Collaborative Testing Services, Inc
FORENSIC TESTING PROGRAM

P.O. Box 650820
Sterling, VA 20165-0820
e-mail: forensics@cts-interlab.com
Telephone: +1-571-434-1925
Web site: www.cts-forensics.com

Bloodstain Pattern Analysis
Test No. 19-5601/2/5 Summary Report

Each sample pack consisted of digitally produced photographs (19-5601), a DVD containing digital images (19-5602), or directly downloadable digital images (19-5605) of bloodstains for Angle of Impact Determination and Pattern Description. Data were returned from 202 participants: 117 for 19-5601, 42 for 19-5602, and 43 for 19-5605 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), DVD (5602), or digital download (5605) form. Participants were requested to determine the angle of impact of Stains A - E (Item 1), identify the pattern for Items 2 - 4, and write a brief description of the pattern(s) for Item 5.

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

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

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

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

Stain	Preparation Angle
A	12.0°
B	26.1°
C	39.0°
D	21.0°
E	17.0°

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

Manufacturer's Information, continued

PATTERN DESCRIPTION

Pattern 2: Synthetic hair was dipped into blood and deposited onto the horizontal target. The hair was dragged across the substrate, then lifted away.

Pattern 3: Blood was released three times from an automated pipette at an upward angle onto the vertical target.

Pattern 4: A dry sponge was dipped into a shallow pool of blood. The sponge was pressed directly down onto a clean horizontal target and then lifted away.

Pattern 5: A modified mousetrap was held near the lower left corner of the horizontal target and blood was deposited on its mechanism. The mousetrap was released and then removed. Three drops of blood were independently released from a dropper bottle at approximately 36 inches above the target. The drops were allowed to partially dry, and then a dry rag was moved from left to right through one of the partially dried drops.

Summary Comments

Introduction

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

Angle of Impact

For angle of impact determination, participants were provided with images of five impact stains prepared at known angles from the vertical (see table below). Results marked with an "X" in Table 1 are greater than or equal to ±3 standard deviations (STD) from the grand mean (GM). These results have been excluded from the statistical calculations presented at the end of each Stain table. Each exclusion was determined independently of other values (i.e. Length exclusion based only on Length GM; CalcAng exclusion based only on CalcAng GM). 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.

Stain	Preparation Angle	Grand Mean	Standard Deviation
A	12.0°	13.21°	0.82
B	26.1°	24.91°	1.42
C	39.0°	37.34°	3.32
D	21.0°	22.06°	1.09
E	17.0°	17.68°	1.10

Pattern Description

The pattern description was divided into two separate parts. Part one consisted of three patterns (one vertical target of white foamboard, two horizontal targets on textured tiles), 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 on textured 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, 94% of participants reported "Swipe". For Item 3, 99% of participants reported "Projected Pattern". For Item 4, all 100% of participants reported a "Transfer Stain".

For part two, Item 5, the majority of participants reported the following distinct pattern types: 1) Impact Pattern, often describing directionality of spines that indicated an area of origin. 2) Drip Stains. 3) Wipe, indicated as one of the three drip stains and accompanied by skeletonization or a perimeter stain. Some participants also identified satellite stains accompanying the drip stains or generic spatter stains that could be attributed to the present mechanisms. Many participants were able to successfully indicate directionality of the wipe from left to right (which is consistent with the production of the 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: $\sin \theta$ = width/length, where θ is the angle of impact. This calculation can only be performed when the reported width is less than or equal to the reported length.

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

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

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

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

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

TABLE 1

Stain A

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
22BFHH-5602	1.50	-0.37	-3.71 X	7.50	-0.72	-2.56	11.50	-1.71	-2.09	11.54
2373W8-5601	1.80	-0.07	-0.71	8.30	0.08	0.27	12.53	-0.68	-0.83	12.53
2G4E26-5602	1.92	0.05	0.49	8.08	-0.14	-0.51	13.75	0.54	0.66	13.75
2JTNDR-5601	1.90	0.03	0.29	8.10	-0.12	-0.44	14.00	0.79	0.96	13.57
2PZ6T8-5601	1.91	0.04	0.39	8.27	0.05	0.16	13.40	0.19	0.23	13.35
2T4TFA-5601	1.90	0.03	0.29	8.30	0.08	0.27	13.00	-0.21	-0.26	13.23
2TZFN8-5601	1.81	-0.06	-0.61	8.36	0.14	0.48	12.50	-0.71	-0.87	12.50
2X9LF8-5601	1.96	0.09	0.89	8.45	0.23	0.80	13.41	0.20	0.24	13.41
34XHKN-5605	1.70	-0.17	-1.71	8.10	-0.12	-0.44	12.10	-1.11	-1.36	12.12
38WULF-5601	1.90	0.03	0.29	8.20	-0.02	-0.09	13.40	0.19	0.23	13.40
3BF3UF-5601	1.50	-0.37	-3.71 X	8.00	-0.22	-0.79	10.80	-2.41	-2.95	10.81
3BZJAH-5601	2.00	0.13	1.29	8.50	0.28	0.97	14.00	0.79	0.96	13.61
3FRZ8U-5605	1.80	-0.07	-0.71	8.00	-0.22	-0.79	13.00	-0.21	-0.26	13.00
3JA8MG-5601	2.00	0.13	1.29	8.00	-0.22	-0.79	14.50	1.29	1.58	14.48
3KPQYB-5601	2.00	0.13	1.29	9.00	0.78	2.74	12.80	-0.41	-0.50	12.84
3QBFBW-5602	1.90	0.03	0.29	8.40	0.18	0.62	13.07	-0.14	-0.17	13.07
3RKQ8V-5602	1.90	0.03	0.29	8.20	-0.02	-0.09	13.40	0.19	0.23	13.40
3VLUYG-5605	1.90	0.03	0.29	8.50	0.28	0.97	13.00	-0.21	-0.26	12.92
3YH9DC-5601	1.80	-0.07	-0.71	8.00	-0.22	-0.79	13.00	-0.21	-0.26	13.00

TABLE 1

Stain A, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
42YYT7-5602	1.80	-0.07	-0.71	8.00	-0.22	-0.79	13.00	-0.21	-0.26	13.00
4BA2E8-5602	1.80	-0.07	-0.71	8.00	-0.22	-0.79	13.00	-0.21	-0.26	13.00
4DHCBB-5601	19.00	17.13	171.06X	85.00	76.78	271.36X	13.00	-0.21	-0.26	12.92
4YFKP7-5602	1.80	-0.07	-0.71	7.80	-0.42	-1.50	13.00	-0.21	-0.26	13.34
4YMTTR-5605	1.80	-0.07	-0.71	8.30	0.08	0.27	13.00	-0.21	-0.26	12.53
66MG2J-5602	1.90	0.03	0.29	8.50	0.28	0.97	13.20	-0.01	-0.01	12.92
68WH7Q-5601	2.00	0.13	1.29	8.25	0.03	0.09	14.00	0.79	0.96	14.03
6H8W6J-5605	1.80	-0.07	-0.71	8.40	0.18	0.62	12.00	-1.21	-1.48	12.37
6J4JDF-5601	1.80	-0.07	-0.71	8.30	0.08	0.27	12.50	-0.71	-0.87	12.53
6JY8R6-5601	1.90	0.03	0.29	8.10	-0.12	-0.44	13.56	0.35	0.43	13.57
6MYFVF-5601	1.90	0.03	0.29	8.20	-0.02	-0.09	13.40	0.19	0.23	13.40
6TM3NZ-5602	1.80	-0.07	-0.71	8.00	-0.22	-0.79	13.10	-0.11	-0.14	13.00
6VD26J-5602	1.85	-0.02	-0.21	8.53	0.31	1.08	12.50	-0.71	-0.87	12.53
6X4ALZ-5601	2.10	0.23	2.29	8.20	-0.02	-0.09	14.80	1.59	1.94	14.84
7778A2-5602	2.00	0.13	1.29	8.20	-0.02	-0.09	14.00	0.79	0.96	14.12
7BL388-5601	1.80	-0.07	-0.71	8.50	0.28	0.97	12.23	-0.98	-1.20	12.23
7E7BT7-5605	2.00	0.13	1.29	8.00	-0.22	-0.79	15.00	1.79	2.19	14.48
7WHAM3-5605	1.80	-0.07	-0.71	8.20	-0.02	-0.09	12.70	-0.51	-0.63	12.68
8746CP-5601	2.00	0.13	1.29	8.20	-0.02	-0.09	14.00	0.79	0.96	14.12

TABLE 1

Stain A, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
87KQVK-5601	1.90	0.03	0.29	8.60	0.38	1.33	12.80	-0.41	-0.50	12.76
8GPPW7-5601	1.90	0.03	0.29	8.40	0.18	0.62	13.10	-0.11	-0.14	13.07
8XU9EQ-5605	1.90	0.03	0.29	8.40	0.18	0.62	12.90	-0.31	-0.38	13.07
93LXAT-5602	2.00	0.13	1.29	8.50	0.28	0.97	14.00	0.79	0.96	13.61
98HGLY-5601	1.88	0.01	0.09	8.37	0.15	0.51	13.00	-0.21	-0.26	12.98
9AGRED-5601	1.80	-0.07	-0.71	8.30	0.08	0.27	12.00	-1.21	-1.48	12.53
9BCFT3-5601	1.90	0.03	0.29	8.10	-0.12	-0.44	13.60	0.39	0.48	13.57
9NPL2N-5601	2.00	0.13	1.29	8.00	-0.22	-0.79	14.50	1.29	1.58	14.48
9R7D8E-5601	1.60	-0.27	-2.71	7.60	-0.62	-2.21	12.10	-1.11	-1.36	12.15
9VHTMB-5602	2.00	0.13	1.29	8.00	-0.22	-0.79	14.40	1.19	1.45	14.48
A4C9ZL-5602	1.90	0.03	0.29	8.50	0.28	0.97	13.00	-0.21	-0.26	12.92
AAVNDQ-5601	1.90	0.03	0.29	8.40	0.18	0.62	13.00	-0.21	-0.26	13.07
ABCNN9-5601	2.00	0.13	1.29	8.40	0.18	0.62	13.77	0.56	0.68	13.77
ACNCWL-5601	1.90	0.03	0.29	8.30	0.08	0.27	13.00	-0.21	-0.26	13.23
AQH2QX-5602	1.90	0.03	0.29	8.00	-0.22	-0.79	14.00	0.79	0.96	13.74
AUNLH4-5601	1.80	-0.07	-0.71	8.40	0.18	0.62	12.40	-0.81	-0.99	12.37
B3TTVJ-5601	7.62	5.75	57.41 X	33.02	24.80	87.64 X	13.30	0.09	0.11	13.34
B433LV-5602	1.90	0.03	0.29	7.50	-0.72	-2.56	14.80	1.59	1.94	14.67
BHTJ43-5601	1.70	-0.17	-1.71	8.10	-0.12	-0.44	12.00	-1.21	-1.48	12.12

TABLE 1

Stain A, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
BKEG6D-5605	1.80	-0.07	-0.71	8.20	-0.02	-0.09	12.70	-0.51	-0.63	12.68
BQZAER-5601	0.67	-1.20	-12.00 X	2.81	-5.41	-19.14 X	14.00	0.79	0.96	13.79
BYBVZ2-5601	1.90	0.03	0.29	8.50	0.28	0.97	12.90	-0.31	-0.38	12.92
BYZVFR-5601	2.00	0.13	1.29	8.37	0.15	0.51	13.90	0.69	0.84	13.82
C8QH44-5605	1.80	-0.07	-0.71	8.20	-0.02	-0.09	13.00	-0.21	-0.26	12.68
CNC7CD-5605	1.90	0.03	0.29	8.40	0.18	0.62	13.07	-0.14	-0.17	13.07
CPGZM3-5601	1.90	0.03	0.29	8.40	0.18	0.62	13.07	-0.14	-0.17	13.07
CXC7F4-5601	1.80	-0.07	-0.71	7.90	-0.32	-1.15	13.17	-0.04	-0.05	13.17
D6DFMW-5601	1.90	0.03	0.29	8.37	0.15	0.51	13.10	-0.11	-0.14	13.12
D8H2JA-5601	1.90	0.03	0.29	8.80	0.58	2.03	12.50	-0.71	-0.87	12.47
DEHYWY-5605	1.90	0.03	0.29	8.00	-0.22	-0.79	13.70	0.49	0.60	13.74
DG7Y23-5601	1.80	-0.07	-0.71	8.20	-0.02	-0.09	12.68	-0.53	-0.65	12.68
DHVCJK-5602	1.90	0.03	0.29	7.70	-0.52	-1.85	14.00	0.79	0.96	14.29
DJCG9B-5602	1.90	0.03	0.29	8.50	0.28	0.97	13.20	-0.01	-0.01	12.92
DWEPQ8-5601	1.90	0.03	0.29	8.30	0.08	0.27	13.20	-0.01	-0.01	13.23
E6ND47-5601	1.90	0.03	0.29	7.90	-0.32	-1.15	13.90	0.69	0.84	13.92
EH2TQJ-5605	2.00	0.13	1.29	9.00	0.78	2.74	12.84	-0.37	-0.45	12.84
EH2UAW-5601	1.80	-0.07	-0.71	8.30	0.08	0.27	13.00	-0.21	-0.26	12.53
ELTDY9-5601	2.00	0.13	1.29	8.00	-0.22	-0.79	14.50	1.29	1.58	14.48

TABLE 1

Stain A, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
EZ9FGW-5601	2.00	0.13	1.29	8.00	-0.22	-0.79	14.47	1.26	1.54	14.48
F6L3L9-5601	1.90	0.03	0.29	8.10	-0.12	-0.44	13.60	0.39	0.48	13.57
F6N7J7-5602	1.80	-0.07	-0.71	8.20	-0.02	-0.09	12.68	-0.53	-0.65	12.68
FBUWT4-5601	2.10	0.23	2.29	8.00	-0.22	-0.79	15.20	1.99	2.43	15.22
FJKKHE-5602	1.90	0.03	0.29	8.40	0.18	0.62	13.00	-0.21	-0.26	13.07
FM3HCW-5605	1.80	-0.07	-0.71	8.40	0.18	0.62	12.00	-1.21	-1.48	12.37
FM8WPW-5601	1.80	-0.07	-0.71	8.20	-0.02	-0.09	12.70	-0.51	-0.63	12.68
FRHXU2-5601	1.80	-0.07	-0.71	8.15	-0.07	-0.26	12.76	-0.45	-0.55	12.76
FYYTGW-5601	1.96	0.09	0.89	8.16	-0.06	-0.23	13.90	0.69	0.84	13.90
G23NUY-5601	1.90	0.03	0.29	8.35	0.13	0.44	13.19	-0.02	-0.03	13.15
G63ZPY-5601	1.90	0.03	0.29	8.60	0.38	1.33	13.00	-0.21	-0.26	12.76
GJHHL3-5605	1.90	0.03	0.29	8.40	0.18	0.62	13.00	-0.21	-0.26	13.07
GKDQJQ-5601	1.95	0.08	0.79	8.21	-0.01	-0.05	13.74	0.53	0.65	13.74
GQ2NH9-5605	1.90	0.03	0.29	8.60	0.38	1.33	13.00	-0.21	-0.26	12.76
GTPMNX-5601	2.17	0.30	2.98	8.32	0.10	0.34	15.10	1.89	2.31	15.12
GZMGF4-5601	1.70	-0.17	-1.71	7.60	-0.62	-2.21	12.90	-0.31	-0.38	12.93
H44VCW-5601	2.00	0.13	1.29	8.50	0.28	0.97	13.61	0.40	0.49	13.61
H784LT-5605	1.98	0.11	1.09	8.41	0.19	0.66	13.60	0.39	0.48	13.62
H7PQKB-5601	1.80	-0.07	-0.71	8.00	-0.22	-0.79	12.40	-0.81	-0.99	13.00

TABLE 1

Stain A, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
HB4L8Z-5601	1.80	-0.07	-0.71	8.20	-0.02	-0.09	13.00	-0.21	-0.26	12.68
HE76LL-5605	1.80	-0.07	-0.71	7.40	-0.82	-2.91	14.00	0.79	0.96	14.08
HFG89K-5602	1.70	-0.17	-1.71	7.20	-1.02	-3.62 X	13.70	0.49	0.60	13.66
HHPKPL-5601	2.00	0.13	1.29	8.00	-0.22	-0.79	14.00	0.79	0.96	14.48
HJYEN8-5605	1.85	-0.02	-0.21	8.35	0.13	0.44	12.80	-0.41	-0.50	12.80
HPLFEJ-5601	2.39	0.52	5.18 X	9.91	1.69	5.96 X	14.00	0.79	0.96	13.96
HYB4DT-5605	1.90	0.03	0.29	8.32	0.10	0.34	13.18	-0.03	-0.04	13.20
JJW48U-5602	1.80	-0.07	-0.71	8.20	-0.02	-0.09	13.00	-0.21	-0.26	12.68
JKNJK7-5601	2.00	0.13	1.29	8.50	0.28	0.97	14.00	0.79	0.96	13.61
JXV6RH-5601	1.90	0.03	0.29	8.40	0.18	0.62	13.00	-0.21	-0.26	13.07
KGJ4FR-5601	1.83	-0.04	-0.41	8.23	0.01	0.02	12.80	-0.41	-0.50	12.85
KKHEBR-5601	1.72	-0.15	-1.51	8.21	-0.01	-0.05	12.09	-1.12	-1.37	12.09
KLEYXR-5602	1.75	-0.12	-1.21	8.00	-0.22	-0.79	12.60	-0.61	-0.75	12.64
KM8ZDB-5605	1.90	0.03	0.29	8.00	-0.22	-0.79	13.70	0.49	0.60	13.74
KNPHDG-5601	1.80	-0.07	-0.71	8.50	0.28	0.97	12.20	-1.01	-1.24	12.23
KQPEGB-5601	2.00	0.13	1.29	8.20	-0.02	-0.09	14.00	0.79	0.96	14.12
KTXZKW-5601	2.00	0.13	1.29	8.26	0.04	0.13	14.01	0.80	0.98	14.01
KX92PZ-5601	2.00	0.13	1.29	8.60	0.38	1.33	13.00	-0.21	-0.26	13.45
L48PKR-5605	2.00	0.13	1.29	8.00	-0.22	-0.79	14.50	1.29	1.58	14.48

TABLE 1

Stain A, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
LQJX3P-5602	1.90	0.03	0.29	8.40	0.18	0.62	13.00	-0.21	-0.26	13.07
LTR8W8-5602	1.87	0.00	-0.01	8.31	0.09	0.30	12.93	-0.28	-0.34	13.00
LUBXGD-5602	1.80	-0.07	-0.71	7.80	-0.42	-1.50	13.00	-0.21	-0.26	13.34
LXJEFG-5601	3.70	1.83	18.26 X	15.08	6.86	24.23 X	14.20	0.99	1.21	14.20
LXQU4X-5605	1.90	0.03	0.29	8.60	0.38	1.33	13.00	-0.21	-0.26	12.76
M3VDVF-5602	1.90	0.03	0.29	8.50	0.28	0.97	13.00	-0.21	-0.26	12.92
M44YXM-5605	1.90	0.03	0.29	8.50	0.28	0.97	12.92	-0.29	-0.36	12.92
M6ZBXW-5601	1.96	0.09	0.89	8.47	0.25	0.87	13.20	-0.01	-0.01	13.38
M8QFP9-5601	1.80	-0.07	-0.71	8.90	0.68	2.39	11.70	-1.51	-1.85	11.67
MDXXVM-5601	1.91	0.04	0.39	8.19	-0.03	-0.12	13.50	0.29	0.35	13.49
MEC928-5601	1.80	-0.07	-0.71	7.50	-0.72	-2.56	14.00	0.79	0.96	13.89
MGE83Z-5601	1.40	-0.47	-4.71 X	8.40	0.18	0.62	10.00	-3.21	-3.93 X	9.59 X
MHNE2L-5601	1.80	-0.07	-0.71	6.90	-1.32	-4.68 X	15.00	1.79	2.19	15.12
MLVC9A-5605	1.85	-0.02	-0.21	7.65	-0.57	-2.03	14.00	0.79	0.96	13.99
MRVJ86-5605	1.90	0.03	0.29	8.20	-0.02	-0.09	14.40	1.19	1.45	13.40
MT6NKT-5605	1.90	0.03	0.29	7.90	-0.32	-1.15	14.00	0.79	0.96	13.92
MYDF2Y-5601	1.81	-0.06	-0.61	7.92	-0.30	-1.08	13.20	-0.01	-0.01	13.21
MZ94FM-5601	2.00	0.13	1.29	7.70	-0.52	-1.85	15.05	1.84	2.25	15.05
N6HM9E-5601	1.80	-0.07	-0.71	8.20	-0.02	-0.09	12.70	-0.51	-0.63	12.68

TABLE 1

Stain A, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
NAQCR3-5605	2.10	0.23	2.29	7.30	-0.92	-3.27 X	16.70	3.49	4.27 X	16.72 X
NDPFBU-5601	1.70	-0.17	-1.71	8.40	0.18	0.62	11.70	-1.51	-1.85	11.68
NJK2MQ-5601	1.75	-0.12	-1.21	8.30	0.08	0.27	12.00	-1.21	-1.48	12.17
NPHWZV-5601	1.60	-0.27	-2.71	8.00	-0.22	-0.79	12.00	-1.21	-1.48	11.54
NPMARX-5602	1.90	0.03	0.29	7.70	-0.52	-1.85	14.28	1.07	1.31	14.29
NQDKEK-5601	1.90	0.03	0.29	7.60	-0.62	-2.21	14.48	1.27	1.55	14.48
P7PNNZ-5605	1.87	0.00	-0.01	8.59	0.37	1.29	13.00	-0.21	-0.26	12.57
PJXWJH-5601	1.68	-0.19	-1.91	8.17	-0.05	-0.19	11.90	-1.31	-1.61	11.87
PPXKRA-5601	1.90	0.03	0.29	8.30	0.08	0.27	13.00	-0.21	-0.26	13.23
PUW8YY-5601	1.90	0.03	0.29	8.10	-0.12	-0.44	13.56	0.35	0.43	13.57
PVNV4T-5605	1.80	-0.07	-0.71	8.40	0.18	0.62	12.40	-0.81	-0.99	12.37
Q4FZQL-5601	1.80	-0.07	-0.71	8.20	-0.02	-0.09	12.70	-0.51	-0.63	12.68
Q8UBLH-5602	1.90	0.03	0.29	8.20	-0.02	-0.09	13.00	-0.21	-0.26	13.40
QA8NHR-5601	2.00	0.13	1.29	8.00	-0.22	-0.79	14.50	1.29	1.58	14.48
QWEF94-5602	1.80	-0.07	-0.71	8.60	0.38	1.33	12.10	-1.11	-1.36	12.08
R7F43L-5601	1.90	0.03	0.29	8.50	0.28	0.97	12.90	-0.31	-0.38	12.92
RDW4BQ-5605	1.90	0.03	0.29	8.50	0.28	0.97	13.00	-0.21	-0.26	12.92
RHBDH9-5602	2.00	0.13	1.29	8.40	0.18	0.62	13.80	0.59	0.72	13.77
RKCF96-5601	1.80	-0.07	-0.71	8.60	0.38	1.33	12.00	-1.21	-1.48	12.08

TABLE 1

Stain A, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
RY2CGU-5601	1.90	0.03	0.29	7.80	-0.42	-1.50	14.10	0.89	1.09	14.10
RYVZVJ-5601	2.00	0.13	1.29	8.00	-0.22	-0.79	14.40	1.19	1.45	14.48
T9YH42-5601	29.70	27.83	277.92X	110.50	102.28	361.49X	15.60	2.39	2.92	15.59
TL6LBG-5602	1.80	-0.07	-0.71	7.50	-0.72	-2.56	13.90	0.69	0.84	13.89
TMGVBN-5605	1.90	0.03	0.29	8.60	0.38	1.33	12.80	-0.41	-0.50	12.76
U6DK4W-5601	1.64	-0.23	-2.31	8.66	0.44	1.54	10.90	-2.31	-2.83	10.92
ULHJYX-5601	1.73	-0.14	-1.41	7.66	-0.56	-2.00	13.00	-0.21	-0.26	13.05
UP4JYE-5601	1.79	-0.08	-0.81	8.26	0.04	0.13	12.50	-0.71	-0.87	12.52
UP8WQG-5601	1.80	-0.07	-0.71	8.10	-0.12	-0.44	13.00	-0.21	-0.26	12.84
UPNZEG-5602	1.84	-0.03	-0.31	8.20	-0.02	-0.09	13.00	-0.21	-0.26	12.97
UXXECC-5602	1.80	-0.07	-0.71	7.30	-0.92	-3.27 X	14.27	1.06	1.29	14.27
V6BANJ-5601	2.00	0.13	1.29	8.40	0.18	0.62	13.77	0.56	0.68	13.77
V7RWBL-5601	1.90	0.03	0.29	8.20	-0.02	-0.09	13.40	0.19	0.23	13.40
VB3G7T-5601	1.90	0.03	0.29	8.20	-0.02	-0.09	13.00	-0.21	-0.26	13.40
VD6FGK-5601	1.60	-0.27	-2.71	8.20	-0.02	-0.09	12.70	-0.51	-0.63	11.25
VTEUPM-5601	1.80	-0.07	-0.71	8.60	0.38	1.33	12.00	-1.21	-1.48	12.08
VTJ8GQ-5605	2.00	0.13	1.29	8.50	0.28	0.97	13.00	-0.21	-0.26	13.61
VUAG4C-5602	1.50	-0.37	-3.71 X	8.50	0.28	0.97	10.20	-3.01	-3.69 X	10.16 X
VZYXN4-5605	1.80	-0.07	-0.71	7.80	-0.42	-1.50	13.34	0.13	0.16	13.34

TABLE 1

Stain A, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
W2AZB3-5601	1.60	-0.27	-2.71	8.00	-0.22	-0.79	11.50	-1.71	-2.09	11.54
W6R8QN-5601	1.80	-0.07	-0.71	8.40	0.18	0.62	12.00	-1.21	-1.48	12.37
W74VY3-5602	1.90	0.03	0.29	8.50	0.28	0.97	13.00	-0.21	-0.26	12.92
W8EWK2-5601	1.90	0.03	0.29	8.30	0.08	0.27	13.23	0.02	0.02	13.23
WC46YM-5605	2.00	0.13	1.29	8.25	0.03	0.09	14.00	0.79	0.96	14.03
WCAMAL-5601	2.00	0.13	1.29	8.50	0.28	0.97	14.00	0.79	0.96	13.61
WCV4H2-5601	1.75	-0.12	-1.21	7.00	-1.22	-4.33 X	14.00	0.79	0.96	14.48
WJBY7H-5601	1.80	-0.07	-0.71	8.20	-0.02	-0.09	12.68	-0.53	-0.65	12.68
WJM87P-5601	1.80	-0.07	-0.71	8.40	0.18	0.62	12.37	-0.84	-1.03	12.37
WKEVBJ-5601	1.80	-0.07	-0.71	8.20	-0.02	-0.09	12.70	-0.51	-0.63	12.68
WUQV6U-5602	1.90	0.03	0.29	8.00	-0.22	-0.79	13.70	0.49	0.60	13.74
WWWDAH-5601	1.80	-0.07	-0.71	8.00	-0.22	-0.79	13.00	-0.21	-0.26	13.00
XGV28R-5605	1.72	-0.15	-1.51	8.27	0.05	0.16	12.00	-1.21	-1.48	12.00
XLXQ2L-5601	1.90	0.03	0.29	8.00	-0.22	-0.79	13.70	0.49	0.60	13.74
XXLYFE-5602	1.86	-0.01	-0.11	8.08	-0.14	-0.51	13.00	-0.21	-0.26	13.31
Y49LXJ-5605	1.90	0.03	0.29	8.50	0.28	0.97	13.00	-0.21	-0.26	12.92
Y7T6PL-5602	1.80	-0.07	-0.71	8.20	-0.02	-0.09	12.70	-0.51	-0.63	12.68
YKDKRL-5605	1.70	-0.17	-1.71	8.30	0.08	0.27	12.00	-1.21	-1.48	11.82
YZQTTP-5602	1.80	-0.07	-0.71	8.30	0.08	0.27	12.50	-0.71	-0.87	12.53

TABLE 1

Stain A, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
Z3A8U6-5605	1.80	-0.07	-0.71	8.00	-0.22	-0.79	13.10	-0.11	-0.14	13.00
Z6X84F-5602	2.00	0.13	1.29	8.00	-0.22	-0.79	14.00	0.79	0.96	14.48
Z6YMDD-5601	1.90	0.03	0.29	8.50	0.28	0.97	13.00	-0.21	-0.26	12.92
ZF4QKV-5601	1.70	-0.17	-1.71	7.20	-1.02	-3.62 X	14.00	0.79	0.96	13.66
ZFCYFA-5601	2.00	0.13	1.29	8.50	0.28	0.97	13.00	-0.21	-0.26	13.61
Grand Mean	1.87			8.22			13.21			13.21
Standard Deviation	0.10			0.28			0.82			0.82
Participants Included in calculations	185			183			192			192
Participants excluded from calculations (indicated by X)	10			12			3			3

Stain A Preparation Angle: 12.0°

TABLE 1

Stain B

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
22BFHH-5602	3.00	-0.47	-4.83 X	8.00	-0.26	-0.65	22.00	-2.87	-1.99	22.02
2373W8-5601	3.50	0.03	0.33	8.60	0.34	0.84	24.02	-0.85	-0.59	24.02
2G4E26-5602	3.35	-0.12	-1.22	7.95	-0.31	-0.77	24.92	0.05	0.03	24.92
2JTNDR-5601	3.40	-0.07	-0.71	8.30	0.04	0.09	24.00	-0.87	-0.60	24.18
2PZ6T8-5601	3.51	0.04	0.43	8.75	0.49	1.21	23.60	-1.27	-0.88	23.65
2T4TFA-5601	3.50	0.03	0.33	8.70	0.44	1.09	24.00	-0.87	-0.60	23.72
2TZFN8-5601	3.41	-0.06	-0.60	8.39	0.13	0.32	24.00	-0.87	-0.60	23.98
2X9LF8-5601	3.57	0.10	1.05	8.10	-0.16	-0.40	26.15	1.28	0.89	26.15
34XHKN-5605	3.40	-0.07	-0.71	8.30	0.04	0.09	24.20	-0.67	-0.47	24.18
38WULF-5601	3.30	-0.17	-1.74	8.00	-0.26	-0.65	24.40	-0.47	-0.33	24.36
3BF3UF-5601	3.50	0.03	0.33	7.50	-0.76	-1.89	27.80	2.93	2.03	27.82
3BZJAH-5601	3.50	0.03	0.33	8.75	0.49	1.21	24.00	-0.87	-0.60	23.58
3FRZ8U-5605	3.20	-0.27	-2.77	7.50	-0.76	-1.89	25.30	0.43	0.30	25.26
3JA8MG-5601	3.50	0.03	0.33	8.00	-0.26	-0.65	25.90	1.03	0.71	25.94
3KPQYB-5601	3.50	0.03	0.33	8.25	-0.01	-0.03	25.10	0.23	0.16	25.10
3QBFBW-5602	3.50	0.03	0.33	8.50	0.24	0.59	24.30	-0.57	-0.40	24.32
3RKQ8V-5602	3.50	0.03	0.33	8.40	0.14	0.34	24.60	-0.27	-0.19	24.62
3VLUYG-5605	3.55	0.08	0.84	8.91	0.65	1.61	23.00	-1.87	-1.30	23.48
3YH9DC-5601	3.50	0.03	0.33	8.20	-0.06	-0.15	25.30	0.43	0.30	25.27

TABLE 1

Stain B, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
42YYT7-5602	3.20	-0.27	-2.77	8.00	-0.26	-0.65	24.00	-0.87	-0.60	23.58
4BA2E8-5602	3.30	-0.17	-1.74	7.50	-0.76	-1.89	26.00	1.13	0.78	26.10
4DHCBB-5601	35.00	31.53	325.39X	89.00	80.74	200.04X	23.00	-1.87	-1.30	23.16
4YFKP7-5602	3.40	-0.07	-0.71	8.00	-0.26	-0.65	25.00	0.13	0.09	25.15
4YMTTR-5605	3.40	-0.07	-0.71	8.00	-0.26	-0.65	25.00	0.13	0.09	25.15
66MG2J-5602	3.50	0.03	0.33	8.50	0.24	0.59	24.00	-0.87	-0.60	24.32
68WH7Q-5601	3.50	0.03	0.33	8.00	-0.26	-0.65	26.00	1.13	0.78	25.94
6H8W6J-5605	3.60	0.13	1.36	8.60	0.34	0.84	25.00	0.13	0.09	24.75
6J4JDF-5601	3.50	0.03	0.33	8.10	-0.16	-0.40	25.60	0.73	0.51	25.60
6JY8R6-5601	3.50	0.03	0.33	8.20	-0.06	-0.15	25.26	0.39	0.27	25.27
6MYFVF-5601	3.50	0.03	0.33	7.80	-0.46	-1.14	26.70	1.83	1.27	26.66
6TM3NZ-5602	3.50	0.03	0.33	8.30	0.04	0.09	24.90	0.03	0.02	24.94
6VD26J-5602	3.51	0.04	0.43	8.92	0.66	1.63	23.00	-1.87	-1.30	23.17
6X4ALZ-5601	3.40	-0.07	-0.71	8.30	0.04	0.09	24.20	-0.67	-0.47	24.18
7778A2-5602	3.60	0.13	1.36	8.20	-0.06	-0.15	26.00	1.13	0.78	26.04
7BL388-5601	0.30	-3.17	-32.70 X	8.00	-0.26	-0.65	22.02	-2.85	-1.98	2.15 X
7E7BT7-5605	3.50	0.03	0.33	9.00	0.74	1.83	23.00	-1.87	-1.30	22.89
7WHAM3-5605	3.40	-0.07	-0.71	8.50	0.24	0.59	23.60	-1.27	-0.88	23.58
8746CP-5601	3.20	-0.27	-2.77	8.00	-0.26	-0.65	23.00	-1.87	-1.30	23.58

TABLE 1

Stain B, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
87KQVK-5601	3.60	0.13	1.36	8.50	0.24	0.59	25.00	0.13	0.09	25.06
8GPPW7-5601	3.50	0.03	0.33	8.30	0.04	0.09	24.90	0.03	0.02	24.94
8XU9EQ-5605	3.50	0.03	0.33	8.00	-0.26	-0.65	25.70	0.83	0.58	25.94
93LXAT-5602	3.50	0.03	0.33	8.50	0.24	0.59	24.00	-0.87	-0.60	24.32
98HGLY-5601	3.55	0.08	0.84	8.52	0.26	0.64	24.60	-0.27	-0.19	24.62
9AGRED-5601	3.50	0.03	0.33	8.00	-0.26	-0.65	26.00	1.13	0.78	25.94
9BCFT3-5601	3.50	0.03	0.33	8.00	-0.26	-0.65	25.90	1.03	0.71	25.94
9NPL2N-5601	3.50	0.03	0.33	8.00	-0.26	-0.65	25.90	1.03	0.71	25.94
9R7D8E-5601	3.20	-0.27	-2.77	6.80	-1.46	-3.62 X	28.00	3.13	2.17	28.07
9VHTMB-5602	3.50	0.03	0.33	8.50	0.24	0.59	24.30	-0.57	-0.40	24.32
A4C9ZL-5602	3.50	0.03	0.33	8.50	0.24	0.59	24.00	-0.87	-0.60	24.32
AAVNDQ-5601	3.60	0.13	1.36	8.80	0.54	1.33	24.00	-0.87	-0.60	24.15
ABCNN9-5601	3.90	0.43	4.45 X	9.20	0.94	2.32	25.08	0.21	0.15	25.08
ACNCWL-5601	3.50	0.03	0.33	8.50	0.24	0.59	24.00	-0.87	-0.60	24.32
AQH2QX-5602	3.50	0.03	0.33	7.50	-0.76	-1.89	28.00	3.13	2.17	27.82
AUNLH4-5601	3.50	0.03	0.33	8.50	0.24	0.59	24.30	-0.57	-0.40	24.32
B3TTVJ-5601	17.02	13.55	139.85X	38.61	30.35	75.19 X	26.20	1.33	0.92	26.16
B433LV-5602	3.40	-0.07	-0.71	7.60	-0.66	-1.64	26.60	1.73	1.20	26.57
BHTJ43-5601	3.30	-0.17	-1.74	8.00	-0.26	-0.65	24.00	-0.87	-0.60	24.36

TABLE 1

Stain B, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
BKEG6D-5605	**2.20**	-1.27	-13.09 X	**7.60**	-0.66	-1.64	**16.80**	-8.07	-5.60 X	16.83 X
BQZAER-5601	**1.25**	-2.22	-22.89 X	**3.14**	-5.12	-12.69 X	**24.00**	-0.87	-0.60	23.46
BYBVZ2-5601	**3.50**	0.03	0.33	**8.80**	0.54	1.33	**23.40**	-1.47	-1.02	23.44
BYZVFR-5601	**3.62**	0.15	1.56	**8.62**	0.36	0.89	**24.90**	0.03	0.02	24.83
C8QH44-5605	**3.40**	-0.07	-0.71	**8.00**	-0.26	-0.65	**25.00**	0.13	0.09	25.15
CNC7CD-5605	**3.50**	0.03	0.33	**8.30**	0.04	0.09	**24.94**	0.07	0.05	24.94
CPGZM3-5601	**3.60**	0.13	1.36	**9.00**	0.74	1.83	**23.58**	-1.29	-0.90	23.58
CXC7F4-5601	**3.50**	0.03	0.33	**8.00**	-0.26	-0.65	**25.94**	1.07	0.74	25.94
D6DFMW-5601	**3.36**	-0.11	-1.12	**8.50**	0.24	0.59	**23.30**	-1.57	-1.09	23.28
D8H2JA-5601	**3.60**	0.13	1.36	**8.00**	-0.26	-0.65	**26.70**	1.83	1.27	26.74
DEHYWY-5605	**3.60**	0.13	1.36	**8.10**	-0.16	-0.40	**26.40**	1.53	1.06	26.39
DG7Y23-5601	**3.40**	-0.07	-0.71	**8.40**	0.14	0.34	**23.88**	-0.99	-0.69	23.88
DHVCJK-5602	**3.50**	0.03	0.33	**8.00**	-0.26	-0.65	**26.00**	1.13	0.78	25.94
DJCG9B-5602	**3.50**	0.03	0.33	**8.50**	0.24	0.59	**24.20**	-0.67	-0.47	24.32
DWEPQ8-5601	**3.50**	0.03	0.33	**8.40**	0.14	0.34	**24.60**	-0.27	-0.19	24.62
E6ND47-5601	**3.40**	-0.07	-0.71	**8.20**	-0.06	-0.15	**24.50**	-0.37	-0.26	24.50
EH2TQJ-5605	**3.40**	-0.07	-0.71	**8.50**	0.24	0.59	**23.58**	-1.29	-0.90	23.58
EH2UAW-5601	**3.50**	0.03	0.33	**8.40**	0.14	0.34	**25.00**	0.13	0.09	24.62
ELTDY9-5601	**3.50**	0.03	0.33	**9.00**	0.74	1.83	**22.90**	-1.97	-1.37	22.89

TABLE 1

Stain B, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
EZ9FGW-5601	3.00	-0.47	-4.83 X	8.00	-0.26	-0.65	22.02	-2.85	-1.98	22.02
F6L3L9-5601	3.50	0.03	0.33	9.00	0.74	1.83	22.90	-1.97	-1.37	22.89
F6N7J7-5602	3.40	-0.07	-0.71	8.50	0.24	0.59	23.58	-1.29	-0.90	23.58
FBUWT4-5601	3.50	0.03	0.33	8.40	0.14	0.34	24.60	-0.27	-0.19	24.62
FJKKHE-5602	3.50	0.03	0.33	8.00	-0.26	-0.65	26.00	1.13	0.78	25.94
FM3HCW-5605	3.50	0.03	0.33	8.30	0.04	0.09	25.00	0.13	0.09	24.94
FM8WPW-5601	3.40	-0.07	-0.71	8.30	0.04	0.09	24.20	-0.67	-0.47	24.18
FRHXU2-5601	3.50	0.03	0.33	8.60	0.34	0.84	24.02	-0.85	-0.59	24.02
FYYTGW-5601	3.39	-0.08	-0.81	8.45	0.19	0.47	23.70	-1.17	-0.81	23.65
G23NUY-5601	3.47	0.00	0.02	8.61	0.35	0.86	23.80	-1.07	-0.74	23.77
G63ZPY-5601	3.50	0.03	0.33	8.60	0.34	0.84	24.00	-0.87	-0.60	24.02
GJHHL3-5605	3.50	0.03	0.33	8.40	0.14	0.34	25.00	0.13	0.09	24.62
GKDQJQ-5601	3.50	0.03	0.33	8.07	-0.19	-0.48	25.70	0.83	0.58	25.70
GQ2NH9-5605	3.50	0.03	0.33	8.70	0.44	1.09	24.00	-0.87	-0.60	23.72
GTPMNX-5601	3.53	0.06	0.64	7.96	-0.30	-0.75	26.30	1.43	0.99	26.33
GZMGF4-5601	3.40	-0.07	-0.71	7.70	-0.56	-1.39	26.20	1.33	0.92	26.20
H44VCW-5601	3.60	0.13	1.36	8.20	-0.06	-0.15	26.04	1.17	0.81	26.04
H784LT-5605	3.42	-0.05	-0.50	8.53	0.27	0.66	23.60	-1.27	-0.88	23.64
H7PQKB-5601	3.50	0.03	0.33	7.90	-0.36	-0.90	26.30	1.43	0.99	26.30

TABLE 1

Stain B, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
HB4L8Z-5601	3.40	-0.07	-0.71	8.60	0.34	0.84	23.00	-1.87	-1.30	23.29
HE76LL-5605	3.60	0.13	1.36	8.50	0.24	0.59	25.00	0.13	0.09	25.06
HFG89K-5602	3.30	-0.17	-1.74	7.40	-0.86	-2.14	26.50	1.63	1.13	26.48
HHPKPL-5601	3.80	0.33	3.42 X	8.60	0.34	0.84	26.00	1.13	0.78	26.22
HJYEN8-5605	3.51	0.04	0.43	8.67	0.41	1.01	23.88	-0.99	-0.69	23.88
HPLFEJ-5601	4.74	1.27	13.12 X	10.61	2.35	5.82 X	26.50	1.63	1.13	26.54
HYB4DT-5605	3.49	0.02	0.22	8.43	0.17	0.42	24.46	-0.41	-0.28	24.46
JJW48U-5602	3.50	0.03	0.33	8.20	-0.06	-0.15	25.00	0.13	0.09	25.27
JKNJK7-5601	3.20	-0.27	-2.77	9.00	0.74	1.83	21.00	-3.87	-2.69	20.83
JXV6RH-5601	3.60	0.13	1.36	8.80	0.54	1.33	24.00	-0.87	-0.60	24.15
KGJ4FR-5601	3.55	0.08	0.84	8.19	-0.07	-0.18	25.70	0.83	0.58	25.69
KKHEBR-5601	3.40	-0.07	-0.71	8.08	-0.18	-0.45	24.88	0.01	0.01	24.88
KLEYXR-5602	3.50	0.03	0.33	8.00	-0.26	-0.65	25.90	1.03	0.71	25.94
KM8ZDB-5605	3.50	0.03	0.33	8.10	-0.16	-0.40	25.60	0.73	0.51	25.60
KNPHDG-5601	3.50	0.03	0.33	8.80	0.54	1.33	23.40	-1.47	-1.02	23.44
KQPEGB-5601	3.40	-0.07	-0.71	8.00	-0.26	-0.65	25.00	0.13	0.09	25.15
KTXZKW-5601	3.48	0.01	0.12	8.00	-0.26	-0.65	25.79	0.92	0.64	25.79
KX92PZ-5601	3.80	0.33	3.42 X	8.50	0.24	0.59	26.00	1.13	0.78	26.56
L48PKR-5605	3.60	0.13	1.36	8.00	-0.26	-0.65	26.70	1.83	1.27	26.74

TABLE 1

Stain B, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
LQJX3P-5602	3.30	-0.17	-1.74	8.00	-0.26	-0.65	24.00	-0.87	-0.60	24.36
LTR8W8-5602	3.44	-0.03	-0.29	8.52	0.26	0.64	23.58	-1.29	-0.90	23.81
LUBXGD-5602	3.50	0.03	0.33	8.00	-0.26	-0.65	26.00	1.13	0.78	25.94
LXJEFG-5601	6.40	2.93	30.25 X	14.45	6.19	15.33 X	26.30	1.43	0.99	26.29
LXQU4X-5605	3.60	0.13	1.36	8.00	-0.26	-0.65	27.00	2.13	1.48	26.74
M3VDVF-5602	3.50	0.03	0.33	8.50	0.24	0.59	24.00	-0.87	-0.60	24.32
M44YXM-5605	3.50	0.03	0.33	8.50	0.24	0.59	24.32	-0.55	-0.38	24.32
M6ZBXW-5601	3.49	0.02	0.22	8.44	0.18	0.44	24.40	-0.47	-0.33	24.43
M8QFP9-5601	3.40	-0.07	-0.71	9.20	0.94	2.32	21.70	-3.17	-2.20	21.69
MDXXVM-5601	3.48	0.01	0.12	8.07	-0.19	-0.48	25.50	0.63	0.44	25.55
MEC928-5601	3.40	-0.07	-0.71	7.20	-1.06	-2.63	28.00	3.13	2.17	28.18
MGE83Z-5601	3.20	-0.27	-2.77	8.90	0.64	1.58	21.00	-3.87	-2.69	21.07
MHNE2L-5601	3.50	0.03	0.33	7.00	-1.26	-3.13 X	30.00	5.13	3.56 X	30.00 X
MLVC9A-5605	3.60	0.13	1.36	7.50	-0.76	-1.89	28.70	3.83	2.66	28.69
MRVJ86-5605	3.60	0.13	1.36	8.10	-0.16	-0.40	26.90	2.03	1.41	26.39
MT6NKT-5605	3.40	-0.07	-0.71	7.70	-0.56	-1.39	26.00	1.13	0.78	26.20
MYDF2Y-5601	3.44	-0.03	-0.29	8.30	0.04	0.09	24.50	-0.37	-0.26	24.49
MZ94FM-5601	3.70	0.23	2.39	7.90	-0.36	-0.90	27.92	3.05	2.12	27.93
N6HM9E-5601	3.40	-0.07	-0.71	8.40	0.14	0.34	23.90	-0.97	-0.67	23.88

TABLE 1

Stain B, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
NAQCR3-5605	3.40	-0.07	-0.71	7.80	-0.46	-1.14	25.80	0.93	0.64	25.84
NDPFBU-5601	3.60	0.13	1.36	8.70	0.44	1.09	24.40	-0.47	-0.33	24.44
NJK2MQ-5601	3.00	-0.47	-4.83 X	8.75	0.49	1.21	20.00	-4.87	-3.38 X	20.05 X
NPHWZV-5601	3.60	0.13	1.36	8.20	-0.06	-0.15	26.00	1.13	0.78	26.04
NPMARX-5602	3.50	0.03	0.33	7.80	-0.46	-1.14	26.60	1.73	1.20	26.66
NQDKEK-5601	3.50	0.03	0.33	7.70	-0.56	-1.39	27.04	2.17	1.51	27.04
P7PNNZ-5605	3.44	-0.03	-0.29	8.53	0.27	0.66	24.00	-0.87	-0.60	23.78
PJXWJH-5601	3.41	-0.06	-0.60	8.11	-0.15	-0.38	24.90	0.03	0.02	24.86
PPXKRA-5601	3.50	0.03	0.33	8.40	0.14	0.34	25.00	0.13	0.09	24.62
PUW8YY-5601	3.40	-0.07	-0.71	8.30	0.04	0.09	24.18	-0.69	-0.48	24.18
PVNV4T-5605	3.50	0.03	0.33	8.20	-0.06	-0.15	25.30	0.43	0.30	25.27
Q4FZQL-5601	3.50	0.03	0.33	8.10	-0.16	-0.40	25.60	0.73	0.51	25.60
Q8UBLH-5602	3.60	0.13	1.36	7.70	-0.56	-1.39	28.00	3.13	2.17	27.87
QA8NHR-5601	3.50	0.03	0.33	8.00	-0.26	-0.65	26.00	1.13	0.78	25.94
QWEF94-5602	3.50	0.03	0.33	8.51	0.25	0.61	24.30	-0.57	-0.40	24.29
R7F43L-5601	3.50	0.03	0.33	8.00	-0.26	-0.65	25.90	1.03	0.71	25.94
RDW4BQ-5605	3.50	0.03	0.33	8.00	-0.26	-0.65	26.00	1.13	0.78	25.94
RHBDH9-5602	3.40	-0.07	-0.71	8.80	0.54	1.33	22.70	-2.17	-1.51	22.73
RKCF96-5601	3.20	-0.27	-2.77	8.40	0.14	0.34	22.00	-2.87	-1.99	22.39

TABLE 1

Stain B, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
RY2CGU-5601	3.30	-0.17	-1.74	8.20	-0.06	-0.15	23.70	-1.17	-0.81	23.73
RYVZVJ-5601	3.50	0.03	0.33	8.50	0.24	0.59	24.30	-0.57	-0.40	24.32
T9YH42-5601	46.40	42.93	443.03X	100.60	92.34	228.78X	27.50	2.63	1.82	27.47
TL6LBG-5602	3.50	0.03	0.33	8.00	-0.26	-0.65	25.90	1.03	0.71	25.94
TMGVBN-5605	3.80	0.33	3.42 X	8.70	0.44	1.09	25.90	1.03	0.71	25.90
U6DK4W-5601	3.38	-0.09	-0.91	9.32	1.06	2.62	21.30	-3.57	-2.48	21.26
ULHJYX-5601	3.19	-0.28	-2.87	7.34	-0.92	-2.28	26.00	1.13	0.78	25.76
UP4JYE-5601	3.41	-0.06	-0.60	8.35	0.09	0.22	24.10	-0.77	-0.53	24.10
UP8WQG-5601	3.10	-0.37	-3.80 X	8.00	-0.26	-0.65	23.00	-1.87	-1.30	22.80
UPNZEG-5602	3.56	0.09	0.95	8.21	-0.05	-0.13	26.00	1.13	0.78	25.70
UXXECC-5602	3.45	-0.02	-0.19	7.55	-0.71	-1.76	27.19	2.32	1.61	27.19
V6BANJ-5601	3.40	-0.07	-0.71	8.20	-0.06	-0.15	24.50	-0.37	-0.26	24.50
V7RWBL-5601	3.50	0.03	0.33	8.40	0.14	0.34	24.60	-0.27	-0.19	24.62
VB3G7T-5601	3.10	-0.37	-3.80 X	8.40	0.14	0.34	21.00	-3.87	-2.69	21.66
VD6FGK-5601	3.40	-0.07	-0.71	8.20	-0.06	-0.15	24.50	-0.37	-0.26	24.50
VTEUPM-5601	3.60	0.13	1.36	8.60	0.34	0.84	25.00	0.13	0.09	24.75
VTJ8GQ-5605	3.60	0.13	1.36	8.50	0.24	0.59	25.00	0.13	0.09	25.06
VUAG4C-5602	3.50	0.03	0.33	8.70	0.44	1.09	23.70	-1.17	-0.81	23.72
VZYXN4-5605	3.40	-0.07	-0.71	7.20	-1.06	-2.63	28.18	3.31	2.30	28.18

TABLE 1

Stain B, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
W2AZB3-5601	3.30	-0.17	-1.74	8.00	-0.26	-0.65	24.40	-0.47	-0.33	24.36
W6R8QN-5601	3.60	0.13	1.36	7.80	-0.46	-1.14	27.00	2.13	1.48	27.49
W74VY3-5602	3.40	-0.07	-0.71	7.90	-0.36	-0.90	25.00	0.13	0.09	25.49
W8EWK2-5601	3.60	0.13	1.36	8.50	0.24	0.59	25.06	0.19	0.13	25.06
WC46YM-5605	3.50	0.03	0.33	8.50	0.24	0.59	24.00	-0.87	-0.60	24.32
WCAMAL-5601	3.80	0.33	3.42 X	9.20	0.94	2.32	24.00	-0.87	-0.60	24.40
WCV4H2-5601	3.50	0.03	0.33	7.50	-0.76	-1.89	27.00	2.13	1.48	27.82
WJBY7H-5601	3.50	0.03	0.33	8.20	-0.06	-0.15	25.26	0.39	0.27	25.27
WJM87P-5601	3.50	0.03	0.33	8.80	0.54	1.33	23.43	-1.44	-1.00	23.44
WKEVBJ-5601	3.50	0.03	0.33	8.20	-0.06	-0.15	25.30	0.43	0.30	25.27
WUQV6U-5602	4.50	1.03	10.65 X	8.50	0.24	0.59	31.90	7.03	4.88 X	31.97 X
WWWDAH-5601	3.40	-0.07	-0.71	8.40	0.14	0.34	23.90	-0.97	-0.67	23.88
XGV28R-5605	3.42	-0.05	-0.50	7.87	-0.39	-0.97	25.75	0.88	0.61	25.76
XLXQ2L-5601	3.40	-0.07	-0.71	8.00	-0.26	-0.65	25.20	0.33	0.23	25.15
XXLYFE-5602	3.49	0.02	0.22	8.36	0.10	0.24	25.00	0.13	0.09	24.67
Y49LXJ-5605	3.50	0.03	0.33	8.70	0.44	1.09	24.00	-0.87	-0.60	23.72
Y7T6PL-5602	3.50	0.03	0.33	8.50	0.24	0.59	24.30	-0.57	-0.40	24.32
YKDKRL-5605	3.50	0.03	0.33	8.00	-0.26	-0.65	25.00	0.13	0.09	25.94
YZQTTP-5602	3.50	0.03	0.33	8.40	0.14	0.34	24.60	-0.27	-0.19	24.62

TABLE 1

Stain B, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
Z3A8U6-5605	3.50	0.03	0.33	7.80	-0.46	-1.14	26.80	1.93	1.34	26.66
Z6X84F-5602	3.10	-0.37	-3.80 X	8.00	-0.26	-0.65	23.00	-1.87	-1.30	22.80
Z6YMDD-5601	3.60	0.13	1.36	8.00	-0.26	-0.65	27.00	2.13	1.48	26.74
ZF4QKV-5601	3.20	-0.27	-2.77	7.30	-0.96	-2.38	26.00	1.13	0.78	26.00
ZFCYFA-5601	3.50	0.03	0.33	8.60	0.34	0.84	24.00	-0.87	-0.60	24.02
Grand Mean	3.47			8.26			24.87			24.91
Standard Deviation	0.10			0.40			1.44			1.42
Participants Included in calculations	175			187			191			190
Participants excluded from calculations (indicated by X)	20			8			4			5

Stain B Preparation Angle: 26.1°

TABLE 1

Stain C

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
22BFHH-5602	3.50	-0.31	-2.57	6.00	-0.28	-0.61	35.70	-1.62	-0.48	35.69
2373W8-5601	3.90	0.09	0.78	6.10	-0.18	-0.39	39.74	2.42	0.72	39.74
2G4E26-5602	3.77	-0.04	-0.31	5.32	-0.96	-2.11	45.12	7.80	2.33	45.12
2JTNDR-5601	3.80	-0.01	-0.06	6.60	0.32	0.71	35.00	-2.32	-0.69	35.15
2PZ6T8-5601	3.82	0.01	0.11	8.06	1.78	3.93 X	28.30	-9.02	-2.70	28.29
2T4TFA-5601	3.80	-0.01	-0.06	6.10	-0.18	-0.39	39.00	1.68	0.50	38.53
2TZFN8-5601	3.69	-0.12	-0.98	6.34	0.06	0.14	35.60	-1.72	-0.51	35.59
2X9LF8-5601	3.80	-0.01	-0.06	6.33	0.05	0.12	36.89	-0.43	-0.13	36.89
34XHKN-5605	3.70	-0.11	-0.90	6.60	0.32	0.71	34.10	-3.22	-0.96	34.10
38WULF-5601	3.80	-0.01	-0.06	6.10	-0.18	-0.39	38.50	1.18	0.35	38.53
3BF3UF-5601	4.00	0.19	1.62	6.00	-0.28	-0.61	41.80	4.48	1.34	41.81
3BZJAH-5601	4.00	0.19	1.62	6.50	0.22	0.49	38.00	0.68	0.20	37.98
3FRZ8U-5605	3.80	-0.01	-0.06	5.50	-0.78	-1.71	43.70	6.38	1.91	43.70
3JA8MG-5601	4.00	0.19	1.62	6.50	0.22	0.49	38.00	0.68	0.20	37.98
3KPQYB-5601	3.25	-0.56	-4.67 X	5.00	-1.28	-2.82	40.50	3.18	0.95	40.54
3QBFBW-5602	3.90	0.09	0.78	6.70	0.42	0.93	35.60	-1.72	-0.51	35.60
3RKQ8V-5602	3.70	-0.11	-0.90	6.90	0.62	1.37	32.40	-4.92	-1.47	32.43
3VLUYG-5605	3.76	-0.05	-0.39	6.35	0.07	0.16	36.00	-1.32	-0.39	36.31
3YH9DC-5601	3.80	-0.01	-0.06	6.80	0.52	1.15	34.00	-3.32	-0.99	33.97

TABLE 1

Stain C, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
42YYT7-5602	3.60	-0.21	-1.73	5.50	-0.78	-1.71	41.00	3.68	1.10	40.89
4BA2E8-5602	3.75	-0.06	-0.48	5.50	-0.78	-1.71	43.00	5.68	1.70	42.99
4DHCBB-5601	38.00	34.19	286.44X	78.00	71.72	158.18X	29.00	-8.32	-2.49	29.16
4YFKP7-5602	3.80	-0.01	-0.06	5.60	-0.68	-1.49	43.00	5.68	1.70	42.73
4YMTTR-5605	3.80	-0.01	-0.06	6.00	-0.28	-0.61	39.00	1.68	0.50	39.30
66MG2J-5602	3.90	0.09	0.78	6.50	0.22	0.49	36.50	-0.82	-0.24	36.87
68WH7Q-5601	3.75	-0.06	-0.48	6.50	0.22	0.49	35.00	-2.32	-0.69	35.23
6H8W6J-5605	3.90	0.09	0.78	6.60	0.32	0.71	36.00	-1.32	-0.39	36.22
6J4JDF-5601	3.80	-0.01	-0.06	5.80	-0.48	-1.05	40.90	3.58	1.07	40.93
6JY8R6-5601	3.90	0.09	0.78	6.20	-0.08	-0.17	38.97	1.65	0.49	38.98
6MYFVF-5601	3.80	-0.01	-0.06	5.80	-0.48	-1.05	41.00	3.68	1.10	40.93
6TM3NZ-5602	3.80	-0.01	-0.06	6.00	-0.28	-0.61	39.40	2.08	0.62	39.30
6VD26J-5602	3.80	-0.01	-0.06	6.20	-0.08	-0.17	39.20	1.88	0.56	37.80
6X4ALZ-5601	4.00	0.19	1.62	6.50	0.22	0.49	38.00	0.68	0.20	37.98
7778A2-5602	4.00	0.19	1.62	6.00	-0.28	-0.61	42.00	4.68	1.40	41.81
7BL388-5601	3.50	-0.31	-2.57	6.00	-0.28	-0.61	35.69	-1.63	-0.49	35.69
7E7BT7-5605	4.00	0.19	1.62	8.00	1.72	3.80 X	30.00	-7.32	-2.19	30.00
7WHAM3-5605	3.70	-0.11	-0.90	6.50	0.22	0.49	34.70	-2.62	-0.78	34.70
8746CP-5601	3.80	-0.01	-0.06	6.20	-0.08	-0.17	37.00	-0.32	-0.09	37.80

TABLE 1

Stain C, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
87KQVK-5601	4.00	0.19	1.62	6.80	0.52	1.15	36.00	-1.32	-0.39	36.03
8GPPW7-5601	3.80	-0.01	-0.06	6.10	-0.18	-0.39	38.50	1.18	0.35	38.53
8XU9EQ-5605	3.80	-0.01	-0.06	6.50	0.22	0.49	36.40	-0.92	-0.27	35.78
93LXAT-5602	4.00	0.19	1.62	7.00	0.72	1.59	35.00	-2.32	-0.69	34.85
98HGLY-5601	3.90	0.09	0.78	6.36	0.08	0.18	37.80	0.48	0.14	37.82
9AGRED-5601	3.70	-0.11	-0.90	6.00	-0.28	-0.61	38.00	0.68	0.20	38.07
9BCFT3-5601	3.80	-0.01	-0.06	5.80	-0.48	-1.05	40.90	3.58	1.07	40.93
9NPL2N-5601	4.00	0.19	1.62	6.00	-0.28	-0.61	41.80	4.48	1.34	41.81
9R7D8E-5601	3.60	-0.21	-1.73	5.20	-1.08	-2.38	43.80	6.48	1.94	43.81
9VHTMB-5602	4.00	0.19	1.62	7.00	0.72	1.59	34.80	-2.52	-0.75	34.85
A4C9ZL-5602	3.80	-0.01	-0.06	6.30	0.02	0.05	37.00	-0.32	-0.09	37.10
AAVNDQ-5601	3.90	0.09	0.78	7.50	1.22	2.70	31.00	-6.32	-1.89	31.33
ABCNN9-5601	4.00	0.19	1.62	7.00	0.72	1.59	34.85	-2.47	-0.74	34.85
ACNCWL-5601	3.80	-0.01	-0.06	6.50	0.22	0.49	36.00	-1.32	-0.39	35.78
AQH2QX-5602	3.80	-0.01	-0.06	5.80	-0.48	-1.05	41.00	3.68	1.10	40.93
AUNLH4-5601	3.80	-0.01	-0.06	6.00	-0.28	-0.61	39.30	1.98	0.59	39.30
B3TTVJ-5601	13.97	10.16	85.14 X	23.62	17.34	38.25 X	36.30	-1.02	-0.30	36.26
B433LV-5602	3.70	-0.11	-0.90	5.60	-0.68	-1.49	41.40	4.08	1.22	41.35
BHTJ43-5601	3.60	-0.21	-1.73	5.90	-0.38	-0.83	38.00	0.68	0.20	37.60

TABLE 1

Stain C, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
BKEG6D-5605	3.50	-0.31	-2.57	6.20	-0.08	-0.17	34.40	-2.92	-0.87	34.37
BQZAER-5601	1.40	-2.41	-20.16 X	2.47	-3.81	-8.40 X	35.00	-2.32	-0.69	34.53
BYBVZ2-5601	3.90	0.09	0.78	8.00	1.72	3.80 X	29.20	-8.12	-2.43	29.18
BYZVFR-5601	4.00	0.19	1.62	6.50	0.22	0.49	38.30	0.98	0.29	37.98
C8QH44-5605	3.70	-0.11	-0.90	6.40	0.12	0.27	35.00	-2.32	-0.69	35.32
CNC7CD-5605	3.80	-0.01	-0.06	6.70	0.42	0.93	34.55	-2.77	-0.83	34.55
CPGZM3-5601	3.80	-0.01	-0.06	6.30	0.02	0.05	37.10	-0.22	-0.06	37.10
CXC7F4-5601	3.80	-0.01	-0.06	6.00	-0.28	-0.61	39.30	1.98	0.59	39.30
D6DFMW-5601	3.50	-0.31	-2.57	7.05	0.77	1.70	29.80	-7.52	-2.25	29.77
D8H2JA-5601	4.00	0.19	1.62	5.60	-0.68	-1.49	45.60	8.28	2.48	45.58
DEHYWY-5605	3.80	-0.01	-0.06	6.10	-0.18	-0.39	38.50	1.18	0.35	38.53
DG7Y23-5601	3.70	-0.11	-0.90	6.80	0.52	1.15	32.96	-4.36	-1.30	32.96
DHVCJK-5602	3.90	0.09	0.78	6.00	-0.28	-0.61	40.00	2.68	0.80	40.54
DJCG9B-5602	3.90	0.09	0.78	6.10	-0.18	-0.39	39.10	1.78	0.53	39.74
DWEPQ8-5601	3.70	-0.11	-0.90	6.00	-0.28	-0.61	38.10	0.78	0.23	38.07
E6ND47-5601	3.60	-0.21	-1.73	5.50	-0.78	-1.71	40.90	3.58	1.07	40.89
EH2TQJ-5605	4.00	0.19	1.62	6.50	0.22	0.49	37.98	0.66	0.20	37.98
EH2UAW-5601	3.70	-0.11	-0.90	6.30	0.02	0.05	36.00	-1.32	-0.39	35.97
ELTDY9-5601	4.00	0.19	1.62	7.00	0.72	1.59	34.80	-2.52	-0.75	34.85

TABLE 1

Stain C, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
EZ9FGW-5601	4.00	0.19	1.62	7.00	0.72	1.59	34.84	-2.48	-0.74	34.85
F6L3L9-5601	3.90	0.09	0.78	6.25	-0.03	-0.06	38.60	1.28	0.38	38.61
F6N7J7-5602	3.70	-0.11	-0.90	6.40	0.12	0.27	35.32	-2.00	-0.60	35.32
FBUWT4-5601	3.90	0.09	0.78	6.20	-0.08	-0.17	39.00	1.68	0.50	38.98
FJKKHE-5602	3.90	0.09	0.78	6.30	0.02	0.05	38.00	0.68	0.20	38.25
FM3HCW-5605	3.80	-0.01	-0.06	6.70	0.42	0.93	35.00	-2.32	-0.69	34.55
FM8WPW-5601	3.70	-0.11	-0.90	6.70	0.42	0.93	33.50	-3.82	-1.14	33.52
FRHXU2-5601	3.52	-0.29	-2.40	5.96	-0.32	-0.70	36.20	-1.12	-0.33	36.20
FYYTGW-5601	3.83	0.02	0.19	6.88	0.60	1.33	33.80	-3.52	-1.05	33.83
G23NUY-5601	3.81	0.00	0.03	6.45	0.17	0.38	36.20	-1.12	-0.33	36.21
G63ZPY-5601	4.00	0.19	1.62	6.70	0.42	0.93	37.00	-0.32	-0.09	36.66
GJHHL3-5605	3.80	-0.01	-0.06	6.20	-0.08	-0.17	38.00	0.68	0.20	37.80
GKDQJQ-5601	3.84	0.03	0.28	6.04	-0.24	-0.52	39.48	2.16	0.65	39.48
GQ2NH9-5605	3.90	0.09	0.78	6.50	0.22	0.49	37.00	-0.32	-0.09	36.87
GTPMNX-5601	3.96	0.15	1.28	6.13	-0.15	-0.33	40.20	2.88	0.86	40.24
GZMGF4-5601	3.70	-0.11	-0.90	6.00	-0.28	-0.61	38.00	0.68	0.20	38.07
H44VCW-5601	3.80	-0.01	-0.06	6.00	-0.28	-0.61	39.30	1.98	0.59	39.30
H784LT-5605	3.71	-0.10	-0.81	6.63	0.35	0.78	34.00	-3.32	-0.99	34.03
H7PQKB-5601	3.84	0.03	0.28	6.12	-0.16	-0.35	38.90	1.58	0.47	38.86

TABLE 1

Stain C, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
HB4L8Z-5601	3.80	-0.01	-0.06	6.20	-0.08	-0.17	38.00	0.68	0.20	37.80
HE76LL-5605	3.80	-0.01	-0.06	5.90	-0.38	-0.83	40.00	2.68	0.80	40.10
HFG89K-5602	3.70	-0.11	-0.90	5.70	-0.58	-1.27	40.50	3.18	0.95	40.48
HHPKPL-5601	4.00	0.19	1.62	6.40	0.12	0.27	39.00	1.68	0.50	38.68
HJYEN8-5605	3.75	-0.06	-0.48	6.06	-0.22	-0.48	38.23	0.91	0.27	38.23
HPLFEJ-5601	5.00	1.19	9.99 X	7.28	1.00	2.21	43.40	6.08	1.82	43.38
HYB4DT-5605	3.81	0.00	0.03	6.31	0.03	0.07	37.14	-0.18	-0.05	37.14
JJW48U-5602	3.70	-0.11	-0.90	6.20	-0.08	-0.17	37.00	-0.32	-0.09	36.64
JKNJK7-5601	4.00	0.19	1.62	7.00	0.72	1.59	35.00	-2.32	-0.69	34.85
JXV6RH-5601	3.90	0.09	0.78	7.50	1.22	2.70	31.00	-6.32	-1.89	31.33
KGJ4FR-5601	3.83	0.02	0.19	6.12	-0.16	-0.35	38.70	1.38	0.41	38.74
KKHEBR-5601	3.77	-0.04	-0.31	6.81	0.53	1.17	33.61	-3.71	-1.11	33.61
KLEYXR-5602	3.75	-0.06	-0.48	6.50	0.22	0.49	35.20	-2.12	-0.63	35.23
KM8ZDB-5605	3.80	-0.01	-0.06	6.20	-0.08	-0.17	37.80	0.48	0.14	37.80
KNPHDG-5601	3.80	-0.01	-0.06	7.60	1.32	2.92	30.00	-7.32	-2.19	30.00
KQPEGB-5601	3.80	-0.01	-0.06	6.20	-0.08	-0.17	34.00	-3.32	-0.99	37.80
KTXZKW-5601	3.81	0.00	0.03	6.25	-0.03	-0.06	37.56	0.24	0.07	37.56
KX92PZ-5601	3.80	-0.01	-0.06	6.10	-0.18	-0.39	39.00	1.68	0.50	38.53
L48PKR-5605	3.80	-0.01	-0.06	6.20	-0.08	-0.17	37.80	0.48	0.14	37.80

TABLE 1

Stain C, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
LQJX3P-5602	3.80	-0.01	-0.06	6.10	-0.18	-0.39	39.00	1.68	0.50	38.53
LTR8W8-5602	3.81	0.00	0.03	6.38	0.10	0.23	36.76	-0.56	-0.17	36.67
LUBXGD-5602	3.90	0.09	0.78	5.90	-0.38	-0.83	41.00	3.68	1.10	41.38
LXJEFG-5601	6.40	2.59	21.72 X	10.19	3.91	8.63 X	38.90	1.58	0.47	38.91
LXQU4X-5605	3.80	-0.01	-0.06	6.20	-0.08	-0.17	38.00	0.68	0.20	37.80
M3VDVF-5602	3.80	-0.01	-0.06	6.50	0.22	0.49	36.00	-1.32	-0.39	35.78
M44YXM-5605	3.80	-0.01	-0.06	6.70	0.42	0.93	34.55	-2.77	-0.83	34.55
M6ZBXW-5601	3.85	0.04	0.36	6.59	0.31	0.69	35.70	-1.62	-0.48	35.75
M8QFP9-5601	3.60	-0.21	-1.73	5.80	-0.48	-1.05	37.70	0.38	0.11	38.37
MDXXVM-5601	3.83	0.02	0.19	7.73	1.45	3.20 X	29.70	-7.62	-2.28	29.70
MEC928-5601	3.80	-0.01	-0.06	5.40	-0.88	-1.94	45.00	7.68	2.30	44.72
MGE83Z-5601	3.90	0.09	0.78	7.00	0.72	1.59	34.00	-3.32	-0.99	33.86
MHNE2L-5601	3.80	-0.01	-0.06	6.00	-0.28	-0.61	39.00	1.68	0.50	39.30
MLVC9A-5605	4.00	0.19	1.62	6.20	-0.08	-0.17	40.10	2.78	0.83	40.18
MRVJ86-5605	3.70	-0.11	-0.90	5.70	-0.58	-1.27	39.90	2.58	0.77	40.48
MT6NKT-5605	3.70	-0.11	-0.90	6.50	0.22	0.49	35.00	-2.32	-0.69	34.70
MYDF2Y-5601	3.73	-0.08	-0.64	6.54	0.26	0.58	34.80	-2.52	-0.75	34.77
MZ94FM-5601	4.00	0.19	1.62	6.10	-0.18	-0.39	40.97	3.65	1.09	40.98
N6HM9E-5601	3.80	-0.01	-0.06	6.20	-0.08	-0.17	37.80	0.48	0.14	37.80

TABLE 1

Stain C, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
NAQCR3-5605	3.80	-0.01	-0.06	6.10	-0.18	-0.39	38.50	1.18	0.35	38.53
NDPFBU-5601	3.80	-0.01	-0.06	6.30	0.02	0.05	37.10	-0.22	-0.06	37.10
NJK2MQ-5601	3.75	-0.06	-0.48	6.50	0.22	0.49	35.00	-2.32	-0.69	35.23
NPHWZV-5601	3.80	-0.01	-0.06	5.80	-0.48	-1.05	41.00	3.68	1.10	40.93
NPMARX-5602	3.80	-0.01	-0.06	6.00	-0.28	-0.61	39.29	1.97	0.59	39.30
NQDKEK-5601	3.80	-0.01	-0.06	6.10	-0.18	-0.39	38.53	1.21	0.36	38.53
P7PNNZ-5605	3.75	-0.06	-0.48	6.88	0.60	1.33	33.00	-4.32	-1.29	33.03
PJXWJH-5601	3.78	-0.03	-0.23	6.74	0.46	1.02	34.10	-3.22	-0.96	34.11
PPXKRA-5601	3.80	-0.01	-0.06	7.80	1.52	3.36 X	29.00	-8.32	-2.49	29.16
PUW8YY-5601	3.80	-0.01	-0.06	6.10	-0.18	-0.39	38.53	1.21	0.36	38.53
PVNV4T-5605	3.90	0.09	0.78	6.00	-0.28	-0.61	40.50	3.18	0.95	40.54
Q4FZQL-5601	3.90	0.09	0.78	6.00	-0.28	-0.61	40.50	3.18	0.95	40.54
Q8UBLH-5602	3.90	0.09	0.78	5.80	-0.48	-1.05	42.00	4.68	1.40	42.25
QA8NHR-5601	4.00	0.19	1.62	6.50	0.22	0.49	38.00	0.68	0.20	37.98
QWEF94-5602	3.75	-0.06	-0.48	6.15	-0.13	-0.28	37.60	0.28	0.08	37.57
R7F43L-5601	3.90	0.09	0.78	6.10	-0.18	-0.39	39.70	2.38	0.71	39.74
RDW4BQ-5605	3.80	-0.01	-0.06	6.00	-0.28	-0.61	39.00	1.68	0.50	39.30
RHBDH9-5602	3.80	-0.01	-0.06	7.00	0.72	1.59	32.90	-4.42	-1.32	32.88
RKCF96-5601	3.80	-0.01	-0.06	6.60	0.32	0.71	36.00	-1.32	-0.39	35.15

TABLE 1

Stain C, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
RY2CGU-5601	3.80	-0.01	-0.06	5.60	-0.68	-1.49	42.70	5.38	1.61	42.73
RYVZVJ-5601	4.00	0.19	1.62	6.00	-0.28	-0.61	41.00	3.68	1.10	41.81
T9YH42-5601	43.90	40.09	335.87X	66.70	60.42	133.26X	41.20	3.88	1.16	41.16
TL6LBG-5602	3.80	-0.01	-0.06	6.10	-0.18	-0.39	38.50	1.18	0.35	38.53
TMGVBN-5605	3.80	-0.01	-0.06	7.30	1.02	2.26	31.40	-5.92	-1.77	31.37
U6DK4W-5601	3.67	-0.14	-1.15	6.88	0.60	1.33	32.20	-5.12	-1.53	32.24
ULHJYX-5601	3.48	-0.33	-2.74	5.49	-0.79	-1.74	39.00	1.68	0.50	39.34
UP4JYE-5601	3.67	-0.14	-1.15	6.69	0.41	0.91	33.30	-4.02	-1.20	33.27
UP8WQG-5601	3.50	-0.31	-2.57	6.00	-0.28	-0.61	36.00	-1.32	-0.39	35.69
UPNZEG-5602	3.88	0.07	0.61	6.18	-0.10	-0.22	39.00	1.68	0.50	38.89
UXXECC-5602	3.75	-0.06	-0.48	6.00	-0.28	-0.61	38.68	1.36	0.41	38.68
V6BANJ-5601	3.80	-0.01	-0.06	6.20	-0.08	-0.17	37.80	0.48	0.14	37.80
V7RWBL-5601	3.90	0.09	0.78	6.40	0.12	0.27	37.50	0.18	0.05	37.54
VB3G7T-5601	3.40	-0.41	-3.41 X	8.00	1.72	3.80 X	25.00	-12.32	-3.68 X	25.15 X
VD6FGK-5601	3.80	-0.01	-0.06	6.00	-0.28	-0.61	39.30	1.98	0.59	39.30
VTEUPM-5601	3.80	-0.01	-0.06	7.00	0.72	1.59	33.00	-4.32	-1.29	32.88
VTJ8GQ-5605	3.90	0.09	0.78	6.20	-0.08	-0.17	38.00	0.68	0.20	38.98
VUAG4C-5602	3.60	-0.21	-1.73	7.00	0.72	1.59	28.70	-8.62	-2.58	30.95
VZYXN4-5605	3.80	-0.01	-0.06	5.70	-0.58	-1.27	41.81	4.49	1.34	41.81

TABLE 1

Stain C, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
W2AZB3-5601	3.70	-0.11	-0.90	5.80	-0.48	-1.05	39.60	2.28	0.68	39.64
W6R8QN-5601	3.70	-0.11	-0.90	5.90	-0.38	-0.83	39.00	1.68	0.50	38.84
W74VY3-5602	4.00	0.19	1.62	7.00	0.72	1.59	35.00	-2.32	-0.69	34.85
W8EWK2-5601	3.90	0.09	0.78	6.60	0.32	0.71	36.22	-1.10	-0.33	36.22
WC46YM-5605	3.87	0.06	0.53	6.50	0.22	0.49	37.00	-0.32	-0.09	36.54
WCAMAL-5601	4.00	0.19	1.62	6.50	0.22	0.49	38.00	0.68	0.20	37.98
WCV4H2-5601	3.75	-0.06	-0.48	5.50	-0.78	-1.71	42.00	4.68	1.40	42.99
WJBY7H-5601	3.80	-0.01	-0.06	6.00	-0.28	-0.61	39.29	1.97	0.59	39.30
WJM87P-5601	3.80	-0.01	-0.06	6.80	0.52	1.15	33.97	-3.35	-1.00	33.97
WKEVBJ-5601	3.80	-0.01	-0.06	6.60	0.32	0.71	35.20	-2.12	-0.63	35.15
WUQV6U-5602	3.70	-0.11	-0.90	6.50	0.22	0.49	34.60	-2.72	-0.81	34.70
WWWDAH-5601	3.60	-0.21	-1.73	6.20	-0.08	-0.17	35.50	-1.82	-0.54	35.50
XGV28R-5605	3.64	-0.17	-1.40	6.16	-0.12	-0.26	36.22	-1.10	-0.33	36.22
XLXQ2L-5601	3.90	0.09	0.78	6.00	-0.28	-0.61	40.50	3.18	0.95	40.54
XXLYFE-5602	3.76	-0.05	-0.39	6.54	0.26	0.58	35.00	-2.32	-0.69	35.09
Y49LXJ-5605	3.80	-0.01	-0.06	6.80	0.52	1.15	34.00	-3.32	-0.99	33.97
Y7T6PL-5602	3.80	-0.01	-0.06	7.00	0.72	1.59	32.90	-4.42	-1.32	32.88
YKDKRL-5605	3.80	-0.01	-0.06	6.20	-0.08	-0.17	38.00	0.68	0.20	37.80
YZQTTP-5602	3.80	-0.01	-0.06	6.30	0.02	0.05	37.10	-0.22	-0.06	37.10

TABLE 1

Stain C, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
Z3A8U6-5605	3.70	-0.11	-0.90	5.80	-0.48	-1.05	40.00	2.68	0.80	39.64
Z6X84F-5602	3.50	-0.31	-2.57	6.00	-0.28	-0.61	36.00	-1.32	-0.39	35.69
Z6YMDD-5601	3.90	0.09	0.78	6.50	0.22	0.49	37.00	-0.32	-0.09	36.87
ZF4QKV-5601	3.80	-0.01	-0.06	5.40	-0.88	-1.94	45.00	7.68	2.30	44.72
ZFCYFA-5601	4.00	0.19	1.62	6.00	-0.28	-0.61	42.00	4.68	1.40	41.81
Grand Mean	3.81			6.28			37.32			37.34
Standard Deviation	0.12			0.45			3.34			3.32
Participants Included in calculations	187			184			194			194
Participants excluded from calculations (indicated by X)	8			11			1			1

Stain C Preparation Angle: 39.0°

TABLE 1

Stain D

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
22BFHH-5602	2.80	-0.29	-2.65	8.00	-0.27	-0.89	20.50	-1.51	-1.33	20.49
2373W8-5601	3.00	-0.09	-0.81	8.00	-0.27	-0.89	22.02	0.01	0.01	22.02
2G4E26-5602	3.07	-0.02	-0.17	8.05	-0.22	-0.72	22.42	0.41	0.36	22.42
2JTNDR-5601	3.20	0.11	1.02	8.30	0.03	0.11	22.00	-0.01	-0.01	22.68
2PZ6T8-5601	3.11	0.02	0.19	8.49	0.22	0.75	21.50	-0.51	-0.45	21.49
2T4TFA-5601	3.10	0.01	0.10	8.40	0.13	0.45	22.00	-0.01	-0.01	21.66
2TZFN8-5601	2.99	-0.10	-0.91	8.52	0.25	0.85	20.50	-1.51	-1.33	20.54
2X9LF8-5601	3.11	0.02	0.19	8.20	-0.07	-0.22	22.29	0.28	0.25	22.29
34XHKN-5605	3.00	-0.09	-0.81	8.20	-0.07	-0.22	21.50	-0.51	-0.45	21.46
38WULF-5601	3.00	-0.09	-0.81	7.70	-0.57	-1.88	22.90	0.89	0.78	22.93
3BF3UF-5601	3.00	-0.09	-0.81	8.00	-0.27	-0.89	22.00	-0.01	-0.01	22.02
3BZJAH-5601	3.00	-0.09	-0.81	8.50	0.23	0.78	21.00	-1.01	-0.89	20.67
3FRZ8U-5605	3.00	-0.09	-0.81	7.50	-0.77	-2.55	23.60	1.59	1.40	23.58
3JA8MG-5601	3.00	-0.09	-0.81	8.50	0.23	0.78	20.70	-1.31	-1.15	20.67
3KPQYB-5601	3.50	0.41	3.77 X	9.00	0.73	2.44	22.80	0.79	0.69	22.89
3QBFBW-5602	3.20	0.11	1.02	8.60	0.33	1.11	21.80	-0.21	-0.19	21.84
3RKQ8V-5602	3.20	0.11	1.02	8.30	0.03	0.11	22.70	0.69	0.61	22.68
3VLUYG-5605	3.21	0.12	1.11	8.78	0.51	1.71	21.00	-1.01	-0.89	21.44
3YH9DC-5601	3.10	0.01	0.10	8.20	-0.07	-0.22	22.20	0.19	0.17	22.21

TABLE 1

Stain D, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
42YYT7-5602	2.80	-0.29	-2.65	8.00	-0.27	-0.89	20.00	-2.01	-1.77	20.49
4BA2E8-5602	3.00	-0.09	-0.81	8.00	-0.27	-0.89	22.00	-0.01	-0.01	22.02
4DHCBB-5601	32.00	28.91	265.09X	86.00	77.73	258.81X	22.00	-0.01	-0.01	21.84
4YFKP7-5602	2.80	-0.29	-2.65	8.20	-0.07	-0.22	20.00	-2.01	-1.77	19.97
4YMTTR-5605	3.10	0.01	0.10	8.20	-0.07	-0.22	22.00	-0.01	-0.01	22.21
66MG2J-5602	3.30	0.21	1.94	8.70	0.43	1.45	22.10	0.09	0.08	22.29
68WH7Q-5601	3.00	-0.09	-0.81	8.25	-0.02	-0.05	21.00	-1.01	-0.89	21.32
6H8W6J-5605	3.00	-0.09	-0.81	8.20	-0.07	-0.22	21.00	-1.01	-0.89	21.46
6J4JDF-5601	2.90	-0.19	-1.73	8.20	-0.07	-0.22	20.70	-1.31	-1.15	20.71
6JY8R6-5601	3.20	0.11	1.02	8.00	-0.27	-0.89	23.57	1.56	1.37	23.58
6MYFVF-5601	3.10	0.01	0.10	8.30	0.03	0.11	21.90	-0.11	-0.10	21.93
6TM3NZ-5602	3.20	0.11	1.02	8.30	0.03	0.11	22.70	0.69	0.61	22.68
6VD26J-5602	3.18	0.09	0.84	8.69	0.42	1.41	21.00	-1.01	-0.89	21.47
6X4ALZ-5601	3.20	0.11	1.02	8.20	-0.07	-0.22	23.00	0.99	0.87	22.97
7778A2-5602	3.20	0.11	1.02	8.00	-0.27	-0.89	24.00	1.99	1.75	23.58
7BL388-5601	2.50	-0.59	-5.40 X	8.00	-0.27	-0.89	18.21	-3.80	-3.34 X	18.21 X
7E7BT7-5605	3.00	-0.09	-0.81	8.50	0.23	0.78	21.00	-1.01	-0.89	20.67
7WHAM3-5605	3.00	-0.09	-0.81	8.20	-0.07	-0.22	21.50	-0.51	-0.45	21.46
8746CP-5601	3.00	-0.09	-0.81	8.20	-0.07	-0.22	21.00	-1.01	-0.89	21.46

TABLE 1

Stain D, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
87KQVK-5601	3.00	-0.09	-0.81	8.50	0.23	0.78	20.70	-1.31	-1.15	20.67
8GPPW7-5601	3.10	0.01	0.10	8.30	0.03	0.11	21.90	-0.11	-0.10	21.93
8XU9EQ-5605	3.10	0.01	0.10	8.30	0.03	0.11	22.20	0.19	0.17	21.93
93LXAT-5602	3.00	-0.09	-0.81	8.50	0.23	0.78	21.00	-1.01	-0.89	20.67
98HGLY-5601	3.20	0.11	1.02	8.46	0.19	0.65	22.20	0.19	0.17	22.23
9AGRED-5601	3.00	-0.09	-0.81	8.30	0.03	0.11	21.00	-1.01	-0.89	21.19
9BCFT3-5601	3.10	0.01	0.10	8.00	-0.27	-0.89	22.80	0.79	0.69	22.80
9NPL2N-5601	3.00	-0.09	-0.81	8.00	-0.27	-0.89	22.00	-0.01	-0.01	22.02
9R7D8E-5601	3.00	-0.09	-0.81	7.20	-1.07	-3.55 X	24.60	2.59	2.28	24.62
9VHTMB-5602	3.10	0.01	0.10	8.50	0.23	0.78	21.30	-0.71	-0.63	21.39
A4C9ZL-5602	3.10	0.01	0.10	8.50	0.23	0.78	21.00	-1.01	-0.89	21.39
AAVNDQ-5601	3.20	0.11	1.02	8.60	0.33	1.11	22.00	-0.01	-0.01	21.84
ABCNN9-5601	3.40	0.31	2.85	9.00	0.73	2.44	22.19	0.18	0.16	22.20
ACNCWL-5601	3.10	0.01	0.10	8.20	-0.07	-0.22	22.00	-0.01	-0.01	22.21
AQH2QX-5602	3.20	0.11	1.02	7.90	-0.37	-1.22	24.00	1.99	1.75	23.90
AUNLH4-5601	3.00	-0.09	-0.81	8.20	-0.07	-0.22	21.50	-0.51	-0.45	21.46
B3TTVJ-5601	14.73	11.64	106.74X	34.80	26.53	88.34 X	25.00	2.99	2.63	25.04
B433LV-5602	3.20	0.11	1.02	7.60	-0.67	-2.22	25.10	3.09	2.72	24.90
BHTJ43-5601	3.00	-0.09	-0.81	8.30	0.03	0.11	21.00	-1.01	-0.89	21.19

TABLE 1

Stain D, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
BKEG6D-5605	2.90	-0.19	-1.73	8.00	-0.27	-0.89	21.30	-0.71	-0.63	21.25
BQZAER-5601	1.39	-1.70	-15.58 X	3.90	-4.37	-14.54 X	21.00	-1.01	-0.89	20.88
BYBVZ2-5601	3.20	0.11	1.02	8.70	0.43	1.45	21.60	-0.41	-0.36	21.58
BYZVFR-5601	3.37	0.28	2.58	8.37	0.10	0.35	23.60	1.59	1.40	23.74
C8QH44-5605	3.00	-0.09	-0.81	8.40	0.13	0.45	21.00	-1.01	-0.89	20.92
CNC7CD-5605	3.20	0.11	1.02	8.40	0.13	0.45	22.39	0.38	0.33	22.39
CPGZM3-5601	3.20	0.11	1.02	8.70	0.43	1.45	21.58	-0.43	-0.38	21.58
CXC7F4-5601	3.10	0.01	0.10	8.00	-0.27	-0.89	22.80	0.79	0.69	22.80
D6DFMW-5601	3.20	0.11	1.02	8.45	0.18	0.61	22.30	0.29	0.25	22.25
D8H2JA-5601	3.20	0.11	1.02	8.00	-0.27	-0.89	23.60	1.59	1.40	23.58
DEHYWY-5605	3.20	0.11	1.02	8.20	-0.07	-0.22	23.00	0.99	0.87	22.97
DG7Y23-5601	3.00	-0.09	-0.81	8.40	0.13	0.45	20.92	-1.09	-0.96	20.92
DHVCJK-5602	3.00	-0.09	-0.81	7.70	-0.57	-1.88	23.00	0.99	0.87	22.93
DJCG9B-5602	3.20	0.11	1.02	8.40	0.13	0.45	22.30	0.29	0.25	22.39
DWEPQ8-5601	3.10	0.01	0.10	8.50	0.23	0.78	21.40	-0.61	-0.54	21.39
E6ND47-5601	3.00	-0.09	-0.81	7.60	-0.67	-2.22	23.20	1.19	1.05	23.25
EH2TQJ-5605	3.20	0.11	1.02	9.00	0.73	2.44	20.83	-1.18	-1.04	20.83
EH2UAW-5601	3.10	0.01	0.10	8.40	0.13	0.45	22.00	-0.01	-0.01	21.66
ELTDY9-5601	3.00	-0.09	-0.81	8.50	0.23	0.78	20.70	-1.31	-1.15	20.67

TABLE 1

Stain D, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
EZ9FGW-5601	3.00	-0.09	-0.81	8.00	-0.27	-0.89	14.47	-7.54	-6.63 X	22.02
F6L3L9-5601	3.10	0.01	0.10	8.50	0.23	0.78	21.40	-0.61	-0.54	21.39
F6N7J7-5602	3.00	-0.09	-0.81	8.40	0.13	0.45	20.92	-1.09	-0.96	20.92
FBUWT4-5601	3.10	0.01	0.10	8.50	0.23	0.78	21.40	-0.61	-0.54	21.39
FJKKHE-5602	3.30	0.21	1.94	8.60	0.33	1.11	23.00	0.99	0.87	22.56
FM3HCW-5605	3.10	0.01	0.10	8.60	0.33	1.11	21.00	-1.01	-0.89	21.13
FM8WPW-5601	3.10	0.01	0.10	8.30	0.03	0.11	21.90	-0.11	-0.10	21.93
FRHXU2-5601	3.10	0.01	0.10	8.26	-0.01	-0.02	22.04	0.03	0.03	22.04
FYYTGW-5601	3.10	0.01	0.10	8.30	0.03	0.11	21.90	-0.11	-0.10	21.93
G23NUY-5601	3.13	0.04	0.38	8.39	0.12	0.41	21.90	-0.11	-0.10	21.90
G63ZPY-5601	3.30	0.21	1.94	8.70	0.43	1.45	22.00	-0.01	-0.01	22.29
GJHHL3-5605	3.20	0.11	1.02	8.50	0.23	0.78	22.00	-0.01	-0.01	22.12
GKDQJQ-5601	3.15	0.06	0.56	8.24	-0.03	-0.09	22.48	0.47	0.41	22.48
GQ2NH9-5605	3.20	0.11	1.02	8.40	0.13	0.45	22.00	-0.01	-0.01	22.39
GTPMNX-5601	3.28	0.19	1.75	8.53	0.26	0.88	22.60	0.59	0.52	22.61
GZMGF4-5601	3.00	-0.09	-0.81	7.70	-0.57	-1.88	22.90	0.89	0.78	22.93
H44VCW-5601	3.00	-0.09	-0.81	8.50	0.23	0.78	20.67	-1.34	-1.18	20.67
H784LT-5605	3.05	-0.04	-0.36	8.51	0.24	0.81	21.00	-1.01	-0.89	21.00
H7PQKB-5601	3.00	-0.09	-0.81	8.10	-0.17	-0.55	21.70	-0.31	-0.27	21.74

TABLE 1

Stain D, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
HB4L8Z-5601	2.90	-0.19	-1.73	8.40	0.13	0.45	20.00	-2.01	-1.77	20.20
HE76LL-5605	3.10	0.01	0.10	7.70	-0.57	-1.88	24.00	1.99	1.75	23.74
HFG89K-5602	3.00	-0.09	-0.81	8.10	-0.17	-0.55	21.70	-0.31	-0.27	21.74
HHPKPL-5601	3.20	0.11	1.02	8.40	0.13	0.45	22.00	-0.01	-0.01	22.39
HJYEN8-5605	3.15	0.06	0.56	8.36	0.09	0.31	22.14	0.13	0.11	22.14
HPLFEJ-5601	4.14	1.05	9.64 X	10.14	1.87	6.24 X	24.10	2.09	1.84	24.10
HYB4DT-5605	3.16	0.07	0.65	8.30	0.03	0.11	22.38	0.37	0.32	22.38
JJW48U-5602	3.10	0.01	0.10	8.40	0.13	0.45	22.00	-0.01	-0.01	21.66
JKNJK7-5601	3.10	0.01	0.10	8.50	0.23	0.78	21.00	-1.01	-0.89	21.39
JXV6RH-5601	3.20	0.11	1.02	8.60	0.33	1.11	22.00	-0.01	-0.01	21.84
KGJ4FR-5601	3.17	0.08	0.74	8.20	-0.07	-0.22	22.70	0.69	0.61	22.74
KKHEBR-5601	3.05	-0.04	-0.36	8.32	0.05	0.18	21.51	-0.50	-0.44	21.51
KLEYXR-5602	3.00	-0.09	-0.81	8.50	0.23	0.78	20.70	-1.31	-1.15	20.67
KM8ZDB-5605	3.10	0.01	0.10	8.10	-0.17	-0.55	22.50	0.49	0.43	22.50
KNPHDG-5601	3.20	0.11	1.02	8.50	0.23	0.78	22.10	0.09	0.08	22.12
KQPEGB-5601	3.00	-0.09	-0.81	8.40	0.13	0.45	20.00	-2.01	-1.77	20.92
KTXZKW-5601	3.05	-0.04	-0.36	7.90	-0.37	-1.22	22.71	0.70	0.61	22.71
KX92PZ-5601	3.20	0.11	1.02	8.60	0.33	1.11	22.00	-0.01	-0.01	21.84
L48PKR-5605	3.20	0.11	1.02	8.40	0.13	0.45	22.40	0.39	0.34	22.39

TABLE 1

Stain D, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
LQJX3P-5602	3.30	0.21	1.94	8.40	0.13	0.45	23.00	0.99	0.87	23.13
LTR8W8-5602	3.12	0.03	0.29	8.37	0.10	0.35	21.87	-0.14	-0.12	21.89
LUBXGD-5602	3.10	0.01	0.10	8.20	-0.07	-0.22	22.00	-0.01	-0.01	22.21
LXJEFG-5601	5.50	2.41	22.11 X	14.19	5.92	19.72 X	22.80	0.79	0.69	22.81
LXQU4X-5605	3.20	0.11	1.02	8.40	0.13	0.45	22.00	-0.01	-0.01	22.39
M3VDVF-5602	3.10	0.01	0.10	8.30	0.03	0.11	22.00	-0.01	-0.01	21.93
M44YXM-5605	3.10	0.01	0.10	8.70	0.43	1.45	20.87	-1.14	-1.00	20.87
M6ZBXW-5601	3.18	0.09	0.84	8.50	0.23	0.78	21.90	-0.11	-0.10	21.97
M8QFP9-5601	2.90	-0.19	-1.73	8.60	0.33	1.11	19.70	-2.31	-2.03	19.71
MDXXVM-5601	3.14	0.05	0.47	8.34	0.07	0.25	22.10	0.09	0.08	22.12
MEC928-5601	3.00	-0.09	-0.81	7.20	-1.07	-3.55 X	25.00	2.99	2.63	24.62
MGE83Z-5601	3.00	-0.09	-0.81	8.40	0.13	0.45	21.00	-1.01	-0.89	20.92
MHNE2L-5601	3.20	0.11	1.02	7.40	-0.87	-2.88	26.00	3.99	3.51 X	25.62 X
MLVC9A-5605	3.20	0.11	1.02	7.70	-0.57	-1.88	24.50	2.49	2.19	24.56
MRVJ86-5605	3.10	0.01	0.10	7.80	-0.47	-1.55	23.50	1.49	1.31	23.42
MT6NKT-5605	3.00	-0.09	-0.81	8.00	-0.27	-0.89	22.00	-0.01	-0.01	22.02
MYDF2Y-5601	2.97	-0.12	-1.09	8.14	-0.13	-0.42	21.40	-0.61	-0.54	21.40
MZ94FM-5601	3.30	0.21	1.94	8.30	0.03	0.11	23.42	1.41	1.24	23.43
N6HM9E-5601	3.00	-0.09	-0.81	8.00	-0.27	-0.89	22.00	-0.01	-0.01	22.02

TABLE 1

Stain D, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
NAQCR3-5605	3.20	0.11	1.02	7.80	-0.47	-1.55	24.20	2.19	1.93	24.22
NDPFBU-5601	3.30	0.21	1.94	8.60	0.33	1.11	22.60	0.59	0.52	22.56
NJK2MQ-5601	3.00	-0.09	-0.81	8.50	0.23	0.78	21.00	-1.01	-0.89	20.67
NPHWZV-5601	3.20	0.11	1.02	8.20	-0.07	-0.22	23.00	0.99	0.87	22.97
NPMARX-5602	3.10	0.01	0.10	8.10	-0.17	-0.55	22.50	0.49	0.43	22.50
NQDKEK-5601	3.10	0.01	0.10	7.80	-0.47	-1.55	23.42	1.41	1.24	23.42
P7PNNZ-5605	3.11	0.02	0.19	8.51	0.24	0.81	21.00	-1.01	-0.89	21.44
PJXWJH-5601	3.00	-0.09	-0.81	8.22	-0.05	-0.15	21.40	-0.61	-0.54	21.41
PPXKRA-5601	3.10	0.01	0.10	8.60	0.33	1.11	21.00	-1.01	-0.89	21.13
PUW8YY-5601	3.00	-0.09	-0.81	8.20	-0.07	-0.22	21.46	-0.55	-0.48	21.46
PVNV4T-5605	3.20	0.11	1.02	8.40	0.13	0.45	22.40	0.39	0.34	22.39
Q4FZQL-5601	2.80	-0.29	-2.65	8.10	-0.17	-0.55	20.20	-1.81	-1.59	20.22
Q8UBLH-5602	3.20	0.11	1.02	8.10	-0.17	-0.55	23.00	0.99	0.87	23.27
QA8NHR-5601	3.00	-0.09	-0.81	8.00	-0.27	-0.89	22.00	-0.01	-0.01	22.02
QWEF94-5602	3.15	0.06	0.56	8.40	0.13	0.45	22.00	-0.01	-0.01	22.02
R7F43L-5601	3.10	0.01	0.10	8.40	0.13	0.45	21.70	-0.31	-0.27	21.66
RDW4BQ-5605	3.10	0.01	0.10	8.20	-0.07	-0.22	22.00	-0.01	-0.01	22.21
RHBDH9-5602	3.00	-0.09	-0.81	8.80	0.53	1.78	19.90	-2.11	-1.86	19.93
RKCF96-5601	3.00	-0.09	-0.81	8.60	0.33	1.11	20.00	-2.01	-1.77	20.42

TABLE 1

Stain D, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
RY2CGU-5601	3.10	0.01	0.10	7.80	-0.47	-1.55	23.40	1.39	1.22	23.42
RYVZVJ-5601	3.00	-0.09	-0.81	8.50	0.23	0.78	20.00	-2.01	-1.77	20.67
T9YH42-5601	54.20	51.11	468.65X	129.30	121.03	402.98X	24.80	2.79	2.45	24.78
TL6LBG-5602	3.10	0.01	0.10	8.00	-0.27	-0.89	22.80	0.79	0.69	22.80
TMGVBN-5605	3.10	0.01	0.10	8.30	0.03	0.11	21.90	-0.11	-0.10	21.93
U6DK4W-5601	3.04	-0.05	-0.45	7.88	-0.39	-1.28	22.70	0.69	0.61	22.69
ULHJYX-5601	2.88	-0.21	-1.92	7.50	-0.77	-2.55	23.00	0.99	0.87	22.58
UP4JYE-5601	3.04	-0.05	-0.45	8.18	-0.09	-0.29	21.80	-0.21	-0.19	21.82
UP8WQG-5601	3.00	-0.09	-0.81	8.00	-0.27	-0.89	22.00	-0.01	-0.01	22.02
UPNZEG-5602	3.17	0.08	0.74	8.48	0.21	0.71	22.00	-0.01	-0.01	21.95
UXXECC-5602	3.05	-0.04	-0.36	8.15	-0.12	-0.39	21.98	-0.03	-0.03	21.98
V6BANJ-5601	2.80	-0.29	-2.65	8.60	0.33	1.11	19.00	-3.01	-2.65	19.00
V7RWBL-5601	3.10	0.01	0.10	8.00	-0.27	-0.89	22.80	0.79	0.69	22.80
VB3G7T-5601	3.00	-0.09	-0.81	8.30	0.03	0.11	20.00	-2.01	-1.77	21.19
VD6FGK-5601	3.00	-0.09	-0.81	8.00	-0.27	-0.89	22.00	-0.01	-0.01	22.02
VTEUPM-5601	3.20	0.11	1.02	8.80	0.53	1.78	21.00	-1.01	-0.89	21.32
VTJ8GQ-5605	3.20	0.11	1.02	8.40	0.13	0.45	23.00	0.99	0.87	22.39
VUAG4C-5602	3.00	-0.09	-0.81	8.70	0.43	1.45	20.20	-1.81	-1.59	20.17
VZYXN4-5605	3.00	-0.09	-0.81	7.80	-0.47	-1.55	22.62	0.61	0.54	22.62

TABLE 1

Stain D, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
W2AZB3-5601	3.00	-0.09	-0.81	8.00	-0.27	-0.89	22.00	-0.01	-0.01	22.02
W6R8QN-5601	3.10	0.01	0.10	7.90	-0.37	-1.22	23.00	0.99	0.87	23.10
W74VY3-5602	3.00	-0.09	-0.81	8.00	-0.27	-0.89	22.00	-0.01	-0.01	22.02
W8EWK2-5601	3.20	0.11	1.02	8.20	-0.07	-0.22	22.97	0.96	0.84	22.97
WC46YM-5605	3.25	0.16	1.48	8.00	-0.27	-0.89	24.00	1.99	1.75	23.97
WCAMAL-5601	3.00	-0.09	-0.81	8.70	0.43	1.45	20.00	-2.01	-1.77	20.17
WCV4H2-5601	3.25	0.16	1.48	8.00	-0.27	-0.89	23.00	0.99	0.87	23.97
WJBY7H-5601	3.00	-0.09	-0.81	8.00	-0.27	-0.89	22.02	0.01	0.01	22.02
WJM87P-5601	3.20	0.11	1.02	8.40	0.13	0.45	22.39	0.38	0.33	22.39
WKEVBJ-5601	3.10	0.01	0.10	8.40	0.13	0.45	21.70	-0.31	-0.27	21.66
WUQV6U-5602	3.00	-0.09	-0.81	8.50	0.23	0.78	20.60	-1.41	-1.24	20.67
WWWDAH-5601	3.00	-0.09	-0.81	8.10	-0.17	-0.55	21.70	-0.31	-0.27	21.74
XGV28R-5605	3.19	0.10	0.93	7.95	-0.32	-1.05	23.65	1.64	1.44	23.66
XLXQ2L-5601	3.10	0.01	0.10	7.40	-0.87	-2.88	24.80	2.79	2.45	24.77
XXLYFE-5602	3.15	0.06	0.56	8.37	0.10	0.35	22.00	-0.01	-0.01	22.11
Y49LXJ-5605	3.20	0.11	1.02	8.40	0.13	0.45	22.00	-0.01	-0.01	22.39
Y7T6PL-5602	3.10	0.01	0.10	8.50	0.23	0.78	21.40	-0.61	-0.54	21.39
YKDKRL-5605	3.10	0.01	0.10	8.30	0.03	0.11	22.00	-0.01	-0.01	21.93
YZQTTP-5602	3.10	0.01	0.10	8.30	0.03	0.11	21.90	-0.11	-0.10	21.93

TABLE 1

Stain D, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
Z3A8U6-5605	**3.10**	0.01	0.10	**7.80**	-0.47	-1.55	**23.50**	1.49	1.31	23.42
Z6X84F-5602	**2.90**	-0.19	-1.73	**8.00**	-0.27	-0.89	**21.00**	-1.01	-0.89	21.25
Z6YMDD-5601	**3.10**	0.01	0.10	**8.50**	0.23	0.78	**21.00**	-1.01	-0.89	21.39
ZF4QKV-5601	**3.00**	-0.09	-0.81	**7.10**	-1.17	-3.88 X	**25.00**	2.99	2.63	24.99
ZFCYFA-5601	**3.00**	-0.09	-0.81	**8.30**	0.03	0.11	**21.00**	-1.01	-0.89	21.19
Grand Mean	**3.09**			**8.27**			**22.01**			**22.06**
Standard Deviation	**0.11**			**0.30**			**1.14**			**1.09**
Participants Included in calculations	187			186			192			193
Participants excluded from calculations (indicated by X)	8			9			3			2

Stain D Preparation Angle: 21.0°

TABLE 1

Stain E

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
22BFHH-5602	1.90	-0.25	-2.40	6.50	-0.61	-1.93	16.90	-0.81	-0.69	17.00
2373W8-5601	2.30	0.15	1.45	6.60	-0.51	-1.62	20.39	2.68	2.28	20.39
2G4E26-5602	2.24	0.09	0.87	6.86	-0.25	-0.79	19.06	1.35	1.15	19.06
2JTNDR-5601	2.20	0.05	0.49	7.10	-0.01	-0.02	18.00	0.29	0.25	18.05
2PZ6T8-5601	2.32	0.17	1.64	7.35	0.24	0.77	18.40	0.69	0.59	18.40
2T4TFA-5601	2.20	0.05	0.49	7.20	0.09	0.29	18.00	0.29	0.25	17.79
2TZFN8-5601	2.16	0.01	0.11	7.23	0.12	0.39	17.40	-0.31	-0.26	17.38
2X9LF8-5601	2.20	0.05	0.49	7.38	0.27	0.87	17.34	-0.37	-0.31	17.34
34XHKN-5605	2.10	-0.05	-0.47	7.10	-0.01	-0.02	17.20	-0.51	-0.43	17.20
38WULF-5601	2.10	-0.05	-0.47	6.70	-0.41	-1.30	18.30	0.59	0.51	18.27
3BF3UF-5601	2.00	-0.15	-1.43	7.00	-0.11	-0.34	16.60	-1.11	-0.94	16.60
3BZJAH-5601	2.25	0.10	0.97	7.25	0.14	0.45	18.00	0.29	0.25	18.08
3FRZ8U-5605	2.00	-0.15	-1.43	6.50	-0.61	-1.93	17.90	0.19	0.17	17.92
3JA8MG-5601	2.00	-0.15	-1.43	7.00	-0.11	-0.34	16.60	-1.11	-0.94	16.60
3KPQYB-5601	2.00	-0.15	-1.43	6.25	-0.86	-2.73	18.70	0.99	0.85	18.66
3QBFBW-5602	2.20	0.05	0.49	7.50	0.39	1.25	17.06	-0.65	-0.55	17.06
3RKQ8V-5602	2.00	-0.15	-1.43	7.30	0.19	0.61	16.00	-1.71	-1.45	15.90
3VLUYG-5605	2.40	0.25	2.41	7.40	0.29	0.93	19.00	1.29	1.10	18.92
3YH9DC-5601	2.20	0.05	0.49	7.00	-0.11	-0.34	18.30	0.59	0.51	18.32

TABLE 1

Stain E, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
42YYT7-5602	2.00	-0.15	-1.43	6.50	-0.61	-1.93	18.00	0.29	0.25	17.92
4BA2E8-5602	2.00	-0.15	-1.43	7.00	-0.11	-0.34	16.60	-1.11	-0.94	16.60
4DHCBB-5601	21.00	18.85	181.30X	74.00	66.89	212.90X	16.00	-1.71	-1.45	16.49
4YFKP7-5602	2.20	0.05	0.49	6.40	-0.71	-2.25	20.00	2.29	1.95	20.11
4YMTTR-5605	2.10	-0.05	-0.47	7.20	0.09	0.29	17.00	-0.71	-0.60	16.96
66MG2J-5602	2.30	0.15	1.45	7.30	0.19	0.61	18.30	0.59	0.51	18.36
68WH7Q-5601	2.00	-0.15	-1.43	7.00	-0.11	-0.34	17.00	-0.71	-0.60	16.60
6H8W6J-5605	2.00	-0.15	-1.43	7.20	0.09	0.29	16.00	-1.71	-1.45	16.13
6J4JDF-5601	2.20	0.05	0.49	7.00	-0.11	-0.34	18.30	0.59	0.51	18.32
6JY8R6-5601	2.20	0.05	0.49	6.60	-0.51	-1.62	21.51	3.80	3.24 X	19.47
6MYFVF-5601	2.20	0.05	0.49	7.10	-0.01	-0.02	18.00	0.29	0.25	18.05
6TM3NZ-5602	2.20	0.05	0.49	7.00	-0.11	-0.34	18.10	0.39	0.34	18.32
6VD26J-5602	2.18	0.03	0.30	7.52	0.41	1.31	17.00	-0.71	-0.60	16.85
6X4ALZ-5601	2.30	0.15	1.45	6.70	-0.41	-1.30	20.10	2.39	2.04	20.08
7778A2-5602	2.20	0.05	0.49	7.20	0.09	0.29	18.00	0.29	0.25	17.79
7BL388-5601	2.00	-0.15	-1.43	7.00	-0.11	-0.34	16.60	-1.11	-0.94	16.60
7E7BT7-5605	2.00	-0.15	-1.43	7.00	-0.11	-0.34	17.00	-0.71	-0.60	16.60
7WHAM3-5605	2.10	-0.05	-0.47	7.20	0.09	0.29	17.00	-0.71	-0.60	16.96
8746CP-5601	2.00	-0.15	-1.43	7.00	-0.11	-0.34	16.00	-1.71	-1.45	16.60

TABLE 1

Stain E, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
87KQVK-5601	2.30	0.15	1.45	7.50	0.39	1.25	17.90	0.19	0.17	17.86
8GPPW7-5601	2.20	0.05	0.49	7.10	-0.01	-0.02	18.10	0.39	0.34	18.05
8XU9EQ-5605	2.20	0.05	0.49	7.20	0.09	0.29	18.00	0.29	0.25	17.79
93LXAT-5602	2.00	-0.15	-1.43	7.50	0.39	1.25	15.00	-2.71	-2.30	15.47
98HGLY-5601	2.13	-0.02	-0.18	7.47	0.36	1.15	16.60	-1.11	-0.94	16.57
9AGRED-5601	2.10	-0.05	-0.47	7.10	-0.01	-0.02	17.00	-0.71	-0.60	17.20
9BCFT3-5601	2.20	0.05	0.49	6.70	-0.41	-1.30	19.20	1.49	1.27	19.17
9NPL2N-5601	2.00	-0.15	-1.43	7.00	-0.11	-0.34	16.60	-1.11	-0.94	16.60
9R7D8E-5601	1.80	-0.35	-3.36 X	6.40	-0.71	-2.25	16.30	-1.41	-1.20	16.33
9VHTMB-5602	2.10	-0.05	-0.47	7.30	0.19	0.61	16.60	-1.11	-0.94	16.72
A4C9ZL-5602	2.20	0.05	0.49	7.50	0.39	1.25	17.00	-0.71	-0.60	17.06
AAVNDQ-5601	2.20	0.05	0.49	7.50	0.39	1.25	17.00	-0.71	-0.60	17.06
ABCNN9-5601	2.20	0.05	0.49	7.60	0.49	1.57	16.83	-0.88	-0.75	16.83
ACNCWL-5601	2.20	0.05	0.49	7.20	0.09	0.29	18.00	0.29	0.25	17.79
AQH2QX-5602	2.20	0.05	0.49	6.70	-0.41	-1.30	19.00	1.29	1.10	19.17
AUNLH4-5601	2.10	-0.05	-0.47	7.20	0.09	0.29	17.00	-0.71	-0.60	16.96
B3TTVJ-5601	13.00	10.85	104.36X	40.90	33.79	107.55X	18.50	0.79	0.68	18.53
B433LV-5602	2.20	0.05	0.49	6.50	-0.61	-1.93	19.80	2.09	1.78	19.78
BHTJ43-5601	2.10	-0.05	-0.47	7.00	-0.11	-0.34	17.00	-0.71	-0.60	17.46

TABLE 1

Stain E, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
BKEG6D-5605	1.95	-0.20	-1.91	7.40	0.29	0.93	15.30	-2.41	-2.05	15.28
BQZAER-5601	0.98	-1.17	-11.24 X	3.19	-3.92	-12.47 X	18.00	0.29	0.25	17.89
BYBVZ2-5601	2.20	0.05	0.49	7.50	0.39	1.25	17.00	-0.71	-0.60	17.06
BYZVFR-5601	2.25	0.10	0.97	7.12	0.01	0.04	18.70	0.99	0.85	18.42
C8QH44-5605	2.10	-0.05	-0.47	7.20	0.09	0.29	17.00	-0.71	-0.60	16.96
CNC7CD-5605	2.20	0.05	0.49	7.30	0.19	0.61	17.54	-0.17	-0.14	17.54
CPGZM3-5601	2.20	0.05	0.49	7.40	0.29	0.93	17.30	-0.41	-0.35	17.30
CXC7F4-5601	2.20	0.05	0.49	6.80	-0.31	-0.98	18.88	1.17	1.00	18.88
D6DFMW-5601	2.20	0.05	0.49	7.40	0.29	0.93	17.30	-0.41	-0.35	17.30
D8H2JA-5601	2.20	0.05	0.49	6.80	-0.31	-0.98	18.90	1.19	1.02	18.88
DEHYWY-5605	2.20	0.05	0.49	6.80	-0.31	-0.98	18.90	1.19	1.02	18.88
DG7Y23-5601	2.00	-0.15	-1.43	7.20	0.09	0.29	16.13	-1.58	-1.34	16.13
DHVCJK-5602	2.00	-0.15	-1.43	6.80	-0.31	-0.98	17.00	-0.71	-0.60	17.10
DJCG9B-5602	2.30	0.15	1.45	7.20	0.09	0.29	18.50	0.79	0.68	18.63
DWEPQ8-5601	2.10	-0.05	-0.47	7.20	0.09	0.29	17.00	-0.71	-0.60	16.96
E6ND47-5601	2.20	0.05	0.49	6.90	-0.21	-0.66	18.60	0.89	0.76	18.59
EH2TQJ-5605	2.20	0.05	0.49	8.00	0.89	2.84	15.96	-1.75	-1.49	15.96
EH2UAW-5601	2.10	-0.05	-0.47	6.90	-0.21	-0.66	18.00	0.29	0.25	17.72
ELTDY9-5601	2.00	-0.15	-1.43	7.50	0.39	1.25	15.50	-2.21	-1.88	15.47

TABLE 1

Stain E, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
EZ9FGW-5601	2.00	-0.15	-1.43	7.00	-0.11	-0.34	16.60	-1.11	-0.94	16.60
F6L3L9-5601	2.10	-0.05	-0.47	7.25	0.14	0.45	16.80	-0.91	-0.77	16.84
F6N7J7-5602	2.10	-0.05	-0.47	7.20	0.09	0.29	16.96	-0.75	-0.63	16.96
FBUWT4-5601	2.30	0.15	1.45	7.00	-0.11	-0.34	19.20	1.49	1.27	19.18
FJKKHE-5602	2.30	0.15	1.45	7.00	-0.11	-0.34	19.00	1.29	1.10	19.18
FM3HCW-5605	2.10	-0.05	-0.47	7.60	0.49	1.57	16.00	-1.71	-1.45	16.04
FM8WPW-5601	2.10	-0.05	-0.47	7.00	-0.11	-0.34	17.50	-0.21	-0.18	17.46
FRHXU2-5601	2.17	0.02	0.20	7.15	0.04	0.14	17.67	-0.04	-0.03	17.67
FYYTGW-5601	2.17	0.02	0.20	7.36	0.25	0.80	17.10	-0.61	-0.52	17.15
G23NUY-5601	2.21	0.06	0.59	7.31	0.20	0.64	17.61	-0.10	-0.08	17.60
G63ZPY-5601	2.20	0.05	0.49	7.50	0.39	1.25	17.00	-0.71	-0.60	17.06
GJHHL3-5605	2.20	0.05	0.49	7.40	0.29	0.93	17.00	-0.71	-0.60	17.30
GKDQJQ-5601	2.23	0.08	0.78	7.05	-0.06	-0.18	18.44	0.73	0.62	18.44
GQ2NH9-5605	2.20	0.05	0.49	7.40	0.29	0.93	17.00	-0.71	-0.60	17.30
GTPMNX-5601	2.29	0.14	1.36	7.28	0.17	0.55	18.30	0.59	0.51	18.33
GZMGF4-5601	2.00	-0.15	-1.43	6.40	-0.71	-2.25	18.20	0.49	0.42	18.21
H44VCW-5601	2.20	0.05	0.49	7.50	0.39	1.25	17.06	-0.65	-0.55	17.06
H784LT-5605	2.12	-0.03	-0.28	7.33	0.22	0.71	16.80	-0.91	-0.77	16.81
H7PQKB-5601	2.10	-0.05	-0.47	6.84	-0.27	-0.85	17.90	0.19	0.17	17.88

TABLE 1

Stain E, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
HB4L8Z-5601	2.20	0.05	0.49	7.20	0.09	0.29	18.00	0.29	0.25	17.79
HE76LL-5605	2.20	0.05	0.49	6.70	-0.41	-1.30	19.00	1.29	1.10	19.17
HFG89K-5602	2.10	-0.05	-0.47	6.60	-0.51	-1.62	18.60	0.89	0.76	18.55
HHPKPL-5601	2.20	0.05	0.49	7.40	0.29	0.93	17.00	-0.71	-0.60	17.30
HJYEN8-5605	2.17	0.02	0.20	7.18	0.07	0.23	17.59	-0.12	-0.10	17.59
HPLFEJ-5601	3.21	1.06	10.20 X	9.44	2.33	7.42 X	19.90	2.19	1.87	19.88
HYB4DT-5605	2.19	0.04	0.39	7.30	0.19	0.61	17.46	-0.25	-0.21	17.46
JJW48U-5602	2.20	0.05	0.49	7.10	-0.01	-0.02	18.00	0.29	0.25	18.05
JKNJK7-5601	2.10	-0.05	-0.47	7.50	0.39	1.25	16.00	-1.71	-1.45	16.26
JXV6RH-5601	2.30	0.15	1.45	7.40	0.29	0.93	18.00	0.29	0.25	18.11
KGJ4FR-5601	2.23	0.08	0.78	7.27	0.16	0.52	17.90	0.19	0.17	17.86
KKHEBR-5601	2.05	-0.10	-0.95	7.10	-0.01	-0.02	16.78	-0.93	-0.79	16.78
KLEYXR-5602	2.00	-0.15	-1.43	7.00	-0.11	-0.34	16.60	-1.11	-0.94	16.60
KM8ZDB-5605	2.10	-0.05	-0.47	6.40	-0.71	-2.25	19.20	1.49	1.27	19.16
KNPHDG-5601	2.20	0.05	0.49	7.50	0.39	1.25	17.00	-0.71	-0.60	17.06
KQPEGB-5601	2.00	-0.15	-1.43	6.00	-1.11	-3.52 X	19.00	1.29	1.10	19.47
KTXZKW-5601	2.11	-0.04	-0.38	6.80	-0.31	-0.98	18.08	0.37	0.32	18.08
KX92PZ-5601	2.40	0.25	2.41	7.20	0.09	0.29	19.00	1.29	1.10	19.47
L48PKR-5605	2.20	0.05	0.49	7.30	0.19	0.61	17.50	-0.21	-0.18	17.54

TABLE 1

Stain E, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
LQJX3P-5602	2.00	-0.15	-1.43	6.80	-0.31	-0.98	17.00	-0.71	-0.60	17.10
LTR8W8-5602	2.19	0.04	0.39	7.26	0.15	0.49	17.47	-0.24	-0.20	17.56
LUBXGD-5602	2.20	0.05	0.49	6.50	-0.61	-1.93	20.00	2.29	1.95	19.78
LXJEFG-5601	4.10	1.95	18.76 X	12.63	5.52	17.58 X	18.90	1.19	1.02	18.94
LXQU4X-5605	2.30	0.15	1.45	7.20	0.09	0.29	19.00	1.29	1.10	18.63
M3VDVF-5602	2.20	0.05	0.49	7.40	0.29	0.93	17.00	-0.71	-0.60	17.30
M44YXM-5605	2.20	0.05	0.49	7.30	0.19	0.61	17.54	-0.17	-0.14	17.54
M6ZBXW-5601	2.28	0.13	1.26	7.62	0.51	1.63	17.40	-0.31	-0.26	17.41
M8QFP9-5601	2.30	0.15	1.45	6.60	-0.51	-1.62	20.40	2.69	2.29	20.39
MDXXVM-5601	2.27	0.12	1.16	7.15	0.04	0.14	18.50	0.79	0.68	18.51
MEC928-5601	2.10	-0.05	-0.47	6.80	-0.31	-0.98	18.00	0.29	0.25	17.99
MGE83Z-5601	2.20	0.05	0.49	7.40	0.29	0.93	17.00	-0.71	-0.60	17.30
MHNE2L-5601	2.20	0.05	0.49	6.00	-1.11	-3.52 X	21.00	3.29	2.80	21.51 X
MLVC9A-5605	2.25	0.10	0.97	6.25	-0.86	-2.73	21.10	3.39	2.89	21.10 X
MRVJ86-5605	2.20	0.05	0.49	7.10	-0.01	-0.02	19.30	1.59	1.36	18.05
MT6NKT-5605	2.00	-0.15	-1.43	7.00	-0.11	-0.34	17.00	-0.71	-0.60	16.60
MYDF2Y-5601	2.05	-0.10	-0.95	6.88	-0.23	-0.72	17.30	-0.41	-0.35	17.34
MZ94FM-5601	2.30	0.15	1.45	6.90	-0.21	-0.66	19.47	1.76	1.50	19.47
N6HM9E-5601	2.20	0.05	0.49	7.20	0.09	0.29	17.80	0.09	0.08	17.79

TABLE 1

Stain E, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
NAQCR3-5605	2.20	0.05	0.49	6.70	-0.41	-1.30	19.20	1.49	1.27	19.17
NDPFBU-5601	2.20	0.05	0.49	6.90	-0.21	-0.66	18.60	0.89	0.76	18.59
NJK2MQ-5601	1.90	-0.25	-2.40	7.20	0.09	0.29	15.00	-2.71	-2.30	15.30
NPHWZV-5601	2.20	0.05	0.49	6.80	-0.31	-0.98	19.00	1.29	1.10	18.88
NPMARX-5602	2.30	0.15	1.45	7.10	-0.01	-0.02	18.90	1.19	1.02	18.90
NQDKEK-5601	2.20	0.05	0.49	7.00	-0.11	-0.34	18.32	0.61	0.52	18.32
P7PNNZ-5605	2.17	0.02	0.20	7.59	0.48	1.54	17.00	-0.71	-0.60	16.61
PJXWJH-5601	2.08	-0.07	-0.66	6.96	-0.15	-0.47	17.40	-0.31	-0.26	17.39
PPXKRA-5601	2.30	0.15	1.45	7.40	0.29	0.93	18.00	0.29	0.25	18.11
PUW8YY-5601	2.00	-0.15	-1.43	7.10	-0.01	-0.02	16.36	-1.35	-1.15	16.36
PVNV4T-5605	2.20	0.05	0.49	7.60	0.49	1.57	16.80	-0.91	-0.77	16.83
Q4FZQL-5601	2.00	-0.15	-1.43	7.00	-0.11	-0.34	16.60	-1.11	-0.94	16.60
Q8UBLH-5602	2.20	0.05	0.49	7.20	0.09	0.29	18.00	0.29	0.25	17.79
QA8NHR-5601	2.50	0.35	3.37 X	7.00	-0.11	-0.34	21.00	3.29	2.80	20.92
QWEF94-5602	2.11	-0.04	-0.38	7.53	0.42	1.34	16.30	-1.41	-1.20	16.27
R7F43L-5601	2.20	0.05	0.49	7.30	0.19	0.61	17.50	-0.21	-0.18	17.54
RDW4BQ-5605	2.10	-0.05	-0.47	7.20	0.09	0.29	17.00	-0.71	-0.60	16.96
RHBDH9-5602	2.00	-0.15	-1.43	7.40	0.29	0.93	15.70	-2.01	-1.71	15.68
RKCF96-5601	2.00	-0.15	-1.43	7.60	0.49	1.57	15.00	-2.71	-2.30	15.26

TABLE 1

Stain E, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
RY2CGU-5601	2.10	-0.05	-0.47	7.20	0.09	0.29	17.00	-0.71	-0.60	16.96
RYVZVJ-5601	2.00	-0.15	-1.43	6.90	-0.21	-0.66	17.70	-0.01	-0.01	16.85
T9YH42-5601	54.30	52.15	501.55X	157.30	150.19	478.01X	20.20	2.49	2.12	20.19
TL6LBG-5602	2.20	0.05	0.49	6.90	-0.21	-0.66	18.60	0.89	0.76	18.59
TMGVBN-5605	2.20	0.05	0.49	7.20	0.09	0.29	17.80	0.09	0.08	17.79
U6DK4W-5601	2.07	-0.08	-0.76	7.46	0.35	1.12	16.10	-1.61	-1.37	16.11
ULHJYX-5601	3.56	1.41	13.57 X	8.08	0.97	3.10 X	26.00	8.29	7.06 X	26.14 X
UP4JYE-5601	2.09	-0.06	-0.57	7.14	0.03	0.10	17.00	-0.71	-0.60	17.02
UP8WQG-5601	2.00	-0.15	-1.43	6.90	-0.21	-0.66	17.00	-0.71	-0.60	16.85
UPNZEG-5602	2.30	0.15	1.45	7.13	0.02	0.07	19.00	1.29	1.10	18.82
UXXECC-5602	2.10	-0.05	-0.47	6.50	-0.61	-1.93	18.85	1.14	0.97	18.85
V6BANJ-5601	2.20	0.05	0.49	7.40	0.29	0.93	17.30	-0.41	-0.35	17.30
V7RWBL-5601	2.20	0.05	0.49	7.10	-0.01	-0.02	18.10	0.39	0.34	18.05
VB3G7T-5601	2.00	-0.15	-1.43	7.20	0.09	0.29	16.00	-1.71	-1.45	16.13
VD6FGK-5601	2.00	-0.15	-1.43	7.00	-0.11	-0.34	16.60	-1.11	-0.94	16.60
VTEUPM-5601	2.40	0.25	2.41	7.40	0.29	0.93	19.00	1.29	1.10	18.92
VTJ8GQ-5605	2.30	0.15	1.45	7.30	0.19	0.61	18.00	0.29	0.25	18.36
VUAG4C-5602	2.20	0.05	0.49	7.20	0.09	0.29	17.80	0.09	0.08	17.79
VZYXN4-5605	2.10	-0.05	-0.47	7.00	-0.11	-0.34	17.46	-0.25	-0.21	17.46

TABLE 1

Stain E, continued

WebCode-Test	Width				Length				Angle			
	mm	Diff	CPV		mm	Diff	CPV		Deg.	Diff	CPV	*CalcAng*
W2AZB3-5601	2.00	-0.15	-1.43		6.50	-0.61	-1.93		17.90	0.19	0.17	17.92
W6R8QN-5601	2.10	-0.05	-0.47		6.80	-0.31	-0.98		18.00	0.29	0.25	17.99
W74VY3-5602	2.00	-0.15	-1.43		7.00	-0.11	-0.34		17.00	-0.71	-0.60	16.60
W8EWK2-5601	2.20	0.05	0.49		7.30	0.19	0.61		17.54	-0.17	-0.14	17.54
WC46YM-5605	2.50	0.35	3.37	X	7.13	0.02	0.07		21.00	3.29	2.80	20.53
WCAMAL-5601	2.20	0.05	0.49		7.50	0.39	1.25		17.00	-0.71	-0.60	17.06
WCV4H2-5601	2.00	-0.15	-1.43		7.00	-0.11	-0.34		16.00	-1.71	-1.45	16.60
WJBY7H-5601	2.10	-0.05	-0.47		7.00	-0.11	-0.34		17.45	-0.26	-0.22	17.46
WJM87P-5601	2.20	0.05	0.49		7.40	0.29	0.93		17.29	-0.42	-0.35	17.30
WKEVBJ-5601	2.20	0.05	0.49		7.20	0.09	0.29		17.80	0.09	0.08	17.79
WUQV6U-5602	2.10	-0.05	-0.47		7.30	0.19	0.61		16.70	-1.01	-0.86	16.72
WWWDAH-5601	2.20	0.05	0.49		7.00	-0.11	-0.34		18.30	0.59	0.51	18.32
XGV28R-5605	2.30	0.15	1.45		7.33	0.22	0.71		18.28	0.57	0.49	18.29
XLXQ2L-5601	2.10	-0.05	-0.47		6.20	-0.91	-2.89		19.80	2.09	1.78	19.80
XXLYFE-5602	2.20	0.05	0.49		7.31	0.20	0.64		18.00	0.29	0.25	17.52
Y49LXJ-5605	2.30	0.15	1.45		7.50	0.39	1.25		18.00	0.29	0.25	17.86
Y7T6PL-5602	2.20	0.05	0.49		7.30	0.19	0.61		17.50	-0.21	-0.18	17.54
YKDKRL-5605	2.20	0.05	0.49		7.00	-0.11	-0.34		18.00	0.29	0.25	18.32
YZQTTP-5602	2.20	0.05	0.49		7.20	0.09	0.29		17.80	0.09	0.08	17.79

TABLE 1

Stain E, continued

WebCode-Test	Width			Length			Angle			
	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
Z3A8U6-5605	2.00	-0.15	-1.43	5.00	-2.11	-6.71 X	23.50	5.79	4.93 X	23.58 X
Z6X84F-5602	2.00	-0.15	-1.43	7.00	-0.11	-0.34	17.00	-0.71	-0.60	16.60
Z6YMDD-5601	2.10	-0.05	-0.47	7.40	0.29	0.93	17.00	-0.71	-0.60	16.49
ZF4QKV-5601	2.00	-0.15	-1.43	6.80	-0.31	-0.98	17.00	-0.71	-0.60	17.10
ZFCYFA-5601	2.20	0.05	0.49	7.30	0.19	0.61	17.00	-0.71	-0.60	17.54
Grand Mean	2.15			7.11			17.71			17.68
Standard Deviation	0.10			0.31			1.17			1.10
Participants Included in calculations	185			185			192			191
Participants excluded from calculations (indicated by X)	10			10			3			4

Stain E Preparation Angle: 17.0°

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
22BFHH-5602	Swipe	3VLUYG-5605	Swipe
2373W8-5601	Swipe	3YH9DC-5601	Swipe
2G4E26-5602	Swipe	42YYT7-5602	Swipe
2JTNDR-5601	Swipe	4BA2E8-5602	Swipe
2PZ6T8-5601	Swipe	4DHCBB-5601	Swipe
2T4TFA-5601	Swipe	4YFKP7-5602	Swipe
2TZFN8-5601	Swipe	4YMTTR-5605	Transfer Stain
2X9LF8-5601	Swipe	66MG2J-5602	Swipe
34XHKN-5605	Swipe	68WH7Q-5601	Transfer Stain
38WULF-5601	Swipe	6H8W6J-5605	Swipe
3BF3UF-5601	Swipe	6J4JDF-5601	Swipe
3BZJAH-5601	Swipe	6JY8R6-5601	Swipe
3FRZ8U-5605	Swipe	6MYFVF-5601	Wipe
3JA8MG-5601	Swipe	6TM3NZ-5602	Swipe
3KPQYB-5601	Swipe	6VD26J-5602	Swipe
3QBFBW-5602	Swipe	6X4ALZ-5601	Transfer Stain
3RKQ8V-5602	Swipe	7778A2-5602	Swipe

TABLE 2: Single Pattern Recognition

Item 2, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
7BL388-5601	Swipe	B3TTVJ-5601	Swipe
7WHAM3-5605	Swipe	B433LV-5602	Swipe
8746CP-5601	Swipe	B6GDQE-5605	Swipe
87KQVK-5601	Swipe	BHTJ43-5601	Swipe
8GPPW7-5601	Swipe	BKEG6D-5605	Swipe
8XU9EQ-5605	Swipe	BQZAER-5601	Swipe
93LXAT-5602	Swipe	BYBVZ2-5601	Swipe
98HGLY-5601	Swipe	BYZVFR-5601	Transfer Stain
9AGRED-5601	Swipe	C8QH44-5605	Swipe
9BCFT3-5601	Swipe	CNC7CD-5605	Swipe
9NPL2N-5601	Swipe	CPGZM3-5601	Swipe
9R7D8E-5601	Swipe	CXC7F4-5601	Swipe
9VHTMB-5602	Swipe	D6DFMW-5601	Swipe
A4C9ZL-5602	Swipe	D8H2JA-5601	Swipe
AAVNDQ-5601	Swipe	DEHYWY-5605	Swipe
ABCNN9-5601	Swipe	DG7Y23-5601	Swipe
ACNCWL-5601	Swipe	DHVCJK-5602	Swipe
AQH2QX-5602	Swipe	DJCG9B-5602	Swipe
AUNLH4-5601	Swipe	DWEPQ8-5601	Swipe

TABLE 2: Single Pattern Recognition

Item 2, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
E6ND47-5601	Swipe	GTPMNX-5601	Swipe
EH2TQJ-5605	Swipe	GZMGF4-5601	Swipe
EH2UAW-5601	Swipe	H44VCW-5601	Swipe
ELTDY9-5601	Swipe	H784LT-5605	Swipe
EZ9FGW-5601	Swipe	H7PQKB-5601	Swipe
F6L3L9-5601	Swipe	HB4L8Z-5601	Swipe
F6N7J7-5602	Transfer Stain	HE76LL-5605	Swipe
FBUWT4-5601	Swipe	HFG89K-5602	Swipe
FJKKHE-5602	Swipe	HHPKPL-5601	Swipe
FM3HCW-5605	Swipe	HJYEN8-5605	Swipe
FM8WPW-5601	Swipe	HPLFEJ-5601	Swipe
FRHXU2-5601	Swipe	HYB4DT-5605	Swipe
FYYTGW-5601	Swipe	JJW48U-5602	Swipe
G23NUY-5601	Swipe	JKNJK7-5601	Swipe
G63ZPY-5601	Swipe	JXV6RH-5601	Swipe
GJHHL3-5605	Swipe	JZ39U7-5605	Swipe
GJY44X-5601	Swipe	KGJ4FR-5601	Swipe
GKDQJQ-5601	Swipe	KKHEBR-5601	Swipe
GQ2NH9-5605	Swipe	KLEYXR-5602	Swipe

TABLE 2: Single Pattern Recognition

Item 2, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
KM8ZDB-5605	Swipe	MHUFGU-5605	Swipe
KNPHDG-5601	Swipe	MLVC9A-5605	Swipe
KQPEGB-5601	Swipe	MRVJ86-5605	Swipe
KTXZKW-5601	Swipe	MT6NKT-5605	Swipe
KX92PZ-5601	Swipe	MYDF2Y-5601	Swipe
L48PKR-5605	Swipe	MZ94FM-5601	Swipe
LQJX3P-5602	Wipe	N6HM9E-5601	Swipe
LTR8W8-5602	Swipe	NAQCR3-5605	Swipe
LUBXGD-5602	Swipe	NDPFBU-5601	Swipe
LXJEFG-5601	Swipe	NJK2MQ-5601	Swipe
LXQU4X-5605	Swipe	NPHWZV-5601	Swipe
M3VDVF-5602	Transfer Stain	NPMARX-5602	Swipe
M44YXM-5605	Wipe	NQDKEK-5601	Swipe
M6ZBXW-5601	Wipe	P7PNNZ-5605	Swipe
M8QFP9-5601	Swipe	PJXWJH-5601	Swipe
MDXXVM-5601	Swipe	PMVMJ3-5605	Swipe
MEC928-5601	Swipe	PPXKRA-5601	Swipe
MGE83Z-5601	Swipe	PUW8YY-5601	Swipe
MHNE2L-5601	Swipe	PVNV4T-5605	Swipe

TABLE 2: Single Pattern Recognition

Item 2, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
Q27MTX-5601	Swipe	UXXECC-5602	Swipe
Q4FZQL-5601	Swipe	V6BANJ-5601	Swipe
Q8UBLH-5602	Swipe	V7RWBL-5601	Swipe
QA8NHR-5601	Swipe	VB3G7T-5601	Swipe
QWEF94-5602	Transfer Stain	VD6FGK-5601	Swipe
R7F43L-5601	Swipe	VTEUPM-5601	Swipe
RDW4BQ-5605	Wipe	VTJ8GQ-5605	Swipe
RHBDH9-5602	Swipe	VUAG4C-5602	Swipe
RKCF96-5601	Swipe	VZYXN4-5605	Swipe
RY2CGU-5601	Swipe	W2AZB3-5601	Swipe
RYVZVJ-5601	Swipe	W6R8QN-5601	Swipe
T9YH42-5601	Swipe	W74VY3-5602	Swipe
TL6LBG-5602	Swipe	W8EWK2-5601	Swipe
TMGVBN-5605	Swipe	WC46YM-5605	Swipe
U6DK4W-5601	Swipe	WCAMAL-5601	Swipe
ULHJYX-5601	Swipe	WCV4H2-5601	Swipe
UP4JYE-5601	Swipe	WJBY7H-5601	Swipe
UP8WQG-5601	Swipe	WJM87P-5601	Swipe
UPNZEG-5602	Swipe	WKEVBJ-5601	Swipe

TABLE 2: Single Pattern Recognition

Item 2, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
WUQV6U-5602	Swipe		
WWWDAH-5601	Swipe		
XFNLYZ-5602	Swipe		
XGV28R-5605	Wipe		
XLXQ2L-5601	Swipe		
XXLYFE-5602	Swipe		
Y49LXJ-5605	Swipe		
Y7T6PL-5602	Swipe		
YKDKRL-5605	Swipe		
YZQTTP-5602	Swipe		
Z3A8U6-5605	Swipe		
Z6X84F-5602	Swipe		
Z6YMDD-5601	Swipe		
ZF4QKV-5601	Swipe		
ZFCYFA-5601	Swipe		

Pattern Types reported for Item 2 (Total Participants Responding = 201)

Pattern Type	Percent Reported
Swipe	188 (93.5%)
Transfer Stain	7 (3.5%)
Wipe	6 (3.0%)

TABLE 2: Single Pattern Recognition

Item 3

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
22BFHH-5602	Projected Pattern	42YYT7-5602	Projected Pattern
2373W8-5601	Projected Pattern	4BA2E8-5602	Projected Pattern
2G4E26-5602	Projected Pattern	4DHCBB-5601	Projected Pattern
2JTNDR-5601	Splash Pattern	4YFKP7-5602	Projected Pattern
2PZ6T8-5601	Projected Pattern	4YMTTR-5605	Projected Pattern
2T4TFA-5601	Projected Pattern	66MG2J-5602	Projected Pattern
2TZFN8-5601	Projected Pattern	68WH7Q-5601	Projected Pattern
2X9LF8-5601	Projected Pattern	6H8W6J-5605	Projected Pattern
34XHKN-5605	Projected Pattern	6J4JDF-5601	Projected Pattern
38WULF-5601	Projected Pattern	6JY8R6-5601	Projected Pattern
3BF3UF-5601	Projected Pattern	6MYFVF-5601	Projected Pattern
3BZJAH-5601	Projected Pattern	6TM3NZ-5602	Projected Pattern
3FRZ8U-5605	Projected Pattern	6VD26J-5602	Projected Pattern
3JA8MG-5601	Projected Pattern	6X4ALZ-5601	Projected Pattern
3KPQYB-5601	Projected Pattern	7778A2-5602	Projected Pattern
3QBFBW-5602	Projected Pattern	7BL388-5601	Projected Pattern
3RKQ8V-5602	Projected Pattern	7E7BT7-5605	Projected Pattern
3VLUYG-5605	Projected Pattern	7WHAM3-5605	Projected Pattern
3YH9DC-5601	Projected Pattern	8746CP-5601	Projected Pattern

TABLE 2: Single Pattern Recognition

Item 3, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
87KQVK-5601	Projected Pattern	BHTJ43-5601	Projected Pattern
8GPPW7-5601	Projected Pattern	BKEG6D-5605	Projected Pattern
8XU9EQ-5605	Projected Pattern	BQZAER-5601	Projected Pattern
93LXAT-5602	Projected Pattern	BYBVZ2-5601	Projected Pattern
98HGLY-5601	Projected Pattern	BYZVFR-5601	Projected Pattern
9AGRED-5601	Projected Pattern	C8QH44-5605	Projected Pattern
9BCFT3-5601	Projected Pattern	CNC7CD-5605	Projected Pattern
9NPL2N-5601	Projected Pattern	CPGZM3-5601	Projected Pattern
9R7D8E-5601	Projected Pattern	CXC7F4-5601	Projected Pattern
9VHTMB-5602	Projected Pattern	D6DFMW-5601	Projected Pattern
A4C9ZL-5602	Projected Pattern	D8H2JA-5601	Projected Pattern
AAVNDQ-5601	Projected Pattern	DEHYWY-5605	Projected Pattern
ABCNN9-5601	Projected Pattern	DG7Y23-5601	Projected Pattern
ACNCWL-5601	Splash Pattern	DHVCJK-5602	Projected Pattern
AQH2QX-5602	Projected Pattern	DJCG9B-5602	Projected Pattern
AUNLH4-5601	Projected Pattern	DWEPQ8-5601	Projected Pattern
B3TTVJ-5601	Projected Pattern	E6ND47-5601	Projected Pattern
B433LV-5602	Projected Pattern	EH2TQJ-5605	Projected Pattern
B6GDQE-5605	Projected Pattern	EH2UAW-5601	Projected Pattern

TABLE 2: Single Pattern Recognition

Item 3, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
ELTDY9-5601	Projected Pattern	H784LT-5605	Projected Pattern
EZ9FGW-5601	Projected Pattern	H7PQKB-5601	Projected Pattern
F6L3L9-5601	Projected Pattern	HB4L8Z-5601	Projected Pattern
F6N7J7-5602	Projected Pattern	HE76LL-5605	Projected Pattern
FBUWT4-5601	Projected Pattern	HFG89K-5602	Projected Pattern
FJKKHE-5602	Projected Pattern	HHPKPL-5601	Projected Pattern
FM3HCW-5605	Projected Pattern	HJYEN8-5605	Projected Pattern
FM8WPW-5601	Projected Pattern	HPLFEJ-5601	Projected Pattern
FRHXU2-5601	Projected Pattern	HYB4DT-5605	Projected Pattern
FYYTGW-5601	Projected Pattern	JJW48U-5602	Projected Pattern
G23NUY-5601	Projected Pattern	JKNJK7-5601	Projected Pattern
G63ZPY-5601	Projected Pattern	JXV6RH-5601	Projected Pattern
GJHHL3-5605	Projected Pattern	JZ39U7-5605	Projected Pattern
GJY44X-5601	Projected Pattern	KGJ4FR-5601	Projected Pattern
GKDQJQ-5601	Projected Pattern	KKHEBR-5601	Projected Pattern
GQ2NH9-5605	Projected Pattern	KLEYXR-5602	Projected Pattern
GTPMNX-5601	Projected Pattern	KM8ZDB-5605	Projected Pattern
GZMGF4-5601	Projected Pattern	KNPHDG-5601	Projected Pattern
H44VCW-5601	Projected Pattern	KQPEGB-5601	Projected Pattern

TABLE 2: Single Pattern Recognition

Item 3, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
KTXZKW-5601	Projected Pattern	MT6NKT-5605	Projected Pattern
KX92PZ-5601	Projected Pattern	MYDF2Y-5601	Projected Pattern
L48PKR-5605	Projected Pattern	MZ94FM-5601	Projected Pattern
LQJX3P-5602	Projected Pattern	N6HM9E-5601	Projected Pattern
LTR8W8-5602	Projected Pattern	NAQCR3-5605	Projected Pattern
LUBXGD-5602	Projected Pattern	NDPFBU-5601	Projected Pattern
LXJEFG-5601	Projected Pattern	NJK2MQ-5601	Projected Pattern
LXQU4X-5605	Projected Pattern	NPHWZV-5601	Projected Pattern
M3VDVF-5602	Projected Pattern	NPMARX-5602	Projected Pattern
M44YXM-5605	Projected Pattern	NQDKEK-5601	Projected Pattern
M6ZBXW-5601	Projected Pattern	P7PNNZ-5605	Projected Pattern
M8QFP9-5601	Projected Pattern	PJXWJH-5601	Projected Pattern
MDXXVM-5601	Projected Pattern	PMVMJ3-5605	Projected Pattern
MEC928-5601	Projected Pattern	PPXKRA-5601	Projected Pattern
MGE83Z-5601	Projected Pattern	PUW8YY-5601	Splash Pattern
MHNE2L-5601	Projected Pattern	PVNV4T-5605	Projected Pattern
MHUFGU-5605	Projected Pattern	Q27MTX-5601	Projected Pattern
MLVC9A-5605	Projected Pattern	Q4FZQL-5601	Projected Pattern
MRVJ86-5605	Projected Pattern	Q8UBLH-5602	Projected Pattern

TABLE 2: Single Pattern Recognition

Item 3, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
QA8NHR-5601	Projected Pattern	VB3G7T-5601	Projected Pattern
QWEF94-5602	Projected Pattern	VD6FGK-5601	Projected Pattern
R7F43L-5601	Projected Pattern	VTEUPM-5601	Projected Pattern
RDW4BQ-5605	Projected Pattern	VTJ8GQ-5605	Projected Pattern
RHBDH9-5602	Projected Pattern	VUAG4C-5602	Projected Pattern
RKCF96-5601	Projected Pattern	VZYXN4-5605	Projected Pattern
RY2CGU-5601	Projected Pattern	W2AZB3-5601	Projected Pattern
RYVZVJ-5601	Projected Pattern	W6R8QN-5601	Projected Pattern
T9YH42-5601	Projected Pattern	W74VY3-5602	Projected Pattern
TL6LBG-5602	Projected Pattern	W8EWK2-5601	Projected Pattern
TMGVBN-5605	Projected Pattern	WC46YM-5605	Projected Pattern
U6DK4W-5601	Projected Pattern	WCAMAL-5601	Projected Pattern
ULHJYX-5601	Projected Pattern	WCV4H2-5601	Projected Pattern
UP4JYE-5601	Projected Pattern	WJBY7H-5601	Projected Pattern
UP8WQG-5601	Projected Pattern	WJM87P-5601	Projected Pattern
UPNZEG-5602	Projected Pattern	WKEVBJ-5601	Projected Pattern
UXXECC-5602	Projected Pattern	WUQV6U-5602	Projected Pattern
V6BANJ-5601	Projected Pattern	WWWDAH-5601	Projected Pattern
V7RWBL-5601	Projected Pattern	XFNLYZ-5602	Projected Pattern

TABLE 2: Single Pattern Recognition

Item 3, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
XGV28R-5605	Projected Pattern		
XLXQ2L-5601	Projected Pattern		
XXLYFE-5602	Projected Pattern		
Y49LXJ-5605	Projected Pattern		
Y7T6PL-5602	Projected Pattern		
YKDKRL-5605	Projected Pattern		
YZQTTP-5602	Projected Pattern		
Z3A8U6-5605	Projected Pattern		
Z6X84F-5602	Projected Pattern		
Z6YMDD-5601	Projected Pattern		
ZF4QKV-5601	Projected Pattern		
ZFCYFA-5601	Projected Pattern		

Pattern Types reported for Item 3 (Total Participants Responding = 202)

Pattern Type	Percent Reported
Projected Pattern	199 (98.5%)
Splash Pattern	3 (1.5%)

TABLE 2: Single Pattern Recognition

Item 4

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
22BFHH-5602	Transfer Stain	42YYT7-5602	Transfer Stain
2373W8-5601	Transfer Stain	4BA2E8-5602	Transfer Stain
2G4E26-5602	Transfer Stain	4DHCBB-5601	Transfer Stain
2JTNDR-5601	Transfer Stain	4YFKP7-5602	Transfer Stain
2PZ6T8-5601	Transfer Stain	4YMTTR-5605	Transfer Stain
2T4TFA-5601	Transfer Stain	66MG2J-5602	Transfer Stain
2TZFN8-5601	Transfer Stain	68WH7Q-5601	Transfer Stain
2X9LF8-5601	Transfer Stain	6H8W6J-5605	Transfer Stain
34XHKN-5605	Transfer Stain	6J4JDF-5601	Transfer Stain
38WULF-5601	Transfer Stain	6JY8R6-5601	Transfer Stain
3BF3UF-5601	Transfer Stain	6MYFVF-5601	Transfer Stain
3BZJAH-5601	Transfer Stain	6TM3NZ-5602	Transfer Stain
3FRZ8U-5605	Transfer Stain	6VD26J-5602	Transfer Stain
3JA8MG-5601	Transfer Stain	6X4ALZ-5601	Transfer Stain
3KPQYB-5601	Transfer Stain	7778A2-5602	Transfer Stain
3QBFBW-5602	Transfer Stain	7BL388-5601	Transfer Stain
3RKQ8V-5602	Transfer Stain	7E7BT7-5605	Transfer Stain
3VLUYG-5605	Transfer Stain	7WHAM3-5605	Transfer Stain
3YH9DC-5601	Transfer Stain	8746CP-5601	Transfer Stain

TABLE 2: Single Pattern Recognition

Item 4, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
87KQVK-5601	Transfer Stain	BHTJ43-5601	Transfer Stain
8GPPW7-5601	Transfer Stain	BKEG6D-5605	Transfer Stain
8XU9EQ-5605	Transfer Stain	BQZAER-5601	Transfer Stain
93LXAT-5602	Transfer Stain	BYBVZ2-5601	Transfer Stain
98HGLY-5601	Transfer Stain	BYZVFR-5601	Transfer Stain
9AGRED-5601	Transfer Stain	C8QH44-5605	Transfer Stain
9BCFT3-5601	Transfer Stain	CNC7CD-5605	Transfer Stain
9NPL2N-5601	Transfer Stain	CPGZM3-5601	Transfer Stain
9R7D8E-5601	Transfer Stain	CXC7F4-5601	Transfer Stain
9VHTMB-5602	Transfer Stain	D6DFMW-5601	Transfer Stain
A4C9ZL-5602	Transfer Stain	D8H2JA-5601	Transfer Stain
AAVNDQ-5601	Transfer Stain	DEHYWY-5605	Transfer Stain
ABCNN9-5601	Transfer Stain	DG7Y23-5601	Transfer Stain
ACNCWL-5601	Transfer Stain	DHVCJK-5602	Transfer Stain
AQH2QX-5602	Transfer Stain	DJCG9B-5602	Transfer Stain
AUNLH4-5601	Transfer Stain	DWEPQ8-5601	Transfer Stain
B3TTVJ-5601	Transfer Stain	E6ND47-5601	Transfer Stain
B433LV-5602	Transfer Stain	EH2TQJ-5605	Transfer Stain
B6GDQE-5605	Transfer Stain	EH2UAW-5601	Transfer Stain

TABLE 2: Single Pattern Recognition

Item 4, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
ELTDY9-5601	Transfer Stain	H784LT-5605	Transfer Stain
EZ9FGW-5601	Transfer Stain	H7PQKB-5601	Transfer Stain
F6L3L9-5601	Transfer Stain	HB4L8Z-5601	Transfer Stain
F6N7J7-5602	Transfer Stain	HE76LL-5605	Transfer Stain
FBUWT4-5601	Transfer Stain	HFG89K-5602	Transfer Stain
FJKKHE-5602	Transfer Stain	HHPKPL-5601	Transfer Stain
FM3HCW-5605	Transfer Stain	HJYEN8-5605	Transfer Stain
FM8WPW-5601	Transfer Stain	HPLFEJ-5601	Transfer Stain
FRHXU2-5601	Transfer Stain	HYB4DT-5605	Transfer Stain
FYYTGW-5601	Transfer Stain	JJW48U-5602	Transfer Stain
G23NUY-5601	Transfer Stain	JKNJK7-5601	Transfer Stain
G63ZPY-5601	Transfer Stain	JXV6RH-5601	Transfer Stain
GJHHL3-5605	Transfer Stain	JZ39U7-5605	Transfer Stain
GJY44X-5601	Transfer Stain	KGJ4FR-5601	Transfer Stain
GKDQJQ-5601	Transfer Stain	KKHEBR-5601	Transfer Stain
GQ2NH9-5605	Transfer Stain	KLEYXR-5602	Transfer Stain
GTPMNX-5601	Transfer Stain	KM8ZDB-5605	Transfer Stain
GZMGF4-5601	Transfer Stain	KNPHDG-5601	Transfer Stain
H44VCW-5601	Transfer Stain	KQPEGB-5601	Transfer Stain

TABLE 2: Single Pattern Recognition

Item 4, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
KTXZKW-5601	Transfer Stain	MT6NKT-5605	Transfer Stain
KX92PZ-5601	Transfer Stain	MYDF2Y-5601	Transfer Stain
L48PKR-5605	Transfer Stain	MZ94FM-5601	Transfer Stain
LQJX3P-5602	Transfer Stain	N6HM9E-5601	Transfer Stain
LTR8W8-5602	Transfer Stain	NAQCR3-5605	Transfer Stain
LUBXGD-5602	Transfer Stain	NDPFBU-5601	Transfer Stain
LXJEFG-5601	Transfer Stain	NJK2MQ-5601	Transfer Stain
LXQU4X-5605	Transfer Stain	NPHWZV-5601	Transfer Stain
M3VDVF-5602	Transfer Stain	NPMARX-5602	Transfer Stain
M44YXM-5605	Transfer Stain	NQDKEK-5601	Transfer Stain
M6ZBXW-5601	Transfer Stain	P7PNNZ-5605	Transfer Stain
M8QFP9-5601	Transfer Stain	PJXWJH-5601	Transfer Stain
MDXXVM-5601	Transfer Stain	PMVMJ3-5605	Transfer Stain
MEC928-5601	Transfer Stain	PPXKRA-5601	Transfer Stain
MGE83Z-5601	Transfer Stain	PUW8YY-5601	Transfer Stain
MHNE2L-5601	Transfer Stain	PVNV4T-5605	Transfer Stain
MHUFGU-5605	Transfer Stain	Q27MTX-5601	Transfer Stain
MLVC9A-5605	Transfer Stain	Q4FZQL-5601	Transfer Stain
MRVJ86-5605	Transfer Stain	Q8UBLH-5602	Transfer Stain

TABLE 2: Single Pattern Recognition

Item 4, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
QA8NHR-5601	Transfer Stain	VB3G7T-5601	Transfer Stain
QWEF94-5602	Transfer Stain	VD6FGK-5601	Transfer Stain
R7F43L-5601	Transfer Stain	VTEUPM-5601	Transfer Stain
RDW4BQ-5605	Transfer Stain	VTJ8GQ-5605	Transfer Stain
RHBDH9-5602	Transfer Stain	VUAG4C-5602	Transfer Stain
RKCF96-5601	Transfer Stain	VZYXN4-5605	Transfer Stain
RY2CGU-5601	Transfer Stain	W2AZB3-5601	Transfer Stain
RYVZVJ-5601	Transfer Stain	W6R8QN-5601	Transfer Stain
T9YH42-5601	Transfer Stain	W74VY3-5602	Transfer Stain
TL6LBG-5602	Transfer Stain	W8EWK2-5601	Transfer Stain
TMGVBN-5605	Transfer Stain	WC46YM-5605	Transfer Stain
U6DK4W-5601	Transfer Stain	WCAMAL-5601	Transfer Stain
ULHJYX-5601	Transfer Stain	WCV4H2-5601	Transfer Stain
UP4JYE-5601	Transfer Stain	WJBY7H-5601	Transfer Stain
UP8WQG-5601	Transfer Stain	WJM87P-5601	Transfer Stain
UPNZEG-5602	Transfer Stain	WKEVBJ-5601	Transfer Stain
UXXECC-5602	Transfer Stain	WUQV6U-5602	Transfer Stain
V6BANJ-5601	Transfer Stain	WWWDAH-5601	Transfer Stain
V7RWBL-5601	Transfer Stain	XFNLYZ-5602	Transfer Stain

TABLE 2: Single Pattern Recognition

Item 4, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
XGV28R-5605	Transfer Stain		
XLXQ2L-5601	Transfer Stain		
XXLYFE-5602	Transfer Stain		
Y49LXJ-5605	Transfer Stain		
Y7T6PL-5602	Transfer Stain		
YKDKRL-5605	Transfer Stain		
YZQTTP-5602	Transfer Stain		
Z3A8U6-5605	Transfer Stain		
Z6X84F-5602	Transfer Stain		
Z6YMDD-5601	Transfer Stain		
ZF4QKV-5601	Transfer Stain		
ZFCYFA-5601	Transfer Stain		

Pattern Types reported for Item 4 (Total Participants Responding = 202)

Pattern Type	Percent Reported
Transfer Stain	202 (100.0%)

Pattern Description, Part 2

TABLE 3: Recognition and Description

Item 5

WebCode-Test	Detailed Pattern Description
22BFHH-5602	Three drip stains are present. One drip stain has some directionality down and to the right. A wipe is also present through the drip stain on the upper left side of the target indicating that the drip stain was present prior to the wipe. An impact pattern resulting from an unidentifiable object being impacted with the the surface. It appears that the impact may have occurred prior to the wipe based on at least one area of the impact spatter stains possibly being wiped away.
2373W8-5601	In the lower-left corner of the vinyl tile, there is an impact pattern. A void is present in the impact pattern. Small satellite stains are present throughout most of the vinyl tile displayed in the picture. Bloodstains with directionality radiate from the impact pattern in the lower-left corner and continue upward to the top right corner of the vinyl tile. In the lower-right corner, a drip stain is present. Also present are satellite stains and bloodstains with directionality that appear to radiate from the impact pattern in the lower-left corner of the vinyl tile. In the upper-left corner, an unknown object wiped to the right through a drip stain, causing the drip stain to become a perimeter stain as only the edge characteristics of the drip stain remain. Satellite stains and bloodstains with directionality are also present that appear to have radiated from the impact pattern in the lower-left corner of the vinyl tile. The bloodstains with directionality were present before the unknown object wiped through the drip stain because the unknown object also wiped through some of the bloodstains with directionality. In the upper right corner, a drip stain is present. Also present are satellite stains and bloodstains with directionality that appear to radiate from the impact pattern in the lower-left corner of the vinyl tile.
2G4E26-5602	For identification purposes I labeled each large stain 1-4 starting with the stain between the 9:00-12:00 area of the photograph as stain 1. Stain 1: The photograph depicts several bloodstain patterns. In the upper left corner of the photograph, a wipe pattern was identified. The wipe moves from left to right. A perimeter stain is visible at the left edge of the wipe. Stain 2: A drip stain on the right edge of the photograph displays edge characteristics. On the right side of the stain are satellite stains which radiate from the parent stain. Stain 3: Another drip in the lower right corner of the photograph also displays edge characteristics. Stain 4: Throughout the center of the photograph, from the lower left corner to the top right corner and right side of the photograph are numerous satellite stains. These stains display a radial distribution with an area of convergence in the lower left corner of the photograph. Another pattern in the extreme bottom left corner also displays a radial distribution of bloodstains. These stains converge to the same area as the previously described stains. These stains both converge to an area that has a void. Surrounding the void on the left, right and top edges are transfer stains.
2JTNDR-5601	Bloodstains are present. There are bloodstain patterns consisting of at least two drip stains, an impact pattern that generated spatter stains, and a wipe that also created a perimeter stain.
2PZ6T8-5601	On the right side of the target, two (2) drip stains were observed. On the upper left corner of the target, a wipe was observed, resulting in a perimeter stain. An impact pattern was observed on the lower left corner of the target with spatter stains radiating out from it.
2T4TFA-5601	I observed an impact pattern with spatter stains that have an area of convergence in the lower left corner with the remainder of the pattern extending to the upper right. I observed two drip stains on the right and an altered stain near the top. The altered stain consists of a wipe traveling from left to right with a perimeter stain from a preexisting drip stain. The wipe also appears to have altered some of the spatter stains in the impact pattern.
2TZFN8-5601	There are two (2) drip stains on the right side of the target. They have near round edges and some satellite stains. There is a wipe on the upper left side of the target resulting in a perimeter stain. There is an impact pattern on the lower left side of the target with spatter stains radiating out from the parent stain that show directionality back to the parent stain.

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
2X9LF8-5601	Two drip stains are observed (a right part of the photo). They reveals features of altered stains, i.e. they are partially crushed. There is a wipe pattern observed (upper left side of the photo). There is also an impact pattern observed (many stains (ellipses) – some with tails drops – created by drops with very small angle of impact), which originate from blood stain observed in the left bottom corner of the photo.
34XHKN-5605	Three drops were deposited on the surface shown from a nearly perpendicular direction (round drops with no directionality, approximately 14mm in size). These drops can be seen in the upper left corner, mid-way down the right edge and halfway towards the center from the lower right corner. The remains of a pooled bloodstain is visible by the edge characteristics in the lower left corner. This pooled bloodstain was impacted by an object causing the low angle spatter pattern (long narrow streaks) radiating from this stain to the upper right and lower left corners. After this pooled blood was impacted, the drop in the upper left corner was wiped by an object in a left to right direction and this wipe appears to have altered one of the low angle stains from the impacted pool. This indicates that the wipe occurred after the impact pattern was created. Finally, there are numerous very small (less than 1mm) stains with no directionality covering a lot of the surface shown in the image. Some of these stains appear on top of the wipe pattern indicating that they occurred after the wipe.
38WULF-5601	Item 5 is a complex bloodstain pattern made up of drip stains, a wipe pattern, and an impact pattern. There are two roughly circular drip stains, 16mm and 17mm in diameter. There is a wipe pattern with a roughly circular perimeter stain (16mm diameter) and a rectangular tail. The wipe pattern is 8.3cm x 1.6cm. The impact pattern covers an area of 24cm x 27cm. It is made up of an irregular shaped bloodstain (7cm x 6cm) with emanating projections/spines and around 35 elliptical stains (0.5mm x 2mm to 2mm x 11mm).
3BF3UF-5601	Impact stain originating from roughly oval transfer stain in bottom left corner. Radiating spatter stains dispersed across target toward top right corner. Three drip stains with scalloped edges and some spines. Drip stain in top left was altered after deposit. Skeletonization of original drip stain with a wipe pattern traveling to the right with feathering at the terminal end.
3BZJAH-5601	Item 5 was an image of a textured vinyl tile in the horizontal plane with multiple bloodstains. There are three drip stains present in the image, each with satellite stains. One of the drip stains (in the upper left corner) is an altered stain that has a wipe pattern through it which left behind a perimeter stain. There is an impact pattern in the lower left corner of the image. Spatter stains are present diagonally in both directions with the blood directionality heading away from the impact point, indicating an area of convergence.
3FRZ8U-5605	Pattern consists of three distinct pattern types: 1. Wipe - an altered stain with perimeter stain visible and movement in a left to right direction (upper centre of image); 2. Drip stains - roughly circular stains with scalloped edges and small satellite stains and spines (right centre of image); 3. Impact pattern - elliptical spatter stains showing directionality radiating from the point of convergence (lower left corner of image) where an object has possibly stuck a liquid source of blood.
3JA8MG-5601	An impact pattern with diameters of less than 1mm - 2mm was observed with stains showing direction from the lower left corner (apparent point of origin) to upper right corner. Three drip stains (passive drip) with diameters of approximately 15mm were observed. One of the drip stains (upper left of target) has been wiped through and skeletonization is visible. The wiped staining measures approximately 85mm X 15mm.
3KPQYB-5601	Numerous bloodstains observed throughout the target consisting of two, near-round drip stains, near the middle right side of the target. One additional near round, perimeter stain, was observed in the upper left corner of the target that exhibits wipe stain characteristics. One area of bloodstaining observed in the lower left corner of the target with shapes ranging from irregular to

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
	linear (transfer pattern) with numerous radiating spatter distributed from this parent stain consistent with impact spatter.
3QBFBW-5602	Impact spatter pattern from bottom (L) radiating up to top (R). Directional spatter on impact pattern traveling Bottom (L) - toward top (R). 2 drip stains on right side. 1 drip stain on left side with wipe pattern throughout it from L to R.
3RKQ8V-5602	Bloodstain Pattern Analysis, Test No. 19-5602, Section II: Pattern Description, [Name], [Laboratory]. The top left area of the image contained a stain that appeared to have had an unknown object move through an existing wet bloodstain, which resulted in a wipe pattern. The wipe pattern had directionality from the left to right. The lower left area of the image contained a bloodstain pattern. This pattern included an impact pattern with elliptical bloodstains of various size and shapes. The elliptical shaped bloodstains were of size and shapes that were consistent with a directional angle of impact, an area of convergence, and an area of origin. On the right and lower right side of the image were two distinct drip stains resulting from falling drops that were formed due to gravity.
3VLUYG-5605	Three major bloodstain patterns were observed in item 5. The first pattern consists of two circular low velocity drip stains on the right side of the image. The second pattern is an alteration of a drip stain at the upper left corner of the image; the original drip stain has been altered to a circular perimeter stain with a visible wipe pattern towards the right.The third pattern is an impact pattern present at the lower left corner of the image. An oval-shaped transfer pattern is present at the center of the impact pattern. Spatter from the impact pattern extends diagonally outward in two directions; the spatter extends towards the lower left-hand and the upper right-hand corners of the image.
3YH9DC-5601	An impact pattern was observed on the lower left-hand corner of this target. Two (2) drip stains were noted on the right side of this target and one (1) drip stain was located near the upper left-hand corner of this target. A wipe was observed through the drip stain located on the upper left-hand corner of this target.
42YYT7-5602	An impact bloodstain pattern is observed originating in the lower left corner of the image. The impact bloodstain pattern extends across the image from the lower left corner to the upper right corner. The bloodstain impact pattern resulted from an object striking liquid blood. Three drip stains are observed in the upper left corner and the right lateral side of the image. The circular drip bloodstains resulted from falling drops that formed due to gravity. A wipe bloodstain is observed in the upper left corner of the image. The wipe bloodstain is an altered stain resulting from an object moving through the preexisting drip bloodstain. The directionality of the pattern is from left to right across the image. The wipe bloodstain pattern left a perimeter stain where the original drip stain existed. A perimeter stain is an altered stain consisting of its edge characteristics, the central area having been partially or entirely removed.
4BA2E8-5602	There is an 'Impact Pattern' in the lower left hand corner of the photo, and has numerous small 'spatter stains' that radiates outward to the upper right hand corner. The 'Impact Pattern' is a bloodstain pattern created when an object strikes liquid blood, and causes numerous 'Spatter Stains' to become airborne from the external force that was applied to the liquid blood. There are 3 'Drip Stains' in this image, impacting the floor at an aprx 90 degree angle. One of the above 'Drip Stains', located in the upper left hand corner of the image, is also an 'Altered Stain' showing characteristics that indicate a physical change has occurred to the stain. This drip/altered stain impacted the floor and had begun to dry, when an object moved through the preexisting wet bloodstain, causing a 'Wipe' pattern with evidence of motion left to right. I am unable to determine the order in which the above mentioned stains occurred.
4DHCBB-5601	The vinyl tile was examined and three large drip stains (with associated satellite stains) were found and one of these drip stains had been wiped (perimeter stain and wipe from left to right

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
	present). A cessation pattern was found in the lower left corner and associated satellite stains were also present. Spatter stains were also present.
4YFKP7-5602	An impact pattern is observed in the lower left corner of the image. This impact pattern extends from the lower left corner of the image to the upper right corner of the image. Two drip stains are observed at the right and right lower corner of the image. A perimeter stain is observed in the upper left corner of the image. This perimeter stain develops into a wipe pattern that extends from left to right in the image.
4YMTTR-5605	Cessation cast off spatter with directionality, away from an area of convergence, about and supporting an association with transfer staining in the bottom left corner of the image. Amongst the cessation cast off spatter are three drip stains, one of which has been wiped through, from left to right.
66MG2J-5602	Section 2 Pattern Description Part 2: Item 5 was an image provided by Collaborative Testing Services. I observed several patterns in the image provided. I noted a possible Wipe pattern located in the top left portion of the image. This pattern appears to contain a Perimeter Stain and appears to have movement from left to right. I also observed a possible Impact Pattern in the bottom left corner of the image. This pattern appears to radiate from the left corner of the image and increase in width as it travels to the top right corner of the image. A possible Transfer pattern was also noted in the bottom left corner of the image. Finally, two possible Drip Stains were noted in the middle right area of the image.
68WH7Q-5601	There were three circular blood stains that were approximately 15 millimetres in diameter on the upper and right sides of the tile. These drip stains were created when blood passively fell from a surface wet with blood. The drip stain on the upper part of the tile appeared as a perimeter stain and had been altered by a wiping action to the right. The blood pattern in the lower left corner of the tile appeared incomplete. The apparent missing blood pattern may be the result of the proximity of the pattern to the edges of the tile or indicates that an item or items were removed after the blood was deposited. The pattern in the lower left corner consisted of an irregularly-shaped blood stain with radiating spines of blood across and towards the right and upper edges of the tile. A number of very small circular and oval blood stains were present. In my opinion the blood pattern was an impact spatter pattern which was created by an impact to a source of wet blood when it was positioned in the lower left corner.
6H8W6J-5605	CTS Item #5 was a photograph of a vinyl tile in the horizontal plane. At least 3 and possibly 4 different mechanisms of blood deposition were observed in the photograph. An arch shaped stain measuring approximately 8.5 cm by 1.5 cm was observed near the top center of the photograph. Based on the characteristics of this stain, it was determined that a round blood stain had been present on the tile and was altered when an object was moved through it from the left to the right creating a perimeter stain and a wipe pattern. Two circular stains on the right side of the photograph exhibited the characteristics consistent with drip stains. Smaller stains were associated with at least one of these stains, making the larger stain a parent stain and the smaller stain a satellite stain. Multiple smaller bloodstains exhibiting directionality were observed radiating from a group of irregularly shaped bloodstains at the bottom left corner of the photograph. Observable characteristics within this group of stains indicated patterns that include but are not limited to an impact pattern with an area of convergence near the bottom left corner of the photograph. The method of deposition of the irregularly shaped stains in the bottom left corner of the photograph could not be determined.
6J4JDF-5601	An impact pattern exists in the lower left corner with numerous satellite stains radiating outward toward the upper right and lower left areas in the photograph. Two drip stains exist in the right side of the photograph. A wipe pattern can be seen in the upper left section. There are indications of the perimeter of a drip stain with the motion of the wipe traveling from left to right. The wipe pattern occurred subsequent to the impact pattern.

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
6JY8R6-5601	The target surface contains 3 distinctive blood spatter stains. One is an impact stain of a blood bearing object at the bottom left corner of the surface. It appeared that once impact was made it radiated blood droplets in a random pattern in varying sizes. The second stain is actually three drip stains which appeared to be in an approximate 90° angle. The third stain is a wipe pattern which showed relative motion through one of the previously described drip stains. The motion appeared to be moving to the right of the parent stain and skeletonization was observed in the drip stain. Due to the motion running through one of the satellite stains from the impact spatter it appeared that the wipe occurred after the impact spatter was made.
6MYFVF-5601	In the image three blood patterns can be identified form left to right: A. An apparent impact pattern with a likely convergence area (point of origin) located in the bottom, left hand corner with this satellite spatter that upwards towards the upper right hand corner. B. A pattern in the upper left hand corner that extends from left to right. C. Two drip stains located in the right hand of the image.
6TM3NZ-5602	An impact pattern was found on the lower left region of the floor. The pattern had long spines radiating from the parent stain and an appearance of a void in it. Several long elliptical stains and small spatter stains were found originating from the parent stain, to as far as 34 cm. Three approximately circular drip stains, 13 mm to 15 mm in diameter, were also on the floor. One of these stains at the top left hand corner was wiped away.
6VD26J-5602	Cessation pattern with an impact with a blooded object on the bottom left hand corner Three drip stains then wipe stain from left to right horizontally from a drip stain.
6X4ALZ-5601	There is a bloodstain pattern consisting of an area of irregular shaped staining in the lower left corner of the photograph, and numerous spines and elliptical stains radiating from this area. There are also many small circular stains less than 0.5mm in diameter. In my opinion this pattern is an impact spatter pattern. There is a area of bloodstaining in the upper left of the photograph that in my opinion is a wipe stain (ie a circular perimeter stain with bloodstaining extending to one side of it, most likely a drip stain that has been wiped). There are also two circular bloodstains on the right side of the photograph that, in my opinion, are drip stains.
7778A2-5602	The image depicts an off white vinyl tile (target) with three distinct pattern types. On the lower left hand corner of the target is an impact pattern that extended up and to the right. The area of convergence is present in the image in the lower left hand corner. On the right side of the target are two drip stains. On the upper portion of the target is a wipe pattern. A slight circular outline of a pre-existing stain was on the left side of the wipe.
7BL388-5601	"Target shows stains/patterns of different kind. Firstly, a typical 'Impact pattern', characterized by a number of ellipsoid-shaped traces with a common convergence area, is observed. Moreover two drip stains and one wipe pattern – originated from a single drip stain - are being identified within the target under examination.
7E7BT7-5605	At the top of the photograph, there is an altered stain consisting of a circular perimeter stain and a wipe leading from the perimeter stain directly to the right. At the bottom left corner of the photograph, there is an impact pattern with radial spatter leading away from the impact site. Some of the spatter observed is directional (leading away from the impact site) and small circular spatter is also observed. Near the impact pattern, there is a possible transfer stain in the shape of an oval. Towards the right-hand side of the photo, there are two large circular drip stains with slightly scalloped edge characteristics on the lower right edges.
8746CP-5601	There are three bloodstain patterns in the picture. 1. On the bottom left of the picture is the Impact Pattern. A bloodstain pattern was found resulting from an object striking liquid blood on the floor. 2. On the left top of the picture is the Wipe Pattern. An altered bloodstain pattern was found resulting from an object moving through a preexisting wet bloodstain. 3. On the right of

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
	the picture is the Drip Trail. A bloodstain pattern was found resulting from the movement of a source of drip stain between two points in the same direction.
87KQVK-5601	dry circular gravitational two drop stains in addition of a wipe pattern of another circular drop impact pattern with elliptical droplets spreading with a clear area of convergence at the corner.
8GPPW7-5601	There are two apparent drip stains on the right side of the photograph. Drip stains are bloodstains that result from a falling drop that formed due to gravity. Bloodstains are deposits of blood on a surface. In the upper portion of the photograph, there is an apparent wipe pattern, showing movement from left to right. A wipe pattern is an altered bloodstain pattern resulting from an object moving through a preexisting wet bloodstain. The stain is an apparent altered stain, with the appearance of the peripheral characteristics of a drip stain. Due to its visual appearance, it is likely that the stain was an apparent drip stain prior to the apparent wipe event. An altered stain is a bloodstain with characteristics that indicate a physical change has occurred. The result of this event was an apparent perimeter stain, a type of altered stain consisting of its edge characteristics, the central area having been partially or entirely removed. In the lower, left portion of the photograph, there is an apparent transfer stain that has what appears to be an oval shape. A transfer stain is a bloodstain resulting from contact between a blood bearing surface and another surface. This apparent transfer event appears to either have resulted in an impact pattern with multiple satellite stains or is in the same vicinity of a separate event resulting in an impact pattern. Most of the satellite stains are exhibiting directionality that is upwards and to the right. An impact pattern results from an object striking liquid blood, and satellite stains are smaller bloodstains that originated during the formation of the parent stain as a result of blood impacting a surface. The parent stain for this event appears to have formed in the lower, left portion of the photograph.
8XU9EQ-5605	With the photograph in the proper orientation, there were two (2) stains on the right side that were roughly circular in shape with regular margins. Stains both measured approximately 1cm (0.4") in diameter. There were some spines around the margins. The stains had an uneven distribution within the stains, which was an effect of the target surface. These were drip stains. There was another stain in the upper left quadrant. This stain was linear in shape and measured approximately 9.0cm x 1.5cm (3.5" x 0.6"). The stain had feathered and contiguous boundaries with a feathered edge. This was a wipe. The object that created the wipe was moving from left to right with respect to the target surface. There was a perimeter stain on the left side of this stain, circular in shape and measuring approximately 1cm (0.4") in diameter. The original stain was a drip stain and may have been created at the same time as the other drip stains. In the lower left corner was a pattern. There was a void within a roughly upside down U-shaped stain measuring approximately 15mm (0.6") wide and 35mm (1.3") long. This was a transfer stain. There were numerous elliptical stains extending from the right side of the transfer stain along the length of the photograph. These were impact spatter stains. The stains were elongated, showing a very low angle of impact. The area of convergence of these stains is the U-shaped transfer stain. There were several larger, elongated stains extending from the left side of the U-shaped transfer stain. These stains were thicker, almost with the appearance of flow. However, they also have an area of convergence to the U-shaped transfer stain. This area also contained small pools of blood. This pattern could be an impact pattern or a cessation pattern. To the left of the U-shaped transfer stain was a stain that was irregular in shape with irregular margins, measuring approximately 5mm x 4mm. This was a transfer stain. There were numerous submillimeter to millimeter sized spatter stains throughout the photo. These stains were circular in shape with regular margins.
93LXAT-5602	In the upper left hand corner is a wipe with movement from left to right. On the right side are two drip stains with scalloped edges. In the bottom left corner is the area of convergence for an impact pattern that travels to the upper left corner.

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
98HGLY-5601	There is an impact pattern in the lower left side of the target with radiating satellite spatter stains. There is a wipe through an apparent drip stain in the upper center area of the target. There are two (2) drip stains near the right edge of the target.
9AGRED-5601	The bloodstains within the photograph are most consistent with those of an Impact Pattern, Drips Stain(s), and a Wipe Pattern.
9BCFT3-5601	An unknown object with blood on it impacted the tile (on the lower left-hand corner of the image) causing blood droplets to radiate out from the impact area in a non-linear manner and also producing small satellite stains. Three drip stains were also on the tile (which were not a product of the aforementioned impact to the tile), with the leftmost drip stain having a wipe stain (in a left to right directionality) due to the presence of its perimeter stain. The wipe stain also disturbed the tail end of a spatter stain, indicating that the droplets radiating from the impact where there prior to the wipe stain.
9NPL2N-5601	There is a bloodstain pattern to the lower left of the image. The features of the staining are indicative of an impact pattern. Although it is not completely clear in this image, there are indications of a transfer pattern in the lower left corner of the image. An impact into liquid blood could have produced the spatter stains that extend towards the upper right corner. There is an altered bloodstain in the upper portion of the image that appears to have originated from a drip stain. There is perimeter staining from where the drip stain was first deposited and a wipe pattern extending to the right of this stain. There are two drip stains on the right side of this image.
9R7D8E-5601	IMPACT PATTERN, DRIP STAIN, WIPE
9VHTMB-5602	three drip stains, one has been wiped after partially drying leaving a perimeter stain. impact pattern, caused by force being applied to wet blood with spatter stains seen radiating from point of impact.
A4C9ZL-5602	A wipe was observed in the upper left corner leaving a perimeter stain at the left edge. Directionality of the wipe was from left to right. Two drip stains were observed on the right side of the target. An impact pattern radiated onto the target and off the lower left edge of the target from the lower left corner. The impact pattern radiated from the area of an ambiguous stain with partial semi-circular borders.
AAVNDQ-5601	There is a Drip Trail with two drip stains in the lower right quadrant. The drip stains have diameters of approximately 15mm. There is an Impact Pattern in the bottom left quadrant with some satellite stains. Within the impact pattern there is a void. There is an altered drip stain in the upper left quadrant that appear to have wipe through it moving from left to right.
ABCNN9-5601	skeletonized stain with wipe pattern upper left. 2 passive drops on right side. Blood on lower left with impact and the pattern going lower left to upper right.
ACNCWL-5601	There are some drip stains and one wipe and a perimeter stain. There is an impact pattern on the left down corner caused by some bloody object. There seem to be also a transfer pattern.
AQH2QX-5602	Two undisturbed drip stains, one drip stain with perimeter stain, impact pattern (lower left corner) with what appears to be associated radiating spatter stains
AUNLH4-5601	Bloodstaining observed consisted of: A) Three drip stains (approximately 1.5cm in diameter), each with associated smaller (approximately 1mm or less in diameter) satellite bloodstains. The top left drip stain has been altered whilst still wet resulting in a wipe stain (direction of wipe is left to right) and leaving the perimeter of the drip stain intact. B) An impact pattern consisting of a small pool of blood in the lower left corner and associated spatter bloodstains radiating out across the photograph (directionality of travel is towards the upper right). These spatter stains are very elongated indicating impact at tile level and all appear to have a single common area of

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
	origin - the small pool of blood in the lower left corner.
B3TTVJ-5601	A target of an apparent vinyl type flooring with a tile design supported bloodstains/patterns in approximately 3 areas. These areas were labeled 1, 2 and 3 with the target in a placement where the "Item 5" is in the bottom right corner. Area 1 was assigned to the upper left corner of the target. A perimeter stain is present of what appears to have once been a drip stain that has been altered. This is consistent with a wipe. Area 2 was assigned to the right edge of the target. Present are two circular stains with scalloped edges. These are drip stains. Area 3 was assigned to the lower left corner of the target. There is a volume of blood with spatter stains in a radial distribution. There is an area of void within the volume of blood. More spatter stains at a distance from the volume of blood in area 3 showing direction of travel and a force applied to the volume of blood. This is consistent with an impact pattern.
B433LV-5602	A- Two circular bloodstains (approx. 1.5 cm in diameter) exhibiting characteristics of drip stains are present on the left side of the target. B- One bloodstain of 8.5 cm x 1.5 cm is present at the top of the target. A circular perimeter stain of 1.5 cm in diameter is visible in this pattern. The characteristics exhibited by the stain were consistent with a drip stain altered by a wipe motion from left to right. C- At the bottom left corner, irregular shape bloodstains exhibiting characteristics of transfer stains are present. D- A few dozens of elliptical spatter bloodstains with directionality toward upper right corner are present in the bottom left corner of the target creating an area of convergence from the transfer stain. Pattern C and D are consistent with a bloody object falling on the floor while the blood is still wet. E- Several hundred spatter stains, nearly circular, with variable sizes are present on the target, from top to bottom and from left to right. Several dozens of these spatter stains are less than 0.1 mm in diameter.
B6GDQE-5605	In the lower left hand corner is an irregularly shaped red-brown stain. Circular and elliptical red-brown stains with a radiating distribution extend from this irregular stain to the upper and right sides. This pattern is consistent with an impact pattern. A red-brown drip stain with a wipe through it, creating a perimeter stain is in the upper left corner. Two red-brown drip stains are also on the right side of the plane.
BHTJ43-5601	Item 5 was an image of textured vinyl tile in the horizontal plane with multiple bloodstains. There is an impact pattern in the lower left corner of the image with many spatter stains extending outwards from an area of convergence. There are two drip stains on the right side of the image. There is a third drip stain near the top left area of the image that was altered to become a wipe pattern. A perimeter stain in the shape of the drip stain is still visible within this wipe.
BKEG6D-5605	Photo showing a textured vinyl tile on a horizontal plane. In the bottom left corner is an impact pattern radiating outward from a place of impact. The photo also shows two drip stains on the right side, one closer to the bottom right corner and one more towards the middle on the right. In the top left corner there is an altered drip stain. The drip stain had an object pass through in wipe pattern with movement from left to right. These stains are consistent with multiple events occurring in this area.
BQZAER-5601	A wipe, including a perimeter stain to the far left of the pattern, is in the upper left of the target. The circular perimeter stain has an approximate 1.5 cm diameter and is an altered drip stain. Based on the location of the perimeter stain and the resultant wipe, the wipe is in the left to right direction. Two circular, approximately 1.5 cm diameter, drip stains with spines are at the right end of the target. Heavier staining is present in the lower left corner of the target with a void in the same area. Roughly curvilinear lines are outlining the void. Spines and/or spatter stains are radiating from the curvilinear line. Spatter stains, with approximate 1-2 mm width, are radiating outward and to the upper right from the lower left corner. The shape of the spatter stains, including elongated tails, indicate a small angle of impact. The stains in the lower left corner and the spatter stains radiating outward and to the upper right from the lower left corner are the result of an impact mechanism. There are circular, sub-millimeter, non- radiating, spatter stains

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
	throughout the target.
BYBVZ2-5601	Two drip stains to the right side. Upper left - an altered stain - drip stain which has been wiped through, left to right, leaving a perimeter stain. Bottom left corner - impact pattern with associated spatter stains exhibiting directionality towards the upper right.
BYZVFR-5601	An area of bloodstaining is present in the bottom left of the image with a series of bloodstaining eminating out from this area across the extent of the image . These stains have visually acute impact angles and directionality from the bottom left area. The combination of the bloodstaining in the bottom left corner area and the series of bloodstains is consistent with an impact at ground level in the bottom left area of the image. Three drips stains area also present in the image with one of these stains, the one closest to the top left of the image, showing signs of having been altered by a wiping action. This subsequent wiping action has resulted in a perimeter bloodstain with left to right wiping action.
C8QH44-5605	On the lower left corner of the tile, bloodstains with an impact pattern are present. The impact pattern radiates primarily towards the upper right corner of the tile. Two drip stains are present, one on the right middle of the tile and one near the bottom right corner of the tile. A perimeter stain (altered drip stain) with a wipe through towards the right is present near the upper left corner of the tile.
CNC7CD-5605	An impact pattern containing numerous elliptical spatter stains was observed on the target. The impact pattern appears to have an area of convergence at the lower left corner and radiates outward toward the upper right quadrant. There are bloodstains which could not be further characterized at the apparent area of convergence. A wipe which appears to originate from an altered drip stain is present in the upper left quadrant. The altered stain exhibits skeletinization with the perimeter staining measuring approximately 15mm in diameter. The wipe extends to the right approximately 8.2cm. Two drip stains are present on the target, one on the right edge and the other in the lower right quadrant. Both drip stains are approximately 15mm in diameter and have spines. These drip stains and the apparent altered drip stain are possibly part of a drip trail. In addition, numerous minute spatter stains were observed in a random pattern over the surface of the target. These minute stains are less than 1mm in diameter and could not be associated with any of the previously described stains or patterns.
CPGZM3-5601	Near the right edge of the target, there are two (2) drip stains. Near the top left edge of the target: there is a circular perimeter stain present, formerly a drip stain, that appears to have been wiped through. This is a wipe. Near the bottom left edge of the target, there is a heavily distorted stain present with spatter stains radiating out from it in all directions. Spatter stains are present across the majority of the target. This is an impact pattern.
CXC7F4-5601	An impact pattern is noted, with an altered stain in the lower left corner of the target and spatter stains of various sizes present across the target. Two drip stains are noted near the right side of the target. A wipe is present in the upper left corner of the target, with a perimeter stain of a drip stain wiped through to the right.
D6DFMW-5601	There is a wipe in the upper left to top middle frame of the target. There are two (2) drip stains in the right frame of the target. There is an impact pattern in the lower left frame of the target with some spatter stains radiating away into the upper right frame of the target.
D8H2JA-5601	1. two circular stains on right side of photograph, slightly scalloped edges, ~1cm diameter - drip stains 2. circular stain with linear stain associated. feathering on right side of linear stain, circular stain is skeletonized - consistent with perimeter stain, appears there was a drip stain and then a wipe through the drip, directional from left to right 3. lower left corner had oval shaped void with linear stains coming out of it to lower left and upper right. linear stains were observed with upper right directionality on entire photograph originating from lower left area. stains were very narrow and elongated implying origin was low or at surface of the vinyl tile. individual stains were

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
	consistent with spatter stains. stains on lower left side were larger in size and linear to lower left. very small <1mm stains on entire tile. consistent with impact pattern.
DEHYWY-5605	Four types of bloodstain patterns were found on the vinyl-tiled floor. (1) an impact pattern with the area of convergence located at the bottom left corner and elliptical-shaped spatter stains radiating towards the top right corner and bottom left corner. (2) a transfer stain measuring about 2.5 by 1.5 cm in size that was found at bottom left corner is likely attributed to the object that struck the blood source. (3) two drip stains with scalloped edges and satellite stains. The two drip stains measured approximately 14 to 15 mm in size. (3) a wipe pattern showing wiping over a pre-existing wet drip stain measuring approximately 15 mm in size. The wipe pattern had left to right directionality and was located at the top left area. It was likely made after the impact pattern.
DG7Y23-5601	On the right side of the target two (2) drip stains are observed. In the upper left-hand corner of the target one (1) rounded perimeter stain (what appears to have been a drip stain) is observed. This stain has been altered by some means, via moving the blood within the stain to the right of the target, thus creating a wipe. In the lower left-hand corner of the target a source of blood with a disrupted center is observed with spines and associated spatter stains radiating out from it; therefore, creating an impact pattern. The entire target has spatter stains radiating out from the impact pattern; these spatter stains are round to elliptical. No determination of sequence or direction of travel were made; direction of movement was determined for the wipe. Some of the stains on the target show the appearance of drying and flaking.
DHVCJK-5602	In the lower left corner is an impact pattern. There are three (3) drip stains. One of the drip stains (upper left corner) has a wipe through it and the stain is skeletonized.
DJCG9B-5602	Possible impact pattern in the lower left corner of the image. In the upper left corner there is a perimeter stain that appears to have occurred as the result of an object being wiped through what was previously a drip stain. There are two drip stain present on the right side of the image. One is approximately 1/3 of the way up the image from the bottom and the second is just above halfway up the image.
DWEPQ8-5601	1 - Three different Drip Stains that present a partial Blood Clot. One of them has undergone on an Altered Bloodstain classifiable as a Wipe Pattern when the trace just started to clot. One other, at the right edge, originated a small ammount of Satellite Stain. 2 - In the lower left corner there are same trace originated from a Transfer Pattern. 3 - From the lower left corner to the upper right corner there is likely an Impact Pattern with a very narrow angle. 4 - All around the picture there are many different very little traces approximately circular that could be classified as a possibly Impact Pattern caused by a high velocity force applied to a blood source/impact mechanism like Gunshot or Power Tools.
E6ND47-5601	Image of a textured vinyl tile approximate size, 27.6 cm x 26.2 cm and in the horizontal plane. Transfer stain in the bottom left corner with an impact pattern radiating outward from the upper right area of the transfer stain. The transfer stain measures approximately 3cm x 4.5cm and bears linear characteristics at the lower left half and curvilinear characteristics at the upper right half. The impact pattern radiating outward from the transfer stain contains spatter stains that have oval shaped parent stains with inline cast-off wave edge characteristics exhibiting a radiating directionality extending to the upper right corner of the tile. The stains range in diameter from less that 1mm to approximately 1.8mm. The back azimuth of the impact stains have a converging directionality back toward the transfer stain. Approximately 5.7cm from the top edge and 10.5 cm from the left edge, in the upper left quadrant is a wipe pattern approximately 1.3cm x 8.5cm long. The pattern wipes through a circular, approximately 1.5cm x 1.5cm drip stain with thin edge characteristics remaining within the left side of the wipe pattern. The wipe pattern moves through the drip stain in a left, slightly curving to the right direction. Approximately 7.2cm from the right edge and 7.7cm from the bottom edge, in the lower right

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
	quadrant is a drip stain. The drip stain is approximately 1.4cm x 1.4cm in size with scalloped edge characteristics. A spine extends outward from the right side. Approximately 1.2cm from the right edge and 15.3cm from the bottom edge, is a drip stain. The drip stain is approximately 1.4cm x 1.4cm in size with scalloped edge characteristics and spines extending from the bottom and lower right side.
EH2TQJ-5605	The photograph is of a vinyl floor tile and it is assumed that the blood staining present was deposited whilst the tile was in a horizontal position on the floor. There are three large drip stains present that have formed from a stationary or near stationary object directly above the location. One of the drip stains has been disturbed and has an associated wipe from the stain to the right. Skeletisation of this stain indicates that that the stain was not disturbed immediately after deposition. An impact event has occurred in the area displayed in the bottom left corner of the photograph resulting in elongated spatter stains extending from this location across the area of the photograph. A transfer stain in this location may be the result of the same event with a bloodied object hitting this area. Alternatively, this staining may be the result of an object being located in this area and wet blood settling in the contact points. Further blood staining in this location may indicate that there was wet blood present in this area prior to the impact event though this staining could also have resulted from a wet bloodied object contacting this as area prior to or at the time of the impact. The quality of the photograph and the properties of the target surface make conclusive determinations regarding this difficult.
EH2UAW-5601	Item 5 is an image of vinyl tile in the horizontal plane with multiple bloodstains. There is an altered stain near the upper left corner of the image, which consists of a wipe originating from a preexisting drip stain. A perimeter stain is visible in the location of the original drip stain. There is an impact pattern with an area of convergence near the bottom left corner of the image and spatter stains radiating outward, traveling primarily toward the upper right and lower left corners of the image. Near the right edge of the image, there are two drip stains with associated satellite stains.
ELTDY9-5601	Bottom left corner - impact into a blood stained item on / very close to the ground. 3 drips - 2 with satellite spatter; and one which has been smeared (wiped) as drying leaving a perimeter stain. The drips have been deposited perpendicular to the surface / dropped from directly above.
EZ9FGW-5601	I have identified the following patterns from left to right. Pattern #1 is an "Altered Stain", resulting in Pattern #2 "Impact Pattern" radiating to the upper right of the picture. Pattern #3 is a "Perimeter Stain" altered by Pattern #4 "Wipe." Pattern #5 is a "Drip Stain." Pattern #6 is a "Drip Stain" including pattern #7 "Satellite Stains."
F6L3L9-5601	Item 5 is a vinyl tile located on the floor of the victim's residence. An "L-shaped" scale device has been placed in the upper, left hand corner of the tile for photo documentation and orientation. Item 5 contains three (3) bloodstain patterns which will be referred to as pattern "A", "B", and "C". Blood pattern "A": Location – Located in the upper left corner of the tile, approximately 2.5 inches the left edge and approximately 2 inches from the top of the tile. Distribution – Approximately 3 ½ inches wide by 5/8 inches high. Target Surface – Vinyl tile. Pattern Type – Wipe pattern with a perimeter stain consistent with a drip stain. Blood pattern "B": Location – Located in the lower left corner of the tile. Distribution – N/A. Target Surface – Vinyl tile. Pattern Type – Impact pattern resulting from an object striking blood. Bloodstains radiate out from the lower left side of the pattern with irregular edges. Multiple elliptical satellite stains with directionality radiate from the pattern towards the upper right corner of the tile. The satellite stains range in size from less than a millimeter to approximately 14 millimeters in length length. Blood pattern "C": Location – Two (2) bloodstains located on the ridge side of the tile. The first bloodstain is approximately 4 1/8 inches from the bottom right corner and approximately 7 9/16 inches from the top right corner. The second bloodstain is approximately 6 inches from the bottom right corner and 4 3/8 inches from the top right corner. The location of each bloodstain

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
	was measured to the approximate center of the bloodstain. Distribution – Both bloodstains were approximately 15 millimeters in diameter. Target Surface – Vinyl tile. Pattern Type – Both are drip stains, circular in appearance with spines.
F6N7J7-5602	Item 5 is a target that is a piece of textured vinyl tile in the horizontal plane. The pattern was "found in a stabbing victim's residence from which a suspect fled." There are two drip stains seen on the right side and right lower area of the tile. One of the drip stains has a downward motion in travel due to the spines coming off the drip in that direction. There is a wipe pattern noted toward the top and left area of the tile. There was a drip stain on the tile and an object wiped through it from left to right leaving a perimeter stain visible. A third pattern was noted on the lower left corner of the tile. This pattern is consistent with an impact pattern with the force (and spines) directed to the upper right corner of the photo. There is a slight void in the lower right-hand corner where an object may have been that held the bloody object that was impacted. Downward to the left the blood pattern resembles a cast-off pattern together with blood stains containing small bubbles
FBUWT4-5601	Item 5 is a 1:1 scaled photograph of a complex bloodstain pattern reportedly on vinyl tile on a horizontal plane. Two near-circular bloodstains are towards the right side of the image. Both are approximately 1.5 cm in diameter and have scalloped edges and several spines. Both of these bloodstains are surrounded by numerous spatter bloodstains less than 1 mm in size. These two bloodstains are drip bloodstains. A bloodstain toward the top of the image has perimeter staining. The perimeter staining is near circular in shape, appears to have scalloped edges, and is approximately 1.5 cm in diameter. This was likely a drip bloodstain that has been wiped through. Striations are present in the wipe with feathering at the right end. The drip bloodstain was wiped through in a left to right direction. More than 20 elliptical-shaped spatter bloodstains are present in the image. These spatter bloodstains range in size from approximately 1.5 mm by less than 1 mm to 3 cm by 2 mm and are in a radiating distribution with an area of convergence towards the bottom left corner of the image. An altered bloodstain is present in the bottom left corner of the image, in the area of convergence. At least eight spines radiate from the altered bloodstain. These features are characteristic of an impact bloodstain pattern. The altered bloodstain that is in the location of the area of convergence is the location of the source of liquid blood that was impacted. There are numerous (TNTC) spatter bloodstains that are less than 1mm in size on the vinyl tile. It cannot be determined which of these small sub-millimeter spatter stains were produced from the impact bloodstain pattern or the drip bloodstains. Sequence of deposition of the bloodstains cannot be determined.
FJKKHE-5602	Three patterns on a surface of about 24 x 30 cm. In the bottom left hand corner is an impact pattern visible. In the top left hand corner is a wipe pattern visible and on the right side are two drip stains visible. On almost the entire surface are spatter stains visible, likely to be part of the impact pattern in the bottom left hand corner.
FM3HCW-5605	Two drip stains, one of them with accompanying drops. A wipe of a drip stain. Impact pattern (high velocity), possibly with transfer stain.
FM8WPW-5601	A wipe, which includes a perimeter stain on the left side of the wipe, was noted in the upper left quadrant of the target. In the lower left corner of the target, an impact pattern was observed which includes spatter stains covering the target diagonally to the upper right corner of the target. On the right side of the target, two (2) drip stains were observed.
FRHXU2-5601	In the bottom left corner of the photograph is a pool which is a bloodstain resulting from a pooling of liquid blood on a surface. Radiating out from this bloodstain throughout the photograph is an impact spatter pattern which is a bloodstain pattern resulting from an object striking liquid blood. This stain has a radiating distribution in which these stains have a directional component with a large number of stains. On the right side on the edge of the photograph and towards the bottom right of the photograph there appears to be a drip trail

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
	which is a bloodstain pattern resulting from the movement of a source of drip stains between two points. These stains have no linear orientation with no evident flows in independent stains and no progressive impact angle change. Finally on the top left corner of the photograph appears to be a wipe pattern which is an altered stain resulting from an object moving through a preexisting wet bloodstain. This stain is a non-spatter stain with irregular margins, no spatter or spines from a pre-existing stain. It is possible that the impact pattern occured after the wipe pattern was established.
FYYTGW-5601	Three drip stains at 90, or near 90, degrees each measuring approximately 16mm in diameter are present on the vinyl tile. One drip stain, located in the upper left corner of the image, has been wiped with evidence of a perimeter stain and directionality from left to right. The other two drip stains have observed drying (cracking) representing a physical change that has occurred (altered). The lower left corner of the vinyl tile has a bloodstain with a characteristic void indicating an impact site and supporting staining on the tile representing an impact pattern (on the image moving from the lower left to the upper right in its majority). Small, less than 1mm, stains are located throughout the image.
G23NUY-5601	Item 5: a "vinyl tile - horizontal plane" contained a drip stain in the upper left area which had been wiped from left to right, leaving a perimeter stain. There were two additional drip stains in the bottom right area. There were multiple circular small spatter stains distributed across the target surface. There was also an irregular shaped transfer stain in the bottom left corner of the target, with multiple elongated spatter stains radiating outwards. There was an irregular shaped void (of spatter stains) in the transfer stain.
G63ZPY-5601	This bloodstain pattern consists of a Transfer Stain in the lower left corner of the pattern. Spatter Stains were created by the bloody object that created the Transfer Stain contacting the vinyl tile, projecting the bloodstains primarily to the right. There were three Drip Stains in the pattern. The left- most Drip Stain had a Wipe through it from left to right, creating a Perimeter Stain. The Wipe most likely occurred after the Spatter Stains.
GJHHL3-5605	There are 3 drip stains. One of these is altered when it was wiped to the right, leaving a perimeter stain and a wipe stain. There are some satellite bloodstains around the other two drip stains. There are numerous blood stains that show directionality. The directionality of these stains indicate an area of convergence at the lower left corner of the photo. The directional spatter appears to be part of an impact pattern, where blood in the lower left corner (area of convergence) was present and then impacted. The very low width to length ratios of the directional spatter indicates the blood impacted the surface from very low angles.
GJY44X-5601	In the lower left hand corner of the target surface there is a transfer stain with some void elements and associated impact spatter radiating in the direction towards the upper right and right hand side of the target surface. There are three drip stains, two of which exhibit satellite stains. The third drip stain consists of a perimeter stain and exhibits wipe features.In addition there are a number of tiny spots of blood.
GKDQJQ-5601	There are two (2) drip stains on the right side of the target. There is a wipe on the upper left side of the target resulting in a perimeter stain. Finally, there is an is an impact pattern on the lower left corner of the target.
GQ2NH9-5605	Item 5 is an image of multiple bloodstain patterns in the horizontal plane, and I labeled the patterns as A, B, and C. Pattern A is located near the approximate middle and top of the image. Pattern A consists of an altered bloodstain pattern. At the left side (as facing) of the pattern is an outline of an approximately circular drip stain with a smear to the right of the skeletonized stain. The drip stain looks to have dried partially before an object moved through the drip stain from left to right. The bloodstain pattern I labeled as A is consistent with a wipe pattern through a drip stain. The second pattern, B, in Item 5 is at the right side (as facing) of the image and consists of

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
	two approximately circular stains that are in line with each other. The two stains have ruffled edges and visible cracking on the surface of the stains. The shape of the stains are consistent with the blood striking the vinyl tile perpendicularly/at an angle of approximately 90 degrees. The pattern is also cut off on the right edge so it is not possible to determine whether the pattern continues. The pattern in B is most consistent with being drip stains. The third pattern, C, in Item 5 consists of a stain/pattern in the lower left corner (as facing) of the image as well as spatter moving out and away from the bloodstain in the lower left corner of the image. There are also spines radiating out and away from the bloodstain in the lower left corner of the image, which indicates an object striking some quantity of liquid blood on the tile surface with some amount of force. The portion of the pattern present in the lower left corner is irregularly shaped and has oval and rectangular shapes visible within the bloodstain that are indicative of a transfer pattern. The deposition of blood in C also varies in heaviness – in some areas it is heavy enough that there is visible surface cracking, while in other areas it is a thin coating with the tile texture and tile color visible. There is also fine spatter visible on the surface of the tile that does not have clear direction since it is so fine. The bloodstain pattern in the lower left corner of the image is cut off and portions of the pattern are missing/absent. Without any additional information or photos of the pattern in area C, the interpretation of this pattern is based solely upon the information provided. If more information or more complete photos were provided, my opinion could change. The pattern in C is most consistent with an apparent transfer pattern and an impact pattern. These two patterns could have been made at the same time during a single event or be the result of separate events.
GTPMNX-5601	1) Three (3) DRIP STAINS observed in the upper left corner and right side of the target. 2) One (1) WIPE (a type of ALTERED STAIN), a byproduct of an object moving through one of the above mentioned drip stains, observed in the upper left corner corner of the target. A PERIMETER STAIN remains in place of the original drip stain. 3) An IMPACT PATTERN, with associated spining and SPATTER STAINS radiating from the PARENT STAIN, observed in the lower left corner of the target.
GZMGF4-5601	Possible transfer stain in bottom left corner exhibiting spatter created by impact to the surface. Spatter converges back to the impact location. Two drip stains on right half of the image are orthogonal. One drip stain in upper left corner exhibits perimeter staining and a wipe moving left to right. This stain appears to have occured after the impact.
H44VCW-5601	Based on the choices provided by CTS, this target surface possessed the following bloodstain patterns: An impact pattern was visible in the lower left corner of the tile that produced spatter stains extending outward. Two drip stains were visible on the right side of the tile. A drip stain was visible in the upper left side of the tile. The stain was disturbed, creating a wipe pattern that extended from the drip. This also created a perimeter stain in the location of the original stain.
H784LT-5605	The blood stains on Item #5 are as follows: Three random appearing blood drops, the upper left one which partially dried and was then wiped through left to right, leaving a partial dry/skeleton of the drop. The far right drip had some spines potentially suggesting motion downward and to the right. The lower drop appeared to have hit approximately perpendicular to the surface of the tile. At the bottom left corner is an impact pattern with area of origin and fine spatter radiating up and to the right away from the origin. There is also heavier spatter radiating down and to the left corner, opposite the fine spatter. The spatter indicates that more force was directed up and to the right.
H7PQKB-5601	A wipe was observed in the top left corner with a directionality of left to right. Two circular drip stains were present on the right side. An impact stain was observed in the lower left corner with a void present in the middle of the stain with defined edges. Long elliptical stains with directionalty toward the impact stain fanned across the entire visible surface.

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
HB4L8Z-5601	This is an impact bloodstain pattern with radiating elliptical shaped spatter stains to the right and left of the impact area which is in the lower left corner. There are also three drip bloodstains, one to the upper left and two on the right. The upper left drip bloodstain has been wiped through from left to right.
HE76LL-5605	Three drip stains are observed on the tiles. The drip stain to the left has been wiped out from left to right by an object or a body part after a short time. The other two have been allowed to dry undisturbed. At the lower left corner a bloody object or body part has hit the surface creating a bloody area from which spines and highly elongated spatter stains have originated. It´s also possible that the object/body part has impacted in blood on the tiles. All over the tiles in the photo many very small circular spatter stains are observed. These spatter stains can be explained by a large force striking a blood source. However, other causes are also possible. The order in which the three blood drops, the impact and the very small spatter stains have occurred cannot be determined.
HFG89K-5602	The following three patterns were identified on Item 5: 1. Two drip stains with a diameter of approx. 15mm on the right-hand side; 2. A wipe pattern resulted from an object moving from left to right on a suspected drip stain with a diameter of approx. 15mm near upper left corner; and 3. An impact pattern with the centre of origin at the lower left corner.
HHPKPL-5601	At the bottom left corner of the photograph there is a transfer stain. Associated with the transfer stain were irregular-shaped stains that could either be from the object causing the transfer stain or altered preexisting stains. There is a pattern that consists of spatter stains that has originated from the area of the transfer stain. Therefore, the spatter stains could be the result of a cessation pattern from a bloodstained object impacting the floor, or an impact spatter pattern as a result of force having been applied to the preexisting stains. Toward the right side of the photograph, there are two drip stains. Toward the upper left of the photograph, there is a drip stain that was been wiped from left to right.
HJYEN8-5605	There are two drip stains toward the right edge of the photograph. There is a third similarly shaped / sized, but altered, stain toward the upper left corner. A wipe begins at this stain and continues in a curvilinear fashion to the right (ending toward the center top). Numerous minute circular spatter stains (many less than 1mm in diameter) and long elliptical spatter stains, with very low angles of impact, are scattered over much of the photograph. The elliptical spatter stains exhibit directionality indicating movement away from a common source at the lower left corner, forming an impact spatter pattern. The very minute circular spatter stains are widely and almost evenly distributed over the field of view making their source unclear. Portions of the impacted blood source at the area of convergence appear regular. However, the photograph does not include all of the staining. It is also impossible to tell if blood was present (irregular) on the floor or possibly applied to the object surface (sole of shoe for example) prior to impact with the floor.
HPLFEJ-5601	This target appears to have 3 different bloodstain patterns associated with it: Wipe Pattern, Impact Pattern, and Drip Stains. A pattern was observed near the upper left corner of the target and is consistent with a non-spatter pattern. This event is consistent with a drip stain that has been wiped through. The wipe pattern appears to travel in an approximate 9 to 3 o'clock directionality. Another pattern was observed near the lower left corner of the target and radiated diagonally towards the upper right corner of the target. This pattern is consistent with a spatter pattern. The primary portion of the pattern in the lower left corner appears heavier in nature and deposited with force with elongated spatter stains that radiated from the parent stain. Based on these characteristics along with other minute spatter stains deposited sporadically about the tile, this event could possibly be associated with an impact pattern. However, it is difficult to definitively classify this pattern without seeing the pattern in its entirety and assessing the stains that most likely exist above, below, and to the left of the parent stain. Lastly, a pattern was

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
	observed on the right third of the target and is consistent with a spatter pattern. There are 2 stains present in this area that are circular in nature and demonstrate satellite staining. Neither stain demonstrated any obvious or pronounced directionality. These stains are consistent with drip stains.
HYB4DT-5605	A drip stain is located in the upper left hand corner. This stain was altered with a wipe toward the right leaving a perimeter stain and a wipe stain. Two drip stains with possible satellite stains are located toward the right. An impact pattern is located in the lower left. A possible transfer stain is located near the point of impact.
JJW48U-5602	The textured tile surface exhibits an impact pattern in the lower, left hand corner with low angle spatter stains radiating out towards the upper, right hand corner in a fan-like shaped pattern. Within the impact pattern, a partial oval shaped bloody outline is visible. Throughout the tile is a bloodstain pattern consisting of numerous circular shaped bloodstains less than 1 mm in diameter that display no directionality. An altered drip stain is located in the upper, left hand corner that displays a perimeter stain. This drip stain was altered by a wipe through it possibly in a left to right movement. The right edge of the wipe has feathery edge characteristics. In addition, the right edge of the tile exhibits two round drip stains approximately 25 mm in diameter with scalloped edge characteristics and little to no directionality.
JKNJK7-5601	There are multiple bloodstain patterns within this area of item 5. The surface of item 5 consists of a vinyl tile floor and is on a horizontal plane. In my opinion, at the bottom left hand portion of item 5 is a bloodstain which created an impact pattern resulting from an object striking that liquid bloodstain. The pattern produced several satellite stains with directionality radiating from the bloodstain to the upper right hand portion of item 5. I observed three (3) drip stains within item 5. There are two (2) drip stains on the right side of item 5 and one (1) near the upper left hand portion of item 5. The two (2) drip stains on the right are primarily circular with multiple spines. Both drip stains measure approximately 15mm by 15mm. The drip stain near the upper left was altered which created a wipe pattern with directionality from left to right. A perimeter stain is observed with the altered drip stain and measured approximately 15mm by 15mm.
JXV6RH-5601	There is a wipe pattern present in the top left corner of the image which is approximately 8.5cm in length and 1.5cm in width at its widest point. There is a perimeter stain present on the left most side of the wipe pattern. There are two drip stains which measure approximately 1.5cm in diameter located on the right side of the image. There is an impact pattern with a possible void in the center located in the lower left corner of the image. There are also numerous spatter stains present throughout the image that have an implied directionality from the bottom left of the image to the top right of the image.
JZ39U7-5605	Red-brown stain A is a drip stain that has been altered via a wipe, a perimeter stain is present. Red-brown stains B and C are drip stains. Red brown stain D is consistent with an impact pattern.
KGJ4FR-5601	An impact pattern was located on the bottom left corner with spatter stains and spines observed in a radiating distribution across the target. Multiple drip stains were observed on the target. A wipe with a perimeter stain was observed near the top edge of the target.
KKHEBR-5601	An impact pattern (a bloodstain pattern resulting from an object striking liquid blood) was observed in the bottom left portion of the target with associated spatter (bloodstains resulting from airborne blood drops created when external force is applied to liquid blood) extending across the majority of the target. Multiple drip stains (a bloodstain resulting from a falling drop that formed due to gravity) were observed on the target. A wipe (an altered stain resulting from an object moving through a preexisting wet bloodstain) with a perimeter stain (an altered stain consisting of its edge characteristics, the central area having been partially or entirely removed) was observed on the top center of the target.

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
KLEYXR-5602	This pattern consists of a wipe pattern (transfer stain) in the upper portion of the pattern, traveling from left to right, with a perimeter stain at the beginning of the wipe. There are two drip stains on the right side of the pattern, both approximately 15 millimeters in diameter. There is an apparent impact pattern in the lower left hand corner of the pattern with satellite stains with directionality originating from the lower left hand corner.
KM8ZDB-5605	In the image there appears to be four main patterns present: An apparent impact pattern is located in the lower left corner of the image. The impact caused small droplets to radiate outward, predominately toward the upper-right corner of the image with very shallow angles of impact. There is also some staining radiating toward the lower left-corner of the image from this location. Located in the staining that resulted in the impact pattern, there appears to be a possible transfer stain, possibly from the object that impacted the blood that was in this location. The object appears to be oval in shape. In the upper-left to upper-middle of the image there is what appears to be a swipe stain with motion from left to right. This swipe stain may originate from a drip stain that was originally at the left most edge of this stain pattern, but now only a perimeter stain remains. On the right side of the image there are two apparent drip stains. One stain is located near on the far right side of the image, just above the horizontal center. The second is located down and to the left of the first stain, centrally located in the lower-right quadrant of the image.
KNPHDG-5601	Pattern #1: Located in the lower left-hand corner of the photograph, is an irregular- shaped bloodstain, covering an area of approximately 3.5 x 3.5 cm. The right side of this stain has an area, which is generally devoid of blood, but is nevertheless marked on the far right edge by a visible perimeter. Located to the right this perimeter is a series of elliptical spatter stains radiating outward (away from the aforementioned stained area) in a general cone-shaped pattern. These spatter stains vary in size, but do have clear directionality to right and upper right regions of the photograph. Based upon these characteristics, this pattern is best described as an impact pattern. Pattern #2: Located on the right hand side of the photograph are two generally circular bloodstains with scalloping. Each of these stains measure approximately 1.5 cm in diameter. Based upon the morphology of these stains, they are best described as drip stains. Pattern #3: Located in the upper left region of the photograph is a bloodstained area. This area consists of a circular perimeter stain, measuring approximately 1.5 cm in diameters, and an associated generally linear bloodstain emanating from the right side of the perimeter stain. This linear stain is approximately 1.3 cm in width x 7.0 cm in length. The far right end of this stain is marked by feathering/linear striations. Based upon all of these characteristics, the best description of the pattern is an altered stain, resulting from a wipe through an existing drip stain.
KQPEGB-5601	Top of frame show a drip stain and then an object moving through this drop so this is Wipe pattern. Right of frame show 2 drips resulting from the movement of a source so this is Drip Trail pattern. Left corner resulting from an object hit on blood so this is Impact Pattern.
KTXZKW-5601	An impact pattern with the blood source located in the lower left corner and associated spines and spatter stains radiating outward. A wipe with perimeter stain is located in the top left and two drip stains are located on the right side with one towards the bottom of the right side and one near the middle.
KX92PZ-5601	A wipe pattern is located in the upper left corner of the vinyl tile. The movement of the wipe is in a left to right direction, as indicated by the perimeter stain on the left side of the pattern. An impact pattern is located in the bottom left corner of the vinyl tile. Spatter stains are located on multiple areas of the vinyl tile, and have directionality indicating their source as the impact pattern. Their directionality appears to go from the bottom left corner to the upper right corner. Two circular shaped drip stains are located on the right side of the vinyl tile. One of the drip stains has a satellite stain originating from the drip stain.

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
L48PKR-5605	Two main bloodstain patterns are visible in the photo. Bloodstain pattern A is comprised of bloodstains that show a close to 90-degree angle of impact indicating a passive drip pattern. Within Bloodstain Pattern A there is evidence of a Wipe pattern through one of the drips. Feathering of the wipe pattern indicates movement through the drip moving to the right. The second main Bloodstain pattern B is a combination of a transfer pattern that also resulted in spatter pattern. The pattern may have been formed when an object impacted a pre existing blood stain. Within the transfer stain is a void with wicking of blood along the edges. Some of the bloodstains exhibit very low angles of impact which would indicate that the impact occurred very close to the floor. There are also very small circular drops of blood inter-dispersed among the low angle blood stains. These small circular stains could be the result of blood falling out of a parabola as part of the impact portion of Bloodstain B.
LQJX3P-5602	Bloodstain pattern item 5 consists of a complex pattern of different formation mechanisms spreading out over a floor tile with an area of about 27 by 26 cm. i) Three drip stains can be seen at the top left, to the right and the Bottom right. All three appear circular suggesting a 90° impact angle and therefore drip stain as formation mechanism. No directionality is deducable from the edge characteristic. At a closer look two spikes resp. one spike leading rectangular from the outline of two of those stains can be seen with one of them forming a little satellite stain at its farmost end. Mentioned spikes appear most possibly due to a structured surface. The drip stain at the top left corner exhibits features of an altered stain appearing as perimeter stain due to a wipe to the right. ii) At the bottom left corner an area of origin of an impact pattern can be seen spreading all over the tile towards the top right.
LTR8W8-5602	There is an "impact pattern" at the lower left side of the target's surface. 3 "drip stains"- one on the upper left side, and two on the right side of the target's surface. the stain on the upper left side of the target surface becoming into a "wipe".
LUBXGD-5602	Three drip stains are present, one on the right hand side, near the middle of the right edge, one below and to the right of the center of the tile, and one above and to the left of center. The stain above and to the left of center dried briefly, then was wiped, with a motion generally from left to right. This created an altered stain, leaving a thin dried ring of the original drop's edge characteristic. An impact spatter pattern is present, with an area of convergence the lower left hand corner. Near the area of convergence is a series of stains suggesting transfer stain from an object with a somewhat ovoid surface. It appears that the wipe that altered one of the three drip stains may have also altered spatter stains, suggesting that the wipe happened after the spatter was deposited on the target
LXJEFG-5601	A perimeter stain of a drip stain with a wipe through it was in the upper left portion of the target. The wipe was left to right through the bloodstain. Two drip stains approximately 15mm in diameter were on the right side of the target. An area of at least three small pools (less than 15mm) of blood and transfer staining was observed in the bottom left corner of the target. Round/oval spatter stains were also present in this area of the target. Elongated impact spatter stains with directionalities ranging between 1 and 3 o'clock were radiating from the pool/transfer area across the target between 1 and 3 o'clock.
LXQU4X-5605	This pattern was on a horizontal plane and was found in a stabbing victim's residence from which a suspect fled. In the bottom left corner a bloodstain was impacted creating a radiating impact spatter pattern. The directional staining was observed going in a fan pattern in both forward and back directions from the center of the impact stain. There were three drip stains (kind of in a triangular fashion). Two of the drip stains had satellite stains coming off of them. One of the drip stains had a visible perimeter stain with a wipe going through it. The wipe appears to be going in a left to right direction. Pattern Types = Bloodstain, Impact Pattern, Directional, Drip Stain, Satellite Stain & Wipe

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
M3VDVF-5602	Pattern 5 is a complex pattern containing drips, a wipe and a cessation pattern. There are two distinct undisturbed drips on the right hand side of the tile. A third drip is noted in the upper left corner which has been disturbed with a wipe through the drip from left to right. The lower left corner of the tile has a cessation pattern with associated radiating stains from it crossing the tile from the lower left to the upper right.
M44YXM-5605	Three different patterns can be observed, in the upper left part of the image a blood stain pattern corresponding to WIPE is observed, characterized by a pre-existing blood stain defined by its contour / profile and that has subsequently been altered by the contact of another surface that has printed a movement from left to right. To the right of the image, you can see two DRIP STAINS, resulting from a drop formed by gravity that falls on the surface. In the lower left part of the image, a TRANSFER STAIN is observed where the shape of the surface containing blood can be distinguished and placed in contact with the surface that does not contain blood. In addition, there is also an IMPACT PATTERN characterized by spiky spots as a result of the impact of an object impregnated with blood on the surface under study.
M6ZBXW-5601	There are two, ~3mm round stains in the lower and mid right of the photograph with characteristics consistent with drip stains. A third bloodstain with similar characteristics is present in the upper left area, ~ 3mm round perimeter stain - an altered drip stain with characteristics of a wipe with the feathered edge located to the right of the perimeter stain along with a darker stain located next to the feathering indicating a left to right movement through the bloodstain. Another bloodstain is observed in the lower left corner - this stain has long spines projecting across the image, bubble rings can be observed under 10X magnification within this bloodstain. The bubble rings in conjunction with fine misting of bloodstains across the image, <1mm in diameter, are indicative an expiration pattern. The expiration pattern and spines located at the wipe stain are unaltered, indicating that they were deposited after the wipe.
M8QFP9-5601	Spatter bloodstains with directional features indicating spatter from left bottom corner to right corner. Spatter long and thin indicating impact low or near ground height. Three drip stains, one drip stain with a wipe through it in the top right.
MDXXVM-5601	There are two (2) drip stains on the right side of the target. A wipe is present at the top of the target. There is an impact pattern at the bottom left corner of the target.
MEC928-5601	Bottom LHS of photo: Combination pooling and transfer staining with spatter radiating out from this area. Dried material within pooled/transfer staining. Acute, elongate, eliptical spatter stains radiating out from transfer staining in fan shape arrangement. Stains are very acute which indicates a source of blood close to or on the floor. Range of acute stain sizes sub mm - 1mm width. > 30 stains. Impact pattern from an impact into liquid blood close to or on the floor. Very fine circular spatter stains distributed over most of the surface. In excess of 100 stains, all sub mm. Three drip stains, at least two with associated satellite spatter on the RHS of the photo and one on the left. Stains appear to have possible clotted or dried material within each of the stains. The drip stain on the left has also been wiped through from left to right, leaving a perimeter stain and wipe pattern.
MGE83Z-5601	There are two drip stains with associated satellite stains and another apparent altered stain, a drip stain that has been wiped to produce a perimeter stain with accompanying wipe. There is a pattern in the bottom left corner, at least some of which appears to be a cessation pattern made as a result of an object wet with blood landing on the tile with some force and resulting in some spots with directionality away from the source.
MHNE2L-5601	In the upper left corner of the photograph, an altered stain pattern can be observed. The altered pattern consists of a perimeter drip stain with a wipe stain. Based on striations and edge characteristics, the wipe stain appears to have a left to right directionality. In the lower right corner of the photograph, two additional drip stains can be observed. They are characterized by

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
	their circular shape, regular edge characteristics, and non- linear/curvilinear distribution. Beginning in the lower left corner of the photograph and moving across towards the upper right corner of the photograph is an impact pattern. The oblong nature of the spatter stains and radiating distribution characterized by the stains' changing directional angles indicate that the area of convergence for the impact pattern is near the lower left corner of the photograph. In the lower left corner of the photograph, an additional bloodstain is present. The stain contains some characteristics which could indicate that some force was enacted on a liquid volume of blood to create the impact pattern previously described however, due to the irregular non-circular/elliptical nature of the bloodstain, the stain cannot be further classified.
MHUFGU-5605	Several drip stains are observed on the floor/target. A wipe was observed through one of the drip stains, resulting in a perimeter stain. Several spatter stains radiating outward from a center stain that appears disturbed (in the lower left hand corner), consistent with an impact pattern, were observed on the floor in the area of the drip stains.
MLVC9A-5605	Drip stains located on the right side of the tile. The peripheral edges of the stains indicate almost 90 degree impact with the target surface. Wipe stain at the top of the tile through a pre-existing drip stain . Directionality indictes that an object has moved through the stain from left to right. Small pooled bloodstains in the lower left corner of the image. Impact bloodstains radiating left and right from the area. Further information required to make definitive definition (photographs, tile in context with scene). Likely that an object has impacted with existing bloodstains on the target surface.
MRVJ86-5605	The photo shows three distinct areas with bloodstains. Near the right side of the image are two stains which are circular and are approximately 16 mm in diameter. These two stains are typical of drips stains resulting from falling drops that formed due to gravity. The circular shape of the blood stains indicates directionality approximately 90 degrees to the target surface when the blood was deposited. Close to the top left corner of the image, there is an altered stain characteristic of a wipe pattern moving left to right. The stain is approximately 85 mm long with a feathered edge characteristic on the right side. On the left side, there is a circular perimeter stain approximately 16 mm in diameter. In the lower left corner of the image is an irregular shaped bloodstain pattern with satellite stains radiating out from it. The center part of the pattern is oval shaped and measures approximately 15 mm wide by 30 mm long. There is a partial void in the center of the oval. Satellite stains cover from the lower left corner all the way to the upper right corner of the image. To the right and above the oval perimeter shaped part, the satellite stains are long and narrow from having a very low angle of impact. These bloodstains have directionality that shows an area of convergence back to the bloodstain with the oval perimeter. To the left and below the area with the oval perimeter is a portion of the stain that has multiple long narrow stains that appear to radiate out from the oval shaped area, however these stains are much thicker / heavier than those that are above and to the right and do not have clear directionality. Also present are sub-millimeter circular bloodstains dispersed over almost the entire image.
MT6NKT-5605	Drip stains are observed on the surface. An altered stain in the upper left was wiped through and perimeter staining is observed. An impact pattern originates in the bottom left corner of the picture that resulted in spatter stains across the surface of the photo.
MYDF2Y-5601	Multiple drip stains observed throughout target. Wipe pattern with perimeter stain observed in upper middle. Impact pattern in bottom left with radiating spatter stains across target observed.
MZ94FM-5601	An impact pattern is present at the bottom left corner of the target surface with outward directionality. A drip stain with 3 drops is present with a wipe pattern through one of the drip stain drops causing an altered stain and skeletonization to that drop.

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
N6HM9E-5601	Item 5: Vinyl tile- horizontal. Near the top of the image, there is a Skeletonized stain on the left edge of a wipe. The wipe traveled through a bloodstain after it had begun to dry… resulting in the skeletonized stain and a wipe (left to right). At the bottom left corner of the image, there is an impact pattern, from an object striking liquid blood. The object could be something like a shoe/boot. There are spines present which indicates some level of force. At the right edge and middle of the image, and slightly below and to the left, there are two drip stains. They have irregular edges which could be due to the motion/movement of the bloodsource, the texture of the target surface (vinyl tile), and/or the height from which the blood fell. There are satellite stains associated with the parent drip stains, especially the drip stain noted at the far right.
NAQCR3-5605	There is a large deposit of blood in the lower left-side corner of the image that has a liner separation dividing it into two parts. The are long narrow spatter stains radiating outward from the deposit in a radial distribution from the blood deposit across the substrate from the lower left-side corner toward the upper right-side of the image. The direction of travel for the spatter stains is from the blood deposit toward the upper right-side of the image. In addition, there larger linear stains associated with the deposit of blood in the lower left-side corner of the image. The observed characteristics of the spatter stains are consistent with being an impact pattern originating from an impact into the deposit of blood in the lower left-side corner. On the right-side of the image are two round to near round bloodstains with diameters of approximately 15 mm. The observed characteristics and random distribution of these two stains is consistent with being drip stains. There is an altered bloodstain in the upper left- side of the image that appears to have been a round or near round bloodstain of similar size to the previously described drip stains. The alteration is due to a wipe through the bloodstain moving from left to right. The wipe pattern appears to transect several of the spatter bloodstains from the previously described impact pattern. This is indicative of the wipe that altered the bloodstain occurring after the spatter bloodstains were deposited on the substrate.
NDPFBU-5601	Item 5 is a color photo depicting bloodstains/bloodstain patterns on a textured vinyl tile in the horizontal plane. Two drip bloodstains are in the lower right area of the photo. The drip stains are approximately 15 mm in diameter and exhibit scalloped edges with some associated spines and satellite spatter stains. These drip stains are intermixed with the impact spatter pattern. A third drip bloodstain that has been wiped through creating a perimeter stain is located in the upper left area of the photo. The wipe direction is left to right in a mostly horizontal orientation. The wipe stain has defined edges. These bloodstains are intermixed with the impact spatter pattern; however, it was not possible to determine the sequence of deposition. An impact spatter pattern originated from the lower left hand corner of the photo and has a radiating stain distribution which covers a majority of the photo. The spatter stains range in size from less than 1 mm to 2 mm. Numerous near circular less than 1 mm to 1 mm spatter stains are present over the entirety of the photo. It was not determined if these spatter stains are artifacts and/or related to the impact spatter pattern and/or the drip stains.
NJK2MQ-5601	Item 5 contains drip stains on the bottom and middle right and a drip stain in the upper right. This drip stain appears to have a wipe with left to right directionality through a partially dried, skeletonized stain with feathering to the right. There is an impact pattern stain in the lower left with numerous, elongated elongated elliptical stains radiating up and to the right with a shallow angle of impact.
NPHWZV-5601	The vinyl tile in Item 5 exhibited a complex bloodstain pattern. Two drip stains towards the right side of the tile measured approximately 14-15mm in diameter and exhibited scalloped edges with some associated satellites and spines. These two drip stains were approximately 80mm apart. A drip stain towards the upper left corner of the tile measured approximately 14mm in diameter and was wiped through from left to right creating a perimeter stain. Feathering was visible towards the right side of this wipe. The bottom left corner of the tile exhibited an impact bloodstain pattern with a spread of approximately 40mm and with radiating spatter stains

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
	towards the upper right hand corner of the tile. Near circular spatter stains measuring smaller than 1mm in diameter were observed throughout the tile. The radiating bloodstains formed an area of convergence in the bottom left corner of the tile.
NPMARX-5602	Multiple drip stains deposited throughout area (right edge, towards bottom right corner, towards upper left corner). Impact pattern in the bottom left corner with satellite stains emanating towards upper right corner and bottom left corner. Wipe pattern through drip stain towards upper left corner. Wipe pattern direction is from left to right with disruption of blood deposited from the impact pattern.
NQDKEK-5601	There are three drip stains in the photograph. Two of the drip stains are on the right side of the photograph. The third drip stain is on the top left of the photograph. This stain has been wiped creating a wipe stain and leaving behind a perimeter stain. In the bottom left corner of the photograph, there is an impact pattern and a transfer pattern.
P7PNNZ-5605	A wipe is observed in the upper left of the photo. The wipe originates at a circular drip stain and appears to move from left to right. A perimeter stain of the wiped drip stain remains visible. Two drip stains are observed on the right side of the photo. The drip stains have jagged edge characteristics, and both of the drip stains have satellite stains around their perimeters. An impact pattern is observed in the photo. There are numerous associated spatter stains showing directionality radiating out from an impact site in the lower left corner. The impact site is the area of convergence of the spatter stains. Numerous very small (less than 1mm) circular possible bloodstains are observed over the entire photo. The stains are so small it is difficult to see if they have any defining characteristics in them. It is also possible these small stains are an artifact of the tile and not bloodstains at all. More information is needed before an accurate description can be given.
PJXWJH-5601	There are two (2) drip stains on the middle and bottom areas of the right side of the target. There is a wipe on the upper left area of the target. There is an impact pattern on the bottom left corner of the target.
PMVMJ3-5605	In the bottom left hand corner, there is an area of heavy pooled blood staining which has impact spatter radiating from it. (Impact spatter in the form of directional stains and small spots of blood). In the area of heavy / pooled blood staining there is also a possible transfer print – Possibly a footwear mark and a void area. There are two large drips of blood, one at the right edge and one to the lower right; both are associated satellite staining. There is a further large drip of blood to the upper left which has been wiped through producing a smeared stain and leaving a halo or perimeter stain. It appears that the smeared drip was wiped through after there was impact into the area of heavy / pooled blood staining. However from the quality of the photo I cannot be certain.
PPXKRA-5601	The upper left corner of pattern has wipe with a perimeter bloodstain. The wipe measures approximately 8 3/4 cm at it's longest point. There is a possible drip trail with 2 drops in the right hand side of the pattern which measure approximately 1 1/2 cm in diatmer. The bottom left hand corner has an impact stain with a possible void in the middle of it with satellite stains around the perimeter. There is spatter stains starting at bottom left of pattern toward upper right hand corner.
PUW8YY-5601	The image shows blood stains on a section of textured vinyl flooring with scale. The stain in the lower left corner of the image is a blood stain with non-linear radiating satellite stains moving outward and away from the parent stain (towards the upper right corner of the image). The farthest satellite stain from the parent stain appears in the upper right corner of the image and is approximately 32cm from the parent stain. The image contains three (3) drop stains; one (1) of these drip stains has a wipe pattern thru the stain leaving behind a perimeter stain. The wipe/drip stain is located above and slightly to the right of the stain located in the lower left corner of the

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
	image. The perimeter stain is approximately 14.9mm x 15mm and the wipe moves from the stain towards the right side of the image in a slight downward arch. This stain appears to have small satellite stains around the parent drip stain. The second drip stain is located below and to the right of the first drip stain, with the wipe pattern, in the image. This drip stain had spines along the perimeter edge of the stain and satellite stains radiating away from the parent stain. This stain is approximately 14.5mm x 15mm. The third drip stain is located above and to the right of the second drip stain and is located near the right edge of the image. This stain has spines along the perimeter edge of the stain and had satellite stains radiating away from the parent stain. This stain is approximately 14mm x 14.5mm.
PVNV4T-5605	A deposit of blood in the lower left corner of the image was struck creating a low angle impact pattern across toward the upper right with drops showing directionality. Multiple large drip stains were present in the image with one swiped through leaving a perimeter stain. A collection of small, mostly round deposits were present throughout the pattern source unknown.
Q27MTX-5601	Lower left hand corner, large stains surrounded by elongated spatter and some small spatter. Spatter ranges in size from <1mm to ~2.8 cm. Spatter concentrated in lower left corner but does expand to upper right corner. Size of spatter and density decreases away from the bottom left hand corner. Spatter stains appears to radiate in a star pattern away from the bottom left hand corner off the picture and across the picture. In my opinion, this is an impact pattern. Given elongated shape of spatter and direction of spatter, impact appears to have occurred at a low level in the bottom left hand corner of the picture. On the right hand side there are two large circular blood stains approximately 1.5 cm in diameter. There is also a third towards the upper left side of the picture but this is now a perimeter stain with the centre being disrupted post deposition creating a wipe going to the right. The large circular stains appear to have been deposited from directly above and are likely to be drip stains.
Q4FZQL-5601	Four distinct patterns were observed: 1- A drip stain was observed on the lower right side. 2- Just above the drip stain was another passive blood stain which may have been a part of a drip trail as it exhibited scalloped edges which indicate that the direction of travel would be from the upper left side to the lower right side. 3- A wipe pattern was observed on the upper left side of the image. The edge characteristics of the stain suggest that the blood source may have been a possible drip stain and that an object/item may have been dragged through it resulting in a wipe pattern travelling from left to right direction. 4- An impact spatter stain was observed on the lower left corner of the image. This stain may have been caused by an impact on a possible blood source that was present in the lower left corner. Spikes exhibited directionality characteristics that indicate the location from which they may have originated. The area of convergence was estimated by observing the directionality of the stains displaying spike characteristics, it was determined that the blood stain located at the bottom left corner of the image may be the source of those spikes and that the direction of travel/spread may have been from the bottom left corner towards the upper right corner.
Q8UBLH-5602	A wipe is observed in the upper left quadrant of the image, with directionality from left to right. There is a circular perimeter stain on the left side of the wipe, indicating that the wipe originated as a passive drip. Unable to determine any characteristics of the object that created the wipe. An impact pattern is observed in the lower left corner of the image. It appears as though some quantity of wet blood on the vinyl was impacted by an unknown object. Sharp spine-like satellite stains emanate outward from the parent stain and can be observed traveling across the entire image and into the upper right corner. Two passive drip stains are observed on the right side of the image. Their edges appear scalloped due to the surface texture of the vinyl. There is minimal projection of spine-like satellite stains emanating from the passive drips due to their low force of impact.

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
QA8NHR-5601	A bloodstain pattern consistent with being IMPACT SPATTER was observed throughout the target surface. Numerous 1 mm to 2 mm elongated stains showed directionality from the lower left, toward the upper right of the target. This indicated the arear of convergence to be at the lower left corner, near or at floor level. Sub-1 mm stains were also observed throughout the target. Two (2) passive DRIP STAINS were observed at the right side of the target, each measuring approximately 15 mm in diameter. One (1) WIPE stain was observed at the upper left of the target measuring approximately 15 mm wide x 8.5 cm long, showing directionality from left to right. The wipe stain's source originated from the adjacent PERIMETER STAIN, ...which originated from an approximate 15 mm drip stain.
QWEF94-5602	In the bottom left corner a transfer stain. The transfer stain is created by an object that hits the floor with some force (impact). The impact in blood creates spines and elongated spatter stains. Spread out over the vinyl tile, hundreds of tiny circular spatter stains of 1 mm and smaller. Three individual drip stains. One drip stain is near circular, the second drip stain has a directionality from diagonal upper to botom. The third is a skeletonized drip stain that is wiped out in the direction from left to right.
R7F43L-5601	2 x drip stains without directionality, satellite stains noted projecting from these. 1 x drip stain without directionality which has been altered to a perimeter stain with wipe pattern. Impact spatter consisting of a number of blood spots with directionality showing area of convergence at bottom left corner. Length of spots indicates low angle of impact / area of origin. Number of very small blood spots without directionality evenly dispersed. Heavy blood staining at bottom left corner with apparent transfer stain at impact spatter area of convergence.
RDW4BQ-5605	There are 3 drip stains: one near the top left corner, one near the center right edge, and one near the bottom right corner. Satellite stains are present for the bottom right and center right drip (parent) stains. The top left drip stain has been altered, leaving a wipe pattern (traveling from left to right) including a perimeter stain. There is an impact pattern present over much of the target. The area of convergence of the radiating impact pattern stains is near the lower left corner.
RHBDH9-5602	An impact pattern was observed from the lower left bottom area towards the upper right area on the vinyl tile. A perimeter stain with a wipe pattern was observed with a left to right motion on the upper left area on the vinyl tile. Drip stains were observed on the right area on the vinyl tile. Spatter stains were observed on the center areas on the vinyl tile.
RKCF96-5601	This is an image of a complex bloodstain pattern on vinyl tile – horizontal plane. The entire pattern covers an area of ~27cm x 27cm (square tile). There are three near circular drip bloodstains, each exhibiting scalloped edges. The drip bloodstain in the upper left corner has been wiped through (horizontally from left to right) and exhibits skeletonization around the original drip bloodstain. There is an impact pattern that originates in the lower left corner of the tile. Numerous elongated and elliptical spatter bloodstains radiate outward from the point of impact. There are also numerous near circular bloodstains throughout the tile, which may be associated with the impact and/or the drip bloodstains. Conclusion: Drip Bloodstains, Wipe, and Impact Pattern.
RY2CGU-5601	Impact pattern: The pattern consists of elongated elliptical stains in a radiating pattern from an impact to a blood source. The blood source is located at the lower left corner of the photograph. The elliptical stains radiate from the lower left corner with a directionality of left to right throughout the image from the lower left to top right corner. Drip stain: Two drip stains are located near the right edge of the photograph with a third skeletonized drip stain at the top left corner. The stains are approximately fourteen to fifteen millimeters in diameter. There is insufficient information to further identify this pattern. Wipe: A preexisting drip stain was altered by an object moving through the original stain. The pattern has feathered boundaries, a skeletonized ring of the original stain, and diminished volume throughout. The movement of the pattern is in a left to right directionality. The stain is located at the top right corner of the image.

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
	Bloodstain pattern: Numerous minute circular bloodstains with a diameter less that one millimeter are observed throughout the photograph. There is insufficient detail to further identify the pattern.
RYVZVJ-5601	An impact pattern is located at the lower left corner on a horizontal plane that radiates outward. A drip stain consisting of three blood droplets was observed. In the upper left corner, an altered blood stain was observed to be a wipe pattern moving in a left to right motion in addition to the presence of a perimeter stain was present
T9YH42-5601	Overall target appears to contain at least 3 separate stain patterns. The dominant pattern on the target is an apparent SPLASH PATTERN with a parent stain in the lower left corner of the target and satellite spatter that radiates outwards including upwards and towards the right. Alternatively, this stain in the lower left portion of the target could also suggest an IMPACT PATTERN with the same radiating distribution. The view of the full pattern is limited by the size of the target and additional observations of the areas surrounding the parent stain would enable further classification between the two possibilities. Three DRIP STAINS are also visible on the target - one on the right edge of the target, one in the lower right quadrant, and one in the upper left quadrant. Finally, a WIPE PATTERN is noted as the drip stain in the upper left quadrant has been altered after it was deposited. The wipe pattern has left a perimeter stain behind as the blood is moved from left to right across the target.
TL6LBG-5602	This complex pattern consists of three drip stains, one at approximately 3 o'clock from center, one at approximately 5 o'clock from center and one at approximately 10 o'clock from center (as imaged). The drip stain at 10 o'clock is a perimeter stain with a wipe traversing from left to right across it. Impact spatter originating from the approximately 8 o'clock position corner crosses the image. Located in the approximate area of convergence of this pattern are a number of curved transfer stains, presumably from the object that produced the impact pattern.
TMGVBN-5605	There are two primary events, but it could not be determined which occurred first: 1. Three drip stains are observed. The drip stain in the upper left corner was altered into a wipe stain, by the action of some object moving from left to right, which turned the drip stain into a perimeter stain. 2. An impact stain is observed in the lower left corner, which produced projected stains which converge at the impact stain. Several tiny, round, spatter stains were observed through the image, which may be the result of the impact, but could also be the result of cessation if the object were large and bloody but with a small footprint, such as a hammer or large knife.
U6DK4W-5601	Impact Pattern, Wipe (after Drip Stain was deposited), Drip Stains (3)
ULHJYX-5601	Observation A: Drip Stains – Three (3) total stains. Three (2) drip stains, approximately 15mm, circular; two (2) drip stains are located along the right edge of the photograph; one (1) perimeter stain is located at the top left of the photograph. Observation B: Wipe Pattern – moves through the top left drip stain; moves from the left to the right; approximately 8cm long. Observation C: Impact Stains – numerous low angle impact angle. Originating from the lower left corner radiating toward the top right. Possible impact stains radiating toward the lower left. Observation D: Void Pattern – One (1) void pattern in the lower left corner; oval perimeter stain, approximately 4cm x 1.5cm. Observation E: Pool – One (1) blood pool located in the lower left corner; approximately 2.5cm x 1.5cm.
UP4JYE-5601	There are two (2) drip stains on the right side of the target. On the upper left side of the target is the perimeter stain of an apparent drip stain that has been altered via a wipe. On the bottom left corner of the target is an impact pattern with numerous spatter stains radiating out from it which show directionality back to the parent stain.
UP8WQG-5601	Lower Left Section: Impact pattern with low angle spatter stains radiating to towards the upper right corner of the target surface. Right Section: Two apparent drip stains with possible satellite

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
	stains originating from parent stains. Upper Left Section: An altered stain consisting of a wipe pattern with a left to right directionality. A perimeter stain is present following the wiping action.
UPNZEG-5602	The following patterns were observed on the target: Drip stains were observed on the right side of the target. A wipe that created a perimeter stain was observed on the upper portion of the target. An impact pattern was observed diagonally across the entire target with the area of convergence at the lower left corner where an apparent void and a transfer stain were also observed.
UXXECC-5602	In the upper left hand part, a perimeter stain resulting from a drip stain altered by a wipe from left to right. In the right hand part, center and lower, two drip stains. From the lower left hand corner towards the upper right hand corner, a transfer stain surrounded with elongated spatter stains. Finally, numerous small diameter (<1 mm)round spatter stains are observed on the vinyl tile.
V6BANJ-5601	Based on the choices provided, the following patterns were observed: An impact pattern was visible in the lower left corner of the tile that produced spatter stains extending outward. Two drip stains were visible on the right side of the tile. An altered drip stain (perimeter stain) was visible in the upper left side of the tile. The stain was disturbed and a wipe pattern was visible extending from the drop.
V7RWBL-5601	An impact pattern is present on the target with the blood source located in the lower left corner of the target. Spatter stains are present with directionality from the lower left corner of the target to the upper right area of the target. Two (2) drip stains are present toward the right side of the target. A wipe is present with an associated perimeter stain in the upper left/center area of the target.
VB3G7T-5601	1. The top position of picture is wipe pattern: (Wipe = An altered stain resulting from an object moving through a preexisting wet bloodstain.) It is a drip stain that had an object wiped through after deposited on the floor for some time. The drip fell at 90 degrees to the surface area. Then an object may have brushed through this drip stain to create this Wipe Pattern. Due to the outer edge of the bloodstain drying, which can deduce that this drip stain must has been there for some time. 2. The right hand position of picture is Drip trail : (Drip Trail = A bloodstain pattern resulting from the movement of a source of drip stains between two points.) On the right hand side of this photograph there is a two drops of drip stain, which possibly be a drip trail. These two drops have a similar size of a drop which can deduce that these drops may have fell from the same height, where the blood source originated. However, there might be some interference with an upper drop which leads to a drip pattern. Furthermore, accompanying blood is also discovered around these two drops as well. 3. The lower left hand position of picture is impact pattern: (Impact Pattern = A bloodstain pattern resulting from an object striking liquid blood.) As shown on the lower left hand side of the photo, it shows that there used to be a pool blood deposited in that area. Then before the pool of blood has dried, there has been an object that has fallen into a pool of blood which left to an impact pattern that dispersed towards the upper right corner of this photo.
VD6FGK-5601	Three drip stains, one of these to upper left of image has been wiped when partially dried. Impact spatter radiating from lower left corner. Indicates impact with floor. Possible transfer pattern in blood in lower left corner but cannot be certain without seeing rest of the pattern in this area as could also possibly be part of the impact pattern - unable to determine without seeing rest of pattern.
VTEUPM-5601	There appears to be 3 drip stains. One of which has been wiped (the skeletal margin is still present). No drip trail could be determined as there is no clear directionality in the drips as a whole. One drip however (far right, middle), seems to be traveling down and slightly right. In the lower left, there was a blood stain of unknown origin. These stains were most likely caused by

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
	something impacting the original stain and projecting the stains from the parent stain (up and to the right).
VTJ8GQ-5605	Elliptical spatter stains were distributed across the target. An area of convergence at the lower left corner was established from these spatter stains. The lower left corner contained transfer stains. A portion of the stains at the lower left corner may have been altered. Circular spatter stains less than 1 mm in diameter were distributed across the entire tile. Three drip stains were present. The topmost drip stain was wiped from left to right; a perimeter stain remained. Satellite stains were associated with the rightmost drip stain.
VUAG4C-5602	At the bottom right and in the right middle, two drop stains are observed and the diameter of the blood is about 11 mm. Drop stain seen in the center of the right side looks like to be in the direction of the lower right, so that the person who bleeds or picks up a bloody object has moved to the lower right. In the upper left part, skeletonized stain is observed, and blood traces extending to the right side from the skeletonized stain are observed. It is assumed that the trace of striation looks like a wipe and it is made by contacting and rubbing in the right direction before the drop stain dries out. In the lower left part, there is only trace of contours, and blood stains are radially distributed in the upper right and lower left directions and these stains are assumed spatters. Blood left in the lower left part is a form that can be produced when the object on which the blood hits the bottom surface or when the object hits the surface where the blood is accumulated.
VZYXN4-5605	The image contains 3x drip stains, one of which has been altered due to a wipe moving through the stain and transferring the blood to the left. In the lower left corner there is an impact pattern with spatter stains extending across the floor towards both the lower left corner and the upper right corner.
W2AZB3-5601	2 x circular stains on right hand side, approx. 15mm in diameter. scallop edge characteristics and spines, some darker coloured areas within the stains, distinct margins (appear to be blood that has gathered in the grooves of the textured tile). Pattern: 2 x drip stains. 1 x elongated stain in upper left hand side, circular perimeter stain on left side of pattern approx. 15mm in diameter, light coloured, irregular margins, striations on right side of pattern, irregular edge characteristics. Pattern: wipe of pre-existing wet drip stain. Irregular shape staining in lower left corner, some elongated stains radiating out from what appears to be parent stain, linear staining within pattern which is possibly reflective of a transfer source, distinct margins. > 30 x elliptical stains approx. >1-2mm in diameter, distinct margins, some with associated satellite spatter which appear to originate from the lower corner. Pattern:impact pattern caused by a blood bearing object impacting the tile also causing a transfer stain. Cannot exclude that some of the spatter stains are as a result of cessation cast-off. Also cannot exclude that the impact was into a pre-existing wet bloodstain. Note: limited interpretation as not all of pattern visible. >200 x circular stains <1 mm in diameter, distributed across the tile. Distinct margins. Pattern: spatter pattern, possibly associated with pattern at lower left corner
W6R8QN-5601	An image of vinyl tile in the horizontal plane with multiple bloodstain patterns. I observed an altered stain near the top consisting of a wipe moving from left to right. On the left side of the wipe is a perimeter stain from a possible preexisting drip stain. In the lower left corner is an impact pattern with spatter stains radiating towards the upper right corner. The directionalities of these spatter stains indicate the area of convergence. Two drip stains, one with a possible satellite stain, were observed on the right.
W74VY3-5602	Two drip stains on right hand side of picture. Drip stain in top left corner, which has been been altered / wipe with movement from left to right. Impact pattern (area of convergence in bottom left corner)with elliptical spatter stains with directionality. Transfer pattern in bottom left corner

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
W8EWK2-5601	The bloodstain in the upper left corner is a wipe pattern, which an object wiped through a preexisting drip stain. A perimeter stain is also observed. The bloodstain in the lower left corner is a transfer stain, which upon impact to the surface created a spatter stain in a direction of left to right, down to up. There are two additional drip stains located in the right center and lower right corner of the target.
WC46YM-5605	Impact pattern lower left hand side, projections spread to over top of the right hand side. Two drip stains approximately 15mm in diameter on right hand side. One apparent drip stain with wipe from left to right, skeletonised stain remains.
WCAMAL-5601	Complex bloodstain pattern over the entire 10.5" x 11" frame of the image. Two circular stains (drip, 15mm in diameter) with smooth margins. An altered circular stain (drip, 16mm in diameter) is near the upper left corner with 8.5cm lateral wipe to the right. An additional oval perimeter bloodstain is in the lower left corner with ligaments and ~25 radiating elliptical spatter stains to the right and upward. The largest of these elliptical spatter stains is 1.5mm x 12mm. An extension of the possible transfer stain and/or broken radiating ligaments are also to the left and downward from the oval pattern, extending beyond the frame of the image. There are also some irregular shaped bloodstains within the pattern area that appear to be unaltered. More than 100 submillimeter satellite stains are throughout the the frame of the image. Conclusion: Three drip bloodstains, one altered with a wipe from left to right. One impact bloodstain pattern and one possible transfer stain.
WCV4H2-5601	There are many spattered bloodstains with an acute angle of impact radiating out from transferred bloodstaining in the lower left corner. This indicates there was an impact of a bloodied object onto the floor. Note: I cannot exclude the possibility of two separate events; ie. a forceful impact into blood on or close to the floor and contact with a bloodied object. There are also three drip stains in the image; two towards the right of the image and one towards the upper left. The drip stain towards the upper left of the image has been altered by way of wiping from left to right leaving a perimeter stain and feathered edges to its extreme right.
WJBY7H-5601	There are two (2) drip stains; one (1) at the center right side of the target and one (1) at the lower right side of the target. There is a wipe through a pre-existing drip stain at the upper left side of the target. A perimeter stain remains from the pre-existing drip stain. There is an impact pattern at the bottom left corner of the target with associated spatter stains.
WJM87P-5601	In this scenario we can observe a complex bloodstain pattern. In the lower left corner there is an impact pattern which has producted a lot of satellite stains whose directionality is toward the upper right corner. There are also 3 drip stain, one of them is an altered stain.
WKEVBJ-5601	There is a transfer stain in the lower left corner, indicating that an object wet with blood has forcibly struck the target area, resulting in the formation an impact pattern of spatter stains radiating out from the point of origin. In addition the target area bears three drip stains resulting from drops of blood having fallen under gravity. Each drip stain has associated satellite stains. The drip stain on the upper left of the target area has partially dried and then been wiped from left to right, leaving behind a perimeter stain.
WUQV6U-5602	Pattern number one: two drip stains are observed on the right of the image, approximately (298 mm from the left,104 mm from the top) and (232 mm from the left, 190 mm from the top). Pattern number two: one perimeter stain was observed on the top left of the image cause by a wipe pattern, approximately (70 mm from the left, 48 mm from the top). Pattern number three: Impact pattern on bottom left of the image, approximately (30 mm from the left,250 mm from the top).
WWWDAH-5601	An impact pattern is present in the lower left corner extending towards the upper right corner and right side of the target. In the upper portion of the target, a wipe extends horizontally with a visible perimeter stain on the left side of the stain. Two (2) drip stains with associated satellite

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
	stains are present on the right side of the target.
XFNLYZ-5602	The pattern in image -item 5 consists of: 1. Three Drip stains, 2. Impact spatter. Three Drip Stains (possibly part of a Drip Trail) comprising: Two drip stains (impact at approx. 90 degrees) are visible on the right of the image. There is one drip stain in the left of the image, which appears to have partially dried and was altered by an object passing through it resulting in a wipe pattern with a perimeter stain remaining at the origin. Impact spatter, originating in the lower left hand corner of the image (lower left quadrant) comprising stains of varying sizes, demonstrating directionality and radiating from an area of origin. This is possibly due to an object making forceful impact with wet blood on the surface.
XGV28R-5605	I observed in item 5, a cast-off patterns resulting from the stabbing the body victim. there is also a wipe pattern on the left top of the picture and two drips stain on the right of the picture with 12mm size resulting from gravity force and I assume that it is from an object (weapon, Knife,etc.)
XLXQ2L-5601	Starting from the upper left-hand corner of the image and moving to the right, an altered stain is present that is best described as a wipe. This altered stain moves towards the right on the image and measures approximately 1.25 cm in width by 8.5 cm in length. Spatter stains are present in the wipe area as well however; caution must be exercised when attempting to sequence the wipe versus the spatter stains. Moving to the right and downward on the image from the wipe are two drip stains the measure approximately 1.5 cm by 1.5 cm. In the lower left-hand corner of the image is a displaced volume of blood that has linear stains radiating from it. This bloodstain is suggestive of an impact pattern. The directionality of the spatter stains is primarily upward and to the right. The spatter stains appear elliptical and measure from less than 1 mm to approximately 2 mm in width. Caution must be exercised when interpreting this displaced volume of blood as the texture of the target material could potentially create a pattern similar in appearance when a volume of blood strikes the surface. Mechanisms such as a splash or a projected pattern could only be ruled out as potential mechanisms if additional case specific information was available from the proficiency test provider and the texture of the target could be examined. In addition small circular spatter stains that measure approximately 1 mm by 1 mm, or less, in size are also present throughout this target.
XXLYFE-5602	An impact spatter pattern is present in the lower left corner of the image as evidenced by the area of convergence and the radiating elliptical stains. Three drip stains are also present in the image; one in the upper left corner, and two on the right side. All three show some spines present but are mostly round and suggest an approximate 90 degree deposition. The drip stain located in the upper left corner of the image is a complex pattern consisting of two patterns. The drip stain was deposited, some time passed as evidenced by the perimeter staining, and was subsequently altered via a wipe. The wipe is evidenced by the perimeter staining and feathering present on the terminal ends of the pattern.
Y49LXJ-5605	There is an impact pattern. The point of impact appears to be in the lower left corner of the image. Smaller drips of blood are emanating from the point of impact. These stains all radiate from the point of impact. There are also three drip stains. One of these drip stains has a wipe pattern through it leaving a perimeter stain where the drip stain once was.
Y7T6PL-5602	In the lower left corner there is an impact spatter pattern which looks like a bloodied object has landed on the tiles and the spatter radiates from there. We see the elliptical stains that go up and to the right come from the same area/impact. There are two dripstains to the right. There is one altered stain (has been a dripstain) close to the upper left corner, and from it goes a wipe.
YKDKRL-5605	This image contains two drip stains in the lower right side of the photo. There is a wipe stain in the upper left of the image with directionality indicating movement from left to right. At the origin of the wipe stain is a circular perimeter stain revealing that the original stain was also a drip stain. In the lower left corner there is an impact pattern

TABLE 3: Recognition and Description

Item 5, continued

WebCode-Test	Detailed Pattern Description
YZQTTP-5602	The blood pattern at the lower left conner is impact and the photo also shows the radical distribution of impact spatters in diagonal direction. The pattern on the upper left is wipe. The two stains on the right are drip stains.
Z3A8U6-5605	Pattern recognition : Drip stain : two circular stains with a diameter of about 15 mm. Wipe pattern in a pre-existing drip stain. Impact pattern : Impact on the target surface or at very low target surface level that created elliptical spatter stains. Spatter stains : small circular spatter stains with a diameter of less than 1 mm. The area of origin of these spatter stains is different from that of the impact pattern
Z6X84F-5602	blood staining around lower left corner of the tile appears to be impact spatter as a result of a blow into a pre existing wet blood stain. This blow has produced a void pattern to the wet blood and has caused blood to spatter across the tile (towards top right). 3 x blood drips are present, one of which has been wiped whilst drying causing a perimeter stain to be visible
Z6YMDD-5601	There is a drip stain located in the top left corner of the photograph that has been altered. There is a wipe pattern with a perimeter stain visible indicating that something moved through the drip stain after some time has passed since it was originally deposited, allowing it to partially dry before it was altered. There are two additional, unaltered drip stains located on the right side of the photograph. One is located in the far right and one is toward the bottom right quadrant of the photograph. There is an impact pattern that begins in the bottom left corner and radiates outward from the bottom left corner of the photograph toward the top right corner and the bottom left corner in opposite directions. An area of convergence can be seen using the directionality of the spatter stains which radiate outward from the site of the impact on the bottom left corner of the image.
ZF4QKV-5601	2 x 1.5cm circular stains with scalloped edges - passive stains. 1 x 1.5 cm circular altered stain with associated wipe - perimeter stain and wipe (left - right). >100 near circular <1mm stains across the entire photograph - spatter. >20 elongated elliptical bloodstains 0.1mm-1mm, radiating out from a central area of convergence at the bottom LHS of the photograph (spatter - most likely impact pattern, although seeing the stain in its entirety I can't completely excluded cessation cast or a combination thereof as a possible mode of deposition). At the area of convergence there appears to be transfer bloodstaining and a possible void.
ZFCYFA-5601	A drip stain consisting of three droplets was observed on the tile floor. A wipe pattern was observed to the blood droplet in the upper right corner which created a altered stain with a perimeter stain. Observed in the lower left corner an impact pattern was observed with an outward directional pattern.

Additional Comments

TABLE 4

WebCode-Test	Additional Comments
2JTNDR-5601	I would have reported the angles of impact as follows: Stain A = 14 +/- 1 degrees, Stain B = 24 +/- 1 degrees, Stain C = 35 +/- 2 degrees, Stain D = 22 +/- 1 degrees, Stain E = 18 +/- 1 degrees
34XHKN-5605	The small stains with no directionality can be attributed to some type of impact mechanism. Since these stains cover nearly all of the surface shown in the image and the entire pattern cannot be seen, no interpretation was made as to the mechanism that created the stain pattern. Since the stains do not show any directionality, it can be assumed that whatever mechanism caused this pattern took place nearly directly above the surface where the picture was taken.
3BZJAH-5601	I identified item 2 as a swipe pattern; however, I would not have excluded a wipe pattern as a possibility for this pattern. I chose the pattern I felt fit best because I was required to pick one single pattern. For item 5, it was a bit difficult to interpret the impact pattern because the image cut off the lower portion of the impact stain.
3RKQ8V-5602	*NOTE: Limitations exist when basing conclusions on photographic evidence alone.
3VLUYG-5605	An insect pattern or fly spots may be present in the image as well.
66MG2J-5602	[From Table 3: Recognition and Description - Item 5: "Section 1: Angle of Impact Determination: Stain A: width 1.9mm, length 8.5mm, Angle of Impact: 13.2 degrees; Stain B: width 3.5mm, length 8.5mm, Angle of Impact: 24.0 degrees; Stain C: width 3.9mm, length 3.9mm, Angle of Impact: 36.5 degrees; Stain D: width 3.3mm, length 8.7mm, Angle of Impact: 22.1 degrees; Stain E: width 2.3mm, length 7.3mm, Angle of Impact 18.3 degrees. Section 2 Pattern Description Part 1: Item 2-Swipe, Item 3-Projected Pattern, Item 4-Transfer Stain."]
68WH7Q-5601	Blood stain C in Item 1 would not be chosen for casework given the lack of clarity regarding the length of the stain. The blood pattern in Item 2 would be reported in casework as a transfer stain and further described to indicate the movement needed to create that particular blood pattern. It is this laboratory's protocol to conservatively report transfer stains unless there are explicit features present within the pattern to further define as a wipe or a swipe.
6TM3NZ-5602	Giving scenarios for the patterns in Items 2 to 5 were useful.
6X4ALZ-5601	It would have been useful to see more of the bloodstaining in the lower left corner of item 5.
7E7BT7-5605	Item 2 is possibly a swipe or a wipe but could not be conclusively distinguished when considering lack of sufficient information and a recent article citing high error rates between the two classifications. ("The Reliability of Swipe/Wipe Classification and Directionality Determination Methods in Bloodstain Pattern Analysis" by Sita K.Y. Yuen, M.Sc.; Michael C. Taylor, D.Phil.; Glynn Owens, D.Phil.; and Douglas A. Elliot, D.Phil)
7WHAM3-5605	The target contains two circular drip stains on the right hand side with some spines observed. There is another drip stain on the top left of the target with a wipe through the stain from left to right. The lower left hand corner contains an oblong transfer impression with associated spatter projecting outward from the center. Pattern may be a cessation pattern arising fro rapid deceleration of the oblong-shaped object when coming in contact with the tile.
9AGRED-5601	All references to blood are suspected blood until confirmed through DNA testing. This report was issued based on the information and evidence available to the analyst and may be subject to change as new information becomes available.
9R7D8E-5601	Observing the entire scenario and different patterns, it's possible to establish the sequence of the events. Wipe is generated after the drip stain formed by the three bloodstains, because one of

TABLE 4

WebCode-Test	Additional Comments
	them exhibits an alteration of the dripped shape produced by an object which moved from left to right. The drying of bloodstains is observed initially around the edges and proceeds inward to the central portion of the stain as the drying process continues then, in this case, the wiping took place in a period of time very close to the deposit of the bloodstain. Most likely wipe is generated also after impact pattern too, because one of the spines produced from the force of an object directly striked the source of exposed blood, seems modified (interrupted in its terminal edge indicating directionality) by the same action which altered the mentioned dripped bloodstain.
B6GDQE-5605	section one not completed
BQZAER-5601	For Item 1: Angle of Impact Determination: PowerPoint was used to discern stain sizes. Therefore, the measurements documented for the length and width of each stain are not in mm and were used solely as a ratio to calculate the angle.
DEHYWY-5605	For item 5: (1) low level impact pattern, (2) satellite stains of drip stains are attributed to the rough surface of the tile.
G23NUY-5601	A fundamental component of bloodstain pattern recognition is the analyst's ability to visualize the complete pattern. In the future the entire pattern should be included in the data set.
G63ZPY-5601	The Wipe most likely occurred after the Spatter Stains.
GQ2NH9-5605	1. The images provided in Items 3 and 5 do not contain complete patterns. This is a particular issue with Item 5 since the portion of the pattern in the lower left corner is cut off. With item 5, this complicates the pattern interpretation since you do not know if any information is missing that would aid in the pattern interpretation. If this were a real life case, my description of the pattern would be that it is incomplete and I need additional photos to determine the possible causes for that pattern. This is an ongoing issue with these tests, and I believe consideration needs to be given to what is encountered out in the field. With casework, there is often opportunity to ask for additional images or to take more photos. This is not the case with this test and there is a risk of misinterpreting a pattern because information is deliberately left out when the photo is cropped. 2. The image sizes for images 2 - 5 were all 11" X 14". Regardless of whether the images are viewed on a monitor or printed, they could not be examined in their original/full size. More consideration needs to be given to how the end user will be taking this test and viewing these images. 3. There is no easy way to view or print the terminology list. It would be helpful if the link opened a pdf document that could be saved or printed rather than opening a pop up window in the portal. For reviewers without access to the CTS portal, it would be nice to be able to provide them with the terminology list in an easily accessible form. 4. The angle of impact exercise should be reported as approximate and not as an absolute angle since we are calculating an estimate.
H44VCW-5601	For Item #3: This pattern does not look like the typical spurt pattern found in casework. In actual casework different terminology would be used, based on the limited view and lack of additional information. Without other supporting stains or additional information may classify simply as vertical flow patterns(flow pattern is listed in the definition, but not a choice). With other supporting stains and wound information, may classify as a spurt pattern (spurt is not defined or listed as a choice)
HJYEN8-5605	In casework, I would call Item 2 a smear. Distinguishing between wipes and swipes can be difficult if preexisting stains don't have time to dry prior to alteration.
HPLFEJ-5601	Angle of impact measurements were made electronically in powerpoint and reported in cm values.
JZ39U7-5605	Item 1 was not processed.
KGJ4FR-5601	Due to the apparent air bubble near the tail end of the stain, stain C in Item 1 is not an ideal stain to use for the measurement of angle of impact and therefore would not ordinarily be

TABLE 4

WebCode-Test	Additional Comments
	selected during casework for such a calculation.
KKHEBR-5601	For item 1, Stain C is a bad stain. There is an air bubble in the bloodstain. During the course of normal casework, I would not choose this stain to be measured for angle of impact.
LXJEFG-5601	Please consider using a different mechanism than a pipette for making drip stains. Most of your tests have drip stains that have an air bubble trapped within it making the resulting stain look unusual and unrealistic. It is also frustrating and makes the test less realistic when you do not include the entire pattern for Item 5.
M6ZBXW-5601	Bloodstains cannot always be classified from photographic record alone as the record does not always provide a full representation of the preponderance of bloodstains. Sub-classifications of smear stains as swipes or wipes is not always possible due to the patterns having many shared characteristics. This is especially true if a wipe has been created prior to any drying occurring in the bloodstain to give indication of altering of a bloodstain. Refer to JFS Vol. 62 No.4 pg 1037-1042, Yuen et al.
MHUFGU-5605	Item #1 not completed. For item # 5: I would like to see the whole stain/pattern resulting from the center stain in the lower left hand corner. You can see there is more to the pattern that is cut off. This additional information could provide useful characteristics to document the stain for making a call.
MYDF2Y-5601	Stain C in item 1 is not a good stain for measurement due to the possible air bubble. Therefore, this stain would not be chosen in casework for measurement.
Q27MTX-5601	Lab does not do angle of impact.
RDW4BQ-5605	Item 2 has characteristics of both a wipe and a swipe pattern. There are indications of possible preexisting stains, although no conclusive perimeter stain was identified. Because of these indications, Item 2 is most consistent with a wipe pattern, but a swipe pattern is also possible.
TMGVBN-5605	Comments: The texture of the target surface created some patterns that could not be interpreted reliably as true or the result of the texture. For example, what might appear to be clots of blood may actually be blood pooling in an indentation of the surface, which would have been obvious upon physical examination.
UPNZEG-5602	Bloodstain pattern documentation should include photographing the entire stain in order to assist the analyst in forming the most accurate determination.
V6BANJ-5601	#3- May have classified as flow in casework: Does not look like typical arterial spurt, Arterial spurt nor flow were listed as choices
VZYXN4-5605	The wipe moves in a direction from left to right. The presence of a perimeter stain indicates that there was an unknown interim period between the deposition of the drip stain and the wipe/swipe. The wipe also occurred subsequent to the impact spatter due to the presence of spatter stains from the impact pattern that have been moved through by the wipe.
W2AZB3-5601	Item 3: this appears to be an artificial pattern, limited indications of force, very light upper margins. Item 2: cannot exclude that it is a wipe in multiple directions originating from area of dark staining.
WCV4H2-5601	Regarding item 3: I have chosen a projected pattern due its somewhat arcing distribution and associated flow patterns and because it doesn't fit any other of the options. The stains in the somewhat arcing distribution are not classic shaped spattered stains.

-End of Report-
(Appendix may follow)

Collaborative Testing Services ~ Forensic Testing Program

Test No. 19-5601: Bloodstain Pattern Analysis

DATA MUST BE SUBMITTED BY **Aug. 19, 2019, 11:59 p.m.** TO BE INCLUDED IN THE REPORT

Participant Code: U1234A WebCode: PQEL7X

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.

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 (use hyperlink in Pattern Description instructions to access)

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.

Stain	Width (mm)	Length (mm)	Angle of Impact (degrees)
A			
B			
C			
D			
E			

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 textured vinyl tile in the horizontal plane. Pattern was found adjacent to a room containing a deceased female with significant blunt force trauma to the head.

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

Item 3: Target is a piece of foamboard in the vertical plane. Pattern was found on a wall near a victim who sustained a possible arterial laceration.

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

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

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

Section II: PATTERN DESCRIPTION cont.

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

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

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

Item 5: Target is a textured vinyl tile in the horizontal plane. Pattern was found in a stabbing victim's residence from which a suspect fled.

Additional Comments

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)

Submitted to CTS on:
NOT SUBMITTED