.27	-0.25	15.47
EQF6Y9-5601	1.96	-0.01	-0.17	6.83	-0.41	-0.87	16.68	0.91	0.87	16.68
ERA33A-5601	1.90	-0.07	-1.08	8.00	0.76	1.60	13.74	-2.03	-1.93	13.74
F4HVDL-5605	2.00	0.03	0.44	7.00	-0.24	-0.51	16.60	0.83	0.79	16.60
G78NNV-5605	2.10	0.13	1.95	7.50	0.26	0.55	16.00	0.23	0.22	16.26
G8GT2J-5605	2.00	0.03	0.44	7.40	0.16	0.33	15.70	-0.07	-0.06	15.68
G8WYGA-5601	1.80	-0.17	-2.60	7.20	-0.04	-0.09	14.47	-1.30	-1.24	14.48
G9BGKF-5605	2.97	1.00	15.15 X	11.15	3.91	8.27 X	15.40	-0.37	-0.35	15.45
GBW4C3-5601	2.00	0.03	0.44	7.30	0.06	0.12	15.90	0.13	0.13	15.90
GFNCGA-5601	2.00	0.03	0.44	8.20	0.96	2.03	14.00	-1.77	-1.68	14.12
GG4P67-5605	7.10	5.13	77.79 X	2.00	-5.24	-11.09 X	17.00	1.23	1.17	X
GNPPHX-5605	2.00	0.03	0.44	7.00	-0.24	-0.51	16.60	0.83	0.79	16.60
GU9RLU-5605	2.00	0.03	0.44	7.60	0.36	0.76	15.26	-0.51	-0.48	15.26
H97JHH-5605	1.99	0.02	0.29	7.31	0.07	0.14	15.78	0.01	0.01	15.80
HAZ6FF-5605	2.00	0.03	0.44	8.00	0.76	1.60	14.48	-1.29	-1.23	14.48
HJPXLK-5605	1.97	0.00	-0.02	7.42	0.18	0.38	15.00	-0.77	-0.73	15.40
HKE7TZ-5601	2.00	0.03	0.44	8.00	0.76	1.60	15.20	-0.57	-0.54	14.48
HMP7U2-5601	1.91	-0.06	-0.93	7.13	-0.11	-0.24	15.54	-0.23	-0.22	15.54

TABLE 1
Stain E, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
HMRUDZ-5605	2.01	0.04	0.59	7.11	-0.13	-0.28	16.42	0.65	0.62	16.42
HV4T6Q-5605	1.80	-0.17	-2.60	6.20	-1.04	-2.20	17.00	1.23	1.17	16.88
JF4DDV-5601	2.00	0.03	0.44	7.80	0.56	1.18	14.90	-0.87	-0.83	14.86
JFHYPH-5605	2.00	0.03	0.44	7.50	0.26	0.55	15.40	-0.37	-0.35	15.47
JM3VYY-5605	2.00	0.03	0.44	7.00	-0.24	-0.51	16.60	0.83	0.79	16.60
JX4BP4-5605	2.00	0.03	0.44	8.00	0.76	1.60	14.48	-1.29	-1.23	14.48
KADF7J-5601	1.99	0.02	0.29	7.10	-0.14	-0.30	16.00	0.23	0.22	16.28
KFYBA9-5605	1.98	0.01	0.13	7.12	-0.12	-0.26	16.10	0.33	0.32	16.15
KJZGK9-5605	2.00	0.03	0.44	7.10	-0.14	-0.30	16.00	0.23	0.22	16.36
KMYU4R-5605	2.00	0.03	0.44	7.00	-0.24	-0.51	17.00	1.23	1.17	16.60
KZ6NZB-5601	2.00	0.03	0.44	6.40	-0.84	-1.78	18.20	2.43	2.32	18.21
L84VU4-5605	2.00	0.03	0.44	7.60	0.36	0.76	15.30	-0.47	-0.45	15.26
LAQEV2-5605	1.50	-0.47	-7.15 X	6.00	-1.24	-2.63	14.40	-1.37	-1.30	14.48
LDQHQU-5605	2.00	0.03	0.44	7.30	0.06	0.12	16.30	0.53	0.51	15.90
LDRHMN-5601	2.00	0.03	0.44	7.00	-0.24	-0.51	16.86	1.09	1.04	16.60
LH2V9T-5605	2.00	0.03	0.44	7.00	-0.24	-0.51	16.20	0.43	0.41	16.60
LTK6V2-5605	2.00	0.03	0.44	6.80	-0.44	-0.93	17.00	1.23	1.17	17.10
LUB7ZP-5605	2.00	0.03	0.44	7.00	-0.24	-0.51	16.60	0.83	0.79	16.60
LV7UDT-5601	2.00	0.03	0.44	7.50	0.26	0.55	15.46	-0.31	-0.29	15.47

TABLE 1
Stain E, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
M4H8VN-5605	1.90	-0.07	-1.08	7.00	-0.24	-0.51	16.00	0.23	0.22	15.75
MCCDUG-5605	2.00	0.03	0.44	7.30	0.06	0.12	16.00	0.23	0.22	15.90
MCNCKK-5605	1.98	0.01	0.13	6.90	-0.34	-0.72	17.00	1.23	1.17	16.68
MEWKU6-5605	2.00	0.03	0.44	6.90	-0.34	-0.72	16.80	1.03	0.98	16.85
MEWMGN-5605	2.00	0.03	0.44	7.70	0.46	0.97	15.05	-0.72	-0.68	15.05
MFTZ3V-5601	1.90	-0.07	-1.08	7.30	0.06	0.12	15.09	-0.68	-0.65	15.09
MQ9RNJ-5605	2.00	0.03	0.44	6.50	-0.74	-1.57	17.92	2.15	2.05	17.92
MTZQ7N-5601	2.10	0.13	1.95	7.20	-0.04	-0.09	17.00	1.23	1.17	16.96
MV3MRC-5605	2.00	0.03	0.44	7.90	0.66	1.39	14.66	-1.11	-1.05	14.66
N97C64-5605	1.90	-0.07	-1.08	6.40	-0.84	-1.78	17.30	1.53	1.46	17.27
NAENHY-5601	2.00	0.03	0.44	7.40	0.16	0.33	15.68	-0.09	-0.08	15.68
NBDPQC-5605	2.00	0.03	0.44	7.20	-0.04	-0.09	16.10	0.33	0.32	16.13
NRXFL6-5605	2.00	0.03	0.44	7.30	0.06	0.12	16.00	0.23	0.22	15.90
NUUP32-5601	2.00	0.03	0.44	6.50	-0.74	-1.57	18.00	2.23	2.13	17.92
P6LZJ8-5605	2.10	0.13	1.95	7.38	0.14	0.29	16.62	0.85	0.81	16.53
PCRCDG-5605	2.00	0.03	0.44	6.00	-1.24	-2.63	19.47	3.70	3.53 X	19.47 X
Q23Z9X-5605	2.00	0.03	0.44	7.50	0.26	0.55	15.40	-0.37	-0.35	15.47
Q3TBYQ-5605	1.90	-0.07	-1.08	7.80	0.56	1.18	14.00	-1.77	-1.68	14.10
Q68N8N-5605	1.50	-0.47	-7.15 X	6.50	-0.74	-1.57	13.30	-2.47	-2.35	13.34

TABLE 1
Stain E, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
QHLZUM-5605	2.00	0.03	0.44	7.10	-0.14	-0.30	16.00	0.23	0.22	16.36
QNATZV-5605	1.80	-0.17	-2.60	7.20	-0.04	-0.09	14.50	-1.27	-1.21	14.48
QT9ZPY-5605	1.60	-0.37	-5.63 X	6.00	-1.24	-2.63	15.50	-0.27	-0.25	15.47
QUWBKY-5605	1.82	-0.15	-2.29	7.74	0.50	1.05	13.59	-2.18	-2.07	13.60
R2TTAU-5605	1.87	-0.10	-1.53	6.51	-0.73	-1.55	17.00	1.23	1.17	16.69
RELA43-5605	2.00	0.03	0.44	8.00	0.76	1.60	14.50	-1.27	-1.21	14.48
RLBP6C-5605	2.00	0.03	0.44	7.50	0.26	0.55	15.50	-0.27	-0.25	15.47
RN87BV-5601	2.10	0.13	1.95	8.00	0.76	1.60	15.40	-0.37	-0.35	15.22
RP34BN-5601	2.00	0.03	0.44	7.00	-0.24	-0.51	17.00	1.23	1.17	16.60
RZJLAM-5605	2.00	0.03	0.44	7.60	0.36	0.76	15.30	-0.47	-0.45	15.26
T37GD8-5605	2.00	0.03	0.44	7.00	-0.24	-0.51	16.60	0.83	0.79	16.60
TF9BKA-5601	1.80	-0.17	-2.60	7.75	0.51	1.07	13.43	-2.34	-2.23	13.43
TMT7MY-5605	2.10	0.13	1.95	7.90	0.66	1.39	15.00	-0.77	-0.73	15.42
TPHJ6H-5605	1.90	-0.07	-1.08	7.00	-0.24	-0.51	15.70	-0.07	-0.06	15.75
TPUEM3-5605	1.75	-0.22	-3.36 X	7.25	0.01	0.02	15.00	-0.77	-0.73	13.97
TTUMRD-5601	2.10	0.13	1.95	7.10	-0.14	-0.30	17.00	1.23	1.17	17.20
UDYP69-5605	1.91	-0.06	-0.93	7.59	0.35	0.74	14.60	-1.17	-1.11	14.57
UERFEU-5605	2.00	0.03	0.44	6.50	-0.74	-1.57	18.00	2.23	2.13	17.92
V3EFHZ-5605	2.00	0.03	0.44	7.00	-0.24	-0.51	16.60	0.83	0.79	16.60

TABLE 1
Stain E, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
V7U6KN-5601	2.00	0.03	0.44	7.80	0.56	1.18	14.85	-0.92	-0.87	14.86
VM4PK2-5605	2.35	0.38	5.75 X	8.89	1.65	3.49 X	15.30	-0.47	-0.45	15.33
W2DZJ9-5601	2.00	0.03	0.44	6.70	-0.54	-1.15	17.00	1.23	1.17	17.37
W87Z4V-5605	2.00	0.03	0.44	8.00	0.76	1.60	14.50	-1.27	-1.21	14.48
WAQ2QV-5605	1.95	-0.02	-0.32	7.07	-0.17	-0.36	16.01	0.24	0.23	16.01
WBANMR-5605	2.00	0.03	0.44	7.40	0.16	0.33	15.70	-0.07	-0.06	15.68
WD997G-5605	1.95	-0.02	-0.32	7.10	-0.14	-0.30	16.00	0.23	0.22	15.94
WGWK89-5601	1.91	-0.06	-0.93	7.43	0.19	0.40	15.00	-0.77	-0.73	14.90
WJYNT4-5605	2.00	0.03	0.44	8.00	0.76	1.60	14.47	-1.30	-1.24	14.48
XDRCHN-5601	1.92	-0.05	-0.78	7.27	0.03	0.06	15.30	-0.47	-0.45	15.31
XEYWXB-5601	1.90	-0.07	-1.08	7.30	0.06	0.12	15.10	-0.67	-0.64	15.09
XMT2RC-5605	1.98	0.01	0.13	7.44	0.20	0.42	15.43	-0.34	-0.32	15.43
XUCZQX-5605	2.62	0.65	9.84 X	9.47	2.23	4.71 X	16.10	0.33	0.32	16.06
XV6ZLN-5601	2.00	0.03	0.44	7.30	0.06	0.12	16.00	0.23	0.22	15.90
XWYP4J-5605	2.00	0.03	0.44	7.80	0.56	1.18	14.86	-0.91	-0.86	14.86
YLEWVZ-5605	2.03	0.06	0.89	6.69	-0.55	-1.17	18.00	2.23	2.13	17.66
YW3JBW-5601	2.00	0.03	0.44	6.80	-0.44	-0.93	17.10	1.33	1.27	17.10
YZDYET-5605	2.00	0.03	0.44	6.00	-1.24	-2.63	19.47	3.70	3.53 X	19.47 X
Z4Q2WH-5601	2.20	0.23	3.47 X	7.03	-0.21	-0.45	18.20	2.43	2.32	18.24

TABLE 1
Stain E, continued

WebCode- Test	Width			Length			Angle			CalcAng
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	
Z6NCRK- 5601	2.00	0.03	0.44	6.87	-0.37	-0.79	16.90	1.13	1.08	16.93
ZHXMNN- 5605	2.01	0.04	0.59	7.79	0.55	1.16	15.07	-0.70	-0.66	14.95
ZMQPP3- 5605	2.00	0.03	0.44	7.00	-0.24	-0.51	16.60	0.83	0.79	16.60
ZYHBXH- 5605	1.84	-0.13	-1.99	6.64	-0.60	-1.27	16.09	0.32	0.31	16.09
Grand Mean		1.97			7.24			15.77		15.76
Standard Deviation		0.07			0.47			1.05		1.03
Participants Included in calculations		142			148			153		152
Participants excluded from calculations (indicated by X)		14			8			3		4

Stain E Preparation Angle: 17.7°

Pattern Description, Part 1

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

TABLE 2: Single Pattern Recognition

Item 2

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
2HR23R-5605	Wipe	669GFZ-5605	Transfer Stain
2UKKJH-5605	Swipe	67339R-5605	Swipe
2X3GQG-5605	Swipe	67NXCE-5605	Wipe
3228GT-5601	Wipe	6CBTAC-5605	Swipe
36WZ83-5605	Swipe	6EVHR4-5601	Transfer Stain
3L7UTK-5605	Swipe	7JN2BE-5601	Swipe
3T6JCA-5605	Wipe	7LUJDF-5601	Swipe
3X6KV2-5605	Transfer Stain	7NKN43-5605	Transfer Stain
3ZL6AK-5601	Transfer Stain	7RHBEH-5601	Swipe
46CNZG-5605	Wipe	7RYDCH-5605	Swipe
48GCHR-5605	Wipe	83YDFA-5605	Transfer Stain
49EKUH-5601	Swipe	84CMQV-5605	Swipe
4BJCF4-5605	Swipe	8EBG7D-5601	Swipe
4EJJ22-5605	Swipe	8M324Y-5605	Swipe
4J2G7Z-5605	Transfer Stain	8M6NKD-5601	Swipe
4JUE26-5605	Swipe	8Q4ZKJ-5605	Swipe
4JX2HH-5601	Swipe	8Q6PTM-5601	Swipe

TABLE 2: Single Pattern Recognition

Item 2, continued

WebCode- Test	Pattern Type	WebCode- Test	Pattern Type
8YX3TL- 5601	Swipe	B8XYW2- 5605	Swipe
99YWCD- 5605	Swipe	BJ9CBG- 5601	Swipe
9ABKZJ- 5605	Swipe	BUV6RK- 5605	Swipe
9ABTJ3- 5601	Swipe	BV4P88- 5601	Swipe
9CWH4F- 5601	Swipe	C4BLTP- 5605	Swipe
9DRAYM- 5605	Swipe	C8F8MH- 5601	Transfer Stain
9L3BGG- 5605	Swipe	CTR634- 5605	Swipe
9M3BKM- 5601	Transfer Stain	CWEQT7- 5601	Swipe
9T4UE7- 5605	Transfer Stain	DDXTCF- 5601	Transfer Stain
A3LN8E- 5601	Wipe	DE7CQ3- 5605	Swipe
AFC83J- 5605	Swipe	DFHQEC- 5601	Swipe
AFRQMG- 5605	Swipe	DKUYJM- 5601	Swipe
AMTY9B- 5601	Swipe	DMP9ZJ- 5601	Transfer Stain
ANLWFH- 5601	Swipe	DPB84F- 5605	Wipe
AVB8YT- 5605	Swipe	DW9RAH- 5601	Swipe
AVBANX- 5601	Swipe	DX3FTD- 5605	Swipe
AXCDBD- 5605	Swipe	EQF6Y9- 5601	Transfer Stain
B2B7MM- 5601	Transfer Stain	ERA33A- 5601	Wipe
B344WF- 5605	Transfer Stain	F4HVDL- 5605	Swipe

TABLE 2: Single Pattern Recognition

Item 2, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
G3JCM6-5601	Swipe	JFHYPH-5605	Swipe
G78NNV-5605	Wipe	JM3VYY-5605	Swipe
G8GT2J-5605	Swipe	JX4BP4-5605	Swipe
G8WYGA-5601	Swipe	KADF7J-5601	Transfer Stain
G9BGKF-5605	Transfer Stain	KFYBA9-5605	Transfer Stain
GBW4C3-5601	Swipe	KJZGK9-5605	Wipe
GFNCGA-5601	Swipe	KMYU4R-5605	Swipe
GG4P67-5605	Swipe	KZ6NZB-5601	Swipe
GNPPHX-5605	Transfer Stain	L84VU4-5605	Swipe
GU9RLU-5605	Wipe	LAQEV2-5605	Swipe
H97JHH-5605	Transfer Stain	LDQHQU-5605	Swipe
HAZ6FF-5605	Wipe	LDRHMN-5601	Transfer Stain
HJPXLK-5605	Swipe	LH2V9T-5605	Transfer Stain
HKE7TZ-5601	Transfer Stain	LTK6V2-5605	Transfer Stain
HMP7U2-5601	Swipe	LUB7ZP-5605	Swipe
HMRUDZ-5605	Swipe	LV7UDT-5601	Wipe
HV4T6Q-5605	Swipe	LV8JNH-5601	Swipe
JAJ9P2-5601	Swipe	M4H8VN-5605	Swipe
JF4DDV-5601	Transfer Stain	MCCDUG-5605	Swipe

TABLE 2: Single Pattern Recognition

Item 2, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
MCNCKK-5605	Swipe	QPJQDD-5605	Swipe
MEWKU6-5605	Swipe	QT9ZPY-5605	Swipe
MEWMGN-5605	Swipe	QUWBKY-5605	Swipe
MFTZ3V-5601	Swipe	R2TTAU-5605	Transfer Stain
MQ9RNJ-5605	Transfer Stain	RELA43-5605	Swipe
MTZQ7N-5601	Wipe	RLBP6C-5605	Transfer Stain
MV3MRC-5605	Wipe	RN87BV-5601	Transfer Stain
N97C64-5605	Swipe	RP34BN-5601	Swipe
NAENHY-5601	Swipe	RZJLAM-5605	Swipe
NBDPQC-5605	Swipe	T37GD8-5605	Swipe
NRXFL6-5605	Swipe	TF9BKA-5601	Wipe
NUUP32-5601	Transfer Stain	TMT7MY-5605	Swipe
P6LZJ8-5605	Swipe	TPHJ6H-5605	Transfer Stain
PCRCDG-5605	Transfer Stain	TPUEM3-5605	Wipe
Q23Z9X-5605	Swipe	TTUMRD-5601	Transfer Stain
Q3TBYQ-5605	Transfer Stain	TV2MBY-5605	Swipe
Q68N8N-5605	Swipe	UDYP69-5605	Swipe
QHLZUM-5605	Swipe	UERFEU-5605	Wipe
QNATZV-5605	Swipe	V3EFHZ-5605	Swipe

TABLE 2: Single Pattern Recognition

Item 2, continued

WebCode- Test	Pattern Type	WebCode- Test	Pattern Type
V7U6KN- 5601	Swipe	Z4Q2WH- 5601	Swipe
VM4PK2- 5605	Swipe	Z6NCRK- 5601	Swipe
W2DZJ9- 5601	Transfer Stain	ZHXMNN- 5605	Swipe
W87Z4V- 5605	Swipe	ZMQPP3- 5605	Swipe
WAQ2QV- 5605	Swipe	ZYHBXH- 5605	Swipe
WBANMR- 5605	Transfer Stain		
WD997G- 5605	Transfer Stain		
WGWK89- 5601	Transfer Stain		
WJYNT4- 5605	Swipe		
XDRCHN- 5601	Swipe		
XEYWXB- 5601	Transfer Stain		
XMT2RC- 5605	Swipe		
XUCZQX- 5605	Swipe		
XV6ZLN- 5601	Swipe		
XWYP4J- 5605	Swipe		
XYBJPB- 5605	Swipe		
YLEWVZ- 5605	Swipe		
YW3JBW- 5601	Swipe		
YZDYET- 5605	Wipe		

**Pattern Types reported for Item 2
(Total Participants Responding = 172)**

<u>Pattern Type</u>	<u>Percent Reported</u>
Swipe	113 (65.7%)
Transfer Stain	39 (22.7%)
Wipe	20 (11.6%)

TABLE 2: Single Pattern Recognition

Item 3

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
2HR23R-5605	Cessation Pattern	67NXCE-5605	Cessation Pattern
2UKKJH-5605	Cast-off Pattern	6CBTAC-5605	Cast-off Pattern
2X3GQG-5605	Cast-off Pattern	6EVHR4-5601	Cast-off Pattern
3228GT-5601	Cast-off Pattern	7JN2BE-5601	Cast-off Pattern
36WZ83-5605	Cast-off Pattern	7LUJDF-5601	Cast-off Pattern
3L7UTK-5605	Cast-off Pattern	7NKN43-5605	Cast-off Pattern
3T6JCA-5605	Cast-off Pattern	7RHBEH-5601	Cessation Pattern
3X6KV2-5605	Cast-off Pattern	7RYDCH-5605	Cast-off Pattern
3ZL6AK-5601	Cast-off Pattern	83YDFA-5605	Cast-off Pattern
46CNZG-5605	Projected Pattern	84CMQV-5605	Cast-off Pattern
48GCHR-5605	Cast-off Pattern	8EBG7D-5601	Cast-off Pattern
49EKUH-5601	Cast-off Pattern	8M324Y-5605	Projected Pattern
4BJCF4-5605	Cast-off Pattern	8M6NKD-5601	Cast-off Pattern
4EJJ22-5605	Cast-off Pattern	8Q4ZKJ-5605	Cast-off Pattern
4J2G7Z-5605	Cessation Pattern	8Q6PTM-5601	Cast-off Pattern
4JUE26-5605	Cast-off Pattern	8YX3TL-5601	Cast-off Pattern
4JX2HH-5601	Cast-off Pattern	99YWCD-5605	Cessation Pattern
669GFZ-5605	Cast-off Pattern	9ABKZJ-5605	Cessation Pattern
67339R-5605	Cast-off Pattern	9ABTJ3-5601	Cessation Pattern

TABLE 2: Single Pattern Recognition

Item 3, continued

WebCode- Test	Pattern Type	WebCode- Test	Pattern Type
9CWH4F-5601	Projected Pattern	C4BLTP-5605	Cast-off Pattern
9DRAYM-5605	Cast-off Pattern	C8F8MH-5601	Cast-off Pattern
9L3BGG-5605	Cast-off Pattern	CTR634-5605	Cast-off Pattern
9M3BKM-5601	Cast-off Pattern	CWEQT7-5601	Cast-off Pattern
9T4UE7-5605	Cast-off Pattern	DDXTCF-5601	Cast-off Pattern
A3LN8E-5601	Cast-off Pattern	DE7CQ3-5605	Cast-off Pattern
AFC83J-5605	Cast-off Pattern	DFHQEC-5601	Projected Pattern
AFRQMG-5605	Cast-off Pattern	DKUYJM-5601	Cast-off Pattern
AMTY9B-5601	Cast-off Pattern	DMP9ZJ-5601	Cast-off Pattern
ANLWFH-5601	Cast-off Pattern	DPB84F-5605	Projected Pattern
AVB8YT-5605	Projected Pattern	DW9RAH-5601	Cast-off Pattern
AVBANX-5601	Cast-off Pattern	DX3FTD-5605	Cast-off Pattern
AXCDBD-5605	Cast-off Pattern	EQF6Y9-5601	Cast-off Pattern
B2B7MM-5601	Cast-off Pattern	ERA33A-5601	Cast-off Pattern
B344WF-5605	Cast-off Pattern	F4HVDL-5605	Cast-off Pattern
B8XYW2-5605	Cast-off Pattern	G3JCM6-5601	Cast-off Pattern
BJ9CBG-5601	Cast-off Pattern	G78NNV-5605	Cast-off Pattern
BUV6RK-5605	Cast-off Pattern	G8GT2J-5605	Projected Pattern
BV4P88-5601	Cast-off Pattern	G8WYGA-5601	Cast-off Pattern

TABLE 2: Single Pattern Recognition

Item 3, continued

WebCode- Test	Pattern Type	WebCode- Test	Pattern Type
G9BGKF-5605	Cast-off Pattern	KFYBA9-5605	Cast-off Pattern
GBW4C3-5601	Cast-off Pattern	KJZGK9-5605	Cast-off Pattern
GFNCGA-5601	Cast-off Pattern	KMYU4R-5605	Projected Pattern
GG4P67-5605	Cast-off Pattern	KZ6NZB-5601	Projected Pattern
GNPPHX-5605	Cast-off Pattern	L84VU4-5605	Cast-off Pattern
GU9RLU-5605	Cast-off Pattern	LAQEV2-5605	Cast-off Pattern
H97JHH-5605	Cast-off Pattern	LDQHQU-5605	Cessation Pattern
HAZ6FF-5605	Cast-off Pattern	LDRHMN-5601	Cast-off Pattern
HJPXLK-5605	Cast-off Pattern	LH2V9T-5605	Cast-off Pattern
HKE7TZ-5601	Cast-off Pattern	LTK6V2-5605	Cast-off Pattern
HMP7U2-5601	Cast-off Pattern	LUB7ZP-5605	Cast-off Pattern
HMRUDZ-5605	Cast-off Pattern	LV7UDT-5601	Cast-off Pattern
HV4T6Q-5605	Cast-off Pattern	LV8JNH-5601	Cast-off Pattern
JAJ9P2-5601	Cast-off Pattern	M4H8VN-5605	Projected Pattern
JF4DDV-5601	Cast-off Pattern	MCCDUG-5605	Cast-off Pattern
JFHYPH-5605	Cast-off Pattern	MCNCKK-5605	Cast-off Pattern
JM3VYY-5605	Cast-off Pattern	MEWKU6-5605	Cast-off Pattern
JX4BP4-5605	Cast-off Pattern	MEWMGN-5605	Cast-off Pattern
KADF7J-5601	Cast-off Pattern	MFTZ3V-5601	Cast-off Pattern

TABLE 2: Single Pattern Recognition

Item 3, continued

WebCode- Test	Pattern Type	WebCode- Test	Pattern Type
MQ9RNJ-5605	Cast-off Pattern	RELA43-5605	Cast-off Pattern
MTZQ7N-5601	Cast-off Pattern	RLBP6C-5605	Cast-off Pattern
MV3MRC-5605	Cast-off Pattern	RN87BV-5601	Cast-off Pattern
N97C64-5605	Cast-off Pattern	RP34BN-5601	Cast-off Pattern
NAENHY-5601	Cast-off Pattern	RZJLAM-5605	Cast-off Pattern
NBDPQC-5605	Cast-off Pattern	T37GD8-5605	Cast-off Pattern
NRXFL6-5605	Cast-off Pattern	TF9BKA-5601	Cast-off Pattern
NUUP32-5601	Cessation Pattern	TMT7MY-5605	Cast-off Pattern
P6LZJ8-5605	Cast-off Pattern	TPHJ6H-5605	Cast-off Pattern
PCRCDG-5605	Cast-off Pattern	TPUEM3-5605	Cast-off Pattern
Q23Z9X-5605	Cast-off Pattern	TTUMRD-5601	Cast-off Pattern
Q3TBYQ-5605	Cast-off Pattern	TV2MBY-5605	Cast-off Pattern
Q68N8N-5605	Projected Pattern	UDYP69-5605	Cast-off Pattern
QHLZUM-5605	Cast-off Pattern	UERFEU-5605	Cast-off Pattern
QNATZV-5605	Cast-off Pattern	V3EFHZ-5605	Cast-off Pattern
QPJQDD-5605	Cast-off Pattern	V7U6KN-5601	Cast-off Pattern
QT9ZPY-5605	Cast-off Pattern	VM4PK2-5605	Cast-off Pattern
QUWBKY-5605	Cast-off Pattern	W2DZJ9-5601	Cast-off Pattern
R2TTAU-5605	Cast-off Pattern	W87Z4V-5605	Cast-off Pattern

TABLE 2: Single Pattern Recognition

Item 3, continued

WebCode- Test	Pattern Type	WebCode- Test	Pattern Type
WAQ2QV- 5605	Projected Pattern	ZYHBXH- 5605	Cast-off Pattern
WBANMR- 5605	Cast-off Pattern		
WD997G- 5605	Cast-off Pattern		
WGWK89- 5601	Cast-off Pattern		
WJYNT4- 5605	Cast-off Pattern		
XDRCHN- 5601	Cast-off Pattern		
XEYWXB- 5601	Cast-off Pattern		
XMT2RC- 5605	Cast-off Pattern		
XUCZQX- 5605	Cast-off Pattern		
XV6ZLN- 5601	Cast-off Pattern		
XWYP4J- 5605	Cast-off Pattern		
XYBJPB- 5605	Cast-off Pattern		
YLEWVZ- 5605	Cessation Pattern		
YW3JBW- 5601	Cast-off Pattern		
YZDYET- 5605	Cast-off Pattern		
Z4Q2WH- 5601	Cast-off Pattern		
Z6NCRK- 5601	Cast-off Pattern		
ZHXMNN- 5605	Projected Pattern		
ZMQPP3- 5605	Cast-off Pattern		

**Pattern Types reported for Item 3
(Total Participants Responding = 172)**

<u>Pattern Type</u>	<u>Percent Reported</u>
Cast-off Pattern	149 (86.6%)
Projected Pattern	13 (7.6%)
Cessation Pattern	10 (5.8%)

TABLE 2: Single Pattern Recognition

Item 4

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
2HR23R-5605	Saturation Stain	67NXCE-5605	Saturation Stain
2UKKJH-5605	Saturation Stain	6CBTAC-5605	Saturation Stain
2X3GQG-5605	Saturation Stain	6EVHR4-5601	Saturation Stain
3228GT-5601	Saturation Stain	7JN2BE-5601	Saturation Stain
36WZ83-5605	Saturation Stain	7LUJDF-5601	Saturation Stain
3L7UTK-5605	Saturation Stain	7NKN43-5605	Saturation Stain
3T6JCA-5605	Saturation Stain	7RHBEH-5601	Saturation Stain
3X6KV2-5605	Saturation Stain	7RYDCH-5605	Saturation Stain
3ZL6AK-5601	Saturation Stain	83YDFA-5605	Saturation Stain
46CNZG-5605	Saturation Stain	84CMQV-5605	Saturation Stain
48GCHR-5605	Saturation Stain	8EBG7D-5601	Saturation Stain
49EKUH-5601	Saturation Stain	8M324Y-5605	Saturation Stain
4BJCF4-5605	Saturation Stain	8M6NKD-5601	Saturation Stain
4EJJ22-5605	Transfer Stain	8Q4ZKJ-5605	Saturation Stain
4J2G7Z-5605	Saturation Stain	8Q6PTM-5601	Saturation Stain
4JUE26-5605	Saturation Stain	8YX3TL-5601	Saturation Stain
4JX2HH-5601	Saturation Stain	99YWCD-5605	Saturation Stain
669GFZ-5605	Saturation Stain	9ABKZJ-5605	Saturation Stain
67339R-5605	Saturation Stain	9ABTJ3-5601	Saturation Stain

TABLE 2: Single Pattern Recognition

Item 4, continued

WebCode- Test	Pattern Type	WebCode- Test	Pattern Type
9CWH4F-5601	Saturation Stain	C4BLTP-5605	Saturation Stain
9DRAYM-5605	Saturation Stain	C8F8MH-5601	Saturation Stain
9L3BGG-5605	Saturation Stain	CTR634-5605	Saturation Stain
9M3BKM-5601	Saturation Stain	CWEQT7-5601	Saturation Stain
9T4UE7-5605	Saturation Stain	DDXTCF-5601	Saturation Stain
A3LN8E-5601	Saturation Stain	DE7CQ3-5605	Saturation Stain
AFC83J-5605	Saturation Stain	DFHQEC-5601	Saturation Stain
AFRQMG-5605	Saturation Stain	DKUYJM-5601	Saturation Stain
AMTY9B-5601	Saturation Stain	DMP9ZJ-5601	Saturation Stain
ANLWFH-5601	Saturation Stain	DPB84F-5605	Saturation Stain
AVB8YT-5605	Saturation Stain	DW9RAH-5601	Saturation Stain
AVBANX-5601	Saturation Stain	DX3FTD-5605	Saturation Stain
AXCDBD-5605	Saturation Stain	EQF6Y9-5601	Saturation Stain
B2B7MM-5601	Saturation Stain	ERA33A-5601	Saturation Stain
B344WF-5605	Saturation Stain	F4HVDL-5605	Saturation Stain
B8XYW2-5605	Saturation Stain	G3JCM6-5601	Saturation Stain
BJ9CBG-5601	Saturation Stain	G78NNV-5605	Saturation Stain
BUV6RK-5605	Saturation Stain	G8GT2J-5605	Saturation Stain
BV4P88-5601	Saturation Stain	G8WYGA-5601	Saturation Stain

TABLE 2: Single Pattern Recognition

Item 4, continued

WebCode- Test	Pattern Type	WebCode- Test	Pattern Type
G9BGKF-5605	Saturation Stain	KFYBA9-5605	Saturation Stain
GBW4C3-5601	Saturation Stain	KJZGK9-5605	Saturation Stain
GFNCGA-5601	Saturation Stain	KMYU4R-5605	Saturation Stain
GG4P67-5605	Saturation Stain	KZ6NZB-5601	Saturation Stain
GNPPHX-5605	Saturation Stain	L84VU4-5605	Saturation Stain
GU9RLU-5605	Transfer Stain	LAQEV2-5605	Saturation Stain
H97JHH-5605	Saturation Stain	LDQHQU-5605	Saturation Stain
HAZ6FF-5605	Saturation Stain	LDRHMN-5601	Saturation Stain
HJPKLK-5605	Saturation Stain	LH2V9T-5605	Saturation Stain
HKE7TZ-5601	Saturation Stain	LTK6V2-5605	Saturation Stain
HMP7U2-5601	Saturation Stain	LUB7ZP-5605	Saturation Stain
HMRUDZ-5605	Saturation Stain	LV7UDT-5601	Saturation Stain
HV4T6Q-5605	Saturation Stain	LV8JNH-5601	Saturation Stain
JAJ9P2-5601	Saturation Stain	M4H8VN-5605	Saturation Stain
JF4DDV-5601	Saturation Stain	MCCDUG-5605	Saturation Stain
JFHYPH-5605	Saturation Stain	MCNCKK-5605	Saturation Stain
JM3VYY-5605	Saturation Stain	MEWKU6-5605	Saturation Stain
JX4BP4-5605	Saturation Stain	MEWMGN-5605	Saturation Stain
KADF7J-5601	Saturation Stain	MFTZ3V-5601	Saturation Stain

TABLE 2: Single Pattern Recognition

Item 4, continued

WebCode- Test	Pattern Type	WebCode- Test	Pattern Type
MQ9RNJ-5605	Saturation Stain	RELA43-5605	Saturation Stain
MTZQ7N-5601	Saturation Stain	RLBP6C-5605	Saturation Stain
MV3MRC-5605	Saturation Stain	RN87BV-5601	Saturation Stain
N97C64-5605	Saturation Stain	RP34BN-5601	Saturation Stain
NAENHY-5601	Saturation Stain	RZJLAM-5605	Saturation Stain
NBDPQC-5605	Saturation Stain	T37GD8-5605	Saturation Stain
NRXFL6-5605	Saturation Stain	TF9BKA-5601	Saturation Stain
NUUP32-5601	Saturation Stain	TMT7MY-5605	Saturation Stain
P6LZJ8-5605	Saturation Stain	TPHJ6H-5605	Saturation Stain
PCRCDG-5605	Saturation Stain	TPUEM3-5605	Saturation Stain
Q23Z9X-5605	Saturation Stain	TTUMRD-5601	Saturation Stain
Q3TBYQ-5605	Saturation Stain	TV2MBY-5605	Saturation Stain
Q68N8N-5605	Saturation Stain	UDYP69-5605	Saturation Stain
QHLZUM-5605	Saturation Stain	UERFEU-5605	Saturation Stain
QNATZV-5605	Saturation Stain	V3EFHZ-5605	Saturation Stain
QPJQDD-5605	Saturation Stain	V7U6KN-5601	Saturation Stain
QT9ZPY-5605	Saturation Stain	VM4PK2-5605	Saturation Stain
QUWBKY-5605	Saturation Stain	W2DZJ9-5601	Saturation Stain
R2TTAU-5605	Saturation Stain	W87Z4V-5605	Saturation Stain

TABLE 2: Single Pattern Recognition

Item 4, continued

WebCode- Test	Pattern Type	WebCode- Test	Pattern Type
WAQ2QV- 5605	Saturation Stain	ZYHBXH- 5605	Saturation Stain
WBANMR- 5605	Saturation Stain		
WD997G- 5605	Saturation Stain		
WGWK89- 5601	Saturation Stain		
WJYNT4- 5605	Saturation Stain		
XDRCHN- 5601	Saturation Stain		
XEYWXB- 5601	Saturation Stain		
XMT2RC- 5605	Saturation Stain		
XUCZQX- 5605	Saturation Stain		
XV6ZLN- 5601	Saturation Stain		
XWYP4J- 5605	Saturation Stain		
XYBJPB- 5605	Saturation Stain		
YLEWVZ- 5605	Saturation Stain		
YW3JBW- 5601	Saturation Stain		
YZDYET- 5605	Saturation Stain		
Z4Q2WH- 5601	Saturation Stain		
Z6NCRK- 5601	Saturation Stain		
ZHXMNN- 5605	Saturation Stain		
ZMQPP3- 5605	Saturation Stain		

**Pattern Types reported for Item 4
(Total Participants Responding = 172)**

<u>Pattern Type</u>	<u>Percent Reported</u>
Saturation Stain	170 (98.8%)
Transfer Stain	2 (1.2%)

Pattern Description, Part 2

TABLE 3: Recognition and Description

Item 5

WebCode-Test	Detailed Pattern Description
2HR23R-5605	The pattern includes passive dripping with small individual spatter that indicates high energy blood dispersal. Transfer with wipe/swipe at lower right corner.
2UKKJH-5605	Item five shows a vinyl tile on a horizontal plane, on the bottom right I can find a wipe, it's an altered stain resulting from an object moving over a preexisting wet blood stain. At the rest of vinyl tile I observe a drip pattern, drip pattern is a blood stain pattern resulting from a liquid that dripped into another liquid, at least one of which was blood. Also have a drip stain, is a blood stain resulting from a falling drop that formed due to gravity.
2X3GQG-5605	Drip stains throughout the entire photograph with possible drip trail(s) in the lower left area of the image. Possible transfer stain in the lower right area of the image.
3228GT-5601	horizontal tile surface with grey marbled pattern - texture said to be smooth. > 50 generally circular shaped stains of varying sizes 1-15 mm - smooth to scalloped edges & some with associated spines. Some stains, particularly on LHS have pale centres? airbubble - difficult to determine from photograph - may be a surface substrate effect - Spatter. Area at lower left aspect has a general linear arrangement of stains - possible cast-off. Very small sub mm staining of various shapes and directionality across most of area - spatter or satellite. Central area of pattern is notably devoid of any staining (void). Area on lower RHS illongated irregular shape with striations - appears to have moved through some pre-existing spatter (partial edges visible on lower aspect of stain - smear.
36WZ83-5605	The top half of the image is a cast-off pattern, comprised of a collection of various-sized drops all appearing approximately 90 degrees with very little scalloping or satellite spatter. This collection of drops is spaced relatively far apart and the shape of some of the spatter show slightly differing directionality. On the lower left of the image are drip trails - densely-spaced, linear arrays of drops of more uniformly round, smaller size drip stains with satellite spatter caused by drip pattern ("blood-in-blood") interactions. On the lower right hand side of the image is a contact/transfer stain that interrupts the pattern of the dense linear drip trails without forming a perimeter ("skeleton") in the drops, suggesting that contact was made soon after the drip trails were formed and before they had a chance to dry.
3L7UTK-5605	There were a number of blood drips, some forming an in-line pattern and some forming a blood drip pattern on the surface with associated small round and elongated satellite bloodstains. In the bottom right of the image, there is a heavy transfer blood pattern with an apparent swipe or wipe mark to the upper edge. There was an area in the centre of the tile which appeared free of bloodstaining (possible void).
3T6JCA-5605	In the photo of this small portion of flooring, there appear to be numerous bloodstain patterns, possibly commingled. Additional context information would be useful. There are numerous small roundish bloodstains, some in linear configurations that could be Cast-off Patterns. Some of these small roundish bloodstains have satellite stains indicating motion right to left. There are two larger round stains, in the relative center of the photo, that appear could possibly be drip stains, impacting the floor at a 90 degree angle. They could be part of a drip trail?? In the lower right corner of the photo, there is an altered stain that looks like an object has contacted and wiped through existing stains, with possible motion of the object right to left and slightly upwards.
3X6KV2-5605	There are 3 main groups of bloodstains observed - 1 at the top half and 2 at the bottom half of the image. 1) At the top half, numerous near circular stains of varying sizes (ranging from 2mm to 13 mm) are seen distributed across the area, with a higher concentration (about 4mm) seen on the left region. These are drip stains. 2) At the bottom left of the picture, numerous stains of largely circular and slightly elliptical shape (ranging from 4mm to 9mm) could be seen at the bottom left of the picture. These stains appeared adjacent to each other in 2 observable linear arrangements. These are drip trails. 3) An uneven volume of blood (measuring 80mm by 110mm in size) with

TABLE 3: Recognition and Description
Item 5, continued

WebCode-Test	Detailed Pattern Description
	non-homogenous coloration could be seen at the bottom right of the picture. The lower half of this bloodstain appeared darker in color and has an irregular edge. Below this area, there are also a few circular drip stains. Relative to the lower half of the blood volume, the top region is lighter in color. There is an observed area with an absence of blood. Within this 'void', there are observable features of fine lines. Above the 'void', an elongated stretch of bloodstain with regular margin was observed parallel to the linear features within the 'void'. Taking the entire pattern into consideration, this could be a transfer stain or altered stain due to contact movement.
3ZL6AK-5601	There are numerous circular bloodstains present ranging from <1mm up to approximately 15 mm in diameter. A large number of the stains range from approximately 2 to 6 mm in diameter. In my opinion some of the larger (10-15mm) stains are drip stains. The 2-6mm stains could be either small drip stains or spatter stains. The <1mm stains are either spatter stains or satellite stains. The overall pattern of bloodstaining does not exhibit the typical features of impact, expiration or drip patterns. In the lower left side of the photograph, some of the approximately 6mm diameter stains are linearly arranged. These stains could be small drip stains or alternatively, I cannot exclude cast-off as a possible mechanism for the creation of these stains. In the lower right of the photograph is an area of transfer bloodstaining, some of which appears to have altered some drip stains. There is an apparent void area in the centre of the photograph.
46CNZG-5605	Patterns identified: Drip pattern with limited satellite staining, suggesting source is close to tiled surface Transfer stain with level of wipe (smearing) apparent Spatter pattern, can't discern whether impact and/or expiration
48GCHR-5605	Items includes various dripstains of different size with a diameter ranging from 2 to 15mm, showing a roughly 90 degrees angles of impact. At the top-left side of the picture, at least two major drip tails can be observed, among which minimal drip pattern phenomena are visually detectable. Finally, a large transfer stain, partially combined with drip stains is observed at the left bottom side of the picture.
49EKUH-5601	A transfer stain was observed on the lower right quadrant of the target. A void was noted near the center of the target between the center and the lower right corner of the target. Spatter stains are noted to be widely dispersed over the target with spatter stain areas on the lower middle and lower left of the target adjacent to the transfer stain having characteristics consistent with a cast-off pattern.
4BJCF4-5605	1) A series of drip stains are present on upper half side of the image and two drip trails are identified on lower left hand side of the image. Several accompanying drops and satellite bloodstains are observed around these patterns. 2) Transfer stain is identified on lower right hand side of the image resulting from contact between a blood-bearing surface (Ex. wounded arm) and another surface (vinyl tile). Because of non-movement between two surface, swipe or wipe is excluded explaining the blood pattern.
4EJJ22-5605	This pattern consists mostly of drip stains randomly distributed on the floor. A larger transfer stain with no recognizable pattern is observed on the bottom right of the picture. The upper part of this transfer stain appears to have been wiped off, but the direction of the wiping motion could not be determined.
4J2G7Z-5605	Majority (>90%) of the bloodstains are circular in shape, with most of the circular bloodstains on the left of the image. Most of these circular bloodstains have crackled surface or presence of flaking that indicates drying. The margin of these circular bloodstains are generally regular, with slight irregularity/presence of scallops. The bottom left of the image have a denser distribution of circular bloodstains with stain size ranging from 1mm to 8mm. These stains have a curvilinear distribution that are in close proximity, indicating the possibility of a cast-off pattern. At least 2 of these patterns can be seen in the bottom left of the image, aligned in a parallel fashion, with the shorter cast-off pattern on the top and the slightly longer cast off pattern below. The length of these cast-off patterns are about 99mm and 132mm respectively. However, due to the circular shape of the bloodstain, the directionality of the cast-off pattern can not be determined. Towards the top left of the image, about

TABLE 3: Recognition and Description
Item 5, continued

WebCode-Test	Detailed Pattern Description
	30 small circular drip stains are observed in sparse distribution and the size of the bloodstains range from sub-millimeter to 6mm. Several sub-millimeter elliptical stains are also seen within the drip stains, showing directionality towards the top left. In the center of the image, there is presence of a void pattern in the shape of a "<" sign. The void pattern is approximately 150mm by 170mm in size. The absence of bloodstains in this area may suggest the presence of an object or a person at the position when the bloodstains were deposited. An amorphous shape of bloodstain size about 54mm by 108mm is observed on the bottom right of the image. The pattern is inhomogeneous with paler stain on the top of the pattern and darker stain towards the bottom of the pattern. There is feature of striation on the top of the pattern, indicating motion within the bloodstain, however directionality is not clear. In my opinion, this is a swipe/wipe pattern.
4JUE26-5605	The tile depicts approximately greater than 100 stains with circular to elliptical shapes, ranging from less than 1 mm to approximately 10 mm. The lower right corner of the photograph depicts a large irregular stain with approximate dimensions of 20mm by 40 mm. There are predominantly circular stains of similar widths (approx. 5-8mm in diameter) that are arranged linearly across the bottom of the photograph. Numerous elliptical stains less than 1mm in width are distributed in the bottom right quadrant of the photograph with predominately down and to the right directionality. Elliptical stains also exist in the upper portions of the photograph with upward and to the right directionality. Numerous other stains randomly distributed in the middle (horizontal) third of the photograph. The irregular stain in the bottom right corner could be caused by contact transfer and/or swipe mechanism. Some striations appear within the stain indicating some lateral motion. All other stains are caused by some unknown spatter producing event(s). Since this is a horizontal plane, drip trail, cessation, cast-off, impact, expiration, and projected cannot be ruled out as mechanisms.
4JX2HH-5601	A cessation pattern is present on the target as evident by numerous spatter stains similar in size and directionality, with some exhibiting a linear distribution and most exhibiting random distribution. In the center of the target, a void is evident. In the bottom right of the target, a transfer stain is present.
669GFZ-5605	There is a transfer stain in the bottom, right corner of the photograph (5A). There are spatter stains in the bottom, left (5B) and center (5C) of the photograph and along the top, left and right (5D) of the photograph. There is a void (5E) in the center of the photograph. There are two drip stains (5F) near the center of the photograph.
67339R-5605	Throughout a majority of the TARGET surface, DRIP STAINS appear to be randomly distributed with only a few in the lower left of the TARGET having somewhat of an appearance of linear grouping. Some very small stains (<1mm in size) were noted throughout the TARGET with many observed as SATELLITE STAINS around larger PARENT STAINS. In the center of the TARGET, a VOID area is apparent. In the lower right of the TARGET, a larger TRANSFER STAIN is present. On the upper/right edge of the TRANSFER STAIN, some characteristics are observed to support a possible WIPE or SWIPE pattern near the upper edge of the larger TRANSFER STAIN. Finally, several possible ALTERED STAINS appear within the TRANSFER STAIN pattern and may be a result of disturbances of existing DRIP STAINS that were affected by the TRANSFER STAIN deposition.
67NXCE-5605	Wipe: Bottom right corner of image. Preexisting volume of blood on lower margins of stain predominately to the left and center of that lower edge. Feather boundary and striations in the body of the stain at the upper margins. Cast-Off Pattern: Bottom left corner of image. Multiple distinct linear spatter stains with consistent size throughout the pattern. Appearing to have consistent angle of impact. Associated satellite stains with the individual circular and elliptical stains. Varied Drips: Left edge, top edge, right top corner of the image. Circular stains ranging from two millimeters to 10 millimeters. No directionality to the drips. Satellite stains associated throughout the pattern. Void-Central mass of image. Unidentifiable area without bloodstains.
6CBTAC-5605	Located at the bottom right corner of the image is a possible transfer stain. To the left of the possible transfer stain appears to be two linear like drip trails horizontally parallel with one another. Located above the transfer stain is a possible drip stain that appears larger in size than the rest of the drip

TABLE 3: Recognition and Description
Item 5, continued

WebCode-Test	Detailed Pattern Description
	stains in the image. The upper left corner of the image has a concentration of drip stains. More possible drip stains are present in the upper right corner as well. Across the top of the image there appears to be at least five small stains that are elliptical in nature. The directionality of the five stains appears to be from the bottom left of the image and moving slightly to the top right of the image.
6EVHR4-5601	At the top left side of the target are drip stains. At the bottom left of the target area there are approximately two linear drip trails. The drip stains are consistent with blood droplets forming due to a gravitational pull. At the center of the target, there could be a possible void caused by an unknown item or object. At the bottom right side of the target area there appears to be a transfer stain which was possibly left there by an impact of a blood bearing object. Small elliptical stains are observed in the area where the transfer stain is noted and those elliptical stains appear to be coming from the main transfer stain.
7JN2BE-5601	A transfer stain is present near the lower right corner of the target. Drip stains, with associated satellite stains and accompanying drops, are present near the center of the target. Cast-off patterns are present on the target. A void is present near the center of the target near adjacent bloodstaining.
7LUJDF-5601	There is a transfer stain in the bottom right corner. There is a void in the center to slightly left area of the target. The remainder of the target contains a wide distribution of spatter staining of various sizes with both linear and non-linear arrangements. These characteristics could point to the possibility of the classification of a cessation pattern; however, without further information from the scene, the most appropriate classification is just spatter staining.
7NKN43-5605	A red-brown transfer stain was observed in the lower right hand corner. Some linear markings were observed within this stain. A lack of staining was noted within the center of the image and no defining shape was observed. Red-brown circular spatter stains were observed throughout the image. Some of these stains in the lower left corner had a linear distribution. Cast-off cannot be excluded as a mechanism that created these stains. Some elliptical stains with directionality and measuring less than 1mm in diameter were also observed within the area of the spatter stains. Two red-brown stains measuring approximately 10mm and 15 mm in diameter were observed towards the center of the image. Drips stains cannot be excluded as a mechanism that created these stains.
7RHBEH-5601	Observation: 1) Multiple drip stains. 2) A drip trail. 3) A swipe
7RYDCH-5605	Multiple circular bloodstains varying in size from approximately 2mm - 15mm in diameter distributed across the image. Some circular stains arranged in a linear fashion in the upper left of the image. Appear to be a combination of drip stains and cast-off indicating movement. Some stains overlapping creating a drip pattern with associated satellite spatter. Small elliptical stains approximately 1 mm in width displaying directionality in the upper left corner classified as spatter stains. Very small <1 mm in width, elliptical stains displaying directionality in the upper right classified as spatter stains. Small approximately 1 mm in width elliptical stains displaying directionality in the middle to lower right classified as spatter stains. Very small, <1 mm in width, elliptical stains displaying directionality in the centre on the left classified as spatter stains. Large irregular stain visible in the bottom left approximately 12 cm long and approximately 3-5.5 cm wide. Density of the stain is uneven where the central and lower section appear lighter. Possible transfer stain. An area on the right within the stain has been altered, characteristics indicate a wipe/swipe pattern. The central to upper left area is devoid of any staining whereas the rest of the target surface has very small circular stains distributed across the surface. Evidence of a void.
83YDFA-5605	This pattern includes drip stains a drip trail and a transfer stain.
84CMQV-5605	Item 5 contains bloodstain patterns on vinyl tile in the horizontal plane. The image looks to be a midrange or medium distance photograph and it is difficult to put the bloodstain pattern into context without an overall view of the room/pattern. In the lower R corner (as facing) of Item 5, there is an

TABLE 3: Recognition and Description
Item 5, continued

WebCode-Test	Detailed Pattern Description
	<p>irregularly shaped transfer stain. The deposition of blood varies in concentration within the transfer pattern and the tile pattern/texture is visible where the deposition of blood is the lightest. At the top edge of this stain is faint apparent feathering. This indicates there may have been some movement during and/or after deposition of this bloodstain pattern. Throughout the Item 5 image, including around the transfer pattern, are circular drip stains of varying size. Some of these stains appear more randomly deposited and appear independent of a larger pattern, while others have been deposited onto the tile in a linear fashion. The circular shape of these drip stains indicates they struck the tile at approximately 90 degrees. The linear arrangement of some of the drip stains may be the result of drip trails (the deposition of drip stains as the result of movement between two points). The drip stains that comprise the linear patterns, apparent drip trails, do overlap in some places and are fairly consistent in size. Within the image are also two irregularly shaped empty spaces within the overall pattern made by the drip stains. One is located in the approximate center of the image and is approximately T-shaped. The second empty spot is a small approximate oval shape and located near the top center of the Item 5 image. In the absence of a true overall photo, it is difficult to determine if the pattern in Item 5 is continuous, but the absence of a bloodstain pattern within an otherwise continuous pattern is described as a void. The larger of these two empty areas indicates a void since it is located within the surrounding drip stains. If there was an intervening object on the tile when the bloodstain pattern was deposited, it is not possible to determine what it could have been based upon the shape of the voided area. The second, smaller, oval shaped empty space may also be a void or could be an artifact of how the pattern was deposited. In addition to the numerous drip stains, there are some small spatter with direction. Some of the directional spatter is located near drip stains and could be associated with the drip stains contacting the surface at the time they were deposited or they may be from another event or pattern. The directional spatter are small and present in numerous areas in the Item 5 image. There is no clear impact, projection, drip, or splash pattern that could have been the origin of these small stains with directionality.</p>
8EBG7D-5601	Transfer stain lower right corner of target. Spatter stains observed throughout target in cessation pattern. A void is observed in center of target.
8M324Y-5605	The target surface bears numerous spatter stains. These are predominantly circular with generally smooth undisrupted edge characteristics, though some disruption is evident in a small number of stains. For the predominant spatters, the size range is between approximately 1 and 15mm diameter. There is some satellite staining present in proximity to the large spatters. The distribution exhibits the features of drip stains, with drip patterning also evident where blood has dripped into existing stains. There is some linearity apparent in areas of the drip staining, and an area free of blood in the central region, possibly suggestive of voiding. On close examination of the spatters, it is noted that colouration is light, suggesting that either the colour of the target surface is evident, or that some level of dilution has occurred. Further to the spatter pattern, a transfer stain is also present in the image. A wipe feature is evident along one edge of this stain.
8M6NKD-5601	There is a void in the center of the target. There is also a transfer stain at the bottom right area of the target. There are numerous round spatter stains that are of similar size, shape, and directionality across the target. Some stains are linear while the majority have random distribution. These are characteristics of a cessation pattern.
8Q4ZKJ-5605	This photo mostly contains circular spatter stains plus associated satellite stains. There is less variation in size and greater density in the bottom left with most of the spatter stains being 5 to 10 mm in diameter in this area (and some of them are overlapping). The remaining spatter staining is more spread out and has a greater size range. There are some relatively large circular stains that could be drip stains. Some of the satellite stains, particularly those in the bottom middle of the image, are showing directionality. There is a relatively large area of roughly rectangular shaped staining to the bottom right. It has mostly defined edges and varies in intensity (i.e. is lighter and heavier in places). It has been characterised as a transfer stain. Some spatter stains/drip stains may have been altered during the formation of the transfer stain. There is a relatively large void area at the centre of the

TABLE 3: Recognition and Description
Item 5, continued

WebCode- Test	Detailed Pattern Description
	image.
8Q6PTM- 5601	Spatter stains, approx. 65, circular in shape measuring between less than 1mm to 10mm in diameter, distributed from the left top to right top of the image. Within this distribution is one large circular stain approx. 15mm diameter which is surrounded by mist like circular staining. The larger stain being a drip or spatter stain. Spatter stains in the bottom left to the middle bottom in a lineal distribution of two patterns parallel to each other. At the bottom right corner is a transfer pattern that measures approx. 60mm X 120mm, has characteristics of motion including irregular edges, feathering and striations.
8YX3TL- 5601	In the top half of the photograph there appeared to be a distribution of circular shaped spatter stains, possibly cast-off with associated satellite stains. In the bottom left of the photograph there appeared to be lineal distributions of circular stains, possibly cast-off stains with associated satellite stains. There was a larger stain in the centre of the photograph with scalloped edges that was possibly a drip stain or possibly part of the distribution of the spatter stains. In the bottom right corner of the photograph was a collection of blood, possibly a pool that had been altered by means of a wipe through it.
99YWCD- 5605	Drip stain, drip pattern, drip trail, wipe, accompanying drop, spatter stains, altered stain and void.
9ABKZJ- 5605	There are approx. hundred small circular spatter stains (1-10 mm), surrounded by several hundred, very small, spatter stains (<1 mm). Some of the very small stains are elongated due to a narrow angle of impact. In the middle of the area there is a void, around 10x10 cm large, with no bloodstains. In the lower left corner the distribution of spatters is linear which may indicate cast off or cessation cast off. A few stains have the shape and size corresponding to drip stains (10-15 mm). In the lower right corner there is a transfer stain. 12x4 cm of the transfer stain is visible in the photo, but it might be larger than that. It is not possible to determine what object caused the transfer stain.
9ABTJ3- 5601	There are several bloodstain patterns deposited on the horizontal surface. Numerous round stains in various sizes (2mm-15mm) were observed throughout the photographed area and are drip stains. Several smaller accompanying drops are present with these drip stains. A linear distribution of the drip stains was present on the bottom edge of the photographic, indicating a drip trail. The drip trail ends, and a sharp delineation in the general shape of a square or a corner is present in the bottom area of the photo, indicating a possible void where an object has been removed after the blood was deposited. Underneath the drip trail several smaller, millimeter and submillimeter elliptical stains were observed. These stains appear next to a larger area of blood deposited on the floor and are consistent with a drip pattern. An altered stain is present in the bottom right corner of the photograph; it appears blood was deposited on the surface and then disturbed by an object moving through the upper portion of the bloodstain, removing some of the blood, consistent with a wipe.
9DRAYM- 5605	Greater than fifty near circular spatter stains ranging in size from approximately 1 to 10 mm. A number of the stains are arranged in a linear pattern. There are at least two linear arrays of stains at the bottom left of the image, and at least another two linear arrays of stains at the upper left of the image. Linear arrays of stains appear to be as a result of blood drops released from an object due to its motion. Stains on the bottom right of the image appear to have been altered. A transfer stain with smearing of blood on the upper edge has occurred within this area resulting in an irregular shaped area of staining. Due to the stain being partially photographed, I can't determine if it is a swipe or wipe. Possible void in the centre of the image.
9L3BGG- 5605	Item 5 was a photograph of bloodstains on a vinyl tile on a horizontal plane. The proper orientation of the photograph is with the scale on the upper and left edges of the photo. Over the right ¾ side of the photo were numerous brownish-red, circular to oval shaped stains with regular margins and satellite spatter around them. Some of the stains were in linear orientations. The stains ranged in size from <1 mm in diameter to 10 mm x 11 mm. Most were of similar size. These stains were drip stains. The drip stains in linear orientations were drip trails. The drip trails had mixed directionality, based on

**TABLE 3: Recognition and Description
Item 5, continued**

WebCode- Test	Detailed Pattern Description
9M3BKM- 5601	<p>the satellite spatter. Near the center of the overall patterns was an area with no spatter stains, no drip stains, and no satellite spatter. This may be a void, or it may be an accident of deposition that nothing was in this area. On the lower left portion of the photograph was a pattern that measured approximately 105 mm x 60 mm. This stain was irregular in shape with irregular margins. There was a feathered edge on the right hand side and some feathering on the lower left side. There wasn't a distinct lessening of the blood but there were distinct striations indicating movement of the object that created the pattern. There were some possible pre-existing drip stains on the upper right edge of the pattern. For this reason, this pattern is best categorized as a wipe, although it could also be a swipe. Just above the wipe and to the left of the drip stains, near the scale, were a series of elliptical shaped stains ranging in size from <1 mm by 2 mm to 1 mm x 5mm. These stains were in a radiating distribution and appeared unrelated to the drip stains/drip trails. This was possibly an impact pattern. However, the area of convergence of this possible impact pattern does not show a source of blood that was impacted. This analysis was affected by the fact that this single photograph did not show the entire area of the bloodstains, but only a portion of the full area.</p>
9T4UE7- 5605	<p>Image 5 was a complex pattern of blood staining. There were numerous circular blood stains, ranging between approximately 5 to 10 mm in diameter, across the majority of the image. Amongst this pattern of circular blood stains were numerous fine circular and elliptical blood stains, ranging between approximately 1 to 2 mm in diameter, some of the elliptical blood stains displayed indications of directionality. In my opinion these are spatter stains. A spatter stain is created from an airborne blood drop created when external force is applied to liquid blood. In my opinion, these spatter stains collectively form an impact pattern. An impact pattern is created from an object striking liquid blood. Central to the image is an area of no visible blood staining. In my opinion this is a void. A void is an absence of blood in an otherwise continuous bloodstain or bloodstain pattern. In the lower right portion of the images is a broad irregularly shaped blood stain. In my opinion this is a transfer stain. A transfer stain is the result of contact between a blood bearing surface and another surface.</p>
A3LN8E- 5601	<p>Circular stains of varying sizes (<1mm to >10mm, majority are ~5mm to >10mm) throughout board, somewhat random arrangement (Drip stains) and some distributed more linearly in bottom left corner of board (Drip Trail). Some stains have interrupted edges or are more elongated/irregularly shaped towards the bottom of the pattern with satellite stains. Staining/coloration is dark red for all circular stains. Irregular shaped pattern ~115mmx50mm in lower right corner, somewhat rectangular shaped, narrower end towards the right edge of the target. Varying coloration, some areas dark red/dense and other areas lighter in color/density. Transfer Pattern.</p>
AFC83J- 5605	<p>Upper part: drip stains and expiration pattern Bottom left part: drip stains, drip trails and expiration pattern Bottom right: drip stains, expiration pattern and a wipe and swipe trough the stains with orientation from left to right.</p>
AFRQMG- 5605	<p>On a vinyl tile in a horizontal plane in the bottom right corner is a non-spatter stain with relative motion from left to right and in a downward direction to the bottom right corner consistent with a swipe. From the swipe are two linear lines of circular stains with similar size and shape going from the swipe with some directionality toward the bottom left corner of the image. Several of the stains have smaller stains that originated from their parent stains. From the middle left side of the photo to the top left and toward the top right and down toward the middle are circular stains of similar size and shape consistent with drip stains that appear to have little to no directionality.</p>
AMTY9B- 5601	<p>Numerous drip stains are noted in the photograph; none show any directionality. There is some linearity observed in some of these stains in the lower left area of the picture. There is a transfer stain in the lower right corner of the picture. There are several very small spatter-like stains, some of which show random directionality and no area of convergence; possible insect activity.</p>
	<p>Target is vinyl tile in the horizontal plane. There are many circular or nearly circular stains all over the target with the exception of a roughly triangular void near the center of the target that lacks even</p>

TABLE 3: Recognition and Description
Item 5, continued

WebCode-Test	Detailed Pattern Description
	<p>small stains. Many of the small circular stains, especially those in a linear arrangement near the bottom left of the target are similar in size (about 3mm to 5mm) and have apparent satellite stains near them. The round stains arranged in a linear fashion near the bottom left of the target appear to be cast-off patterns. The circular stains located on the top half of the target appear too small to be drip stains and have a preponderance of about 3mm to 5mm sized stains and some satellite stains associated with them similar to the cast-off patterns below, but there is not a clear linearity to these stains. For these reasons, the circular stains in the top portion of the target can be classified as spatter stains with the distinct possibility that they could be part of a cessation pattern. There is a circular stain near the center of the target that measures about 15mm across. Finally, there is an irregularly shaped stain having a pressed out appearance measuring about 12.5cm x 6cm in the lower right corner of the target. This stain is consistent with a transfer stain.</p>
ANLWFH-5601	<p>On the Item 5 picture, different bloodstain patterns can be identified: On the left and the upper hand, (along the ruler) we can see DRIP STAINS, a pattern resulting from falling drops that formed due to gravity. Under those stains, in the middle of the picture, we identified an absence of blood among the pattern, that is to say a VOID. Under this void, in the lower left hand corner, there are at least 2 DRIP TRAILS (movement of a source of blood between two points). On the lower right hand corner, we identified a TRANSFER STAIN (contact between a blood-bearing surface and another surface). Few drip stains seem to overlay the transfer pattern. The whole pattern includes tiny projections that could be qualified as SATELLITE STAINS.</p>
AVB8YT-5605	<p>On the upper region of the tile, there were at least five upwards directional spatter stains. In the middle of the tile, there were numerous approximately circular bloodstains measuring from less than 1 mm to 15 mm in size. Their size range indicates a combination of drip stains and spatter stains. Some of the smaller bloodstains towards the upper region were in a linear distribution, suggesting a projected mechanism. In the middle and towards the lower region of the tile, there was a possible void area measuring 18 cm by 18 cm. On the lower right region of the tile, there was a transfer stain with possible movement measuring 12 cm by 6 cm. On the lower left region of the tile, there were approximately circular bloodstains measuring 4 mm to 10 mm in size, in a linear distribution forming two drip trails. The size of the bloodstains suggest that these were drip stains. Within the trails, there were satellite stains and/or spatter stains with directionality towards the bottom of the tile.</p>
AVBANX-5601	<p>Item #5 depicts two distinct pattern types. Numerous drip stains of varying sizes appear dispersed throughout the image area. These stains vary widely in size from sub-mm to approximately 15mm diameter, the majority are approximately 5mm diameter. Some drip stains along the lower left area of the image are in a linear array but due to their close proximity to adjacent stains and limited overall length in the visible area, will not be classified as a drip trail. Accompanying drops, satellite stains and spatter stains are also visible in the photograph. In addition to the drip stains, a transfer bloodstain is visible in the lower right portion of the photograph. This stain exhibits straight, rounded, and irregular edges. The overall size of this stained area is approximately 130mm long x 50mm wide.</p>
AXCDBD-5605	<p>The image provided depicts a complex pattern of overlapping stains that are located on the horizontal plane of a vinyl tile floor. A transfer pattern is located on the bottom right of the image. A pattern of circular spatter stains which range in size from approximately 2 to 14 mm are located in the majority of the image with the exception of the upper quarter. These stains exhibit some evidence of having a linear distribution, most notably in the bottom left corner of the image; however, an overall distribution was unable to be determined. Additionally, a second pattern of spatter stains is visible throughout the image. These stains range in shape from circular to elliptical and range in size from approximately 4 mm to less than 1 mm. A distribution of these stains was unable to be determined.</p>
B2B7MM-5601	<p>Drip stain with drip tail and some evidence of drip pattern. Satellite stains visible. Transfer pattern visible also.</p>
B344WF-5605	<p>Multiple spatter stains of varying deposition are present across nearly the entire page. They range in size from less than ~1mm to ~12mm. A lack of blood in the center of the page along with the</p>

TABLE 3: Recognition and Description
Item 5, continued

WebCode- Test	Detailed Pattern Description
	presence of some altered stains suggests a possible void. A transfer stain is present in the bottom right corner.
B8XYW2- 5605	Drip stain(s): traversing area between left and right edges, across tile towards the top. Drip trail(s): multiple possible drip trails near bottom left corner extending to center on bottom edge. Transfer stain: lower right corner. Void pattern: middle of tile, towards left side - "T" shape with bottom of T extending off the tile in the lower left corner. Satellite stains: surrounding and adjacent to drip stains and trails.
BJ9CBG- 5601	Altered stain to lower right of pattern is an area of transfer bloodstaining. Edge on the right hand side is not visible, but from edge on the left it appears to be a wipe through several wet spots of blood pooling together into a larger bloodstain and moving from left to right in a diagonal direction. Overall features are more likely wipe than swipe. Numerous spots of blood, with a range of sizes over a wide area. largest approximately 14 mm diameter (drip stain), smallest less than 1 mm diameter. Some are close together, overlapping in places e.g. lower left and upper right, associated with smaller spots and directional stains, others more widely dispersed. Apparent void area in the centre. Linear pattern of spots of uniform size in lower left: cast off / drip trail considered but given varying distances between the spots in my opinion, this indicates a drip trail and drip pattern where blood is dripping into blood whilst source is moving at different rates. Spots of blood to upper left and right, ranging from 1 mm to 6 mm diameter, of uniform sizes within the ranges. They are not directional and appear aligned, indicative of cast-off. The smaller spots are a result of the drip pattern and satellite stains. No indication of expired blood or impact patterns
BUV6RK- 5605	There is a transfer stain at the bottom right corner of the image. There is a swipe (or possible wipe) at the top edge of this transfer stain. At the bottom left of the transfer stain there is heavier staining with irregular margins but with some circular/scalloped edge characteristics noted. There are also irregular satellite spatter stains around this area, indicating a possible drip pattern/blood-into blood. This pattern was possibly altered by the transfer stain. There is a void near the center and toward the lower left of the pattern. There are spatter stains (including possible drip stains) in a somewhat linear distribution at the bottom of the pattern. No specific mechanism of deposition could be determined. There are numerous other spatter stains throughout the pattern. A couple of these appear consistent with drip stains, otherwise, no specific mechanism of deposition could be determined.
BV4P88- 5601	On the bottom right corner, there is a transfer stain from a blood bearing object making contact with a non-blood bearing surface. A drip trail resulting in the movement of a source of drip stains between two points is located on the bottom portion of the image. Drip stains are present with satellites coming from some of the parent stains as a result of blood impacting the vinyl tile. In the middle of the vinyl floor, there is a void where there is no blood present amongst a floor covered in blood.
C4BLTP- 5605	Bloodstains were observed around the perimeter of the photo and a void was observed in the middle of the bloodstains. The void is not an obvious shape. Numerous circular drip stains and spatter stains were observed on the photo. The stains appear to be in a random pattern along the top and left side of the photo. Two possible drip trails were observed along the bottom left side of the photo. Some of the drip stains along the bottom appear to overlap with each other. Some of the drip stains have smaller satellite stains around them. An altered stain was observed in the lower right corner of the photo. Some striations appear to be present in the stain along with some light feathering which indicate the stain is a wipe or a swipe. The alteration of the stain appears to have been moving from right to left. Due to the photo having cut off the stain I am not able to determine if a preexisting stain was present, therefore I cannot confirm the direction, or confirm wipe vs swipe. A possible drip pattern was observed on the lower left side of the altered stain, but it does not appear to be the source of the stain.
C8F8MH- 5601	Numerous drip stains varying in size and dispersion; circular in shape with some satellite stains observed. Transfer stain in the bottom right corner.

TABLE 3: Recognition and Description
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WebCode- Test	Detailed Pattern Description
CTR634- 5605	A circular apparent drip stain is located just right of center on the photograph. Additional smaller, circular, possible drip stains are located just above center, along the lower left edge, and toward the bottom edge of the photograph. The left half of the photograph is dominated by small [3-7mm] circular spatter stains in linear distributions at varied angles. These are possible cast-off patterns. The lack of elliptical stains suggests that the source object is being moved slowly above the horizontal surface. (Even slower movement would produce larger stains indicative of a drip trail. Increased speed would be more likely to produce elliptical spatter stains.) Similar small circular stains lack linear orientation at the upper right quadrant of the photograph. These stains could be continuation of cast-off patterns from the left. (I cannot rule out cessation.) A large, long, irregularly shaped transfer stain is present at the lower right corner of the photograph. The edges of this roughly rectangular stain are distinct in some areas and feathered in others (suggesting limited motion). The lower left corner of this transfer is most irregular and appears to be surrounded by satellite stains. This corner portion is consistent with a drip pattern. There is also an area without stains, indistinct in shape, starting at the center and continuing toward the lower left of the photograph. Finally, limited fine apparent spatter stains, mostly with directionality pointing down and to the right, are located at the bottom of the photograph. They are not plentiful enough to determine their source.
CWEQT7- 5601	In the lower right corner, there's a transfer stain from one blood bearing object onto the floor (target). Drip stains are present in the upper and lower left corners along with a drip trail. Satellite stains are present around drip stains, most notably near the transfer stain. Accompanying drops are present near the drip stains in the upper left corner, and upper right corner. On the larger drip stains, edge characteristics are also observed. A drip pattern is also present near the transfer stain in the lower corner.
DDXTCF- 5601	Drip stains- larger stains in the middle and left edge. Possible void in the middle- adjacent to the larger drip stains. There are some mixed sized stains, but predominantly uniform- especially along the bottom. However, there are many stains throughout the visualized plane that are < 1 mm. The bottom has bloodstains in linearity that appear to be a drip trail. The bottom right has a transfer that appears to have some motion from right to left due to the top "edge" fading away and small stains along the bottom which began to dry (altered/skeletonized stains) before movement to the left (wipe). There are round stains at the bottom "left corner" of the transfer, which were present first, before the transfer, as they dried a bit and are still visible. There is an irregular shape to the transfer, narrower at the right edge of the frame and it gets wider towards the left. This could be from the shape of the item creating the transfer, or because of the movement of the item as it came into contact with the tile. Due to distinct edge at top, this transfer is possibly a swipe, versus wipe, starting out of frame, however, because it starts out of frame and the totality of the pattern isn't visible, the pattern can not be definitively identified. The category of the patterns considered all fall within the category of Transfer, and the pattern will conservatively be regarded as a transfer. The texture of vinyl makes it difficult to determine if individual stains are visible within this transfer. Stains are round-ish, versus elliptical. Roundish stains across mid and top of photo. Cast-off (possibly from the flicking of fingers or a tip of a knife) was considered as a possibility. Cast off patterns, however, tend to reflect "a consistently changing impact angle" (Bloodstain Pattern Analysis, 3rd edition, Bevel and Gardner) which is not visualized here. Some stains have lighter/diluted appearance. Some appear to have vacuoles or dried air bubbles at their center. These traits are factors attributed to expired bloodstains. The report from the medical examiner would need to be consulted to determine if there had been any breaches of the airways, or blood in the mouth, lungs, and/or airways. Without surrounding contextual information, like photos of the adjacent areas, along with the Medical Examiner's report, I would be more conservative and not attribute the stains from the mid to the top of the photo to any specific pattern type, but use the broader classification of a Spatter Pattern.
DE7CQ3- 5605	This complex pattern consists of numerous circular and near circular spatter stains ranging from < 1mm to approximately 15mm, located predominantly on the upper and lower left and center of the target, and a larger irregular shaped transfer stain located on the lower right. Some of the circular

TABLE 3: Recognition and Description
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WebCode-Test	Detailed Pattern Description
	stains appear to have a linear orientation while others appear more random, indicating possible cast off patterns and/or drip trails and drip stains. There is thinning and feathering on the upper edge of the larger transfer stain on the lower right, indicating possible movement. The lower edge appears to overlap a possible drip pattern, resulting in an apparent altered stain. Numerous small satellite stains are also present on the target.
DKUYJM-5601	Several drip stains, some that dripped into another stain creating radiating satellite stains, therefore creating a drip pattern. There are small circular spatter stains with a linear orientation in at least 3 separate patterns creating a cast-off pattern. There is a large swipe stain in the bottom corner of the target that appears to have also wiped through a few of the drip stains creating a wipe. In the center of the target is a void.
DMP9ZJ-5601	In the bottom right corner is a transfer stain, on the bottom left edge are indications of curved edges which may represent altered drip stains or spatter stains. In the approximate center of the tile is an apparent void surrounded by various sized spatter from very small to larger drip stains. In the bottom left corner is a series of drip and spatter stains with associated satellite spatter. Some of these drip and spatter stains are in a linear orientation. In addition some of the drip and spatter stains in the bottom center have associated spatter with directionality towards the bottom of the tile.
DPB84F-5605	Transfer stain in bottom right of photograph, some of which has been wiped. Dripstains also within transfer stain which appear altered as a result of the transfer stain. Numerous dripstains throughout the photograph, some with associated satellite stains. Dripstains mostly at a 90 degree angle. In bottom right of photograph there are some bloodstains showing directionality, mostly going in the same direction and some also appear dilute. In my opinion, spatter stain and cannot exclude the possibility of expiration pattern.
DW9RAH-5601	Image of an approximate 30 cm x 22.2 cm area of a gray in color vinyl tile in the horizontal plane, with a right angle, millimeter scale oriented in the upper left corner. The following stain pattern description is based on what is visible in the photograph. In the lower right quadrant of the image is a red in color stain approximately 4.8 cm wide x 12 cm long with a continuous demarcated boundary at the upper and lower edges. Within the lower left edge of the pattern are areas bearing scalloped edge characteristics, consistent with portions of preexisting drip stains. The top side of the pattern bears a thin red in color veneer containing linear striations. The interior of the pattern contains less than 1 mm in size, circular to elliptical shaped perimeter stains. The pattern extends beyond the lower right side of the image. The pattern is consistent with a wipe pattern; however, additional images regarding the remainder of the pattern would be requested for a final determination. In the lower left quadrant of the image is a series of two curvilinear oriented, red in color stain patterns consisting of circular to semi-circular stains. The circular to semi-circular stains range in diameter from approximately 2.5 mm to 9.0 mm, with associated satellite stains within the patterns. The upper pattern is approximately 9.6 cm in length and the lower pattern is approximately 15 cm in length. The patterns are approximately 1.3 cm to 2.3 cm, one above the other in a horizontal orientation. Some of the stains intersect with one another. The lower pattern appears to extend beyond the lower left corner of the photograph. The patterns are consistent with drip trails; however, additional images regarding the remainder of the pattern at the left side of the photograph would be requested for a final determination. The remaining approximate two thirds of the image is above the aforementioned patterns and contains randomly dispersed circular to semi-circular, red in color stains, ranging in diameter from approximately 2.5 mm to 15 mm with associated satellite stains within the pattern area. Some of the stains intersect with one another. The stains are consistent with drip stains.
DX3FTD-5605	The target is a vinyl tile on a horizontal plane. Most of the bloodstains are drip stains ranging in size from approximately 1-15mm. The drips stains are distributed on the upper half, left side, and lower left of the target. The lower left half of the target also appears to have more than one drip trail ranging in size from approximately 2-9 mm. Satellite stains are also present in areas that include drip stains and drip trails. A possible void pattern is present in between the drip stains and drip trail. A 115mm x 30mm transfer stain with some pooling is present in the lower right corner of the target.

TABLE 3: Recognition and Description
Item 5, continued

WebCode-Test	Detailed Pattern Description
EQF6Y9-5601	There are drip stains of various sizes throughout the photo. Some satellite stains surrounding the drips suggest an irregular surface, not to be confused with spatter. A void is visible near the center of the image however, the object cannot be determined. In the lower right corner is a drip pattern. A transfer stain is located in the lower right corner of the image. The upper edge of the transfer stain has a linear appearance in contrast to the lower edge which appears more irregular. Spatter is visible along the left side of the image (digital).
ERA33A-5601	DRIP STAINING to the top half of the picture and two DRIP TRAILS to the bottom left, within which numerous PARENT STAINS and SATELLITE STAINS visible. DIRECTIONALITY also noted within the satellite stains. A few of the larger dripped stains have the EDGE CHARACTERISTIC of spines emanating. Bloodstain which has been WIPED to the bottom right of picture.
F4HVDL-5605	Spatter stains are present on almost the entire surface of the vinyl tile but a void is visible in the central part of the tile. A few drip stains (the ones with a larger diameter) are also observed on the tile. In the lower right hand corner there is a wipe/swipe.
G3JCM6-5601	There is a transfer stain in the lower right corner of the target. There is a grouping of spatter stains of similar size and directionality covering most of the target. The distribution is neither radiating nor really linear. This grouping of spatter stains makes up a cessation pattern. There is a void in the middle of the target.
G78NNV-5605	The image of vinyl tile has multiple bloodstain patterns. I observed a transfer stain on the bottom right corner of the tile. This is a larger bloodstain with characteristics of blood being transferred from a blood-bearing surface onto the tile. I also observed multiple drip stains which have various sizes, but the general angle of the drips appears to be perpendicular to the tile surface. One area with drip stains of similar size and appearance are forming a drip trail. Another area towards the center bottom of the tile appears to be a drip pattern in which blood drops fell into other blood drops resulting in smaller satellite stains.
G8GT2J-5605	There is a transfer stain located at the lower left corner. The right part of that stain shows a wipe pattern oriented upward from the bottom of the vinyl tile. The object/element from which that transfer stain come from can't be determinate. There are mostly spatter stains on this vinyl tile. The hypotheses concerning these patterns are: H1: The spatter stains located at the left side of the tile is probably a projected pattern. H2: The spatter stains located at the center and right parts of the tile could be a projected pattern or a cast-off pattern or a mix of these two patterns. There are at least 2 or 3 drip stains located at the center of the tile. There are some satellite stains mostly linked to the spatter stains deposit on the tile.
G8WYGA-5601	Observation: 1) Multiple drip stains. 2) A drip trail. 3) A wipe in a contact stain
G9BGKF-5605	There were four bloodstain patterns/areas of interest (labeled A-D) on the tile target. A void (A) is present in the middle of the target. There are numerous drip stains (B) throughout the entirety of the target, ranging in size from ~ 5mm to 10mm, including a linear distribution of drip stains/spatter stains in the bottom left of the target. Throughout the target there are also numerous spatter stains (C). These spatter stains are small (ranging from sub-millimeter to ~ 3mm in size), and elliptical and circular in shape. There are areas of these spatter stains (primarily near the bottom of the target) that exhibit directionality that appear to originate from an area that is now part of the void. Without the context of what created the void, it is difficult to discern the mechanism of creation of the spatter stains (a drip pattern, an impact pattern, or a small projected pattern cannot be ruled out). Finally, a transfer stain (D) is present in the bottom right of the target.
GBW4C3-5601	A cast-off pattern is present in the lower left corner of the target. A transfer stain is observed in the lower right corner of the target. Spatter stains are present across the majority of the target. A void is observed in the central portion of the vinyl tile.

TABLE 3: Recognition and Description
Item 5, continued

WebCode-Test	Detailed Pattern Description
GFNCGA-5601	<p>Observation #1- Transfer stain- A transfer stain was in the lower right area of the target. The bloodstain measured approximately 4" x 2". The bloodstain's left edge began approximately 4 1/4" left of the right edge of the target and progressed to the right edge of the of the target. The bloodstain's top edge began 2 7/8" up from the bottom edge of the target and progressed to approximately 1 1/2" up from the bottom edge of the target. Observation #2- Impact Pattern- There were approximately 50 bloodstains located in the upper left, upper center and upper right areas of the target. The sizes of the bloodstains ranged between 1mm and 15 mm with most of the bloodstains measuring approximately 5mm. The bloodstains were circular in shape. The overall pattern size measured approximately 11" x 6". Observation #3- Cast-off Pattern- There were approximately 50 bloodstains creating a total of two linear cast-off patterns in the lower left and lower center areas of the target. The overall pattern began approximately 1/4" right of the left edge of the target and progressed to approximately 9 3/4" right of the left edge of the target. The overall pattern began approximately 2 1/2" up from the lower edge of the target and progressed to the lower edge of the target. The sizes of the bloodstains ranged between 2mm and 10mm with most of the stains measuring approximately 5mm. The stains were circular in shape. The overall pattern size measured approximately 7" x 2 1/2". The pattern's orientation on the target was 9 o'clock to 2 o'clock. Observation #4- Void- A void was in the lower left area and the center of the target. The void area was consistent with a "T" shape and measured approximately 7" x 6". An object was placed on the target prior to the deposition of Observations #2 and #3 and was removed after deposition.</p>
GG4P67-5605	<p>On a horizontal grey vinyl tile (approx. 20 x 30 cm) are different types of blood stains visible. In the bottom right of the photo is a slightly rectangular bloodstain (approx. 4 x 12 cm) visible, this is classified as a transfer stain. On the upper part of this transfer stain is an indication of a longitudinal movement visible, this is classified as a wipe and/or swipe. In the bottom left and the upper part of the photo are circular spatter stains with a size between smaller than 1 mm and 15 mm visible. In the bottom left the spatter stains have a linear distribution (two slightly horizontal lines). In the upper part of the photo the spatter stains have an irregular distribution. Some of the circular spatter stains are accompanied by small satellite stains, some with directionality. The spatter stains are classified as a cessation pattern. It is possible that the largest spatter stains are drip stains. In the middle of the photo is an area without bloodstains, this could be a void.</p>
GNPPHX-5605	<p>There are multiple overlapping bloodstains on this target. Located on the bottom right of the tile is an irregular shaped slightly diagonal bloodstain of approximately 12 cm long by 5 cm wide. The top of this pattern has varying densities of linear bands of staining running lengthwise through the stain that feathers or comes to points of lesser staining on the left and appears to continue off the target to the right. The majority of the center of the pattern is much lighter in density then the surrounding areas of the stain. The bottom left corner of this pattern has rounded and scalloped edges parts of which have associated satellite spatter and spines radiating outward from the parent stain. The bottom right of the pattern, like the top appears to continue off the target. Directly adjacent to and slightly overlapping this pattern are drip stains. Given that part of the staining appears to missing on the right side (off the target) it limits the overall observations and conclusions that can be made of the pattern. This pattern appears as a possible drip pattern that was altered by a wipe through the top of the pattern lengthwise. Located throughout various areas of the tile are round to elliptical blood stains with mostly continuous staining and well defined borders ranging in sizes from < 1mm up to 1.5 cm in diameter. It is noted that the center of the tile appears relatively free of blood staining. Given that some of these stains appears to be cut off on the edges and that the overall density of staining continues to edges it suggests that the image represents only a portion of the overall pattern(s) and possibly limits the overall observations and conclusions that can be made. The larger of these stains have scalloped edges and are consistent with drip stains. They also have satellite spatter and spines radiating outward. The distribution of these drips stains appear more random on the top of the target, in the bottom left a number of the these appear in linear depositions, and in the bottom right associated with the drip pattern (see above). Note given the overall distribution and directionalities of some of the spatter stains on the target that do not appear to be directly related to an associated</p>

TABLE 3: Recognition and Description
Item 5, continued

WebCode-Test	Detailed Pattern Description
	parent stain, it is possible that spatter stain types other than satellite are present on the target as well. Drip stains, drip trail(s), and possible spatter stains of a mechanism other than satellite.
GU9RLU-5605	There are drip stains with some satellite stains. Additionally, we see drip patterns, where some even form drip trails. In one corner, a wipe can be seen.
H97JHH-5605	The photo shows multiple circular bloodstains with the characteristics of drip stains dispersed across the majority of the photo. Along the bottom of the photo some of the individual drip stains fall along a rough line indicative of a drip trail. The circular stains in the top 1/3 of the photo are almost a random dispersion. The two patterns of circular stains in the lower left corner of the photo are linear. The upper one has a distinct beginning and end, additionally at least two of the stains within the pattern are drips into and existing drip stain. The same is observed for the pattern nearest the bottom of the photo with the addition that the pattern does not fall along as straight of a line as the one above it. The drip stains range in size from sub millimeter to approx. 15 mm in diameter. The majority of the stains have edge characteristics with a scalloped appearance. The circular shape indicates a straight down angle of impact. Some of the drip stains have apparent satellite stains showing directionality away from the parent stain. A few of the drip stains have a partial perimeter stain with part of the central area missing. In the lower right corner of the photo is an irregular, somewhat rectangular, shaped altered bloodstain the entirety of which is not shown in the photo. The stain is heavier at the bottom than the top. There is a splotchy appearance with heavier deposits adjacent to lighter ones There is a distinct edge characteristic is readily apparent in the photo at the top of this stain. The best pattern description that describes this stain is a transfer stain.
HAZ6FF-5605	Patterns seen in the ITEM: DRIP STAINS; DRIP TRAIL; SATELLITE STAINS; TRANSFER STAIN; WIPE STAIN To provide a better description, the image of ITEM 5 has been divided into four zones: Lower left part of the image: Several scattered independent drip stains, falling practically at an angle of 90° due to their rounded shape, as well as in the lower part of the image, drip trail patterns are observed, as well as small satellite stains produced by the impact of drop on drop. Top left: Several scattered independent drip stains falling practically at a 90° angle due to their rounded shape, and surrounding satellite stains produced by impacting the drop that produces the parent stain against the surface. Top right: Several scattered independent drip stains falling practically at a 90° angle due to their rounded shape, and satellite stains around them (satellite stains) produced when the drop that produces the parent stain hits the surface. Bottom right: In the upper part of the image, several scattered independent drip stains can be seen, falling practically at an angle of 90° due to their rounded shape, and satellite stains around them produced when the drop that hits produces the parent stain against the surface. In the lower part of the image, a transfer pattern is observed, the result of a support of an object impregnated with blood and later a wipe pattern that takes away part of the deposited blood. Likewise, a subsequent dripping (drip stains) are observed on the left side of the wipe pattern. In the central area of the image there is an area where there is practically no bloodstain, but it could not be said that there is a void since there is no illogical discontinuity of the existing patterns.
HJPKLK-5605	The item 5 bloodstain pattern consists of four major elements and a possible fifth element. The first element is a series of cast-off patterns at various locations in the image. The second element is one or more passive blood drops at various locations in the image. The third element is a transfer pattern near the lower right corner of the image. The fourth element is a roughly rectangular void near the central portion of the image. The possible fifth element is a series of sub-millimeter stains in all areas of the image except for the void area described above. This pattern may be the result of insect activity; this was not confirmed.
HKE7TZ-5601	A drip pattern is observed in the top left corner of the image (target). A drip stain is observed at the center of left of the image (target). Two linear drip patterns are observed in the lower left corner of the image (target). In the lower right of the target area, there is a transfer stain with several elliptical stains appear to be coming from the main transfer stain.

TABLE 3: Recognition and Description
Item 5, continued

WebCode- Test	Detailed Pattern Description
HMP7U2- 5601	<p>Spatter stains: near circular stains ranging in size from less than 1mm to approximately 9mm; the majority of stains measure less than 4mm in diameter -located throughout the frame of the photograph except for an area near the center where there is no staining present (*see additional comment below); higher concentration of the staining on the left and bottom of photograph -arranged in a seemingly random distribution except for a group of stains located in the bottom left that have a linear/curvilinear arrangement -these stains exhibit characteristics of both cast-off and cessation cast-off; however, there is not enough information available to make a determination.</p> <p>Transfer stain: irregular shape, varied concentration, striation present; it should be noted that a portion of a bloodstain with a feathered edge is noted on the top right side of this stain however, it is unclear if this bloodstain is a part of the transfer stain or not -located near the bottom right corner of the photograph.</p> <p>Drip stains: near circular with scalloped margin, measuring approximately 1.5cm and 1.1cm in diameter -stains are located in various areas of the photograph -it is possible that the creation of these stains is related to the creation of a potential cessation cast-off pattern. *Potential Void: a lack of bloodstaining is present in an area near the center of the photograph -it could not be determined that an otherwise continuous bloodstain or bloodstain pattern was present in this area</p>
HMRUDZ- 5605	<p>Item 5 is an image of a complex bloodstain pattern on a gray vinyl tile in the horizontal plane. The L-scale is on the upper left hand corner of the image. Two near-circular drip bloodstains are near the center of the image. These have scalloped edges and are 10 and 14mm in diameter. Over fifty near-circular spatter bloodstains are across the surface of the tile. These range in size from 1.5mm to 6.5mm in diameter. Many of the spatter stains have scalloped edges and some have spines. Over one hundred submillimeter spatter bloodstains surround the majority of the larger spatter bloodstains. These submillimeter bloodstains range from near-circular to elliptical. Some of the elliptical spatter stains along the right hand side of the image have directionality to the right, and some of the spatter along the bottom edge of the image have directionality downward. Some of the submillimeter spatter bloodstains are irregular in shape and are possibly satellite spatter from the other stains. There is an irregular-shaped void in the center that extends towards the lower left quadrant of the image. The voided area in the center is 9x6.5cm and the voided area that extends towards the lower left corner is 8.5x2.5cm. Two linear groups of spatter bloodstains are in the lower left corner of the image. The top pattern is 9.5cm in length, with the stains ranging from 2 to 5.5mm in diameter. The lower pattern is 10cm in length, with the stains ranging from 2 to 6mm in diameter. In both linear patterns, the stains become slightly more elongated towards the left end. Some spines are present on several stains at the left end of the patterns, indicating a directionality towards the left. These are likely cast-off bloodstain patterns. To the right of these patterns are over 30 submillimeter spatter bloodstains with a downward directionality. A transfer bloodstain is present in the lower right corner of the image. It is irregular in shape, and is 11x4.5cm in size. Perimeter staining from previous drip and/or spatter bloodstaining is visible at the left lower edge of the bloodstain and is altered. Striations and feathering are present along the top edge, indicating some movement/wipe through of the bloodstaining. The presence of perimeter staining at the left end indicates direction of wipe as to the right and downward. No spatter staining is observed on top of this bloodstain.</p>
HV4T6Q- 5605	<p>Area A: Numerous circular drip and spatter stains measuring ~<1mm to 15mm in diameter. Satellite and spatter stains exhibiting different shapes and random orientations in a chaotic distribution throughout Item 5. The drip stains have defined scalloped edges.</p> <p>Area B: Circular stains measuring ~3mm-6mm in diameter are in a linear distribution. The individual stains have scalloping. Based on the linear orientation and the change in shape from circular to elliptical, stains consistent with drip stains in a linear distribution and/or a castoff pattern were noted on area B. Additional elliptical spatter stains with directionally measuring ~<1mm x 1mm were noted in between area B and C.</p> <p>Area C: The bottom portion of area C has two areas with scalloping. Satellite and spatter stains in a chaotic distribution are noted along the bottom of area C. The top portion has areas of diminished volume, striations and feathering at one side. Welling is noted near the bottom portion of the stain. The stain labeled as C is consistent with a smear.</p> <p>Area D: This area lacks the satellite and spatter stains that is observed consistently throughout the remainder of the overall pattern. This area is in the</p>

TABLE 3: Recognition and Description
Item 5, continued

WebCode-Test	Detailed Pattern Description
	center of a pattern of numerous drip, spatter, and satellite stains would be expected in this area. This area is consistent with a void. Area E: Circular spatter stains ~<1mm in diameter see 22_5601.5_Item5 for full photo. [Photograph not attached by participant].
JAJ9P2-5601	Spatter stains consistent with a cessation pattern observed throughout target. Void observed in center area of target. Transfer stain observed in bottom right area of target.
JF4DDV-5601	There is a transfer stain (bottom right), which appears altered with indications of smearing to the top edge of the stain. Insufficient information available to determine if this is a wipe or swipe stain. There are drip stains to the bottom edge of the transfer stain which have possibly been disturbed to a small degree at their upper edge. These appear to have been deposited over / on top of the transfer stain before this staining was smeared. Further drip stains were observed through the middle of the image. Towards the lower left of the image, there are two approximately parallel linear patterns of blood drops, indicating cast-off blood staining. The spots are of generally similar size, and some of these are overlapping spots of blood, indicating multiple actions/motions, and which appear to have produced small satellite stains. Further blood drops of variable sizes were observed on the left side of the image and to the top right corner, which although not in a characteristic linear pattern, may be accounted for by cast-off blood staining.
JFHYPH-5605	Numerous drip stains on are throughout the tile surface. Most of the drip stains are in drip trails in the lower left and middle areas. Many of the drip stains are very circular in shape, indicating the source of the drip was perpendicular to the drip. Some of the drip stains have satellite stains; however some of the satellite stains are not evenly distributed around the circumference of the drip stain, or the drip stain is not as round, and also indicates that the source of the drip was in motion while it was dripping. Describing the stains in the lower right corner is difficult since it looks like part of the staining was not captured in the photograph. A zoomed out photograph would have been helpful. The large elongated stain in the lower right portion of the tile could be a transfer stain or altered stain, or a combination of both. Above the long elongated stain above is a swipe or wipe stain. Throughout the tile there are very fine circular stains. Without further information, it's impossible to determine the mechanism of formation and deposition of these fine stains. There are some elongated spatter stains in the lower middle, lower right, and upper areas. The middle left portion of the tile has a small area that does not have any stains.
JM3VYY-5605	Item 5 is a complex bloodstain pattern that includes spatter and drip stains, indications of a drip pattern, a void, and a wipe stain. There are over 100 mostly circular spatter stains, at least eight of which are drip stains, in area that is 22cm x 3cm. The stains range in size from 4-15mm in diameter. There is a void in the center and bottom left of the staining, in roughly the shape of an angled T. The top bar of the T-shaped void is 17cm across; the stem is 20cm long. There is a grouping of over 100 elliptical, mostly circular, and amorphous stains that are indicative of a drip pattern. These stains are throughout the complex bloodstain pattern but are most heavily concentrated at the bottom of the image, near the edges of the void. The directionality of the elliptical stains is generally towards the center of the image, but is not radiating. It is likely there is more bloodstaining related to this pattern on whatever object(s) left the void. A roughly rectangular wipe stain is in the lower right corner of the image and covers an area of 13cm x 6cm. There are striations at the top of the stain. There is perimeter staining at the top and bottom edges of the wipe stain.
JX4BP4-5605	Numerous drip stains of varying size throughout the image. A majority of these appearing near circular indicating impact of the target surface at 90 degrees or close to 90 degrees. Some appearing altered with incomplete edge characteristics. In the bottom right corner of the image there is a large apparent transfer stain. There also appears to be a number of altered drip stains on the left side of the transfer stain. Along the top section of the transfer stain there appears to be an indication movement with swipe/wipe characteristics however there is insufficient evidence to conclude which has occurred.

TABLE 3: Recognition and Description
Item 5, continued

WebCode- Test	Detailed Pattern Description
KADF7J- 5601	Drip stains are located on the majority of the tile. An area to the left of the approximate center was void of bloodstains but did not exhibit a specific void pattern indicating the presence of an object. Small circular bloodstains < 1mm were scattered throughout the patterns. A transfer pattern was located in the bottom right corner of the tile. Bloodstains on the bottom right of the tile had radiating spines that traveled towards the bottom right of the tile/picture.
KFYBA9- 5605	Numerous circular-shaped stains of about two to half a centimeter can be observed all over the vinyl tile surface. These patterns can be classified as drip stains based on their shape and size. Accompanying drops and satellite stains of a round to slightly elliptical shape and even spinelike appearance are also visible. They are possibly associated with drip patterns – resulting from blood falling into pre-existing liquid bloodstain or other liquid – which several overlapping drip stains can confirm. Additionally, in the bottom left-hand corner of the image, a transfer stain that can be further classified as a blood smear is present. The conclusive differentiation between swipe and wipe pattern is impossible, as the skeletonization of the original stain, distinctive for the wipe pattern, is not visible in the photo. However, the original stain boundary may or may not be disrupted as it strictly depends upon the time passed after the initial deposit and the subsequent disruption. Thus, it is not always observed in the case of the wipe pattern.
KJZGK9- 5605	This is a horizontal surface of a smooth vinyl tile. Pattern was found in a bedroom with evidence of a struggle. Multiple drip stains were observed – some just sitting singly and some grouped creating a drip trail. Some satellite staining was observed in the lower center of the photo in-between several of the drip stains, going from top to bottom in the photo. A possible bloody footprint transfer was observed in the lower right portion of the photo. One of the drip stains was observed under the possible footprint, indicating the drip was deposited before the transfer stain. Several of the drip stains have satellite staining coming off of them. Many of the drip stains were circular in shape indicating they were deposited from above at a 90° angle. Some appear to be less round which could indicate they were deposited as the bleeding source was in motion. Pattern = Drip stains, drip trail, satellite, and transfer
KMYU4R- 5605	Examined visually. Many drip stains were observed across the surface in the image. A drip stain is a bloodstain resulting from a falling drop that formed due to gravity. Drip trail patterns were observed across the surface in the image, with the most obvious drip trails located at the lower left corner of the surface in the image. The drip trail patterns resulted from the movement of a source of drip stains between two points. Very small bloodstains were observed around the drip stains across the surface in the image. These small bloodstains may be satellite stains that originated during the formation of the parent stain as a result of blood impacting a surface. These small bloodstains may also have resulted from a drip pattern on the object that created the void at the center of the image. A drip pattern is a bloodstain pattern resulting from a liquid that dripped into another liquid, at least one of which was blood. A void area was observed at the center of the surface in the image and extended towards the lower left side of the image. The void area displays an absence of blood in the otherwise continuous bloodstain pattern. A transfer stain was observed at the lower right corner of the surface in the image. A transfer stain is a bloodstain resulting from contact between a blood bearing surface and another surface.
KZ6NZB- 5601	Drip stains are present throughout the tile. There are a couple of drip trails towards the bottom of the tile. There is a projected stain towards the bottom center of the tile, but the drip trails landed on top of the projected stain. A large bloodstain on the bottom right of the tile may be a transfer stain with a possible swipe pattern. Several satellite stains are scattered throughout.
L84VU4- 5605	Transfer stain in bottom left of image - possibly a foot mark in blood. Drip stains throughout with associated satellite stains some of the parent drips and possibly some accompanying drops. Some drips overlap with transfer pattern. Drip trails noted to left side of image. Possible limited drip patterns where one drip has dripped onto another

TABLE 3: Recognition and Description
Item 5, continued

WebCode-Test	Detailed Pattern Description
LAQEV2-5605	Bottom right corner there is a transfer stain Top and bottom left and right many drip stains Void in central area Satellite stains resulting from the drips
LDQHQU-5605	Across the bottom of the surface area are bloodstains that are circular in shape and range in size from 3mm up to 10mm. Directionality is unknown. These stains appear to be drip trails and drip patterns. On the top two-thirds of the surface, across the whole surface, are multiple circular stains ranging in size from 1 mm to 15 mm. These stains appear to be drip stains. In the bottom right corner of the surface is an elongated shape that is darker in color towards the bottom of the shape and lighter at the top. There is feathering at the top of the shape, lightest red coloring at the left of the feathering and dark at the right. This appears to be a transfer stain.
LDRHMN-5601	The bloodstain patterns on the floor are consistent with drip stains and a transfer stain. The drip stains display in a linear pattern ranging from approximately 3-4 inches. The drip stains are a result from falling drops due to gravity and are a circular shape indicating the source was approximately 90 degrees above the horizontal surface. There is a transfer stain from a blood bearing unknown object coming into contact with a clean surface (floor), prior to the blood bearing object's removal.
LH2V9T-5605	One or more spatter producing event(s), originating from above the tile, created the bloodstains observed on this horizontal surface. The event(s) could not be narrowed down to only one mechanism. Those included in possible bloodstain creation were cessation, multiple overlapping cast-offs, impact from above this area, or projected blood. Within these bloodstains there are several larger circular stains that appear as drip stains. A void was observed at the approximate center of the tile. The shape was amorphous and a specific object could not be attributed to it. A transfer stain was observed on the bottom right of the target. Linear striations and feathering within the pattern indicate movement. This pattern was classified as a swipe and/or wipe. Elliptical spatter stains less than 1mm in size were observed throughout the pattern. These cannot be attributed to only bloodstains striking each other or the target surface. Due to the presence of the void, there may be information missing that prohibits further classification of these stains.
LTK6V2-5605	This complex pattern consists of multiple spatter stains measuring predominantly in the 3 to 6 mm range. Additional millimeter to sub millimeter stains are noted throughout the image. A higher concentration of spatter stains are noted in the lower left corner. These lower spatter stains are arranged in a generally linear pattern and are presumed to extend beyond the borders of the image. Interrupting staining in the approximate center of the image is a rectangular void at an angle. An additional possible thinner void extends from the left corner of the rectangle to the lower left of the image. A transfer stain is in the lower right of the image, with the left edge approximate to the void area. This transfer appears to overlap with a number of stains at its lower edge, and the right side of the transfer is cut off by the edge of the image.
LUB7ZP-5605	200 x 300 area. Transfer stain in lower right hand corner. 400+ passive drops from sub millimeter to approximately 15 mm size. Smaller stains with directionality are consistent with satellite stains from the larger stains
LV7UDT-5601	Drip stains with accompanying drops and associated satellite stains (some directional). Drip trail to left-hand side of the image. To the bottom right a bloodstain with wipe (right to left) with an altered stain (possibly dilute).
LV8JNH-5601	The photograph contains images of bloodstain patterns. Bloodstains are a deposit of blood on a surface and bloodstain patterns are a grouping or distribution of bloodstains that indicates through regular or repetitive form, order, or arrangement the manner in which the pattern was deposited. On the lower right there is a transfer stain that also has a wipe. A transfer stain is a bloodstain resulting from contact between a blood-bearing surface and another surface. A wipe is an altered stain resulting from an object moving through a preexisting wet bloodstain. There are also various drip stains and a couple of apparent drip trails. Drip stains are a bloodstain resulting from a falling drop that formed due to gravity, and a drip trail is a bloodstain pattern resulting from the movement of a

TABLE 3: Recognition and Description
Item 5, continued

WebCode- Test	Detailed Pattern Description
	<p>source of drip stains between two points. On the lower left corner there are a few drip stains that appear to have perimeter stains, a perimeter stain is an altered stain consisting of its edge characteristics, the central area having been partially or entirely removed. In the center area there appears to be a void pattern, a void is an absence of blood in an otherwise continuous bloodstain or bloodstain pattern.</p>
M4H8VN- 5605	<p>A transfer stain was observed in the lower right corner of the image. A void was observed in the center of the image. Drip stains were observed in the upper half, at the left edge, and at the lower edge of the image. Spatter stains were observed in the area of the image surrounding the void. The spatter stains display characteristics suggestive of an impact pattern or a drip pattern.</p>
MCCDUG- 5605	<p>Item 5 is an image of smooth vinyl tile in the horizontal plane with multiple bloodstains. There is a transfer stain in the lower right corner of the image. The upper portion of the transfer stain has some indications of motion, making it a possible swipe. Drip trail stains are present throughout the image. Some of the blood drops have dripped into existing bloodstains, producing drip patterns with satellite stains.</p>
MCNCKK- 5605	<p>A large stain is located at the bottom right of the picture. The distribution of blood is homogeneous. It is a TRANSFER STAIN. The upper part of this transfer stain is altered. We notice internal striations. It is a WIPE. From the top to the bottom of the photo, rather on the left, we notice several lines of circular millimetric stains. They are CAST-OFF PATTERNS. In the center of the picture, two circular centimetric stains exist. They are 2 DRIP STAINS. Rather in the upper right corner, we find a set of circular millimeter stains without distribution. They are circular SPATTERS.</p>
MEWKU6- 5605	<p>Item 5 was a complex bloodstain pattern on a vinyl tile in the horizontal plane. There was a possible wipe/swipe bloodstain in the right lower corner of the tile that measured approximately 22mm to 50mm in width and 150mm in length. Some feathering was visible just above the possible wipe/swipe. The left lower corner of the stain appeared to have moved through preexisting bloodstains. To the left of the possible wipe/swipe bloodstain was a series of circular spatter bloodstains which covered an area of approximately 50mm wide to 150mm in length. These spatter bloodstains ranged in size from approximately submillimeter to 9mm and were linear in nature. Some of the spatter bloodstains also exhibited satellite spatter stains originating from the parent stains. Just above the spatter bloodstains as mentioned above was an area of a possible void. This possible void measured approximately 32mm at the narrowest and 114mm at the widest and was approximately 181 mm in length. No spatter bloodstains were observed within this area. The area above and to the right of the possible void exhibited spatter bloodstains that ranged in size from approximately submillimeter to 7mm. The bloodstains were circular to near circular in shape. Some of these bloodstains also exhibited satellite bloodstains originating from the parent stains. Some linearity could be observed on the top row of spatter bloodstains on the tile. There was at least one possible drip bloodstain to the right of the possible void. This bloodstain was circular in shape and measured approximately 14.5mm in diameter and had scalloped edges.</p>
MEWMGN- 5605	<p>Approximately 115 red/brown stains were observed throughout the tile, round to oval in shape, measuring approximately 10mm to 3mm with at least 7 linear groupings, which is consistent with cast-off patterns. Within most of the cast-off patterns are satellite stains and possible cessation patterns or spatter stains, and consists of hundreds of stains that measure approximately less than 1mm to 1mm. Two possible passive drip stains were observed on the middle of the tile, measuring approximately 15mm and 12mm. On the bottom right corner of the tile is staining (possible part of one of the cast-off patterns) that has been altered by a wipe and/or a swipe. Varying intensity and striations were observed within this staining, and motion appears to be from right to left and slightly upward, as the volume diminishes from right to left on the uppermost of the stain.</p>
MFTZ3V- 5601	<p>One (1) transfer stain was observed on the bottom right corner of the target. Two (2) drip stains were observed near the center of the target. Cast-off patterns were observed on the bottom, left side, and top of the target. No directionality of the cast-off patterns could be determined. A void was observed</p>

TABLE 3: Recognition and Description
Item 5, continued

WebCode-Test	Detailed Pattern Description
	within the cast-off patterns and to the left of the drip stains on the target.
MQ9RNJ-5605	At the top, left side, and bottom left of the target area there are approximate 90° drip stains. At the center of the target there appears to be a void due to no blood stains being observed. At the bottom right side of the target area there appears to be a transfer stain which was possibly left there by an impact of a blood bearing object. Small elliptical stains are observed in the area where the transfer stain is noted and those elliptical stains appear to be coming from the main transfer stain.
MTZQ7N-5601	The bloodstain pattern present in the photograph is oriented in the horizontal plane on vinyl tile. This description is oriented in such a fashion that the larger non-circular stain in the image is oriented in the lower right-hand corner of the overall pattern, just as it was reported to be on the CTS portal website in the August 4, 2022 email communication from CTS. In the lower right-hand corner of the image there is a rectangular shaped bloodstain that measures approximately 3.5 cm X 11.0 cm. This rectangular shaped bloodstain has well defined edges and has a solid linear striation adjacent to it. The linear striation appears associated to the main rectangular shaped stain and has a feathered edge as the linear striation moves upward from the bottom of the image. This rectangular shaped bloodstain pattern is suggestive of a transfer stain but due to characteristics observed within this bloodstain a swipe or wipe must also be considered as possible mechanisms that could have created this stain. The fact that the entire pattern is not present in the photograph prevents a more definitive conclusion as to the mechanism which created this pattern. Moving toward the left-hand side of the image and near the bottom of the image there are circular to elliptical spatter stains that measure from less than 1 mm in size to approximately 9 mm X 10 mm in size. The majority of these spatter stains do not individually exhibit a directionality. A few of the spatter stains appear to be deposited partially on top of one another and are indicative of a drip pattern with associated satellite stains. The stains in this area of the target are suggestive of drip stains, with associated satellite stains, that cumulate into at least two linear patterns. These circular stains appear to be a series of circular stains or a drip trail. Towards the upper left-hand side and to the upper right-hand side of the image there are individual circular to elliptical spatter stains that vary in size from less than 1 mm to approximately 14 mm X 15 mm in size. A good number of these spatter stains appear to be approximately 4 mm X 4 mm. The majority of these stains exhibit very little to no directionality indicating that they were deposited on the target at close to 90 degrees. Satellite staining is also evident around the parent stains. These bloodstains are suggestive of drip stains with associated satellite stains. Near the center of the image, an absence of bloodstaining is noted between the drip stains and the transfer stain previously described. This absence of bloodstaining in the center of the image could be considered a void.
MV3MRC-5605	I have identified the following bloodstains and bloodstain patterns onto the target surface, drip pattern, drip stain, drip trail, accompanying stain, expiration pattern, bubble ring, parent stain, satellite stain, altered stain, cast-off pattern, edge characteristics, perimeter stain, pooling, and wipe.
N97C64-5605	Various round stains are present throughout item #5, with the approximate angle being close to 90 degrees. This is consistent with drip stains. Several drip stains also have smaller, more irregular stains near their perimeter which is consistent with satellite stains. In the bottom right hand corner is a transfer stain showing feathering which is consistent with movement, or a swipe. It also appears as if the transfer stain and subsequent movement altered preexisting drip stains, which is consistent with a wipe. In the bottom left are several drip stains in which other drip stains have fallen into, creating a drip pattern.
NAENHY-5601	Spatter stains, some of which have associated satellite stains. Linear apparent cast-off patterns to bottom left, some of which have associated satellite stains. Few drip stains present amongst spatter stains/cast-off stains. A bloodstain in the bottom right corner, the lower left edge of which appears to have been caused by an accumulation of apparent drip stains/further spatter stains. This bloodstain appears to have been physically altered and has a smeared top edge from right to left (unable to determine if swipe or wipe). There is an apparent void in the centre of the vinyl tile.

TABLE 3: Recognition and Description
Item 5, continued

WebCode-Test	Detailed Pattern Description
NBDPQC-5605	The bloodstain patterns depicted in the photograph (item 1-1-5) consist of numerous spatter stains with non-linear random distribution on the vinyl tile. Many of the stains are approximately circular; however, some small elongated stains with varying directionality are also present. The spatter stains vary greatly in diameter. Additionally, there are at least two approximately parallel patterns of spatter stains with linear orientation located in the lower-left/lower-central portions of the tile. Stains within the linear patterns vary greatly in diameter and lack observable progressive changes in angle of impact. A transfer stain was located in the lower right corner of the tile. Very small and faint parallel striations were observed within this stain; however, no recognizable pattern was observed. A swipe stain was located in the lower right corner of the tile. The feathered edges of the stain indicate a movement from right to left and upward as viewed facing the photograph.
NRXFL6-5605	Main patterns: drip stains drip trail transfer stain Item 5 contains multiple bloodstains including a large partial stain. The larger patterns include a transfer stain, numerous drip stains, and a drip trail (the movement of drip stains between two points). There appears to be an overlap between the transfer stain and some of the drip stains. Some of the smaller stains present appear to be satellite and accompanying drops.
NUUP32-5601	There were a large number of approximately circular red-brown stains of varying sizes on the vinyl tile (item 5). These circular stains ranged in size from less than 1 millimetre (mm) to approximately 15 mm in diameter, however in my opinion, the majority of these circular stains were approximately 5 mm to 6 mm in diameter. Amongst these circular stains there were small red-brown stains that ranged in shape from elongated to oval and some were slightly irregular in shape. In my opinion, these smaller stains were satellite stains. Based on the range of sizes of these circular stains and the majority being approximately 5 mm to 6 mm, in my opinion, the majority of these stains are spatter bloodstains. In my opinion, the larger stains could be drip bloodstains. There was an area within the approximate centre of the tile and towards the lower left, where there was no apparent bloodstaining. In my opinion, this could be a void and could be associated with the spatter and satellite bloodstains. In the bottom right corner of the tile, in my opinion there appears to have been a drip pattern that has been altered. The alteration appears to be from a wiping action, leading to a wipe bloodstain.
P6LZJ8-5605	On the bottom right part of the picture, there is a transfer stain. On the bottom left part of the picture, there are cast-off patterns from more than one mechanism. In the middle of the picture there is a void pattern, from the right of the void, two drip stains. Stains from cast-off patterns are visible on the upper part of the picture. On the bottom part of the picture, there are some impact patterns.
PCRCDG-5605	Minimally 3 patterns were observed. Pattern 1 is located at top left corner and measures between 2mm to 4mm with several circular stains appearing to be in a curvilinear arrangement. The stains have irregular margins with scallops and are homogenous with no directionality. Pattern 1 is a cast-off pattern in my opinion. Pattern 2 is located at the bottom right corner. It is an amorphous pattern measuring 11.5cm by 3cm and seen to have feathering features. In my opinion, this is a transfer pattern. Pattern 3 is located within the bottom left and bottom center region of the picture. There are stains with irregular margin measuring between 1mm to 15mm. They appear to be homogenous and found with secondary spatter radiating from the parent stains. Certain section of these areas exhibited at least 2 actions due to the observation of stains overlapping one another. In my opinion, this is a drip pattern.
Q23Z9X-5605	Top left corner across top and down left side - Drip stains. Bottom right-corner transfer pattern Along bottom - drip stains, some stains over lap which would be consistent with a drip pattern causing smaller satellite stains
Q3TBYQ-5605	A void is present in the center extending to the lower-middle left of the photograph. On the bottom right-hand corner of the photograph, an irregular shaped light red-brown to red-brown transfer stain is present. This stain measures measuring approximately 124 mm x 43 mm in total. Striations, welling, and feathering are noted in one area of the stain. There is diminished volume in some areas of the stain. Between the bottom left-hand corner and the bottom middle section of the photograph,

TABLE 3: Recognition and Description
Item 5, continued

WebCode-Test	Detailed Pattern Description
	<p>stains having a linear distribution with characteristics of a drip trail are present. These stains measure approximately 2.5 mm to 6.5 mm and have slightly scalloped edges. One of the stains in this area appears altered as there is a partial perimeter around a voided area of the stain. Some of the drip stains landed on top of each other. Satellite stains are also present measuring approximately less than 1 mm. Red-brown drip stains are present in the upper and lower portion of the photograph, not including the area of the void. The drip stains and corresponding satellite spatter measure approximately 2 mm to 15 mm and have slightly scalloped edges. These stains have a chaotic distribution. The edges appear a darker red-brown than the center in some of these stains. Some of the drip stains landed on top of each other. Satellite stains are also present measuring approximately less than 1 mm. Red-brown circular spatter stains are present throughout the photograph not including the area of the void. Some of these spatter stains include satellite stains. These stains measure approximately less than 1 mm to 1.2 mm. These stains have a chaotic distribution. There are red-brown elliptical spatter stains present in the upper left and lower middle and right side of the photograph. Some of these stains show directionality. Some of these stains were travelling to the upper left, others were travelling to the lower right and lower middle, and overall these stains are in a chaotic distribution. These stains measure approximately less than 1 mm.</p>
Q68N8N-5605	<p>There are multiple circular drip stains, size range 1mm-10mm diameter. There are several elliptical spatter stains, size range 1mm-5mm length. The elliptical spatter stains radiate out from approximately the center/left side of the image. There is a transfer stain at the bottom left corner of the image.</p>
QHLZUM-5605	<p>Drips stains and spatter stains observed throughout the imaged section of tile except for a non-descript void area in the center left of the image. A wipe pattern is present in the lower right-hand corner of the image.</p>
QNATZV-5605	<p>Bloodstaining on this item consists of: - A transfer stain in the lower right-hand corner. - Numerous drip stains of various sizes covering the top half of the item, all with angle of impacts of approximately 90 degrees. Some of these have satellite stains. - Drip stains (also with angle of impacts of approximately 90 degrees) on the lower left-hand corner have been deposited in a more linear fashion and form drip trails. In my opinion, I am unable to determine any directionality. Satellite stains are also present and some drips have been deposited on top of one-another.</p>
QPJQDD-5605	<p>Item 5 consisted of an image with various bloodstains on vinyl tile. In the lower right-hand corner of the image is a transfer stain, with a void along the upper right edge. Various drip stains are seen along the upper left corner, upper right corner and along the bottom. A drip trail is seen along the bottom left corner surrounded by small spatter stains. Spatter stains are also present along the lower middle edge of the image and amongst the drip stains present on upper left and upper right portions of the image. A possible void is seen in the middle-left portion of the image. Several of the drip stains have perimeter staining.</p>
QT9ZPY-5605	<p>This a complex bloodstain pattern on a horizontal surface. In the upper left area there are more than 50 near circular spatter bloodstains that are submillimeter to 5mm in size. These spatter bloodstains also are across the top and on the right upper corner of the surface. There are a couple larger drip bloodstains near the upper middle and middle of the surface. These are 1cm and 1.5cm in diameter. There is an area between the upper left, middle and lower left spatter bloodstains that has some spatter bloodstains which extend onto the surface; however, this overall area does appear to be a possible void. The lower left area has more than 25, linear oriented, near circular spatter bloodstains with satellite spatter stains surrounding many of the parent stains. These spatter bloodstains range in size from 2mm to 5mm and appear mostly uniform. This overall area with the spatter and drip bloodstains intermixed has indication of a possible drip pattern with the object being removed (possible void area) leaving an undistinguished area of spatter and drip bloodstains. In the lower right corner there is a wipe bloodstain. There are perimeter bloodstains on the upper and lower top of the stain as well as striations. This bloodstains is 14.5 cm by 4.75cm in size. The direction of this wipe stain is from upper mid-left to lower right of the corner.</p>

TABLE 3: Recognition and Description
Item 5, continued

WebCode-Test	Detailed Pattern Description
QUWBKY-5605	In the upper left corner, lower left corner, and upper right corner of the photo are Cast-off Pattern. Satellite Stain near Parent Stain Cessation Pattern in the lower right corner of the photo. Wipe Pattern on part off Cessation pattern. Swipe in the lower right corner of the photo. A probable scenario is that the blood-covered surface moves above the floor resulting in formation of Cast-off Pattern on the floor. As a result of the sudden slowdown of the movement of the object covered with blood, it was created Cessation Pattern. Movement of an object over the floor surface with Cessation Pattern caused Wipe and Swipe.
R2TTAU-5605	Item 5: The image contains multiple bloodstain patterns that includes a transfer stain on the lower right portion of the target and multiple spatter stains across the entire target. Due to the lack of information provided, which is inconsistent with forensic casework, no additional interpretation will be completed at this time.
RELA43-5605	Item 5 shows several drip stains in the left half of the image. In addition, there is a transfer stain in the lower left corner.
RLBP6C-5605	There are numerous spatter stains observed in the top of the image, with sizes ranging from sub-mm to the largest one of about 3 – 4 mm. Most of these stains are circular with smooth edge characteristics and without any indication of directionality, but there are a few elliptical ones observed with different directionalities, which suggests that these spatter stains could have been formed by more than one event. Around the same area, there are also a few larger, circular drip stains, with the largest one being about 15 mm. In the middle of the image, an irregular void pattern can also be seen. At the bottom-left of the image, two almost-linear drip trails can be seen. The shorter one above consists of at least 14 stains; they have relatively smooth edge characteristics, even though they are not all completely circular in shape. The longer drip trail below consists of at least 20 stains; they also have a relatively smooth edge characteristics, but a few are not completely circular in shape. At the rightmost end of this longer drip trail, several elliptical spatter stains with directionality towards the bottom/bottom-right of the image can also be seen. These satellite stains could have been formed by a drip pattern, where blood was dripped into an existing bloodstain. At the bottom-right of the image, an elongated amorphous transfer stain can be observed. Just beside this transfer stain (on its top, based on the image), features of feathering that indicate motion from right to left can also be seen, indicating a wipe/swipe pattern.
RN87BV-5601	A number of patterns are visible in the photograph. On the bottom right area is an area of transfer bloodstaining with no distinctive shape observed. Just above stain is a circular bloodstain with a diameter of approximately 15 millimetres. The size and appearance of this bloodstain is, in my opinion, consistent with a drip stain. In the central area of the photograph is an area where is no apparent bloodstaining constituting a void pattern. On the lower left of the photograph are two approximately linear lines of circular spatter stains. with some associated smaller spatter stains. I cannot exclude a projected or cast-off mechanism for the production of these areas of staining. The upper areas of the photograph consisted of a series of circular spatter stains with sizes varying from less than 1 millimetres up to approximately 10 millimetres diameter.
RP34BN-5601	The bloodstain pattern is a complex stain consisting of a transfer stain, drip stains, linear spatter, and spatter stains. The transfer stain is in the lower bottom right corner of the photograph. The drip stains are throughout the photograph. The linear spatter is in the bottom left corner of the photograph. The spatter stains are in the upper part of the photograph.
RZJLAM-5605	Randomly distributed, variously sized circular stains with associated satellite stains were observed throughout Item 5 except for an area ~ 80x80mm in the center of the photograph. More linearly distributed, uniformly sized circular stains with associated satellite stains were observed in the bottom left corner of Item 5. The circular stains depicted in Item 5 are consistent with drip stains. Not enough detail was present to determine whether they formed a drip trail or were a portion of a cast-off pattern. Possible some of the circular stains are spatter. A potential void about 80x80mm was

TABLE 3: Recognition and Description
Item 5, continued

WebCode-Test	Detailed Pattern Description
T37GD8-5605	observed in the center of the photograph based on the lack of circular stains in that area. An irregular shaped stain with varying density was observed in the bottom right corner of Item 5. The irregular shaped stain in the bottom right corner is consistent with a transfer stain. It is possible that this stain was made after the drip stains were already deposited.
TF9BKA-5601	On the target surface drip trails are observed. Possibly from a blood bearing object perpendicular to the surface. On the lower left area of the surface, three (3) linear drip trails are visible. Surrounding some of the circular stains are small spatter stains indicative of satellite stains. On the lower right section of the surface, a swipe stain is visible. On the upper left area of the surface, there are multiple drip stains that are circular in shape, denoting they struck the surface at a 90 degree angle.
TMT7MY-5605	Item #5 consists of circular drip stains on a horizontal target surface. Small satellite stains and small accompanying drops were formed from blood impacting the target surface during the formation of the parent drip stains. Additionally, there is evidence of an altered bloodstain pattern in the lower right side of the photograph consistent with a wipe, resulting from an object moving through liquid blood. Complex pattern that includes a 5.5 cm x 10 cm transfer bloodstain in lower right, with smooth margins and some possible overlap with near circular spatter bloodstains near the lower left. A 13-18mm wide faint area along top of transfer with possible lateral pressure striations and perimeter characteristics on the inner margin. More than 100 near circular and irregular shaped spatter/drip bloodstains throughout the image area, with some in a linear arrangement, ranging in size from 1.5 to 15mm in diameter. None of the aligned patterns appear to progress from circular to elliptical. Also a possible void in the spatter/drip stains. Dozens of near circular to elliptical sub-millimeter satellite bloodstains are present throughout the image. Three elliptical bloodstains with bottom to top and slightly left to right directionality are on the upper right quadrant of the image, ranging in size from .8 x 2mm to 1.3 x 5.5mm. These elliptical stains are in linear alignment with one another, but with none of the aligned near circular stains. Conclusion: Spatter and drip bloodstains with a possible void. Transfer stain with a likely wipe from outside the pattern, down and to the right along the top of the transfer.
TPHJ6H-5605	Several circular reddish-brown stains covering most of the overall image, ranging in size from under approximately 1 millimeter in diameter to 15 millimeters in diameter. In the lower middle of the overall image there are several reddish-brown spatter stains with directionality, ranging in size from under approximately 1 millimeter in width and length to 1 millimeter wide by 5 millimeters in length, most appearing to originate from above the stains. One reddish-brown stain in the lower right corner of the overall image, measuring approximately 120 millimeters by 55 millimeters. In the middle of the overall image there is an area with no reddish-brown stains, measuring approximately 160 millimeters by 85 millimeters. From the middle diagonally down to the left corner there is an area with no reddish-brown stains, measuring approximately 115 millimeters by 30 millimeters. The size, shape and distribution of the reddish-brown stains in Item 5 appear to be possible drip stains, transfer stains, and void patterns.
TPUEM3-5605	Two drip trails on lower portion of image with a pool on the lower right, with some drip patterns towards right end of trail. Some spines and elongated stains around this drip pattern area and lower portion of pool. A swipe mark appears of upper edge of pool and or transfer stain and appears to be movement from right to left Small (sub mm) sized stains predominantly on right side of image circular in shape, no direction - satellite stains Upper half of image shows passive drops in no real pattern, stains predominantly circular in shape
TTUMRD-5601	The horizontal tile exhibits spatter stains, mostly large and round and some smaller spatter stains that are elongated. At the bottom right of the picture is also a transfer pattern. The elongated small stains do not all converge to the same area of convergence, which indicates that multiple spattering events (either impact events or expiration events) have occurred above the tile, at a vertical distance of less than 50cm from the tile. The larger round spatter stains are probably drip stains and indicate that a

TABLE 3: Recognition and Description
Item 5, continued

WebCode-Test	Detailed Pattern Description
	blood source was located above the tile for a given amount of time. The transfer pattern indicates that a blood-bearing surface has contacted another surface at that location.
TV2MBY-5605	Transfer stain – bottom right – possible wipe as drips possible at edge of stain. Drip Stain – central area – couple of drips. Spatter stain – upper 2/3 – spots range in size no clear direction, straight onto surface, no classical fanning. Cast Off Pattern – bottom left – linear pattern large spots, possible drips, some spots have spines projected from stains to suggest force
UDYP69-5605	The following patterns were clearly observed in image 5: Void, drip stain, drip pattern and swipe/wipe. A transfer stain with a wipe/wipe and/or possible altered stain was present in the lower right corner of the image. There are additional stains in image 5 that could not be classified to any one particular pattern type due to the image being cropped resulting in the entire stain/pattern not being captured. The following pattern types were considered and are possibilities that could account for the rest of the stains in image 5: cast-off, cessation, and drip trail.
UERFEU-5605	Series of circular stains of various sizes, some directional stains associated with circular stains - satellite. Drips & drip trail. Bottom of image is a transfer blood stain with evidence of disturbance/movement. Blood appears to have been wiped through. Also appears to be blood dripping into blood in this area. In my opinion someone who has been bleeding has been moving around in this area.
V3EFHZ-5605	A. Drip stains/drip trails There are numerous drip stains/drip trails all four quadrants of the photograph. Many of the drip trails appear to travel in a linear fashion. In the lower half of the photograph, there are at least two drips trails in which the drip stains that make up the drip trails are in close proximity to one another. Some of the drip stains are even touching. In the upper half of the photograph, there also appear to be several drip trails, but the drip stains are separated further from each other as compared to the lower drip trail The size of the drip stains in the photograph ranges from approximately 14 mm (the largest drip stain in the middle right of the photograph) to approximately 2mm (the drip stain in the upper left corner, located approximately 5 mm right and 14 mm down). B. Transfer stain In the lower right quadrant of the photograph, there is a transfer stain loosely in the shape of a rectangle, with the long edges of the rectangle situated at a downward angle (left to right) at approximately 35 degrees down from horizontal. The upper/wider end is on the left and the lower/narrower end is on the right. The top long edge of the rectangular-shaped transfer stain (which will be referred to as the NORTH edge) has a fairly straight, linear edge. The bottom long edge (which will be referred to as the SOUTH edge) has an inconsistent shape, whereas several areas along the edge appear to have been made up of several of the drips stains from the drip trails. Approximately 7mm above the NORTH edge, and parallel to the NORTH edge, there is narrow linear rectangular-shaped transfer stain with feathering. The edges of the two transfer stains seem to connect at the far-right side of the photograph, so there is a possibility the two transfers were made with the same object. There are faint feathering striations between the two edges stains. C. Void In the middle/left quadrant of the photograph, there is a void area that resembles an irregular "T" shape. The top of "T" is located in the middle of the photograph and is at a similar downward angle (left to right) as the rectangle-shaped transfer stain mentioned above. The void that encompasses the top of the "T" is wider than the void in the bottom part of the "T" and roughly measures approximately 150 mm X 60 mm.* The width of the bottom section of the "T" measures approximately 35 mm and the length extends past the edge of the photograph. The measurement from the edge of the photograph to the furthest point in the void at the top edge of the "T" is approximately 185 mm.* *due to the void's irregular shape, the measurements are not precise. The measurements given are conservative.
V7U6KN-5601	There is a transfer stain in the bottom right corner of the target. There is a void in the center to lower left side of the target. There are cast-off patterns on the lower left side below the void, upper left side above the void, and on the right side above the transfer stain. There are two (2) circular drip stains to the right side of the void in the center of the target. There are some small spatter stains on the center and right side at the bottom of the target.

TABLE 3: Recognition and Description
Item 5, continued

WebCode-Test	Detailed Pattern Description
VM4PK2-5605	The circular stains distributed across the profile are consistent with a cessation pattern with a void, however, cannot rule out a drip trail along the lower left corner of the pattern. Stains in the bottom right corner appeared altered. Satellite stains in this area may indicate blood dripped into blood, however, due to the alteration of the pattern cannot determine the initial deposition of these stains. This altered portion consistent with a wipe based on the view provided.
W2DZJ9-5601	There is a seemingly random distribution of near circular drip stains over most of the target. There is no distinct directionality to these stains, though near the bottom, the stains do form two short linear formations. These two areas are not long enough to be classified as drip trail patterns. There is a triangular shaped void near the center. In the lower right corner is a transfer stain that has feathering on the top portion suggesting a right to left movement. The initial contact point is not shown in the photograph, therefore swipe/wipe distinction is uncertain. It appears the transfer did go through some of the drip stains.
W87Z4V-5605	There is a complex bloodstain pattern covering the entirety of Image 5. This complex bloodstain included a transfer bloodstain in the lower right corner of the image, a slightly Y-shaped void in the center of the image, spatter bloodstains surrounding the transfer bloodstain and void patterns. The transfer bloodstain was 11.5 by 5.6 cm in size and has heavier deposition on the lower portion and some striations on the upper portion. The void measures 17.7 by 18.5 cm in size and was designated by surrounding spatters bloodstains. The spatter bloodstains range in size from sub 1 mm to 14 by 15mm in size and are all near circular. These bloodstains appear to be mostly randomly distributed with the exception of an area of linear deposition on the lower left portion of the image.
WAQ2QV-5605	1. A transfer stain is found at the lower right corner. 2. At least two drip trails are found to the left of the transfer stain on the lower part of the tile. 3. Drip stains of random sizes up to about 1.5 cm in diameter are found scattered around mainly on the left and the upper half of the tile.
WBANMR-5605	On the bottom right corner of the target there is an approximately 110mm x 80mm transfer stain with some possible lateral movement, but there is insufficient detail to further characterise it (the right side of the pattern is not visible). Below and to the left of the transfer stain there are numerous drip stains with associated satellite stains, some of which show directionality. There is a linear appearance to the drip stains at the lower end of the target, but there is insufficient detail to further characterise the pattern. Some of the drip stains on the lower left corner of the target have been partly removed. On the uppermost half of the target, concentrated mainly on the left side, there are scattered near-circular drips stains, satellite stains and spatter stains. Staining is absent in an area on the centre to centre-left of the target indicating a possible void with no distinct shape characteristics.
WD997G-5605	Multiple drip stains and drip patterns are noted across the surface of the tile. A transfer stain is noted at the lower right corner of the image.
WGWK89-5601	An area primarily consisting of drip stains with a transfer stain on the bottom right side of the tile. There was an area void of bloodstains in the approximate center of the pattern, but was not a void pattern. There were several very small stains throughout the pattern with the drip stains on the lower portion of the pattern having a heavier association of additional small stains. The pattern in its entirety was not fully represented in the photograph, so I was limited in my ability to properly and fully determine and describe the pattern.
WJYNT4-5605	Analysis: Overall observation: The majority of the circular stains have a darker red outer ring as an edge characteristic. Pattern area 5A (yellow shaded area): Majority of the stains are circular and range in size from ~2mm to 5mm. They have a random orientation. Conclusion = Drip stains Pattern area 5B (purple shaded area): Area absent of blood. Conclusion = Void Pattern area 5C (red shaded area): Majority of stains are circular and consistent in size. Linear/curvilinear orientation. Conclusion = drip trail. Pattern area 5D (blue shaded area): Multiple small (1 mm or less) elliptical stains with consistent directional angles, many of which have satellite stains. Red arrow within pattern area indicates direction of travel. Conclusion = Impact pattern Pattern area 5E (green shaded area):

TABLE 3: Recognition and Description
Item 5, continued

WebCode- Test	Detailed Pattern Description
	<p>Non spatter stain. Observed feathering along top of stain, right to left, indicating a wipe. Regular margins along top of stain, irregular margins along left and bottom sides. Complex stain. Appears to have some of the drip stains present along the left and bottom area, closest to 5D pattern area.</p> <p>Possible altered stain. See arrows pointing to areas with diluted appearance. Lower section with an altered stain appearance - substrate interference? Conclusion = transfer stain Pattern area 5F (non-shaded area): Primary stains are circular and less than ~ .1 mm. Numerous observed.</p> <p>Conclusion: Spatter stains</p>
XDRCHN-5601	A transfer stain is present in the bottom right corner. Spatter is present on most of the rest of the target with the exception of an area near-center, which is consistent with a void. An area of spatter in the bottom left exhibits characteristics consistent with cast-off pattern(s).
XEYWXB-5601	Spread out throughout the majority of item 5 are drip stains. The drip stains are consistent with blood dripping down due to the gravitational pull and the drip stains are approximately 90 degrees. There is a transfer stain from an unknown object in the bottom right corner and two linear drip trails in the bottom left corner. Near the transfer stain, there are small elliptical stains that appear to be coming from the main transfer stain.
XMT2RC-5605	Numerous drip stains of varying sizes are noted on most of the target. The drip stains form a drip trail on the bottom left corner. Some drip stains exhibit characteristics of drip patterns with satellite stains from parent stains. A transfer stain is located in the bottom right corner with a wipe in the upper portion of the stain.
XUCZQX-5605	A transfer stain is present in the lower right hand corner of the target. Some feathering is observed on the top portion of the transfer stain. Drip stains present immediately below and to the left of the transfer. A void is observed in the center of the target, it extends down and to the left, and down into the right. Large amounts of drip stains are present in the upper, lower, and left side of the target. Drip patterns with satellite spatter present as well. No clear directionality noted in the satellite spatter or drip stains. Some of the stains have possible air bubbles present but this may be due to the texture of the target and not from expiration. Projected bloodstaining can't be ruled out.
XV6ZLN-5601	Multiple passive drip stains of various sizes (.1mm to 15mm) across the entirety of the image with a void pattern is located near the center of the image, extending from the bottom of the left side approximately 170mm at an approximately 45-degree angle toward the center of the image and then extending approximately 150mm from just above the discussed void line downward at an approximately 45-degree angle toward the bottom right side of the image to the top of the wipe/swipe. Passive stains in the bottom left corner are very linear (running right to left slight upward at the right end). Various stains around the image exhibit disturbance (potential wipe) impacting the shape of the stain. Very few exhibit directionality, very few being consistent with other stains. Many of the stains appear to be satellite. An apparent swipe/wipe (difficult to determine which or if both due to image cut off in right bottom corner) occurs through many of the passive stains in the bottom right corner of the image. The directionality of the swipe/wipe appears to be right to left and bottom to top and appears to follow the right bottom side of the void (consistent with an object being picked up). Just above the swipe/wipe are multiple transfer stains of irregular shape.
XYBJPB-5605	Numerous circular stains were present on the tile. The majority of the stains ranged from approximately 4 mm to 10 mm in diameter. These stains had a random distribution and some are consistent with drip stains. A transfer stain measuring approximately 106 mm x 34 mm was also noted on the tile in the area of the circular stains.
YLEWVZ-5605	Item #5 was a photograph of Bloodstains and Bloodstain patterns deposited on a smooth vinyl tile target in the horizontal plane. In the upper left portion, down towards the bottom left, of the photograph, were several Drip Stains and Accompanying Drops of various sizes. The Drip Stains resulted in Satellite Stains from the Parent Stains. In the lower center of the photograph, were Drip Stains and Accompanying Drops. Some of the Drip Stains were deposited in a linear manor that

TABLE 3: Recognition and Description
Item 5, continued

WebCode- Test	Detailed Pattern Description
	produced Drip Trails. The Drip Trails and Drip Stains included Satellite Stains from the Parent Stains. In the lower left corner of the photograph, several Bloodstains presented the directionality of downward and to the left. In the lower center portion and lower right portion of the photograph, was a spatter Pattern that presented the directionality of downward and to the right. In the lower right portion of the photograph, was a non-discernable Transfer Stain, several Drip Stains, Drip Patterns, and Satellite Stains. The Transfer Stain contained a Wipe in the upper right portion. The feathering observed within the Wipe presented a directionality of right to left across the top portion. In the upper right portion of the photograph, were several Drip Stains and Accompanying Drops of various sizes. The Drip Stains resulted in Satellite Stains from the Parent Stains. This area of the photograph also included Bloodstains that presented the Directionality of upwards and slightly to the right.
YW3JBW- 5601	In excess of 80 circular blood drip stains on a vinyl tile, diameter range predominantly between 1-10mm. Some with associated satellite spatter. Area area at bottom of image stain in linear pattern, predominantly 4-6mm diameter possibly in for of cast-off. Bottom right corner, transfer stain measuring 105 x 50 mm irregular in shape disrupting existing blood drips stains.
YZDYET- 5605	Item 5 appears to have a wipe stain in the bottom right quadrant. An apparent void stain is present in the middle, with an expiration stain to the right. To the left of the void appears to be drip stains with parent ad satellite stains.
Z4Q2WH- 5601	Spatter stains were observed widely disbursed on the target and stains with characteristics consistent with cast-off patterns were observed on the bottom left side of the target. A void was noted near the center of the target and between this area and the bottom left corner. A transfer stain was observed on the bottom right corner of the target.
Z6NCRK- 5601	There are numerous spatter stains present on the target that are similar in size and directionality, with some exhibiting a linear distribution and others in a random distribution. These spatter stains form a cessation pattern. There is a void near the center of the target. A transfer stain is present in the lower right area of the target.
ZHXMNN- 5605	Drip Stains scattered on most parts of the tile with a possible Void in the middle. Transfer Stain on the bottom right side. Drip Pattern and some Spatter Stains, mostly on the bottom.
ZMQPP3- 5605	There are numerous spatter blood stains onto almost the entire surface with a void in the middle. We cannot exclude that the few bigger stains are drip stains. In the lower right-hand corner there is a transfer bloodstain with some indication of movement (swipe/wipe) in the upper portion of the stain.
ZYHBXH- 5605	Void present in the center. Bottom right portion contains triangular shape transfer with indications of swipe. Multiple depositions of drip stains, drip trails, and drip patterns. The drip patterns consist the parent stain as well as satellite stains. At least two drip trails are very linear. Smaller spatter stains with multiple directionalities are present throughout the target.

Additional Comments

TABLE 4

WebCode- Test	Additional Comments
3L7UTK- 5605	It was only possible for one individual to view the photos on line. I experienced some difficulties in printing the images for my peer reviewer with sufficient quality to undertake the evaluation. Section 1 has not been completed as this type of work is not undertaken at our laboratory.
3T6JCA- 5605	It is possible that there could be more than one bleeder involved in the creation of these patterns. Sampling and DNA analysis would be essential. Wound information would be helpful.
46CNZG- 5605	Difficult to fully assess patterns for item 5 in absence of full distribution and lack of vertical plane information. Terminology for Item 4 is not as would normally use - the fabric appears to have become blood stained through contact with blood on the floor, soaking the blood up. Section I not completed as not undertaken as part of normal casework.
67339R- 5605	NOTE - all measurements for item 1 were made in mm/cm and were taken from PowerPoint images of each stain.
7LUJDF- 5601	The angle of impact determination section was not completed as per Serology QA Manual, Rev 6/22, Section 9.2.
84CMQV- 5605	<p>1. Item 1 is listed as containing "Stains A through G," but there are only 5 stains labeled A through E in Item 1. The answer sheet only has spaces for entering 1A - 1E. I am assuming the "Stains A through G" statement is a typo on CTS's part. 2. Item 5 is listed in some places as "Item 5" and in others as "Item 5 - 6." There is no Item 6 photograph or a place to enter conclusions for an Item 6 on the answer sheet. This appears to be another typo by CTS. I did no examinations of an Item 6. 3. Calculated angles are estimated measurements and this should be reflected in the answer sheet. 4. Pattern description Part 1 - the list of possible patterns includes parent patterns (e.g. transfer, projected) and sub patterns under those groups (e.g. swipe, wipe, arterial, cast-off, etc.). It is not always straightforward to select a single pattern when multiple may apply. 5. Item 2 pattern description - there is no single pattern description that is most appropriate to describe this pattern. The pattern is nondescript enough that arguments could be made that it is a transfer, swipe, or wipe pattern. This is further complicated by the fact that the left edge appears incomplete/obscured by the ruler and swipes and wipes are a subset of transfer patterns. It is then complicated even further by the fact that my lab tech procedures and the current literature (e.g. The Reliability of Swipe/Wipe Classification and Directionality Determination Methods in Bloodstain Pattern Analysis (J Forensic Sci. 2017 Jul;62(4):1037-1042. doi: 10.1111/1556-4029.13298. Epub 2017 May 3)) state that swipes and wipes cannot be distinguished from each other when there is an absence of an altered stain. In casework, I would describe the pattern as either a swipe or a wipe. That is not an option for this pattern and this test forces me to disregard laboratory technical procedures by selecting only one answer. If these tests are supposed to be approached as casework, then they should be completed within the scope of a lab's tech procedures. Forcing a test taker/analyst to not comply with their tech procedures seems to contradict the reasoning for proficiency tests. If the test is going to continue to be administered in this fashion, it would be helpful to allow for multiple answers or to be able to select "other." Bloodstain pattern interpretation is rarely as simple as choose the best answer. Forcing an analyst to ignore the requirement of their technical procedures and the best practices in the field defeats the purpose of a proficiency test that we are expected to complete as we would casework. 6. In addition to the errors in the item descriptions, there are also typos and misspellings in the test documents. The lack of attention to detail is a cause of concern and makes me wonder if it has spilled over into any of the pattern creation.</p>
8EBG7D- 5601	The complete pattern is not visible for item 2. It is therefore not possible to definitively identify the pattern. The portion of the pattern that is cut off allows for the possibility that the pattern is a wipe. Without seeing the part of the pattern that is cut off, this determination can not be made.
8M6NKD- 5601	The angle of impact determination section was not completed as per Serology QA Manual, Rev 06/22, Section 9.2.

TABLE 4

WebCode-Test	Additional Comments
9CWH4F-5601	Items 1 and 5 not examined as outside accreditation scope.
9DRAYM-5605	Classification on blood staining in items 2, 3 and 5 were made difficult due to the photographs not capturing the entirety of the stain.
A3LN8E-5601	Item 2: You should be able to see the whole bloodstain. It is impossible to tell if it is a wipe or a swipe, when you only see a part of it. Stain 5 bottom right corner has the same problem: You cannot see the whole bloodstain.
AVBANX-5601	Section 4.17, Bloodstain Pattern Analysis, of the Crime Scene Investigation manual does not include procedures for the determination of the angle of impact and this is not an analytical procedure that is performed during any bloodstain pattern analysis within the laboratory. Therefore, the laboratory will not participate in the portion of the test that calls for calculating the angle of impact.
B2B7MM-5601	For some of the pattern recognition stains some of the pattern is missing even on digital format, making it difficult to categorize the stains. For item 2 it would be useful to know if background is textured surface.
BJ9CBG-5601	Section I not completed as angle of impact is not accredited in the MPS
BUV6RK-5605	Note: dimensions listed in the "width" and "length" columns for item 1 are based off of measurements from ellipses created in Powerpoint to create ratios for the angle of impact measurement. They are not actual measurements of the width and lengths of the stains themselves.
C4BLTP-5605	The Item 2 pattern was reported as a swipe due to the limitations of the reporting procedure for this test. Based on our technical procedure, this pattern would have been reported as a swipe or a wipe.
DFHQEC-5601	Items 1 and 5 not examined as outside accreditation scope.
DMP9ZJ-5601	The area requested to be described has bloodstains extending to the edges indicating the bloodstains extend beyond the image provided limiting the capacity to evaluate the full context of bloodstains present and the mechanisms that caused them.
DW9RAH-5601	Item 2: Pattern Comments The pattern depicted is part of a larger pattern that extends into the image from the left side. Although the pattern depicted bears characteristics of a swipe pattern, additional images regarding the remainder of the pattern would be requested for a final determination. Item 4: Pattern Comments The blood in this pattern has saturated into the fabric. However, the straight edge at the bottom of the pattern indicates this may be a transfer pattern that has saturated into the fabric. Additional information regarding scene context would be requested.
ERA33A-5601	No obvious direction of travel for drip trails.
G3JCM6-5601	The angle of impact determination section was not completed as per Serology QA Manual, Rev 06/22, Section 9.2.
G9BGKF-5605	Section 1: Section 1 measurements taken using software, so they are not in millimeters.
GG4P67-5605	It looks like not all the spatter stains that were created are visible on this photo.
GNPPHX-5605	Item 2: (vinyl tile - horizontal plane) Located across most of the middle of the tile is a pattern consisting of a series of horizontal bands of varying densities of blood staining that appears as 4 darker bands surrounded by lighter bands and is approximately 25 cm wide x 7.5 cm tall. Staining on the left of the pattern is darker and appears cut off on the left side of the image. The top and bottom of the pattern appear as mostly continuous borders of light staining that trails off to the right side of the pattern. The right side of the pattern tappers off in density of staining and the staining appears to

TABLE 4

WebCode- Test	Additional Comments
H97JHH- 5605	feather off or is drawn to fine points to the right. Given that part of the pattern appears to be missing on the left side (off the target) it cannot be determined if this transfer stain with horizontal orientation of motion is more specifically a swipe or a wipe. Transfer stain pattern with indications of horizontal motion with directionality from left to right. Item 3: (posterboard - vertical plane) Located mostly diagonal from bottom left to upper right is a pattern of a band of mostly circular to elliptical continuous bloodstains that is approximately 34 cm long x 5 cm tall. There are approximately 50 spatter stains ranging in size from approximately 1mm up to 7mm in diameter. Many of the larger of these spatter stains appear darker in density on the bottom halves. There are also satellite stains and spines radiating outward from some of the larger stains. Note it does appear that the pattern could continue off the target to both the left and right. Cast-off pattern with slightly vertical orientation bottom left and upper right. Item 4: (vinyl tile - horizontal plane) Located on the tile in the image is a white washrag that takes up a majority of the image and in parts appears creased and possibly folded on itself. Present in the center of the image on the washrag is an approximately 9.5 cm x 14 cm roughly rectangular bloodstain. Stain is mostly continuous, slightly denser in the center as compared to the top and bottom, and has fairly defined rough edges. It is noted that not all of the washrag is visual in the image and that it appears creased / folded around the left and right sides of the bloodstain concealing these areas from view. Saturation stain on the washrag.
HAZ6FF- 5605	Regarding item 2. Our technical procedure reporting guidelines. "Stains may be described as wipe patterns when clear alteration of the original stain, such as partial disruption or perimeter staining, is present. In the absence of clear alteration of a blood pattern the stain should be classified as a swipe or a wipe." However as the report sheet allows only one choice and without the entire stain showing in the photograph to examine for characteristics of a wipe the the best pattern type that describes item 2 is a transfer stain as a swipe is a more restrictive/definitive description than a transfer stain. Observation ITEM 2: It could be better justified that it is a WIPE PATTERN instead of a SWIPE one if more information were obtained from the left part of the image (observation of a greater amount of blood deposited in the indicated area shows that there is blood on the target before a movement occurs with another object in contact). Observation ITEM 3: It is considered CAST OFF because if it were a CESSATION PATTERN, the spots would be more grouped and smaller. Observation ITEM 4: This answer is chosen by taking into account that only what is observed in the image has to be described. If the objective were only the tile, it would not be possible to determine what pattern is there since it would be found under the cloth and there is no possibility of visualizing it in the image provided, and therefore, it does not provide information on a possible pre-existing object at the time the stain or pattern is produced.
HJPXLK- 5605	Identification of the item 2 pattern is contrary to our laboratory's current technical procedure.
HMP7U2- 5601	Pattern Description, Part 1 - Item 2: The entire pattern is not visible, the left side extends beyond the frame of the photograph; reported as swipe.
HV4T6Q- 5605	Item 2 Based on the vendor information that the entire pattern target was provided by the vendor, swipe was concluded. However, without the entire area to the left of the stain being referenced, or the disclaimer that the entire stain/pattern was provided; the conclusion of this stain would be smear, which is referenced in our protocol.
JAJ9P2- 5601	The angle of impact determination section was not completed as per Serology QA Manual, Rev 6/22, Section 9.2.
JFHYPH- 5605	For Items 2 and 5, it appears that some of the stains go beyond what was captured in the photographs. The lack of extra documentation and information makes it difficult to properly interpret the stains. The Item 2 stain does not have any obvious disruption of an original stain; therefore, my laboratory would report this stain as a swipe or wipe. The report would not indicate only a single pattern.
JX4BP4- 5605	Item 2: Limited information at left hand side of image. Appears the scale is covering some of the bloodstain pattern. This information would have aided classification. Item 3: Without further context

TABLE 4

WebCode- Test	Additional Comments
KADF7J- 5601	including areas around the blood staining this stain would not typically be classified.
KFYBA9- 5605	Pattern recognition for Items 2 - 5 were limited to 13 pattern choices determined by CTS. Only close-up portions of patterns were available for analysis. The pattern descriptions chosen do not necessarily express what would be used in a real life scenario, especially with the limited patterns given for analysis. Item 2 is most likely a wipe or swipe but since the left edge of the pattern is cut off in the photograph, (which could contain the important information as to whether there was an existing stain or not). I am only willing to call it a transfer stain. Item 3 is a linear pattern located between the bottom left and top right of the photograph but the pattern is cut off on both side. Of the choices given, I feel cast off fits the closest, but i would not render that opinion in a real life scenario with such little information.
KJZGK9- 5605	Item 2 The pattern under consideration has been described as a moving TRANSFER STAIN that could be further classified into SWIPE or WIPE patterns. The conclusive identification is impossible, as the skeletonization of the original stain, distinctive for the wipe pattern, is not visible in the photo. However, the original stain boundary may or may not be disrupted as it strictly depends upon the time passed after the initial deposit and the subsequent disruption. Thus, it is not always observed in the case of the wipe pattern. Other observed characteristics, such as a feathered boundary, striations, and diminished blood volume across the body of the stain, are the common features for both swipe and wipe patterns.
L84VU4- 5605	On Item 2, it appears a portion of the pattern is cut off on the left side, which changes my ability to decisively say if it is a wipe or a swipe. Per our technical procedure, we refer to staining as a wipe or a swipe. Therefore, I selected wipe, but cannot exclude swipe as the choice.
LH2V9T- 5605	For pattern 2 - smear of blood - based on image alone cannot be sure whether wipe or swipe and so in casework would not definitely state one rather than the other. Seeing in situ and accompanying tiles may assist.
LH2V9T- 5605	Items 2 and 3 are ambiguous enough patterns that one pattern type cannot describe their appearance. There is no "best" pattern type as the two options should be treated/considered equally based only upon observed characteristics. Furthermore, a proficiency test in bloodstain pattern analysis should not promote that an analyst choose only one pattern. While may be true that only one mechanism made the pattern, 1) the entire pattern is not depicted in the image provided, and 2) bloodstain pattern analysts should not choose only one classification if there is not enough information to do so. If that pattern can be narrowed to two possible mechanisms, both should be reported with equal status. There is not enough information to determine if item 2 is a swipe or a wipe. No perimeter staining is present, so a wipe cannot be definitively concluded. The pattern provided should not be reported as a swipe just because perimeter stains were not observed. There is obvious movement within this pattern and therefore both swipe and wipe are better descriptions than a transfer, but both of those options cannot be chosen. Item 3 should be reported as either a cast-off or projected pattern. Because it cannot, I would have chosen spatter to include both of the possibilities, but spatter was also not an option. Projected patterns can be excluded given additional information that no arteries were breached, but that information was not provided. Therefore, both cast-off and projected should be treated equally as possible mechanisms. There is no "best" choice without additional information. Furthermore, the contextual information that was provided shouldn't be utilized to classify patterns. Injury information or autopsy reports are helpful, but not the context provided in this test. When people say they want more context for bloodstain pattern analysis, what they really want is a better understanding of the overall bloodstains present/interrelationships, not a snapshot of an 8.5"x11" portion of the pattern. The only other contextual information that is helpful to narrow down classifications is injury and autopsy information.
LTK6V2- 5605	For item 5 specifically, a larger overall mid-range image in addition to the test image would be extremely beneficial. The question could still pertain only to the test image, but the mid-range image would help to put the patterns into better context and potentially allow a fuller view of the patterns present.

TABLE 4

WebCode- Test	Additional Comments
LUB7ZP- 5605	#2: Swipe with a length of Approximately 19mm and 5.25mm wide #4: Saturation stain with a width of 96mm and a length of 138mm
LV8JNH- 5601	Section 1, Angle of Impact Determination, intentionally left blank. The laboratory currently does not have a procedure for this determination. [Initials] 8/8/2022
MCNCKK- 5605	We notice several millimetric ovoid spatters mostly on the bottom of the picture. They are ovoid SPATTERS but we didn't see any distribution and their main axis seem to be linked with bigger stains. So we consider them as satellite stains of the patterns described
NAENHY- 5601	Item 2 - can't exclude 'wipe' as can't see whole of stain. Item 3 - would report this as 'projected blood' in old definition but not an option in trial so have had to pick a term I wouldn't have chosen in casework.
NBDPQC- 5605	When bloodstain patterns begin or end at the edge of a substrate such as a vinyl tile, the lack of context such as the presence/absence of a pre-existing stain or other features can affect the final reported stain classification. It would be beneficial to keep the full stain patterns within the bounds of the substrate material where possible.
NRXFL6- 5605	awkward to label stain patterns when the complete stain is not visible. The smooth vinyl tile did have texture to it; therefore, it was not smooth. Awkward descriptions of "target stains" made things unclear (target is a smooth vinyl tile containing a washrag). I had to assume the washrag was the target and not the tile underneath. There were numerous grammatical issues which made the descriptions ambiguous. These exercises are difficult to do in a vacuum, without information normally obtained when doing this type of examination.
NUUP32- 5601	For item 2, without having the entire stain available to me, i.e., underneath the scale in the left hand side, I am unable to provide an opinion on whether this stain is a wipe or a swipe. If this was an actual case and if I cannot conclusively determine the deposition mechanism, I would report as a swipe or a wipe. As I do not have this option for this QA, I will revert back to transfer bloodstain, as swipe and wipe are considered subsets of transfer stains.
P6LZJ8- 5605	Picture was oriented according to the 22-5605_Item5.tif
Q68N8N- 5605	Item 3 could be one of two pattern types. The stains in item 3 are approximately circular and struck the vertical surface at a 90 degree angle. They are large volume bloodstains. The stains are most likely projected blood created by a small vessel injury. The stains could also be linear cast-off from a weapon or bloody body part. I would conservatively classify this pattern as a blood spatter pattern.
QPJQDD- 5605	The supplemental pictures dont appear to be useful as they are cut off and actually oriented different that the other images- some clear spatter on edges of tile that presumably fell on whatever was beneath it. Also, the orientation for Item 5 changes from the original image to the Supplemental image (see location of rule)
R2TTAU- 5605	Every year this proficiency test gets worse. The instructions included two references to an Item 6. Item 6 was not included in the documents. The instructions also referred to Stains A through G for Item 1, but only included Stains A through E. The complete pattern images were not included for Items 2,3 and 5. It is irresponsible to expect a forensic scientist to identify a partial pattern. Items 2 and 5 were reported to be on a smooth vinyl tile, but the patterns were obviously on a textured surface. The scenario descriptions for Items 2-5 were unhelpful. The scales were not in the same location/position for the two images of Item 5.
TPHJ6H- 5605	Unable to determine if the transfer stain in Item 2 is a swipe or wipe due to the image being truncated on the left side After performing experiments, one of the patterns observed appeared similar to Item 3, with several circular reddish-brown stains arranged in a linear pattern, ranging in size from approximately 1 millimeter to 7.5 millimeters. Therefore, the pattern in Item 3 is a possible cast-off pattern.

TABLE 4

WebCode- Test	Additional Comments
UDYP69- 5605	This image was noticeably cropped; therefore, the edges of the stains/patterns were missing or incomplete. The staining in the areas that were cropped/missing from the image would have provided essential data that is needed to determine a pattern type. In case work I would not render some of the pattern type conclusions without images of entire area of staining and the area surrounding the staining. Additional scene details such as any weapons located, wounds on all individuals involved, other areas of possible bloodstains would also be needed.
UERFEU- 5605	Image 2 has the scale over part of the image/blood stain making issues with interpretation. Image 2 has been reissued but the image cant be retrieved from the CTS portal for some reason. it is therefore difficult to identify the initial stain. Wipe has been chosen however swipe cant be completely eliminated
VM4PK2- 5605	Angle measurements generated using software and are in cm, not mm.
WD997G- 5605	It would be helpful to have the information provided on the answer area for stains 2-4 printed on the images as well. Scales should not cover portions of the pattern in photos.
GWGK89- 5601	The patterns (for items 2-5) in their entirety were not fully represented in the photographs provided, so I was limited in my ability to properly and fully determine and describe each pattern. Item 2 is most likely a swipe, however I was not provided the full pattern, and was unable to make a proper determination.
WJYNT4- 5605	Within lab system, photoshopped and labeled images retained in LIMS depicting pattern areas labeled 5A through 5F. Approximate locations within image: 5A: 85mm to 245mm (except void area 5B and spatter stains 5F) 5B: between drip pattern and drip trail 5C: bottom center to left (except impact pattern 5D) 5D: bottom center; Red arrow is referring to downward angle going left to right (similar to \) 5E: bottom right corner 5F: primarily top
XUCZQX- 5605	Very difficult to determine exactly what patterns are present with such a small target area shown. Section 1 - Imported photos into PowerPoint and enlarged them to determine length and width. Measurements reported are in cm.
XV6ZLN- 5601	Item 2 - This is an image that has been cut off (this is not true to a scene). The portion left is difficult to determine if blood is preexisting on the left side of the image making the stain a wipe or if the blood is from another object contacting the surface making the image a swipe. This item is listed under Pattern Recognition, accurate recognition cannot be completed with cut off images. This was corrected by the updated images provided 8/9 by CTS. Item 5 - Same as item 2. The image is cut off in an important area (bottom right corner), impacting the ability to make accurate conclusions (not to mention the void that extends off the left side of the page). This item is listed under Pattern Description again it is very difficult to make accurate pattern description conclusions without a full image/pattern. This was not corrected by new images provided 8/9 by CTS.
XWYP4J- 5605	The pattern appears to contain multiple drip trails (upper left, middle top, center). Drip stains are also noted throughout, mostly to the left middle area, some of these droplets landing on one another producing satellite spatter. What appears to be a transfer stain is noted in the lower left.
XYBJPB- 5605	Angle of impact determination section not being performed by this analyst. For Item 2 a conclusion was made of swipe based on the assumption that the pattern in the image is the complete pattern. However the beginning of the stain is not clearly depicted and is potentially not visible which would lead to a more conservative conclusion of smear (swipe or wipe) which is not an option in the pattern terminology. In the future photos of patterns should clearly show the beginning/middle/end of the pattern in order for a definitive conclusion to be made.

-End of Report-
(Appendix may follow)

Test No. 22-5601: Bloodstain Pattern Analysis

DATA MUST BE SUBMITTED BY **Aug. 22, 2022, 11:59 p.m.** TO BE INCLUDED IN THE REPORT

Participant Code: U1234J

WebCode: BH27JE

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

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

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

As a courtesy, an image of the entire pattern target (Items 2-4, max size 24 inches by 24 inches) has been provided in a digital download supplemental on the CTS customer portal. You must claim a test on the portal to have access to the supplemental download found on the data entry form.

For the digital supplemental material, you are not limited to conducting only on-screen comparisons and may employ any other method you wish. However, because of differences in printing technology, CTS cannot guarantee the quality of images you print from the digital media.

Items Submitted (Sample Pack BSP - Photographs):

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

Items 2-4: Pattern Description: Part 1

Item 5: Pattern Description: Part 2

Appendix: Suggested Terminology Glossary

Section I: ANGLE OF IMPACT DETERMINATION

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

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

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

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

PATTERN DESCRIPTION, PART 1

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

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

Item 2: Target is a smooth vinyl tile in the horizontal plane. Pattern was found on the floor of the victims kitchen adjacent to the deceased with evidence of a struggle following a stabbing.

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

Item 3: Target is white poster board in the vertical plane. Pattern was found in the bedroom containing a deceased victim leaned against the wall with a stab wound.

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

Item 4: Target is a smooth vinyl tile containing a washrag in the horizontal plane. Pattern was found in the victims bathroom next to the naked deceased, there is evidence of a possible slip and fall.

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

Section II: PATTERN DESCRIPTION cont.

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

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

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

Item 5: Target is a smooth vinyl tile in the horizontal plane. Pattern was found in a bedroom with evidence of a struggle.

Additional Comments

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

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

Altered Stain

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

Angle of Impact

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

Area of Convergence

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

Area of Origin

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

Backspatter Pattern

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

Blood Clot

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

Bloodstain

A deposit of blood on a surface.

Bloodstain Pattern

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

Bubble Ring

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

Cast-off Pattern

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

Cessation Pattern

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

Directional Angle

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

Directionality

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

Drip Pattern

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

Drip Stain

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

Drip Trail

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

Edge Characteristic

A physical feature of the periphery of a bloodstain.

Expiration Pattern

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

Flow

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

Forward Spatter Pattern

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

Impact Pattern

A bloodstain pattern resulting from an object striking liquid blood.

Insect Stain

A bloodstain resulting from insect activity.

Parent Stain

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

Perimeter Stain

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

Pool

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

Projected Pattern

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

Satellite Stain

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

Saturation Stain

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

Serum Stain

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

Spatter Stain

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

Splash Pattern

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

Swipe

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

Target

A surface onto which blood has been deposited.

Transfer Stain

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

Void

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

Wipe

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

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

RELEASE OF DATA TO ACCREDITATION BODIES

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

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

- This participant's data is intended for submission to ASCLD/LAB, ANAB, and/or A2LA. (Accreditation Release section below must be completed.)
- This participant's data is not intended for submission to ASCLD/LAB, ANAB, and/or A2LA.

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

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

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

A2LA Certificate No.

Step 2: Complete the Laboratory Identifying Information in its entirety.

Authorized Contact Person and Title

Laboratory Name

Location (City/State)