Collaborative Testing Services, Inc
FORENSIC TESTING PROGRAM

Bloodstain Pattern Analysis
Test No. 14-560/561 Summary Report

This test was sent to 261participants. Each sample pack consisted of either photos (14-560) or a DVD (14-561) containing images of bloodstains for determination of Angle of Impact and Pattern Description. Data were returned from 213 participants (130 for 14-560 and 83 for 14-561 - 82% response rate) and are compiled into the following tables:

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

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

Manufacturer's Information

Each sample set contained the following images: Angle of Impact Determination Stains A - E (Item 1), Pattern Description: Mechanism of Deposition (Items 2, 3, and 4), and Pattern Description: Recognition and Description (Item 5) provided in photographic (560) or DVD (561) 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.

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 ejected from a pipette at a height of approximately thirty-six (36) inches above the impact surface. Targets (white posterboard) were placed on an inclined plane at the following predetermined angles from the vertical:

Stain	Preparation Angle
A	38.1°
B	19.0°
C	28.2°
D	44.2°
E	16.0°

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.

PATTERN DESCRIPTION

Pattern 2: A blood-coated screwdriver was accelerated in a downward swing in front of a vertical target located approximately sixty (60) inches from the floor. The movement was made four times and the screwdriver recoated with blood before each stroke.

Pattern 3: A spring-release mousetrap loaded with a piece of sponge was positioned adjacent to a horizontal target. Approximately 1.25mL of blood was deposited on the sponge, and then the trigger released, closing on the blood-soaked sponge.

Pattern 4: Blood was released from a dropper bottle at an approximate height of thirty-six (36) inches from a horizontal target. Ten drops were released into a single spot on the target.

Pattern 5: Several individual drops of blood were released from a dropper bottle in a diagonal motion above a horizontal target. At the lower-left corner, the bottle was held in place and several drops of blood were allowed to fall onto the target. After two minutes, a dry terrycloth rag was moved through the second and third blood drops in the diagonal line.

Summary Comments

Introduction

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

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 STD from the grand mean. These results have been excluded from the statistical calculations presented at the end of each Stain table. Each exclusion was determined independently of other values (i.e. Length exclusion based only on Length GM; CalcAng exclusion based only on CalcAng GM). Exclusions were caused by either reporting measurements in units other than mm, significantly discrepant length/width measurements, or a combination of both. Those who provided measurements in units other than mm are apparent, as their Width and Length values are excluded but their Angle and Calculated Angle are included due to the ratio of their values corresponding with the other participants. The Grand Mean and Standard Deviation are shown below, based on the Calculated Angle.

Stain	Preparation Angle	Grand Mean	Standard Deviation
A	38.1°	33.97°	2.15
B	19.0°	16.60°	1.16
C	28.2°	25.13°	1.93
D	44.2°	38.99°	2.44
E	16.0°	14.67°	1.51

Pattern Description

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

For part one, Item 2, 98% of participants reported "Cast-off Pattern". For Item 3, the two most common responses were "Impact Pattern" (55%) and "Expiration Pattern" (39%). A majority of those participants that identified the pattern as "expiration" cited the presence of bubble rings as the reason behind this pattern choice instead of "impact". For Item 4, 97% of participants reported "Drip Pattern". For part two, Item 5, the majority of participants reported the following distinct pattern types: Drip Stains/Drip Trail, noting the linear pattern of the individual stains; Wipe Pattern/Altered Stains, with many reporting a directionality of upper left to lower right in the wipe movement; Perimeter Stains, resulting from the wipe; and Drip Pattern.

Release Date of Summary Report: 08-October-2014

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

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
2B83FC-560	1.80	-0.08	-1.02	3.30	-0.05	-0.30	33.10	-0.82	-0.38	33.06
2D3FHX-560	1.80	-0.08	-1.02	3.00	-0.35	-2.11	36.90	2.98	1.38	36.87
2FD4CV-560	1.85	-0.03	-0.37	3.42	0.07	0.42	32.75	-1.17	-0.54	32.75
2GDEUX-561	1.90	0.02	0.28	3.20	-0.15	-0.91	36.40	2.48	1.15	36.42
2HVFZY-560	1.80	-0.08	-1.02	3.40	0.05	0.30	31.90	-2.02	-0.94	31.97
2UKMCF-560	1.94	0.06	0.80	3.45	0.10	0.60	34.20	0.28	0.13	34.22
2X3R7H-560	1.70	-0.18	-2.32	3.30	-0.05	-0.30	31.00	-2.92	-1.35	31.01
2XWEH9-561	2.00	0.12	1.58	3.40	0.05	0.30	36.00	2.08	0.97	36.03
2YN3CJ-561	1.90	0.02	0.28	3.20	-0.15	-0.91	36.40	2.48	1.15	36.42
332A8V-561	2.00	0.12	1.58	3.50	0.15	0.90	35.00	1.08	0.50	34.85
396AMR-560	1.90	0.02	0.28	3.30	-0.05	-0.30	35.15	1.23	0.57	35.15
3EFRA7-561	2.30	0.42	5.49 X	4.40	1.05	6.33 X	31.50	-2.42	-1.12	31.52
3GH6MR-561	1.90	0.02	0.28	3.00	-0.35	-2.11	39.30	5.38	2.50	39.30
3J6WLB-560	1.90	0.02	0.28	3.40	0.05	0.30	33.97	0.05	0.02	33.97
3KLRPW-561	8.91	7.03	91.56 X	16.64	13.29	80.20 X	32.00	-1.92	-0.89	32.37
3PGLKD-560	1.80	-0.08	-1.02	3.40	0.05	0.30	32.00	-1.92	-0.89	31.97
3PUBL4-561	1.90	0.02	0.28	3.50	0.15	0.90	32.90	-1.02	-0.47	32.88
3VEHXG-560	1.90	0.02	0.28	3.50	0.15	0.90	32.90	-1.02	-0.47	32.88
3X6LQN-560	1.90	0.02	0.28	3.40	0.05	0.30	33.97	0.05	0.02	33.97
3XLTXR-560	1.80	-0.08	-1.02	3.30	-0.05	-0.30	33.00	-0.92	-0.43	33.06
3YFCTD-560	1.81	-0.07	-0.89	3.40	0.05	0.30	32.50	-1.42	-0.66	32.16
3ZNNCA-560	1.90	0.02	0.28	3.50	0.15	0.90	32.90	-1.02	-0.47	32.88
43XVM9-561	1.90	0.02	0.28	3.20	-0.15	-0.91	36.00	2.08	0.97	36.42
49DVA7-560	1.90	0.02	0.28	3.40	0.05	0.30	34.00	0.08	0.04	33.97

TABLE 1

Stain A, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
4DFHR3-560	19.00	17.12	222.95 X	32.00	28.65	172.89 X	36.00	2.08	0.97	36.42
4E6XTX-560	1.80	-0.08	-1.02	3.60	0.25	1.51	30.00	-3.92	-1.82	30.00
4HDLR8-561	2.00	0.12	1.58	3.40	0.05	0.30	36.00	2.08	0.97	36.03
4HYYFK-560	1.93	0.05	0.67	3.10	-0.25	-1.51	38.50	4.58	2.13	38.50
4NTQ8F-560	1.90	0.02	0.28	3.40	0.05	0.30	34.00	0.08	0.04	33.97
68XT2C-560	1.80	-0.08	-1.02	3.26	-0.09	-0.55	33.50	-0.42	-0.19	33.51
6TKBRB-561	2.00	0.12	1.58	3.60	0.25	1.51	34.00	0.08	0.04	33.75
6TKDD9-560	1.94	0.06	0.80	3.17	-0.18	-1.09	37.50	3.58	1.66	37.73
6VBELH-561	1.90	0.02	0.28	3.40	0.05	0.30	34.10	0.18	0.08	33.97
6X2KYM-561	1.80	-0.08	-1.02	3.10	-0.25	-1.51	36.00	2.08	0.97	35.50
6YAXGP-561	2.00	0.12	1.58	3.50	0.15	0.90	35.00	1.08	0.50	34.85
76U9C6-561	1.91	0.03	0.43	3.47	0.12	0.72	33.42	-0.50	-0.23	33.43
7AH3NJ-560	1.90	0.02	0.28	3.10	-0.25	-1.51	37.80	3.88	1.80	37.80
7E28JL-560	2.00	0.12	1.58	3.50	0.15	0.90	34.80	0.88	0.41	34.85
7EJWAT-560	1.80	-0.08	-1.02	3.50	0.15	0.90	30.90	-3.02	-1.40	30.95
84QDHY-560	1.80	-0.08	-1.02	3.30	-0.05	-0.30	33.00	-0.92	-0.43	33.06
8H3GKF-560	1.87	-0.01	-0.11	3.37	0.02	0.12	33.73	-0.19	-0.09	33.70
8QWLDG-560	1.92	0.04	0.54	3.47	0.12	0.72	33.63	-0.29	-0.13	33.59
8TXQW3-561	1.90	0.02	0.28	3.30	-0.05	-0.30	35.00	1.08	0.50	35.15
8VMT4C-561	1.80	-0.08	-1.02	2.80	-0.55	-3.32 X	40.00	6.08	2.82	40.01
98BLKX-561	1.90	0.02	0.28	3.40	0.05	0.30	33.97	0.05	0.02	33.97
9N38FP-560	1.80	-0.08	-1.02	3.50	0.15	0.90	31.00	-2.92	-1.35	30.95
9RE28F-561	2.00	0.12	1.58	4.00	0.65	3.92 X	31.00	-2.92	-1.35	30.00
9Y9LL3-561	1.90	0.02	0.28	3.70	0.35	2.11	31.00	-2.92	-1.35	30.90

TABLE 1

Stain A, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
A36LKY-560	1.85	-0.03	-0.37	3.41	0.06	0.36	32.80	-1.12	-0.52	32.86
A7WAND-560	2.00	0.12	1.58	3.20	-0.15	-0.91	39.00	5.08	2.36	38.68
AEC23H-560	1.80	-0.08	-1.02	3.30	-0.05	-0.30	33.00	-0.92	-0.43	33.06
AHLGZV-561	2.00	0.12	1.58	3.50	0.15	0.90	35.00	1.08	0.50	34.85
AHTANW-560	1.90	0.02	0.28	3.20	-0.15	-0.91	36.00	2.08	0.97	36.42
ARY6FG-560	1.92	0.04	0.54	3.45	0.10	0.60	34.00	0.08	0.04	33.82
AUVUEB-560	1.80	-0.08	-1.02	3.40	0.05	0.30	32.00	-1.92	-0.89	31.97
B3WBXL-560	1.90	0.02	0.28	3.30	-0.05	-0.30	35.00	1.08	0.50	35.15
B848CF-560	1.80	-0.08	-1.02	3.40	0.05	0.30	32.00	-1.92	-0.89	31.97
BJFE8U-560	1.60	-0.28	-3.62 X	2.70	-0.65	-3.92 X	36.00	2.08	0.97	36.34
BJJR2H-560	2.00	0.12	1.58	3.60	0.25	1.51	34.00	0.08	0.04	33.75
BMFFHP-561	1.90	0.02	0.28	3.30	-0.05	-0.30	34.70	0.78	0.36	35.15
BPYP2W-561	1.90	0.02	0.28	3.40	0.05	0.30	34.00	0.08	0.04	33.97
BQZAGB-561	1.80	-0.08	-1.02	3.40	0.05	0.30	32.00	-1.92	-0.89	31.97
BWFAZ3-560	1.83	-0.05	-0.63	3.43	0.08	0.48	32.00	-1.92	-0.89	32.24
CABKYM-560	1.90	0.02	0.28	3.40	0.05	0.30	34.00	0.08	0.04	33.97
CCJPFH-560	1.90	0.02	0.28	3.40	0.05	0.30	34.00	0.08	0.04	33.97
CVYNPR-561	1.90	0.02	0.28	3.30	-0.05	-0.30	35.00	1.08	0.50	35.15
CXEKZP-560	2.00	0.12	1.58	3.50	0.15	0.90	34.80	0.88	0.41	34.85
CYQDXD-560	1.74	-0.14	-1.80	3.18	-0.17	-1.03	33.00	-0.92	-0.43	33.17
D2872Q-560	1.80	-0.08	-1.02	3.20	-0.15	-0.91	34.20	0.28	0.13	34.23
D4EG4L-560	1.80	-0.08	-1.02	3.20	-0.15	-0.91	34.20	0.28	0.13	34.23
D8GFEE-560	1.90	0.02	0.28	3.20	-0.15	-0.91	36.40	2.48	1.15	36.42
D9B7KT-561	1.90	0.02	0.28	3.20	-0.15	-0.91	36.40	2.48	1.15	36.42

TABLE 1

Stain A, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
DED3KT-560	1.80	-0.08	-1.02	3.40	0.05	0.30	32.00	-1.92	-0.89	31.97
DFBHMH-560	1.90	0.02	0.28	3.40	0.05	0.30	34.00	0.08	0.04	33.97
DVL7TQ-560	1.90	0.02	0.28	3.10	-0.25	-1.51	37.80	3.88	1.80	37.80
DZKDKF-560	1.90	0.02	0.28	3.40	0.05	0.30	34.00	0.08	0.04	33.97
E8V2RM-561	1.89	0.01	0.15	3.48	0.13	0.78	32.90	-1.02	-0.47	32.90
ECCVTY-561	2.00	0.12	1.58	3.60	0.25	1.51	33.00	-0.92	-0.43	33.75
EF999Q-560	1.90	0.02	0.28	3.30	-0.05	-0.30	35.20	1.28	0.59	35.15
EFH7BM-560	2.00	0.12	1.58	3.00	-0.35	-2.11	42.00	8.08	3.75 X	41.81 X
EKH7ZJ-560	2.00	0.12	1.58	3.50	0.15	0.90	34.80	0.88	0.41	34.85
ENDC4N-560	1.90	0.02	0.28	3.60	0.25	1.51	31.80	-2.12	-0.98	31.86
EPUBEZ-560	1.50	-0.38	-4.93 X	3.50	0.15	0.90	25.40	-8.52	-3.95 X	25.38 X
ETBJVD-560	1.80	-0.08	-1.02	3.40	0.05	0.30	32.00	-1.92	-0.89	31.97
EU6A2R-560	1.90	0.02	0.28	3.30	-0.05	-0.30	35.20	1.28	0.59	35.15
F2HU9V-561	5.00	3.12	40.65 X	8.00	4.65	28.06 X	38.60	4.68	2.17	38.68
F2QH84-561	1.88	0.00	0.02	3.53	0.18	1.08	32.20	-1.72	-0.80	32.18
F8WN7K-560	2.00	0.12	1.58	3.50	0.15	0.90	34.80	0.88	0.41	34.85
FAZ4VX-560	1.78	-0.10	-1.28	3.56	0.21	1.27	30.00	-3.92	-1.82	30.00
FQU4BH-561	1.75	-0.13	-1.67	3.25	-0.10	-0.61	32.60	-1.32	-0.61	32.58
FY8ZAX-561	1.90	0.02	0.28	3.40	0.05	0.30	34.00	0.08	0.04	33.97
FYDZZQ-561	1.90	0.02	0.28	3.60	0.25	1.51	32.00	-1.92	-0.89	31.86
FYZEEW-561	1.90	0.02	0.28	3.50	0.15	0.90	32.88	-1.04	-0.48	32.88
G6C7PD-561	1.90	0.02	0.28	3.20	-0.15	-0.91	36.40	2.48	1.15	36.42
GZ69PL-560	1.80	-0.08	-1.02	3.60	0.25	1.51	30.00	-3.92	-1.82	30.00
H4LBTW-561	2.00	0.12	1.58	3.50	0.15	0.90	34.80	0.88	0.41	34.85

TABLE 1

Stain A, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
H68XXR-561	1.85	-0.03	-0.37	3.28	-0.07	-0.42	34.00	0.08	0.04	34.33
H8KB89-560	2.00	0.12	1.58	3.20	-0.15	-0.91	39.00	5.08	2.36	38.68
HJACJ9-560	2.00	0.12	1.58	3.00	-0.35	-2.11	42.00	8.08	3.75 X	41.81 X
HKB3WJ-561	1.90	0.02	0.28	3.40	0.05	0.30	33.40	-0.52	-0.24	33.97
HUWDZJ-561	1.88	0.00	0.02	3.17	-0.18	-1.09	36.37	2.45	1.14	36.37
HZYKKD-561	1.90	0.02	0.28	3.20	-0.15	-0.91	36.00	2.08	0.97	36.42
JA8WLM-561	1.88	0.00	0.02	3.09	-0.26	-1.57	37.47	3.55	1.65	37.47
JF6CGP-560	2.00	0.12	1.58	3.50	0.15	0.90	30.00	-3.92	-1.82	34.85
JHDJ2V-561	2.00	0.12	1.58	3.50	0.15	0.90	35.00	1.08	0.50	34.85
JHGWVJ-561	1.88	0.00	0.02	3.45	0.10	0.60	33.06	-0.86	-0.40	33.02
JN36NN-560	1.90	0.02	0.28	3.00	-0.35	-2.11	39.30	5.38	2.50	39.30
JNDT6N-561	1.90	0.02	0.28	3.50	0.15	0.90	32.88	-1.04	-0.48	32.88
K28HY8-560	5.50	3.62	47.16 X	11.00	7.65	46.16 X	30.00	-3.92	-1.82	30.00
K9FD2Z-560	1.50	-0.38	-4.93 X	3.00	-0.35	-2.11	30.00	-3.92	-1.82	30.00
K9LA9R-561	1.90	0.02	0.28	3.50	0.15	0.90	32.80	-1.12	-0.52	32.88
KC4NCR-561	1.80	-0.08	-1.02	3.20	-0.15	-0.91	34.00	0.08	0.04	34.23
KJD2BH-560	1.90	0.02	0.28	3.20	-0.15	-0.91	36.40	2.48	1.15	36.42
KNZLQC-560	1.90	0.02	0.28	3.40	0.05	0.30	34.00	0.08	0.04	33.97
KVGX4D-560	1.70	-0.18	-2.32	3.20	-0.15	-0.91	32.10	-1.82	-0.84	32.09
L2YU2Z-561	1.60	-0.28	-3.62 X	3.20	-0.15	-0.91	30.00	-3.92	-1.82	30.00
L4BMXM-561	2.00	0.12	1.58	3.00	-0.35	-2.11	41.80	7.88	3.66 X	41.81 X
LALXMF-561	1.90	0.02	0.28	3.60	0.25	1.51	32.00	-1.92	-0.89	31.86
LUAGHY-560	1.80	-0.08	-1.02	3.50	0.15	0.90	30.90	-3.02	-1.40	30.95
LUK4GT-561	2.00	0.12	1.58	3.00	-0.35	-2.11	41.00	7.08	3.29 X	41.81 X

TABLE 1

Stain A, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
LXLZ99-560	1.90	0.02	0.28	3.40	0.05	0.30	34.00	0.08	0.04	33.97
M2JWHZ-560	1.88	0.00	0.02	3.37	0.02	0.12	34.00	0.08	0.04	33.91
M2XCKF-561	1.87	-0.01	-0.11	3.39	0.04	0.24	33.33	-0.59	-0.27	33.48
M3UP89-560	1.90	0.02	0.28	3.20	-0.15	-0.91	36.42	2.50	1.16	36.42
MFZW4T-561	1.90	0.02	0.28	3.50	0.15	0.90	33.00	-0.92	-0.43	32.88
MH8AP2-560	1.86	-0.02	-0.24	3.40	0.05	0.30	33.00	-0.92	-0.43	33.17
MJG7B6-560	1.80	-0.08	-1.02	3.40	0.05	0.30	32.00	-1.92	-0.89	31.97
MKBWGJ-561	1.77	-0.11	-1.41	3.50	0.15	0.90	30.38	-3.54	-1.64	30.38
MLNGCE-561	1.90	0.02	0.28	3.50	0.15	0.90	33.00	-0.92	-0.43	32.88
MQLXN9-560	1.78	-0.10	-1.28	3.24	-0.11	-0.67	33.30	-0.62	-0.29	33.32
MT4ACD-560	1.80	-0.08	-1.02	3.40	0.05	0.30	31.90	-2.02	-0.94	31.97
MWMC8P-560	2.00	0.12	1.58	3.60	0.25	1.51	33.70	-0.22	-0.10	33.75
MXR23T-561	1.90	0.02	0.28	3.30	-0.05	-0.30	35.00	1.08	0.50	35.15
MZ4LE2-560	1.80	-0.08	-1.02	3.30	-0.05	-0.30	33.00	-0.92	-0.43	33.06
NCCXYA-561	1.85	-0.03	-0.37	3.50	0.15	0.90	31.90	-2.02	-0.94	31.91
NP8VFF-560	1.90	0.02	0.28	3.50	0.15	0.90	33.00	-0.92	-0.43	32.88
NTYE37-560	1.90	0.02	0.28	3.40	0.05	0.30	34.00	0.08	0.04	33.97
P2TJV8-560	1.66	-0.22	-2.84	2.78	-0.57	-3.44 X	36.66	2.74	1.27	36.66
PM6LNG-560	1.75	-0.13	-1.67	3.00	-0.35	-2.11	35.70	1.78	0.83	35.69
PUDTF8-560	1.72	-0.16	-2.06	3.28	-0.07	-0.42	31.60	-2.32	-1.08	31.63
Q36LAJ-561	1.90	0.02	0.28	3.50	0.15	0.90	33.00	-0.92	-0.43	32.88
QDHT4X-560	1.80	-0.08	-1.02	3.00	-0.35	-2.11	37.00	3.08	1.43	36.87
QR7DUR-561	1.90	0.02	0.28	3.36	0.01	0.06	34.00	0.08	0.04	34.44
QWX9AY-560	2.00	0.12	1.58	3.20	-0.15	-0.91	38.60	4.68	2.17	38.68

TABLE 1

Stain A, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
QXNEN6-560	1.80	-0.08	-1.02	3.35	0.00	0.00	32.50	-1.42	-0.66	32.50
QXP7RE-560	2.00	0.12	1.58	3.60	0.25	1.51	34.00	0.08	0.04	33.75
R6DMX8-560	1.90	0.02	0.28	3.20	-0.15	-0.91	36.43	2.51	1.17	36.42
R9GBXG-561	1.90	0.02	0.28	3.60	0.25	1.51	32.00	-1.92	-0.89	31.86
RB8FQN-560	1.90	0.02	0.28	3.60	0.25	1.51	31.80	-2.12	-0.98	31.86
RJ2HYR-561	1.79	-0.09	-1.15	3.02	-0.33	-1.99	36.00	2.08	0.97	36.35
RJ2KKP-561	1.84	-0.04	-0.50	2.82	-0.53	-3.20 X	44.40	10.48	4.86 X	40.73 X
RRUVUK-560	1.80	-0.08	-1.02	3.30	-0.05	-0.30	33.00	-0.92	-0.43	33.06
RZDJ2E-561	2.00	0.12	1.58	3.50	0.15	0.90	34.85	0.93	0.43	34.85
T3FUEU-560	1.80	-0.08	-1.02	3.40	0.05	0.30	31.00	-2.92	-1.35	31.97
T88GXB-560	1.90	0.02	0.28	3.20	-0.15	-0.91	36.40	2.48	1.15	36.42
TB3L2F-560	1.30	-0.58	-7.53 X	3.10	-0.25	-1.51	25.00	-8.92	-4.14 X	24.79 X
TCGYUH-561	1.80	-0.08	-1.02	3.00	-0.35	-2.11	37.00	3.08	1.43	36.87
TLLZ6H-560	1.80	-0.08	-1.02	3.40	0.05	0.30	31.97	-1.95	-0.90	31.97
TQ8RE7-560	1.80	-0.08	-1.02	3.50	0.15	0.90	31.00	-2.92	-1.35	30.95
TR9JR7-561	1.90	0.02	0.28	3.60	0.25	1.51	31.90	-2.02	-0.94	31.86
TZLQAU-561	1.86	-0.02	-0.24	3.56	0.21	1.27	31.50	-2.42	-1.12	31.50
U3QHYM-560	1.90	0.02	0.28	3.29	-0.06	-0.36	35.00	1.08	0.50	35.28
U6AVHP-561	1.80	-0.08	-1.02	3.20	-0.15	-0.91	34.20	0.28	0.13	34.23
U7JRN2-561	1.90	0.02	0.28	3.40	0.05	0.30	34.00	0.08	0.04	33.97
UBA77G-561	1.90	0.02	0.28	3.40	0.05	0.30	34.00	0.08	0.04	33.97
UEH3KK-561	1.90	0.02	0.28	3.40	0.05	0.30	34.00	0.08	0.04	33.97
UEMHY7-561	1.80	-0.08	-1.02	3.20	-0.15	-0.91	34.20	0.28	0.13	34.23
UJEQ2R-561	1.80	-0.08	-1.02	3.20	-0.15	-0.91	34.00	0.08	0.04	34.23

TABLE 1

Stain A, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
UJV8TY-560	1.90	0.02	0.28	3.10	-0.25	-1.51	37.80	3.88	1.80	37.80
UKF4XQ-560	1.89	0.01	0.15	3.04	-0.31	-1.87	38.00	4.08	1.89	38.44
UXVMGN-561	1.90	0.02	0.28	3.30	-0.05	-0.30	34.70	0.78	0.36	35.15
V3JTAF-560	0.20	-1.68	-21.85 X	0.30	-3.05	-18.41 X	41.80	7.88	3.66 X	41.81 X
V9Y6LP-560	1.96	0.08	1.06	3.30	-0.05	-0.30	36.90	2.98	1.38	36.44
VPNUTJ-560	1.79	-0.09	-1.15	3.26	-0.09	-0.55	33.00	-0.92	-0.43	33.30
W336FR-560	1.81	-0.07	-0.89	3.39	0.04	0.24	32.30	-1.62	-0.75	32.27
WBAT7J-561	1.90	0.02	0.28	3.50	0.15	0.90	32.87	-1.05	-0.49	32.88
WFP2RX-561	2.00	0.12	1.58	3.40	0.05	0.30	36.00	2.08	0.97	36.03
WHURXD-560	2.00	0.12	1.58	3.50	0.15	0.90	34.80	0.88	0.41	34.85
WJWYDX-560	1.90	0.02	0.28	3.50	0.15	0.90	33.00	-0.92	-0.43	32.88
WWBYKC-560	1.70	-0.18	-2.32	3.20	-0.15	-0.91	32.09	-1.83	-0.85	32.09
XLQZFT-561	1.80	-0.08	-1.02	3.13	-0.22	-1.33	35.10	1.18	0.55	35.11
XN6MQY-560	1.80	-0.08	-1.02	3.00	-0.35	-2.11	36.86	2.94	1.36	36.87
XVTBQP-560	2.00	0.12	1.58	3.40	0.05	0.30	36.00	2.08	0.97	36.03
XXJEJW-560	1.80	-0.08	-1.02	3.60	0.25	1.51	30.00	-3.92	-1.82	30.00
XYWYER-560	1.80	-0.08	-1.02	3.30	-0.05	-0.30	33.10	-0.82	-0.38	33.06
Y66MRT-560	1.80	-0.08	-1.02	3.40	0.05	0.30	32.00	-1.92	-0.89	31.97
YAD6NZ-561	1.87	-0.01	-0.11	3.39	0.04	0.24	33.00	-0.92	-0.43	33.48
YF88H7-561	2.10	0.22	2.89	4.10	0.75	4.52 X	31.00	-2.92	-1.35	30.81
YLHHRE-560	1.90	0.02	0.28	3.30	-0.05	-0.30	35.00	1.08	0.50	35.15
Z2WUBY-561	1.82	-0.06	-0.76	3.46	0.11	0.66	31.00	-2.92	-1.35	31.74
Z3N27W-561	1.90	0.02	0.28	3.50	0.15	0.90	33.00	-0.92	-0.43	32.88
Z6D7Y4-560	1.90	0.02	0.28	3.40	0.05	0.30	34.00	0.08	0.04	33.97

TABLE 1

Stain A, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
Z9XY7P-561	1.80	-0.08	-1.02	3.30	-0.05	-0.30	33.00	-0.92	-0.43	33.06
ZCE9D2-561	1.90	0.02	0.28	3.60	0.25	1.51	32.00	-1.92	-0.89	31.86
ZL2EZ8-561	1.80	-0.08	-1.02	3.50	0.15	0.90	31.00	-2.92	-1.35	30.95
ZT2PGX-560	1.80	-0.08	-1.02	3.40	0.05	0.30	32.00	-1.92	-0.89	31.97
ZYD4B2-560	1.90	0.02	0.28	3.20	-0.15	-0.91	36.15	2.23	1.04	36.42
Grand Mean	1.88			3.35			33.92			33.97
Standard Deviation	0.08			0.17			2.16			2.15
Participants Included in calculations	186			185			189			189
Participants excluded from calculations (indicated by X)	11			12			8			8

Stain A Preparation Angle: 38.1°

TABLE 1

Stain B

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
2B83FC-560	1.40	0.01	0.11	4.90	0.02	0.07	16.60	0.03	0.02	16.60
2D3FHX-560	1.25	-0.14	-1.71	4.60	-0.28	-1.22	15.77	-0.80	-0.67	15.77
2FD4CV-560	1.44	0.05	0.60	4.95	0.07	0.28	16.91	0.34	0.28	16.91
2GDEUX-561	1.30	-0.09	-1.11	4.60	-0.28	-1.22	16.40	-0.17	-0.14	16.42
2HVFZY-560	1.40	0.01	0.11	4.80	-0.08	-0.36	16.90	0.33	0.27	16.96
2UKMCF-560	1.46	0.07	0.84	4.81	-0.07	-0.32	17.60	1.03	0.86	17.67
2X3R7H-560	1.20	-0.19	-2.32	4.80	-0.08	-0.36	14.50	-2.07	-1.72	14.48
2XWEH9-561	1.50	0.11	1.33	5.00	0.12	0.50	17.50	0.93	0.77	17.46
2YN3CJ-561	1.40	0.01	0.11	3.60	-1.28	-5.52 X	22.90	6.33	5.26 X	22.89 X
332A8V-561	1.20	-0.19	-2.32	5.00	0.12	0.50	14.00	-2.57	-2.14	13.89
396AMR-560	1.40	0.01	0.11	4.90	0.02	0.07	16.60	0.03	0.02	16.60
3EFRA7-561	1.80	0.41	4.97 X	5.90	1.02	4.36 X	17.70	1.13	0.94	17.76
3GH6MR-561	1.40	0.01	0.11	4.20	-0.68	-2.94	19.50	2.93	2.44	19.47
3J6WLB-560	1.40	0.01	0.11	5.10	0.22	0.93	15.93	-0.64	-0.53	15.93
3KLRPW-561	6.02	4.63	56.25 X	20.32	15.44	66.31 X	17.00	0.43	0.36	17.23
3PGLKD-560	1.40	0.01	0.11	4.80	-0.08	-0.36	17.00	0.43	0.36	16.96
3PUBL4-561	1.40	0.01	0.11	5.10	0.22	0.93	15.90	-0.67	-0.56	15.93
3VEHXG-560	1.40	0.01	0.11	5.10	0.22	0.93	15.90	-0.67	-0.56	15.93
3X6LQN-560	1.40	0.01	0.11	5.10	0.22	0.93	15.93	-0.64	-0.53	15.93
3XLTXR-560	1.40	0.01	0.11	5.00	0.12	0.50	16.00	-0.57	-0.48	16.26
3YFCTD-560	1.50	0.11	1.33	4.70	-0.18	-0.79	18.00	1.43	1.19	18.61
3ZNNCA-560	1.40	0.01	0.11	5.10	0.22	0.93	15.90	-0.67	-0.56	15.93
43XVM9-561	1.20	-0.19	-2.32	4.00	-0.88	-3.80 X	17.00	0.43	0.36	17.46
49DVA7-560	1.40	0.01	0.11	5.00	0.12	0.50	16.00	-0.57	-0.48	16.26

TABLE 1

Stain B, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
4DFHR3-560	15.00	13.61	165.38 X	50.00	45.12	193.81 X	17.00	0.43	0.36	17.46
4E6XTX-560	1.20	-0.19	-2.32	4.80	-0.08	-0.36	14.50	-2.07	-1.72	14.48
4HDLR8-561	1.20	-0.19	-2.32	5.00	0.12	0.50	14.00	-2.57	-2.14	13.89
4HYYFK-560	1.50	0.11	1.33	4.60	-0.28	-1.22	19.03	2.46	2.04	19.03
4NTQ8F-560	1.40	0.01	0.11	5.00	0.12	0.50	16.00	-0.57	-0.48	16.26
68XT2C-560	1.45	0.06	0.72	4.90	0.02	0.07	17.20	0.63	0.52	17.21
6TKBRB-561	1.40	0.01	0.11	5.00	0.12	0.50	16.00	-0.57	-0.48	16.26
6TKDD9-560	1.46	0.07	0.84	4.60	-0.28	-1.22	18.50	1.93	1.60	18.51
6VBELH-561	1.50	0.11	1.33	4.80	-0.08	-0.36	18.20	1.63	1.35	18.21
6X2KYM-561	1.50	0.11	1.33	5.00	0.12	0.50	17.00	0.43	0.36	17.46
6YAXGP-561	1.50	0.11	1.33	5.00	0.12	0.50	17.50	0.93	0.77	17.46
76U9C6-561	1.44	0.05	0.56	5.01	0.12	0.53	16.67	0.10	0.08	16.67
7AH3NJ-560	1.30	-0.09	-1.11	4.20	-0.68	-2.94	18.00	1.43	1.19	18.03
7E28JL-560	1.50	0.11	1.33	4.80	-0.08	-0.36	18.20	1.63	1.35	18.21
7EJWAT-560	1.40	0.01	0.11	5.10	0.22	0.93	15.90	-0.67	-0.56	15.93
84QDHY-560	1.40	0.01	0.11	4.80	-0.08	-0.36	17.00	0.43	0.36	16.96
8H3GKF-560	1.44	0.05	0.60	4.91	0.03	0.11	17.01	0.44	0.36	17.05
8QWLDG-560	1.44	0.05	0.60	5.03	0.15	0.63	16.66	0.09	0.07	16.64
8TXQW3-561	1.40	0.01	0.11	4.50	-0.38	-1.65	18.00	1.43	1.19	18.13
8VMT4C-561	1.40	0.01	0.11	4.50	-0.38	-1.65	18.00	1.43	1.19	18.13
98BLKX-561	1.40	0.01	0.11	4.80	-0.08	-0.36	16.96	0.39	0.32	16.96
9N38FP-560	1.40	0.01	0.11	4.80	-0.08	-0.36	17.00	0.43	0.36	16.96
9RE28F-561	1.50	0.11	1.33	5.00	0.12	0.50	16.00	-0.57	-0.48	17.46
9Y9LL3-561	1.40	0.01	0.11	5.10	0.22	0.93	16.00	-0.57	-0.48	15.93

TABLE 1

Stain B, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
A36LKY-560	1.54	0.15	1.81	5.09	0.21	0.88	17.60	1.03	0.86	17.61
A7WAND-560	1.60	0.21	2.54	4.80	-0.08	-0.36	19.00	2.43	2.02	19.47
AEC23H-560	1.40	0.01	0.11	5.00	0.12	0.50	16.00	-0.57	-0.48	16.26
AHLGZV-561	1.50	0.11	1.33	5.00	0.12	0.50	18.00	1.43	1.19	17.46
AHTANW-560	1.40	0.01	0.11	4.80	-0.08	-0.36	17.00	0.43	0.36	16.96
ARY6FG-560	1.54	0.15	1.81	5.10	0.22	0.93	18.00	1.43	1.19	17.58
AUVUEB-560	1.40	0.01	0.11	4.80	-0.08	-0.36	17.00	0.43	0.36	16.96
B3WBXL-560	1.50	0.11	1.33	4.60	-0.28	-1.22	19.00	2.43	2.02	19.03
B848CF-560	1.40	0.01	0.11	5.20	0.32	1.36	16.00	-0.57	-0.48	15.62
BJFE8U-560	1.30	-0.09	-1.11	4.40	-0.48	-2.08	17.00	0.43	0.36	17.18
BJJR2H-560	1.50	0.11	1.33	5.30	0.42	1.79	16.00	-0.57	-0.48	16.44
BMFFHP-561	1.40	0.01	0.11	5.10	0.22	0.93	15.50	-1.07	-0.89	15.93
BPYP2W-561	1.40	0.01	0.11	5.00	0.12	0.50	16.00	-0.57	-0.48	16.26
BQZAGB-561	1.40	0.01	0.11	5.00	0.12	0.50	16.30	-0.27	-0.23	16.26
BWFAZ3-560	1.42	0.03	0.35	5.02	0.14	0.58	16.00	-0.57	-0.48	16.43
CABKYM-560	1.40	0.01	0.11	4.90	0.02	0.07	17.00	0.43	0.36	16.60
CCJPFH-560	1.50	0.11	1.33	5.10	0.22	0.93	17.10	0.53	0.44	17.10
CVYNPR-561	1.30	-0.09	-1.11	4.70	-0.18	-0.79	16.00	-0.57	-0.48	16.06
CXEKZP-560	1.40	0.01	0.11	4.90	0.02	0.07	16.60	0.03	0.02	16.60
CYQDXD-560	1.40	0.01	0.11	4.28	-0.60	-2.60	19.00	2.43	2.02	19.09
D2872Q-560	1.40	0.01	0.11	5.00	0.12	0.50	16.30	-0.27	-0.23	16.26
D4EG4L-560	1.40	0.01	0.11	4.80	-0.08	-0.36	16.90	0.33	0.27	16.96
D8GFEE-560	1.40	0.01	0.11	5.00	0.12	0.50	16.30	-0.27	-0.23	16.26
D9B7KT-561	1.40	0.01	0.11	4.70	-0.18	-0.79	17.30	0.73	0.61	17.33

TABLE 1

Stain B, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
DED3KT-560	1.40	0.01	0.11	5.00	0.12	0.50	16.30	-0.27	-0.23	16.26
DFBHMH-560	1.40	0.01	0.11	4.80	-0.08	-0.36	17.00	0.43	0.36	16.96
DVL7TQ-560	1.40	0.01	0.11	4.50	-0.38	-1.65	18.10	1.53	1.27	18.13
DZKDKF-560	1.50	0.11	1.33	5.00	0.12	0.50	17.50	0.93	0.77	17.46
E8V2RM-561	1.38	-0.01	-0.13	4.49	-0.39	-1.69	17.90	1.33	1.11	17.90
ECCVTY-561	1.50	0.11	1.33	5.00	0.12	0.50	17.00	0.43	0.36	17.46
EF999Q-560	1.40	0.01	0.11	5.00	0.12	0.50	16.30	-0.27	-0.23	16.26
EFH7BM-560	1.00	-0.39	-4.75 X	5.00	0.12	0.50	11.50	-5.07	-4.22 X	11.54 X
EKH7ZJ-560	1.25	-0.14	-1.71	5.00	0.12	0.50	14.50	-2.07	-1.72	14.48
ENDC4N-560	1.40	0.01	0.11	5.20	0.32	1.36	15.60	-0.97	-0.81	15.62
EPUBEZ-560	1.25	-0.14	-1.71	5.00	0.12	0.50	14.50	-2.07	-1.72	14.48
ETBJVD-560	1.40	0.01	0.11	5.00	0.12	0.50	16.00	-0.57	-0.48	16.26
EU6A2R-560	1.40	0.01	0.11	5.00	0.12	0.50	16.30	-0.27	-0.23	16.26
F2HU9V-561	3.00	1.61	19.55 X	10.00	5.12	21.98 X	17.40	0.83	0.69	17.46
F2QH84-561	1.45	0.06	0.72	5.13	0.25	1.06	16.80	0.23	0.19	16.42
F8WN7K-560	1.00	-0.39	-4.75 X	5.00	0.12	0.50	11.50	-5.07	-4.22 X	11.54 X
FAZ4VX-560	1.33	-0.06	-0.74	5.18	0.30	1.27	14.80	-1.77	-1.47	14.88
FQU4BH-561	1.50	0.11	1.33	4.75	-0.13	-0.58	18.40	1.83	1.52	18.41
FY8ZAX-561	1.30	-0.09	-1.11	4.90	0.02	0.07	15.40	-1.17	-0.97	15.39
FYDZZQ-561	1.40	0.01	0.11	5.20	0.32	1.36	16.00	-0.57	-0.48	15.62
FYZEEW-561	1.50	0.11	1.33	5.00	0.12	0.50	17.46	0.89	0.74	17.46
G6C7PD-561	1.40	0.01	0.11	4.90	0.02	0.07	16.60	0.03	0.02	16.60
GZ69PL-560	1.20	-0.19	-2.32	5.00	0.12	0.50	13.90	-2.67	-2.22	13.89
H4LBTW-561	1.50	0.11	1.33	5.00	0.12	0.50	17.40	0.83	0.69	17.46

TABLE 1

Stain B, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
H68XXR-561	1.36	-0.03	-0.38	4.87	-0.01	-0.06	16.00	-0.57	-0.48	16.22
H8KB89-560	1.40	0.01	0.11	4.40	-0.48	-2.08	19.00	2.43	2.02	18.55
HJACJ9-560	1.00	-0.39	-4.75 X	5.00	0.12	0.50	12.00	-4.57	-3.80 X	11.54 X
HKB3WJ-561	1.40	0.01	0.11	4.90	0.02	0.07	16.80	0.23	0.19	16.60
HUWDZJ-561	1.27	-0.12	-1.47	4.80	-0.08	-0.36	15.34	-1.23	-1.02	15.34
HZYKKD-561	1.40	0.01	0.11	4.50	-0.38	-1.65	18.00	1.43	1.19	18.13
JA8WLM-561	1.32	-0.07	-0.86	4.63	-0.25	-1.09	16.56	-0.01	-0.01	16.56
JF6CGP-560	1.50	0.11	1.33	5.50	0.62	2.65	20.00	3.43	2.85	15.83
JHDJ2V-561	1.50	0.11	1.33	5.00	0.12	0.50	18.00	1.43	1.19	17.46
JHGWVJ-561	1.36	-0.03	-0.38	5.03	0.15	0.63	15.64	-0.93	-0.77	15.69
JN36NN-560	1.40	0.01	0.11	4.90	0.02	0.07	16.60	0.03	0.02	16.60
JNDT6N-561	1.30	-0.09	-1.11	5.50	0.62	2.65	13.67	-2.90	-2.41	13.67
K28HY8-560	4.00	2.61	31.71 X	15.00	10.12	43.46 X	15.50	-1.07	-0.89	15.47
K9FD2Z-560	1.00	-0.39	-4.75 X	4.50	-0.38	-1.65	13.00	-3.57	-2.97	12.84 X
K9LA9R-561	1.40	0.01	0.11	5.00	0.12	0.50	16.30	-0.27	-0.23	16.26
KC4NCR-561	1.40	0.01	0.11	4.90	0.02	0.07	17.00	0.43	0.36	16.60
KJD2BH-560	1.30	-0.09	-1.11	4.00	-0.88	-3.80 X	19.00	2.43	2.02	18.97
KNZLQC-560	1.50	0.11	1.33	5.00	0.12	0.50	17.50	0.93	0.77	17.46
KVGX4D-560	1.40	0.01	0.11	4.90	0.02	0.07	16.60	0.03	0.02	16.60
L2YU2Z-561	1.30	-0.09	-1.11	4.60	-0.28	-1.22	16.40	-0.17	-0.14	16.42
L4BMXM-561	1.25	-0.14	-1.71	4.75	-0.13	-0.58	15.30	-1.27	-1.06	15.26
LALXMF-561	1.40	0.01	0.11	5.20	0.32	1.36	16.00	-0.57	-0.48	15.62
LUAGHY-560	1.40	0.01	0.11	5.00	0.12	0.50	16.20	-0.37	-0.31	16.26
LUK4GT-561	1.50	0.11	1.33	4.50	-0.38	-1.65	19.00	2.43	2.02	19.47

TABLE 1

Stain B, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
LXLZ99-560	1.50	0.11	1.33	4.90	0.02	0.07	18.00	1.43	1.19	17.83
M2JWHZ-560	1.42	0.03	0.35	4.97	0.09	0.37	16.60	0.03	0.02	16.60
M2XCKF-561	1.40	0.01	0.11	4.87	-0.01	-0.06	16.72	0.15	0.12	16.71
M3UP89-560	1.40	0.01	0.11	4.80	-0.08	-0.36	16.96	0.39	0.32	16.96
MFZW4T-561	1.30	-0.09	-1.11	5.10	0.22	0.93	15.00	-1.57	-1.31	14.77
MH8AP2-560	1.45	0.06	0.72	5.02	0.14	0.58	17.00	0.43	0.36	16.79
MJG7B6-560	1.40	0.01	0.11	5.00	0.12	0.50	16.30	-0.27	-0.23	16.26
MKBWGJ-561	1.41	0.02	0.23	4.93	0.05	0.20	16.62	0.05	0.04	16.62
MLNGCE-561	1.40	0.01	0.11	5.00	0.12	0.50	16.00	-0.57	-0.48	16.26
MQLXN9-560	1.36	-0.03	-0.38	4.62	-0.26	-1.13	17.10	0.53	0.44	17.12
MT4ACD-560	1.40	0.01	0.11	4.80	-0.08	-0.36	16.90	0.33	0.27	16.96
MWMC8P-560	1.40	0.01	0.11	5.20	0.32	1.36	15.60	-0.97	-0.81	15.62
MXR23T-561	1.40	0.01	0.11	5.00	0.12	0.50	16.00	-0.57	-0.48	16.26
MZ4LE2-560	1.40	0.01	0.11	4.60	-0.28	-1.22	17.70	1.13	0.94	17.72
NCCXYA-561	1.40	0.01	0.11	5.10	0.22	0.93	15.93	-0.64	-0.53	15.93
NP8VFF-560	1.40	0.01	0.11	5.00	0.12	0.50	16.00	-0.57	-0.48	16.26
NTYE37-560	1.40	0.01	0.11	5.00	0.12	0.50	16.00	-0.57	-0.48	16.26
P2TJV8-560	1.35	-0.04	-0.50	3.89	-0.99	-4.27 X	20.30	3.73	3.10 X	20.31 X
PM6LNG-560	1.25	-0.14	-1.71	4.50	-0.38	-1.65	16.10	-0.47	-0.39	16.13
PUDTF8-560	1.32	-0.07	-0.86	4.82	-0.06	-0.28	15.90	-0.67	-0.56	15.89
Q36LAJ-561	1.50	0.11	1.33	5.00	0.12	0.50	17.00	0.43	0.36	17.46
QDHT4X-560	1.20	-0.19	-2.32	4.60	-0.28	-1.22	15.00	-1.57	-1.31	15.12
QR7DUR-561	1.44	0.05	0.60	5.03	0.15	0.63	17.00	0.43	0.36	16.64
QWX9AY-560	1.20	-0.19	-2.32	4.10	-0.78	-3.37 X	17.00	0.43	0.36	17.02

TABLE 1

Stain B, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
QXNEN6-560	1.37	-0.02	-0.25	4.67	-0.21	-0.92	17.10	0.53	0.44	17.06
QXP7RE-560	1.40	0.01	0.11	5.00	0.12	0.50	16.00	-0.57	-0.48	16.26
R6DMX8-560	1.30	-0.09	-1.11	4.70	-0.18	-0.79	16.06	-0.51	-0.43	16.06
R9GBXG-561	1.40	0.01	0.11	5.20	0.32	1.36	16.00	-0.57	-0.48	15.62
RB8FQN-560	1.20	-0.19	-2.32	4.60	-0.28	-1.22	15.10	-1.47	-1.22	15.12
RJ2HYR-561	1.46	0.07	0.84	4.34	-0.54	-2.34	19.00	2.43	2.02	19.66
RJ2KKP-561	1.40	0.01	0.11	3.90	-0.98	-4.23 X	21.10	4.53	3.77 X	21.04 X
RRUVUK-560	1.20	-0.19	-2.32	4.90	0.02	0.07	14.00	-2.57	-2.14	14.18
RZDJ2E-561	1.50	0.11	1.33	5.00	0.12	0.50	17.46	0.89	0.74	17.46
T3FUEU-560	1.40	0.01	0.11	4.80	-0.08	-0.36	17.00	0.43	0.36	16.96
T88GXB-560	1.40	0.01	0.11	4.70	-0.18	-0.79	17.30	0.73	0.61	17.33
TB3L2F-560	1.20	-0.19	-2.32	5.00	0.12	0.50	14.00	-2.57	-2.14	13.89
TCGYUH-561	1.20	-0.19	-2.32	4.40	-0.48	-2.08	16.00	-0.57	-0.48	15.83
TLLZ6H-560	1.50	0.11	1.33	5.30	0.42	1.79	16.44	-0.13	-0.11	16.44
TQ8RE7-560	1.40	0.01	0.11	5.30	0.42	1.79	15.00	-1.57	-1.31	15.32
TR9JR7-561	1.40	0.01	0.11	4.90	0.02	0.07	16.60	0.03	0.02	16.60
TZLQAU-561	1.36	-0.03	-0.38	5.00	0.12	0.50	15.80	-0.77	-0.64	15.78
U3QHYM-560	1.44	0.05	0.60	5.00	0.12	0.50	16.70	0.13	0.11	16.74
U6AVHP-561	1.30	-0.09	-1.11	4.80	-0.08	-0.36	15.70	-0.87	-0.72	15.71
U7JRN2-561	1.40	0.01	0.11	5.00	0.12	0.50	16.30	-0.27	-0.23	16.26
UBA77G-561	1.40	0.01	0.11	4.80	-0.08	-0.36	17.00	0.43	0.36	16.96
UEH3KK-561	1.40	0.01	0.11	4.90	0.02	0.07	17.00	0.43	0.36	16.60
UEMHY7-561	1.40	0.01	0.11	5.00	0.12	0.50	16.30	-0.27	-0.23	16.26
UJEQ2R-561	1.20	-0.19	-2.32	4.40	-0.48	-2.08	16.00	-0.57	-0.48	15.83

TABLE 1

Stain B, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
UJV8TY-560	1.50	0.11	1.33	4.60	-0.28	-1.22	19.00	2.43	2.02	19.03
UKF4XQ-560	1.44	0.05	0.60	4.93	0.05	0.20	17.00	0.43	0.36	16.98
UXVMGN-561	1.40	0.01	0.11	4.80	-0.08	-0.36	17.30	0.73	0.61	16.96
V3JTAF-560	0.10	-1.29	-15.69 X	0.50	-4.38	-18.83 X	11.50	-5.07	-4.22 X	11.54 X
V9Y6LP-560	1.50	0.11	1.33	4.30	-0.58	-2.51	21.00	4.43	3.68 X	20.42 X
VPNUTJ-560	1.28	-0.11	-1.35	4.78	-0.10	-0.45	16.00	-0.57	-0.48	15.53
W336FR-560	1.42	0.03	0.35	5.00	0.12	0.50	16.50	-0.07	-0.06	16.50
WBAT7J-561	1.40	0.01	0.11	5.00	0.12	0.50	16.26	-0.31	-0.26	16.26
WFP2RX-561	1.40	0.01	0.11	4.80	-0.08	-0.36	17.00	0.43	0.36	16.96
WHURXD-560	1.50	0.11	1.33	5.00	0.12	0.50	17.45	0.88	0.73	17.46
WJWYDX-560	1.40	0.01	0.11	5.40	0.52	2.22	15.00	-1.57	-1.31	15.03
WWBYKC-560	1.40	0.01	0.11	5.00	0.12	0.50	16.26	-0.31	-0.26	16.26
XLQZFT-561	1.24	-0.15	-1.83	4.74	-0.14	-0.62	15.16	-1.41	-1.17	15.17
XN6MQY-560	1.30	-0.09	-1.11	4.00	-0.88	-3.80 X	18.96	2.39	1.99	18.97
XVTBQP-560	1.40	0.01	0.11	5.00	0.12	0.50	16.00	-0.57	-0.48	16.26
XXJEJW-560	1.30	-0.09	-1.11	5.20	0.32	1.36	14.00	-2.57	-2.14	14.48
XYWYER-560	1.40	0.01	0.11	4.80	-0.08	-0.36	17.00	0.43	0.36	16.96
Y66MRT-560	1.30	-0.09	-1.11	4.90	0.02	0.07	15.00	-1.57	-1.31	15.39
YAD6NZ-561	1.42	0.03	0.35	4.83	-0.05	-0.23	17.00	0.43	0.36	17.10
YF88H7-561	1.50	0.11	1.33	4.20	-0.68	-2.94	21.00	4.43	3.68 X	20.92 X
YLHHRE-560	1.40	0.01	0.11	4.90	0.02	0.07	17.00	0.43	0.36	16.60
Z2WUBY-561	1.41	0.02	0.23	5.11	0.23	0.97	15.00	-1.57	-1.31	16.02
Z3N27W-561	1.40	0.01	0.11	5.00	0.12	0.50	16.00	-0.57	-0.48	16.26
Z6D7Y4-560	1.40	0.01	0.11	5.00	0.12	0.50	16.00	-0.57	-0.48	16.26

TABLE 1

Stain B, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
Z9XY7P-561	1.40	0.01	0.11	4.70	-0.18	-0.79	17.00	0.43	0.36	17.33
ZCE9D2-561	1.40	0.01	0.11	4.90	0.02	0.07	17.00	0.43	0.36	16.60
ZL2EZ8-561	1.10	-0.29	-3.54 X	4.70	-0.18	-0.79	14.00	-2.57	-2.14	13.54
ZT2PGX-560	1.38	-0.01	-0.13	4.78	-0.10	-0.45	16.80	0.23	0.19	16.78
ZYD4B2-560	1.30	-0.09	-1.11	4.90	0.02	0.07	15.07	-1.50	-1.25	15.39
Grand Mean	1.39			4.88			16.57			16.60
Standard Deviation	0.08			0.23			1.20			1.16
Participants Included in calculations	186			184			188			187
Participants excluded from calculations (indicated by X)	11			13			9			10

Stain B Preparation Angle: 19.0°

TABLE 1

Stain C

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
2B83FC-560	1.60	-0.02	-0.30	4.00	0.15	0.65	23.60	-1.54	-0.81	23.58
2D3FHX-560	1.60	-0.02	-0.30	3.65	-0.20	-0.83	26.00	0.86	0.45	26.00
2FD4CV-560	1.67	0.05	0.56	3.82	-0.03	-0.11	25.92	0.78	0.41	25.92
2GDEUX-561	1.60	-0.02	-0.30	3.50	-0.35	-1.46	27.20	2.06	1.08	27.20
2HVFZY-560	1.60	-0.02	-0.30	3.80	-0.05	-0.20	24.90	-0.24	-0.13	24.90
2UKMCF-560	1.70	0.08	0.93	3.91	0.06	0.27	25.70	0.56	0.29	25.77
2X3R7H-560	1.60	-0.02	-0.30	3.80	-0.05	-0.20	24.90	-0.24	-0.13	24.90
2XWEH9-561	1.90	0.28	3.39 X	4.10	0.25	1.07	27.60	2.46	1.29	27.61
2YN3CJ-561	1.70	0.08	0.93	3.20	-0.65	-2.73	32.10	6.96	3.66 X	32.09 X
332A8V-561	1.60	-0.02	-0.30	4.00	0.15	0.65	24.00	-1.14	-0.60	23.58
396AMR-560	1.60	-0.02	-0.30	3.90	0.05	0.22	24.22	-0.92	-0.48	24.22
3EFRA7-561	2.00	0.38	4.62 X	5.10	1.25	5.28 X	23.00	-2.14	-1.13	23.09
3GH6MR-561	1.65	0.03	0.32	3.40	-0.45	-1.88	29.00	3.86	2.03	29.03
3J6WLB-560	1.70	0.08	0.93	3.80	-0.05	-0.20	26.57	1.43	0.75	26.57
3KLRPW-561	7.82	6.20	76.23 X	16.68	12.83	54.10 X	28.00	2.86	1.50	27.96
3PGLKD-560	1.60	-0.02	-0.30	4.00	0.15	0.65	24.00	-1.14	-0.60	23.58
3PUBL4-561	1.70	0.08	0.93	4.00	0.15	0.65	25.20	0.06	0.03	25.15
3VEHXG-560	1.70	0.08	0.93	4.10	0.25	1.07	24.50	-0.64	-0.34	24.50
3X6LQN-560	1.60	-0.02	-0.30	4.30	0.45	1.91	21.84	-3.30	-1.74	21.84
3XLTXR-560	1.50	-0.12	-1.53	4.00	0.15	0.65	22.00	-3.14	-1.65	22.02
3YFCTD-560	1.58	-0.04	-0.54	3.70	-0.15	-0.62	25.00	-0.14	-0.07	25.28
3ZNNCA-560	1.60	-0.02	-0.30	4.00	0.15	0.65	23.60	-1.54	-0.81	23.58
43XVM9-561	1.40	-0.22	-2.76	3.60	-0.25	-1.04	23.00	-2.14	-1.13	22.89
49DVA7-560	1.70	0.08	0.93	4.10	0.25	1.07	24.00	-1.14	-0.60	24.50

TABLE 1

Stain C, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
4DFHR3-560	17.00	15.38	189.17 X	40.00	36.15	152.42 X	25.00	-0.14	-0.07	25.15
4E6XTX-560	1.60	-0.02	-0.30	3.80	-0.05	-0.20	24.90	-0.24	-0.13	24.90
4HDLR8-561	1.60	-0.02	-0.30	4.00	0.15	0.65	24.00	-1.14	-0.60	23.58
4HYYFK-560	1.58	-0.04	-0.54	3.58	-0.27	-1.12	26.19	1.05	0.55	26.19
4NTQ8F-560	1.60	-0.02	-0.30	3.80	-0.05	-0.20	25.00	-0.14	-0.07	24.90
68XT2C-560	1.56	-0.06	-0.79	3.70	-0.15	-0.62	24.90	-0.24	-0.13	24.94
6TKBRB-561	1.60	-0.02	-0.30	4.00	0.15	0.65	24.00	-1.14	-0.60	23.58
6TKDD9-560	1.65	0.03	0.32	3.37	-0.48	-2.01	29.30	4.16	2.19	29.32
6VBELH-561	1.70	0.08	0.93	4.00	0.15	0.65	25.10	-0.04	-0.02	25.15
6X2KYM-561	1.70	0.08	0.93	4.00	0.15	0.65	25.00	-0.14	-0.07	25.15
6YAXGP-561	2.00	0.38	4.62 X	4.00	0.15	0.65	30.00	4.86	2.56	30.00
76U9C6-561	1.66	0.04	0.50	4.07	0.23	0.96	24.12	-1.02	-0.54	24.12
7AH3NJ-560	1.30	-0.32	-3.99 X	3.30	-0.55	-2.31	23.00	-2.14	-1.13	23.20
7E28JL-560	1.80	0.18	2.16	3.90	0.05	0.22	27.50	2.36	1.24	27.49
7EJWAT-560	1.60	-0.02	-0.30	4.10	0.25	1.07	23.00	-2.14	-1.13	22.97
84QDHY-560	1.50	-0.12	-1.53	3.60	-0.25	-1.04	25.00	-0.14	-0.07	24.62
8H3GKF-560	1.64	0.02	0.19	3.90	0.05	0.22	24.79	-0.35	-0.18	24.87
8QWLDG-560	1.68	0.06	0.69	4.03	0.18	0.77	24.62	-0.52	-0.27	24.64
8TXQW3-561	1.70	0.08	0.93	3.40	-0.45	-1.88	30.00	4.86	2.56	30.00
8VMT4C-561	1.50	-0.12	-1.53	3.30	-0.55	-2.31	27.00	1.86	0.98	27.04
98BLKX-561	1.70	0.08	0.93	3.80	-0.05	-0.20	26.57	1.43	0.75	26.57
9N38FP-560	1.60	-0.02	-0.30	3.70	-0.15	-0.62	26.00	0.86	0.45	25.62
9RE28F-561	2.00	0.38	4.62 X	4.50	0.65	2.75	24.00	-1.14	-0.60	26.39
9Y9LL3-561	1.70	0.08	0.93	4.20	0.35	1.49	24.00	-1.14	-0.60	23.88

TABLE 1

Stain C, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
A36LKY-560	1.68	0.06	0.69	3.95	0.10	0.44	25.10	-0.04	-0.02	25.17
A7WAND-560	1.80	0.18	2.16	3.80	-0.05	-0.20	28.00	2.86	1.50	28.27
AEC23H-560	1.60	-0.02	-0.30	3.60	-0.25	-1.04	26.00	0.86	0.45	26.39
AHLGZV-561	1.80	0.18	2.16	4.00	0.15	0.65	27.00	1.86	0.98	26.74
AHTANW-560	1.70	0.08	0.93	3.60	-0.25	-1.04	28.00	2.86	1.50	28.18
ARY6FG-560	1.74	0.12	1.42	4.17	0.32	1.36	25.00	-0.14	-0.07	24.66
AUVUEB-560	1.70	0.08	0.93	3.60	-0.25	-1.04	28.00	2.86	1.50	28.18
B3WBXL-560	1.70	0.08	0.93	3.60	-0.25	-1.04	28.00	2.86	1.50	28.18
B848CF-560	1.70	0.08	0.93	4.10	0.25	1.07	25.00	-0.14	-0.07	24.50
BJFE8U-560	1.50	-0.12	-1.53	3.40	-0.45	-1.88	26.00	0.86	0.45	26.18
BJJR2H-560	1.70	0.08	0.93	4.30	0.45	1.91	23.00	-2.14	-1.13	23.29
BMFFHP-561	1.50	-0.12	-1.53	3.80	-0.05	-0.20	23.20	-1.94	-1.02	23.25
BPYP2W-561	1.60	-0.02	-0.30	4.10	0.25	1.07	23.00	-2.14	-1.13	22.97
BQZAGB-561	1.60	-0.02	-0.30	3.60	-0.25	-1.04	26.40	1.26	0.66	26.39
BWFAZ3-560	1.65	0.03	0.32	3.90	0.05	0.22	25.00	-0.14	-0.07	25.03
CABKYM-560	1.60	-0.02	-0.30	3.90	0.05	0.22	24.00	-1.14	-0.60	24.22
CCJPFH-560	1.70	0.08	0.93	3.80	-0.05	-0.20	26.60	1.46	0.77	26.57
CVYNPR-561	1.70	0.08	0.93	3.80	-0.05	-0.20	27.00	1.86	0.98	26.57
CXEKZP-560	1.65	0.03	0.32	3.70	-0.15	-0.62	26.50	1.36	0.72	26.48
CYQDXD-560	1.57	-0.05	-0.67	3.77	-0.08	-0.32	25.00	-0.14	-0.07	24.61
D2872Q-560	1.60	-0.02	-0.30	4.00	0.15	0.65	23.60	-1.54	-0.81	23.58
D4EG4L-560	1.60	-0.02	-0.30	3.70	-0.15	-0.62	25.60	0.46	0.24	25.62
D8GFEE-560	1.60	-0.02	-0.30	4.00	0.15	0.65	23.60	-1.54	-0.81	23.58
D9B7KT-561	1.60	-0.02	-0.30	3.80	-0.05	-0.20	24.90	-0.24	-0.13	24.90

TABLE 1

Stain C, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
DED3KT-560	1.50	-0.12	-1.53	4.00	0.15	0.65	22.00	-3.14	-1.65	22.02
DFBHMH-560	1.60	-0.02	-0.30	3.80	-0.05	-0.20	25.00	-0.14	-0.07	24.90
DVL7TQ-560	1.60	-0.02	-0.30	3.50	-0.35	-1.46	27.20	2.06	1.08	27.20
DZKDKF-560	1.70	0.08	0.93	4.00	0.15	0.65	25.20	0.06	0.03	25.15
E8V2RM-561	1.63	0.01	0.07	3.65	-0.20	-0.83	26.60	1.46	0.77	26.52
ECCVTY-561	2.00	0.38	4.62 X	4.00	0.15	0.65	30.00	4.86	2.56	30.00
EF999Q-560	1.60	-0.02	-0.30	3.70	-0.15	-0.62	25.60	0.46	0.24	25.62
EFH7BM-560	1.20	-0.42	-5.22 X	4.00	0.15	0.65	17.50	-7.64	-4.02 X	17.46 X
EKH7ZJ-560	1.75	0.13	1.55	4.00	0.15	0.65	26.00	0.86	0.45	25.94
ENDC4N-560	1.70	0.08	0.93	4.05	0.20	0.86	24.80	-0.34	-0.18	24.82
EPUBEZ-560	1.25	-0.37	-4.60 X	4.00	0.15	0.65	18.20	-6.94	-3.65 X	18.21 X
ETBJVD-560	1.60	-0.02	-0.30	3.60	-0.25	-1.04	26.00	0.86	0.45	26.39
EU6A2R-560	1.70	0.08	0.93	3.80	-0.05	-0.20	26.60	1.46	0.77	26.57
F2HU9V-561	4.00	2.38	29.23 X	9.00	5.15	21.73 X	26.40	1.26	0.66	26.39
F2QH84-561	1.70	0.08	0.93	3.96	0.11	0.48	25.40	0.26	0.14	25.42
F8WN7K-560	1.40	-0.22	-2.76	4.00	0.15	0.65	20.50	-4.64	-2.44	20.49
FAZ4VX-560	1.64	0.02	0.19	3.90	0.05	0.22	24.80	-0.34	-0.18	24.87
FQU4BH-561	1.75	0.13	1.55	3.75	-0.10	-0.41	27.80	2.66	1.40	27.82
FY8ZAX-561	1.60	-0.02	-0.30	3.90	0.05	0.22	24.20	-0.94	-0.49	24.22
FYDZZQ-561	1.70	0.08	0.93	4.00	0.15	0.65	25.00	-0.14	-0.07	25.15
FYZEEW-561	1.50	-0.12	-1.53	4.00	0.15	0.65	22.02	-3.12	-1.64	22.02
G6C7PD-561	1.70	0.08	0.93	3.90	0.05	0.22	25.80	0.66	0.35	25.84
GZ69PL-560	1.60	-0.02	-0.30	4.20	0.35	1.49	22.40	-2.74	-1.44	22.39
H4LBTW-561	1.80	0.18	2.16	4.00	0.15	0.65	26.70	1.56	0.82	26.74

TABLE 1

Stain C, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
H68XXR-561	1.60	-0.02	-0.30	3.50	-0.35	-1.46	27.00	1.86	0.98	27.20
H8KB89-560	1.60	-0.02	-0.30	3.40	-0.45	-1.88	28.00	2.86	1.50	28.07
HJACJ9-560	1.50	-0.12	-1.53	4.00	0.15	0.65	22.00	-3.14	-1.65	22.02
HKB3WJ-561	1.60	-0.02	-0.30	3.90	0.05	0.22	24.50	-0.64	-0.34	24.22
HUWDZJ-561	1.76	0.14	1.67	3.76	-0.09	-0.37	27.91	2.77	1.46	27.91
HZYKKD-561	1.60	-0.02	-0.30	3.50	-0.35	-1.46	27.00	1.86	0.98	27.20
JA8WLM-561	1.58	-0.04	-0.54	3.54	-0.31	-1.29	26.50	1.36	0.72	26.51
JF6CGP-560	1.50	-0.12	-1.53	4.00	0.15	0.65	20.00	-5.14	-2.70	22.02
JHDJ2V-561	1.80	0.18	2.16	4.00	0.15	0.65	27.00	1.86	0.98	26.74
JHGWVJ-561	1.65	0.03	0.32	3.99	0.14	0.60	24.05	-1.09	-0.57	24.43
JN36NN-560	1.50	-0.12	-1.53	3.50	-0.35	-1.46	25.40	0.26	0.14	25.38
JNDT6N-561	1.60	-0.02	-0.30	4.30	0.45	1.91	21.84	-3.30	-1.74	21.84
K28HY8-560	5.00	3.38	41.53 X	12.50	8.65	36.48 X	23.60	-1.54	-0.81	23.58
K9FD2Z-560	1.50	-0.12	-1.53	3.50	-0.35	-1.46	25.00	-0.14	-0.07	25.38
K9LA9R-561	1.70	0.08	0.93	3.90	0.05	0.22	25.80	0.66	0.35	25.84
KC4NCR-561	1.50	-0.12	-1.53	3.60	-0.25	-1.04	25.00	-0.14	-0.07	24.62
KJD2BH-560	1.60	-0.02	-0.30	3.50	-0.35	-1.46	27.20	2.06	1.08	27.20
KNZLQC-560	1.70	0.08	0.93	3.90	0.05	0.22	25.80	0.66	0.35	25.84
KVGX4D-560	1.60	-0.02	-0.30	3.70	-0.15	-0.62	25.60	0.46	0.24	25.62
L2YU2Z-561	1.60	-0.02	-0.30	3.80	-0.05	-0.20	24.90	-0.24	-0.13	24.90
L4BMXM-561	1.50	-0.12	-1.53	3.50	-0.35	-1.46	25.40	0.26	0.14	25.38
LALXMF-561	1.60	-0.02	-0.30	3.90	0.05	0.22	24.00	-1.14	-0.60	24.22
LUAGHY-560	1.50	-0.12	-1.53	4.00	0.15	0.65	22.00	-3.14	-1.65	22.02
LUK4GT-561	1.75	0.13	1.55	3.50	-0.35	-1.46	30.00	4.86	2.56	30.00

TABLE 1

Stain C, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
LXLZ99-560	1.70	0.08	0.93	3.90	0.05	0.22	26.00	0.86	0.45	25.84
M2JWHZ-560	1.63	0.01	0.07	3.90	0.05	0.22	24.80	-0.34	-0.18	24.71
M2XCKF-561	1.62	0.00	-0.05	3.80	-0.05	-0.20	25.21	0.07	0.04	25.23
M3UP89-560	1.70	0.08	0.93	4.00	0.15	0.65	25.15	0.01	0.00	25.15
MFZW4T-561	1.60	-0.02	-0.30	4.00	0.15	0.65	24.00	-1.14	-0.60	23.58
MH8AP2-560	1.63	0.01	0.07	4.00	0.15	0.65	24.00	-1.14	-0.60	24.05
MJG7B6-560	1.60	-0.02	-0.30	3.90	0.05	0.22	24.20	-0.94	-0.49	24.22
MKBWGJ-561	1.56	-0.06	-0.79	4.00	0.15	0.65	22.95	-2.19	-1.15	22.95
MLNGCE-561	1.60	-0.02	-0.30	4.00	0.15	0.65	24.00	-1.14	-0.60	23.58
MQLXN9-560	1.57	-0.05	-0.67	3.74	-0.11	-0.45	24.80	-0.34	-0.18	24.82
MT4ACD-560	1.60	-0.02	-0.30	3.80	-0.05	-0.20	24.90	-0.24	-0.13	24.90
MWMC8P-560	1.60	-0.02	-0.30	4.20	0.35	1.49	22.40	-2.74	-1.44	22.39
MXR23T-561	1.70	0.08	0.93	4.10	0.25	1.07	24.00	-1.14	-0.60	24.50
MZ4LE2-560	1.60	-0.02	-0.30	3.80	-0.05	-0.20	24.90	-0.24	-0.13	24.90
NCCXYA-561	1.70	0.08	0.93	4.00	0.15	0.65	25.15	0.01	0.00	25.15
NP8VFF-560	1.60	-0.02	-0.30	3.80	-0.05	-0.20	25.00	-0.14	-0.07	24.90
NTYE37-560	1.60	-0.02	-0.30	4.00	0.15	0.65	24.00	-1.14	-0.60	23.58
P2TJV8-560	1.57	-0.05	-0.67	3.24	-0.61	-2.56	28.98	3.84	2.02	28.98
PM6LNG-560	1.50	-0.12	-1.53	3.50	-0.35	-1.46	25.40	0.26	0.14	25.38
PUDTF8-560	1.51	-0.11	-1.41	3.78	-0.07	-0.28	23.50	-1.64	-0.86	23.55
Q36LAJ-561	1.60	-0.02	-0.30	4.10	0.25	1.07	23.00	-2.14	-1.13	22.97
QDHT4X-560	1.60	-0.02	-0.30	3.60	-0.25	-1.04	26.00	0.86	0.45	26.39
QR7DUR-561	1.63	0.01	0.07	3.89	0.04	0.18	25.00	-0.14	-0.07	24.77
QWX9AY-560	1.90	0.28	3.39 X	3.30	-0.55	-2.31	35.00	9.86	5.19 X	35.15 X

TABLE 1

Stain C, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
QXNEN6-560	1.61	-0.01	-0.17	3.75	-0.10	-0.41	25.40	0.26	0.14	25.43
QXP7RE-560	1.70	0.08	0.93	4.00	0.15	0.65	25.00	-0.14	-0.07	25.15
R6DMX8-560	1.60	-0.02	-0.30	3.90	0.05	0.22	24.22	-0.92	-0.48	24.22
R9GBXG-561	1.70	0.08	0.93	4.10	0.25	1.07	25.00	-0.14	-0.07	24.50
RB8FQN-560	1.70	0.08	0.93	4.00	0.15	0.65	25.10	-0.04	-0.02	25.15
RJ2HYR-561	1.70	0.08	0.93	3.53	-0.32	-1.34	28.00	2.86	1.50	28.79
RJ2KKP-561	1.60	-0.02	-0.30	3.24	-0.61	-2.56	30.00	4.86	2.56	29.59
RRUVUK-560	1.40	-0.22	-2.76	3.90	0.05	0.22	21.00	-4.14	-2.18	21.04
RZDJ2E-561	1.75	0.13	1.55	4.25	0.40	1.70	24.32	-0.82	-0.43	24.32
T3FUEU-560	1.70	0.08	0.93	3.70	-0.15	-0.62	27.00	1.86	0.98	27.35
T88GXB-560	1.60	-0.02	-0.30	3.80	-0.05	-0.20	24.90	-0.24	-0.13	24.90
TB3L2F-560	1.40	-0.22	-2.76	4.20	0.35	1.49	19.00	-6.14	-3.23 X	19.47
TCGYUH-561	1.60	-0.02	-0.30	3.40	-0.45	-1.88	28.00	2.86	1.50	28.07
TLLZ6H-560	1.70	0.08	0.93	4.20	0.35	1.49	23.88	-1.26	-0.66	23.88
TQ8RE7-560	1.60	-0.02	-0.30	4.25	0.40	1.70	22.00	-3.14	-1.65	22.12
TR9JR7-561	1.60	-0.02	-0.30	4.00	0.15	0.65	23.60	-1.54	-0.81	23.58
TZLQAU-561	1.60	-0.02	-0.30	4.00	0.15	0.65	23.60	-1.54	-0.81	23.58
U3QHYM-560	1.72	0.10	1.18	3.84	-0.01	-0.03	26.60	1.46	0.77	26.61
U6AVHP-561	1.60	-0.02	-0.30	4.00	0.15	0.65	23.60	-1.54	-0.81	23.58
U7JRN2-561	1.70	0.08	0.93	3.90	0.05	0.22	25.80	0.66	0.35	25.84
UBA77G-561	1.60	-0.02	-0.30	3.90	0.05	0.22	24.20	-0.94	-0.49	24.22
UEH3KK-561	1.50	-0.12	-1.53	3.80	-0.05	-0.20	23.00	-2.14	-1.13	23.25
UEMHY7-561	1.60	-0.02	-0.30	3.70	-0.15	-0.62	25.60	0.46	0.24	25.62
UJEQ2R-561	1.50	-0.12	-1.53	3.60	-0.25	-1.04	25.00	-0.14	-0.07	24.62

TABLE 1

Stain C, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
UJV8TY-560	1.60	-0.02	-0.30	3.70	-0.15	-0.62	25.60	0.46	0.24	25.62
UKF4XQ-560	1.67	0.05	0.56	3.51	-0.34	-1.42	28.00	2.86	1.50	28.41
UXVMGN-561	1.70	0.08	0.93	3.80	-0.05	-0.20	25.80	0.66	0.35	26.57
V3JTAF-560	0.20	-1.42	-17.52 X	0.40	-3.45	-14.53 X	30.00	4.86	2.56	30.00
V9Y6LP-560	1.68	0.06	0.69	3.80	-0.05	-0.20	27.00	1.86	0.98	26.24
VPNUTJ-560	1.52	-0.10	-1.28	3.90	0.05	0.22	23.00	-2.14	-1.13	22.94
W336FR-560	1.66	0.04	0.44	3.90	0.05	0.22	25.20	0.06	0.03	25.19
WBAT7J-561	1.70	0.08	0.93	4.00	0.15	0.65	25.15	0.01	0.00	25.15
WFP2RX-561	1.60	-0.02	-0.30	3.80	-0.05	-0.20	25.00	-0.14	-0.07	24.90
WHURXD-560	1.50	-0.12	-1.53	4.00	0.15	0.65	22.02	-3.12	-1.64	22.02
WJWYDX-560	1.70	0.08	0.93	4.20	0.35	1.49	24.00	-1.14	-0.60	23.88
WWBYKC-560	1.60	-0.02	-0.30	3.80	-0.05	-0.20	24.90	-0.24	-0.13	24.90
XLQZFT-561	1.70	0.08	0.93	3.68	-0.17	-0.70	27.51	2.37	1.25	27.51
XN6MQY-560	1.60	-0.02	-0.30	3.60	-0.25	-1.04	26.39	1.25	0.66	26.39
XVTBQP-560	1.60	-0.02	-0.30	3.80	-0.05	-0.20	25.00	-0.14	-0.07	24.90
XXJEJW-560	1.60	-0.02	-0.30	4.30	0.45	1.91	22.00	-3.14	-1.65	21.84
XYWYER-560	1.60	-0.02	-0.30	3.70	-0.15	-0.62	25.60	0.46	0.24	25.62
Y66MRT-560	1.60	-0.02	-0.30	4.00	0.15	0.65	24.00	-1.14	-0.60	23.58
YAD6NZ-561	1.69	0.07	0.81	3.99	0.14	0.60	25.00	-0.14	-0.07	25.06
YF88H7-561	1.70	0.08	0.93	4.10	0.25	1.07	25.00	-0.14	-0.07	24.50
YLHHRE-560	1.70	0.08	0.93	3.90	0.05	0.22	26.00	0.86	0.45	25.84
Z2WUBY-561	1.64	0.02	0.19	4.01	0.16	0.69	24.00	-1.14	-0.60	24.14
Z3N27W-561	1.90	0.28	3.39 X	4.80	0.95	4.02 X	23.00	-2.14	-1.13	23.32
Z6D7Y4-560	1.80	0.18	2.16	4.10	0.25	1.07	26.00	0.86	0.45	26.04

TABLE 1

Stain C, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
Z9XY7P-561	1.60	-0.02	-0.30	3.70	-0.15	-0.62	26.00	0.86	0.45	25.62
ZCE9D2-561	1.60	-0.02	-0.30	4.20	0.35	1.49	22.00	-3.14	-1.65	22.39
ZL2EZ8-561	1.40	-0.22	-2.76	3.70	-0.15	-0.62	22.00	-3.14	-1.65	22.23
ZT2PGX-560	1.67	0.05	0.56	3.87	0.02	0.10	25.60	0.46	0.24	25.56
ZYD4B2-560	1.50	-0.12	-1.53	3.90	0.05	0.22	22.33	-2.81	-1.48	22.62
Grand Mean	1.62			3.85			25.14			25.13
Standard Deviation	0.08			0.24			1.90			1.93
Participants Included in calculations	182			190			192			193
Participants excluded from calculations (indicated by X)	15			7			5			4

Stain C Preparation Angle: 28.2°

TABLE 1

Stain D

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
2B83FC-560	2.30	-0.08	-0.75	3.90	0.12	0.69	36.10	-2.86	-1.43	36.14
2D3FHX-560	2.20	-0.18	-1.74	3.60	-0.18	-1.09	37.70	-1.26	-0.63	37.67
2FD4CV-560	2.43	0.05	0.53	3.86	0.08	0.45	39.02	0.06	0.03	39.02
2GDEUX-561	2.20	-0.18	-1.74	3.50	-0.28	-1.68	38.90	-0.06	-0.03	38.94
2HVFZY-560	2.40	0.02	0.24	3.80	0.02	0.10	39.10	0.14	0.07	39.17
2UKMCF-560	2.42	0.04	0.44	3.92	0.14	0.81	38.10	-0.86	-0.43	38.12
2X3R7H-560	2.30	-0.08	-0.75	3.70	-0.08	-0.49	38.40	-0.56	-0.28	38.43
2XWEH9-561	2.60	0.22	2.21	4.00	0.22	1.28	40.50	1.54	0.77	40.54
2YN3CJ-561	2.30	-0.08	-0.75	3.20	-0.58	-3.45 X	45.90	6.94	3.47 X	45.95
332A8V-561	2.10	-0.28	-2.73	4.00	0.22	1.28	32.00	-6.96	-3.48 X	31.67
396AMR-560	2.40	0.02	0.24	3.90	0.12	0.69	37.98	-0.98	-0.49	37.98
3EFRA7-561	3.00	0.62	6.17 X	5.00	1.22	7.20 X	36.80	-2.16	-1.08	36.87
3GH6MR-561	2.40	0.02	0.24	3.50	-0.28	-1.68	43.30	4.34	2.17	43.29
3J6WLB-560	2.50	0.12	1.23	3.80	0.02	0.10	41.14	2.18	1.09	41.14
3KLRPW-561	10.48	8.10	80.07 X	16.62	12.84	76.00 X	39.00	0.04	0.02	39.09
3PGLKD-560	2.40	0.02	0.24	3.80	0.02	0.10	39.00	0.04	0.02	39.17
3PUBL4-561	2.40	0.02	0.24	3.80	0.02	0.10	39.20	0.24	0.12	39.17
3VEHXG-560	2.40	0.02	0.24	3.90	0.12	0.69	38.00	-0.96	-0.48	37.98
3X6LQN-560	2.20	-0.18	-1.74	4.00	0.22	1.28	33.36	-5.60	-2.80	33.37
3XLTXR-560	2.20	-0.18	-1.74	3.60	-0.18	-1.09	38.00	-0.96	-0.48	37.67
3YFCTD-560	2.30	-0.08	-0.75	3.80	0.02	0.10	38.00	-0.96	-0.48	37.25
3ZNNCA-560	2.40	0.02	0.24	3.90	0.12	0.69	38.00	-0.96	-0.48	37.98
43XVM9-561	2.20	-0.18	-1.74	4.00	0.22	1.28	33.00	-5.96	-2.98	33.37
49DVA7-560	2.30	-0.08	-0.75	3.90	0.12	0.69	36.00	-2.96	-1.48	36.14

TABLE 1

Stain D, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
4DFHR3-560	24.00	21.62	213.64 X	38.00	34.22	202.58 X	39.00	0.04	0.02	39.17
4E6XTX-560	2.60	0.22	2.21	3.80	0.02	0.10	43.00	4.04	2.02	43.17
4HDLR8-561	2.40	0.02	0.24	4.00	0.22	1.28	37.00	-1.96	-0.98	36.87
4HYYFK-560	2.37	-0.01	-0.06	3.56	-0.22	-1.32	41.74	2.78	1.39	41.74
4NTQ8F-560	2.50	0.12	1.23	3.70	-0.08	-0.49	43.00	4.04	2.02	42.51
68XT2C-560	2.49	0.11	1.13	3.77	-0.01	-0.08	41.30	2.34	1.17	41.34
6TKBRB-561	2.60	0.22	2.21	3.80	0.02	0.10	43.00	4.04	2.02	43.17
6TKDD9-560	2.39	0.01	0.14	3.63	-0.15	-0.91	41.20	2.24	1.12	41.18
6VBELH-561	2.50	0.12	1.23	3.90	0.12	0.69	38.80	-0.16	-0.08	39.87
6X2KYM-561	2.50	0.12	1.23	3.70	-0.08	-0.49	43.00	4.04	2.02	42.51
6YAXGP-561	2.50	0.12	1.23	4.00	0.22	1.28	39.00	0.04	0.02	38.68
76U9C6-561	2.45	0.07	0.73	3.86	0.08	0.47	39.37	0.41	0.21	39.37
7AH3NJ-560	2.20	-0.18	-1.74	3.30	-0.48	-2.86	41.00	2.04	1.02	41.81
7E28JL-560	2.50	0.12	1.23	3.70	-0.08	-0.49	42.50	3.54	1.77	42.51
7EJWAT-560	2.30	-0.08	-0.75	3.70	-0.08	-0.49	38.40	-0.56	-0.28	38.43
84QDHY-560	2.40	0.02	0.24	3.50	-0.28	-1.68	43.00	4.04	2.02	43.29
8H3GKF-560	2.35	-0.03	-0.26	3.72	-0.06	-0.37	39.20	0.24	0.12	39.18
8QWLDG-560	2.42	0.04	0.44	3.88	0.10	0.57	38.49	-0.47	-0.23	38.59
8TXQW3-561	2.40	0.02	0.24	3.60	-0.18	-1.09	42.00	3.04	1.52	41.81
8VMT4C-561	2.20	-0.18	-1.74	3.30	-0.48	-2.86	42.00	3.04	1.52	41.81
98BLKX-561	2.40	0.02	0.24	3.80	0.02	0.10	39.17	0.21	0.11	39.17
9N38FP-560	2.30	-0.08	-0.75	3.60	-0.18	-1.09	40.00	1.04	0.52	39.71
9RE28F-561	2.50	0.12	1.23	4.00	0.22	1.28	38.00	-0.96	-0.48	38.68
9Y9LL3-561	2.40	0.02	0.24	4.00	0.22	1.28	37.00	-1.96	-0.98	36.87

TABLE 1

Stain D, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
A36LKY-560	2.53	0.15	1.52	4.01	0.23	1.34	39.10	0.14	0.07	39.12
A7WAND-560	2.50	0.12	1.23	3.90	0.12	0.69	40.00	1.04	0.52	39.87
AEC23H-560	2.40	0.02	0.24	3.70	-0.08	-0.49	40.00	1.04	0.52	40.44
AHLGZV-561	2.50	0.12	1.23	4.00	0.22	1.28	39.00	0.04	0.02	38.68
AHTANW-560	2.40	0.02	0.24	3.80	0.02	0.10	39.00	0.04	0.02	39.17
ARY6FG-560	2.53	0.15	1.52	3.92	0.14	0.81	40.00	1.04	0.52	40.20
AUVUEB-560	2.40	0.02	0.24	3.80	0.02	0.10	39.00	0.04	0.02	39.17
B3WBXL-560	2.40	0.02	0.24	3.80	0.02	0.10	39.00	0.04	0.02	39.17
B848CF-560	2.40	0.02	0.24	3.80	0.02	0.10	39.00	0.04	0.02	39.17
BJFE8U-560	2.30	-0.08	-0.75	3.50	-0.28	-1.68	41.00	2.04	1.02	41.08
BJJR2H-560	2.40	0.02	0.24	4.00	0.22	1.28	37.00	-1.96	-0.98	36.87
BMFFHP-561	2.40	0.02	0.24	3.80	0.02	0.10	39.80	0.84	0.42	39.17
BPYP2W-561	2.40	0.02	0.24	3.80	0.02	0.10	39.00	0.04	0.02	39.17
BQZAGB-561	2.40	0.02	0.24	3.80	0.02	0.10	39.20	0.24	0.12	39.17
BWFAZ3-560	2.35	-0.03	-0.26	3.83	0.05	0.28	38.00	-0.96	-0.48	37.85
CABKYM-560	2.40	0.02	0.24	3.80	0.02	0.10	39.00	0.04	0.02	39.17
CCJPFH-560	2.40	0.02	0.24	3.90	0.12	0.69	38.00	-0.96	-0.48	37.98
CVYNPR-561	2.40	0.02	0.24	3.80	0.02	0.10	39.00	0.04	0.02	39.17
CXEKZP-560	2.50	0.12	1.23	4.10	0.32	1.88	37.60	-1.36	-0.68	37.57
CYQDXD-560	2.37	-0.01	-0.06	3.69	-0.09	-0.55	40.00	1.04	0.52	39.96
D2872Q-560	2.40	0.02	0.24	3.80	0.02	0.10	39.20	0.24	0.12	39.17
D4EG4L-560	2.30	-0.08	-0.75	3.60	-0.18	-1.09	39.70	0.74	0.37	39.71
D8GFEE-560	2.20	-0.18	-1.74	3.80	0.02	0.10	35.40	-3.56	-1.78	35.38
D9B7KT-561	2.40	0.02	0.24	3.60	-0.18	-1.09	41.80	2.84	1.42	41.81

TABLE 1

Stain D, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
DED3KT-560	2.30	-0.08	-0.75	3.80	0.02	0.10	37.20	-1.76	-0.88	37.25
DFBHMH-560	2.40	0.02	0.24	3.60	-0.18	-1.09	42.00	3.04	1.52	41.81
DVL7TQ-560	2.40	0.02	0.24	3.50	-0.28	-1.68	43.30	4.34	2.17	43.29
DZKDKF-560	2.40	0.02	0.24	3.80	0.02	0.10	39.20	0.24	0.12	39.17
E8V2RM-561	2.41	0.03	0.34	3.83	0.05	0.28	39.10	0.14	0.07	38.99
ECCVTY-561	2.50	0.12	1.23	4.00	0.22	1.28	38.00	-0.96	-0.48	38.68
EF999Q-560	2.40	0.02	0.24	3.80	0.02	0.10	39.20	0.24	0.12	39.17
EFH7BM-560	2.00	-0.38	-3.71 X	4.00	0.22	1.28	30.00	-8.96	-4.48 X	30.00 X
EKH7ZJ-560	2.50	0.12	1.23	4.00	0.22	1.28	38.70	-0.26	-0.13	38.68
ENDC4N-560	2.40	0.02	0.24	4.00	0.22	1.28	36.80	-2.16	-1.08	36.87
EPUBEZ-560	2.00	-0.38	-3.71 X	4.00	0.22	1.28	30.00	-8.96	-4.48 X	30.00 X
ETBJVD-560	2.20	-0.18	-1.74	3.50	-0.28	-1.68	39.00	0.04	0.02	38.94
EU6A2R-560	2.40	0.02	0.24	3.70	-0.08	-0.49	40.40	1.44	0.72	40.44
F2HU9V-561	6.00	3.62	35.81 X	8.00	4.22	24.96 X	48.50	9.54	4.77 X	48.59 X
F2QH84-561	2.44	0.06	0.63	3.78	0.00	-0.02	40.20	1.24	0.62	40.20
F8WN7K-560	2.50	0.12	1.23	3.50	-0.28	-1.68	45.60	6.64	3.32 X	45.58
FAZ4VX-560	2.39	0.01	0.14	3.68	-0.10	-0.61	40.50	1.54	0.77	40.50
FQU4BH-561	2.50	0.12	1.23	3.75	-0.03	-0.20	38.00	-0.96	-0.48	41.81
FY8ZAX-561	2.40	0.02	0.24	3.70	-0.08	-0.49	40.40	1.44	0.72	40.44
FYDZZQ-561	2.40	0.02	0.24	3.80	0.02	0.10	39.00	0.04	0.02	39.17
FYZEEW-561	2.40	0.02	0.24	3.90	0.12	0.69	37.98	-0.98	-0.49	37.98
G6C7PD-561	2.40	0.02	0.24	3.80	0.02	0.10	39.20	0.24	0.12	39.17
GZ69PL-560	2.40	0.02	0.24	4.80	1.02	6.02 X	30.00	-8.96	-4.48 X	30.00 X
H4LBTW-561	2.60	0.22	2.21	4.10	0.32	1.88	39.30	0.34	0.17	39.36

TABLE 1

Stain D, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
H68XXR-561	2.33	-0.05	-0.45	3.52	-0.26	-1.56	41.00	2.04	1.02	41.45
H8KB89-560	2.40	0.02	0.24	3.60	-0.18	-1.09	42.00	3.04	1.52	41.81
HJACJ9-560	2.00	-0.38	-3.71 X	4.00	0.22	1.28	30.00	-8.96	-4.48 X	30.00 X
HKB3WJ-561	2.40	0.02	0.24	3.90	0.12	0.69	38.50	-0.46	-0.23	37.98
HUWDZJ-561	2.34	-0.04	-0.35	3.52	-0.26	-1.56	41.67	2.71	1.36	41.66
HZYKKD-561	2.40	0.02	0.24	3.60	-0.18	-1.09	42.00	3.04	1.52	41.81
JA8WLM-561	2.32	-0.06	-0.55	3.51	-0.27	-1.62	41.37	2.41	1.21	41.37
JF6CGP-560	2.50	0.12	1.23	4.00	0.22	1.28	40.00	1.04	0.52	38.68
JHDJ2V-561	2.50	0.12	1.23	4.00	0.22	1.28	39.00	0.04	0.02	38.68
JHGWVJ-561	2.38	0.00	0.04	3.86	0.08	0.45	37.91	-1.05	-0.52	38.07
JN36NN-560	2.00	-0.38	-3.71 X	3.50	-0.28	-1.68	34.80	-4.16	-2.08	34.85
JNDT6N-561	2.40	0.02	0.24	4.50	0.72	4.24 X	32.23	-6.73	-3.36 X	32.23
K28HY8-560	7.20	4.82	47.66 X	11.50	7.72	45.69 X	38.80	-0.16	-0.08	38.76
K9FD2Z-560	2.00	-0.38	-3.71 X	3.50	-0.28	-1.68	35.00	-3.96	-1.98	34.85
K9LA9R-561	2.40	0.02	0.24	3.90	0.12	0.69	38.00	-0.96	-0.48	37.98
KC4NCR-561	2.30	-0.08	-0.75	3.70	-0.08	-0.49	38.00	-0.96	-0.48	38.43
KJD2BH-560	2.40	0.02	0.24	3.80	0.02	0.10	39.20	0.24	0.12	39.17
KNZLQC-560	2.40	0.02	0.24	3.90	0.12	0.69	38.00	-0.96	-0.48	37.98
KVGX4D-560	2.30	-0.08	-0.75	3.70	-0.08	-0.49	38.40	-0.56	-0.28	38.43
L2YU2Z-561	2.30	-0.08	-0.75	3.60	-0.18	-1.09	39.70	0.74	0.37	39.71
L4BMXM-561	2.25	-0.13	-1.24	3.50	-0.28	-1.68	40.00	1.04	0.52	40.01
LALXMF-561	2.60	0.22	2.21	4.10	0.32	1.88	39.00	0.04	0.02	39.36
LUAGHY-560	2.40	0.02	0.24	3.90	0.12	0.69	37.90	-1.06	-0.53	37.98
LUK4GT-561	2.25	-0.13	-1.24	3.75	-0.03	-0.20	37.00	-1.96	-0.98	36.87

TABLE 1

Stain D, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
LXLZ99-560	2.50	0.12	1.23	3.80	0.02	0.10	41.00	2.04	1.02	41.14
M2JWHZ-560	2.38	0.00	0.04	3.83	0.05	0.28	38.40	-0.56	-0.28	38.42
M2XCKF-561	2.45	0.07	0.73	3.97	0.19	1.11	38.08	-0.88	-0.44	38.11
M3UP89-560	2.40	0.02	0.24	3.70	-0.08	-0.49	40.44	1.48	0.74	40.44
MFZW4T-561	2.40	0.02	0.24	3.90	0.12	0.69	38.00	-0.96	-0.48	37.98
MH8AP2-560	2.37	-0.01	-0.06	3.82	0.04	0.22	38.00	-0.96	-0.48	38.35
MJG7B6-560	2.60	0.22	2.21	3.60	-0.18	-1.09	46.20	7.24	3.62 X	46.24
MKBWGJ-561	2.34	-0.04	-0.35	3.78	0.00	-0.02	38.25	-0.71	-0.35	38.25
MLNGCE-561	2.40	0.02	0.24	3.80	0.02	0.10	39.00	0.04	0.02	39.17
MQLXN9-560	2.25	-0.13	-1.24	3.64	-0.14	-0.85	38.20	-0.76	-0.38	38.18
MT4ACD-560	2.40	0.02	0.24	3.80	0.02	0.10	39.10	0.14	0.07	39.17
MWMC8P-560	2.60	0.22	2.21	4.20	0.42	2.47	40.50	1.54	0.77	38.25
MXR23T-561	2.40	0.02	0.24	3.90	0.12	0.69	38.00	-0.96	-0.48	37.98
MZ4LE2-560	2.40	0.02	0.24	3.70	-0.08	-0.49	40.40	1.44	0.72	40.44
NCCXYA-561	2.40	0.02	0.24	3.90	0.12	0.69	37.98	-0.98	-0.49	37.98
NP8VFF-560	2.40	0.02	0.24	3.80	0.02	0.10	39.00	0.04	0.02	39.17
NTYE37-560	2.40	0.02	0.24	3.80	0.02	0.10	39.00	0.04	0.02	39.17
P2TJV8-560	2.00	-0.38	-3.71 X	3.37	-0.41	-2.45	36.40	-2.56	-1.28	36.40
PM6LNG-560	2.25	-0.13	-1.24	3.50	-0.28	-1.68	40.00	1.04	0.52	40.01
PUDTF8-560	2.25	-0.13	-1.24	3.70	-0.08	-0.49	37.50	-1.46	-0.73	37.45
Q36LAJ-561	2.30	-0.08	-0.75	3.90	0.12	0.69	36.00	-2.96	-1.48	36.14
QDHT4X-560	2.20	-0.18	-1.74	3.80	0.02	0.10	35.00	-3.96	-1.98	35.38
QR7DUR-561	2.43	0.05	0.53	3.93	0.15	0.87	38.00	-0.96	-0.48	38.19
QWX9AY-560	2.20	-0.18	-1.74	3.60	-0.18	-1.09	37.60	-1.36	-0.68	37.67

TABLE 1

Stain D, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
QXNEN6-560	2.36	-0.02	-0.16	3.64	-0.14	-0.85	40.40	1.44	0.72	40.42
QXP7RE-560	2.30	-0.08	-0.75	3.90	0.12	0.69	36.00	-2.96	-1.48	36.14
R6DMX8-560	2.10	-0.28	-2.73	3.90	0.12	0.69	32.58	-6.38	-3.19 X	32.58
R9GBXG-561	2.40	0.02	0.24	4.00	0.22	1.28	37.00	-1.96	-0.98	36.87
RB8FQN-560	2.40	0.02	0.24	4.00	0.22	1.28	36.80	-2.16	-1.08	36.87
RJ2HYR-561	2.30	-0.08	-0.75	3.57	-0.21	-1.26	40.00	1.04	0.52	40.11
RJ2KKP-561	2.30	-0.08	-0.75	3.20	-0.58	-3.45 X	44.40	5.44	2.72	45.95
RRUVUK-560	2.20	-0.18	-1.74	3.50	-0.28	-1.68	39.00	0.04	0.02	38.94
RZDJ2E-561	2.50	0.12	1.23	3.75	-0.03	-0.20	41.81	2.85	1.43	41.81
T3FUEU-560	2.30	-0.08	-0.75	3.80	0.02	0.10	37.00	-1.96	-0.98	37.25
T88GXB-560	2.40	0.02	0.24	3.60	-0.18	-1.09	41.80	2.84	1.42	41.81
TB3L2F-560	2.20	-0.18	-1.74	4.00	0.22	1.28	34.00	-4.96	-2.48	33.37
TCGYUH-561	2.20	-0.18	-1.74	3.40	-0.38	-2.27	40.00	1.04	0.52	40.32
TLLZ6H-560	2.40	0.02	0.24	4.00	0.22	1.28	36.87	-2.09	-1.04	36.87
TQ8RE7-560	2.40	0.02	0.24	3.90	0.12	0.69	38.00	-0.96	-0.48	37.98
TR9JR7-561	2.30	-0.08	-0.75	3.80	0.02	0.10	37.30	-1.66	-0.83	37.25
TZLQAU-561	2.30	-0.08	-0.75	3.90	0.12	0.69	36.10	-2.86	-1.43	36.14
U3QHYM-560	2.49	0.11	1.13	3.76	-0.02	-0.14	41.50	2.54	1.27	41.47
U6AVHP-561	2.40	0.02	0.24	3.80	0.02	0.10	39.20	0.24	0.12	39.17
U7JRN2-561	2.40	0.02	0.24	3.90	0.12	0.69	38.00	-0.96	-0.48	37.98
UBA77G-561	2.40	0.02	0.24	3.90	0.12	0.69	38.00	-0.96	-0.48	37.98
UEH3KK-561	2.30	-0.08	-0.75	3.60	-0.18	-1.09	40.00	1.04	0.52	39.71
UEMHY7-561	2.40	0.02	0.24	3.80	0.02	0.10	39.10	0.14	0.07	39.17
UJEQ2R-561	2.30	-0.08	-0.75	3.70	-0.08	-0.49	38.00	-0.96	-0.48	38.43

TABLE 1

Stain D, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
UJV8TY-560	2.50	0.12	1.23	3.60	-0.18	-1.09	44.00	5.04	2.52	43.98
UKF4XQ-560	2.40	0.02	0.24	3.72	-0.06	-0.37	40.00	1.04	0.52	40.18
UXVMGN-561	2.40	0.02	0.24	3.70	-0.08	-0.49	40.20	1.24	0.62	40.44
V3JTAF-560	0.30	-2.08	-20.51 X	0.40	-3.38	-20.03 X	48.60	9.64	4.82 X	48.59 X
V9Y6LP-560	2.40	0.02	0.24	3.80	0.02	0.10	39.80	0.84	0.42	39.17
VPNUTJ-560	2.22	-0.16	-1.54	3.77	-0.01	-0.08	36.00	-2.96	-1.48	36.08
W336FR-560	2.26	-0.12	-1.14	3.77	-0.01	-0.08	36.80	-2.16	-1.08	36.83
WBAT7J-561	2.40	0.02	0.24	3.90	0.12	0.69	37.97	-0.99	-0.49	37.98
WFP2RX-561	2.40	0.02	0.24	3.70	-0.08	-0.49	40.00	1.04	0.52	40.44
WHURXD-560	2.50	0.12	1.23	3.50	-0.28	-1.68	45.58	6.62	3.31 X	45.58
WJWYDX-560	2.30	-0.08	-0.75	3.80	0.02	0.10	37.00	-1.96	-0.98	37.25
WWBYKC-560	2.40	0.02	0.24	3.80	0.02	0.10	39.17	0.21	0.11	39.17
XLQZFT-561	2.32	-0.06	-0.55	3.63	-0.15	-0.91	39.72	0.76	0.38	39.73
XN6MQY-560	2.20	-0.18	-1.74	3.20	-0.58	-3.45 X	43.43	4.47	2.24	43.43
XVTBQP-560	2.50	0.12	1.23	4.00	0.22	1.28	39.00	0.04	0.02	38.68
XXJEJW-560	2.20	-0.18	-1.74	3.80	0.02	0.10	35.00	-3.96	-1.98	35.38
XYWYER-560	2.40	0.02	0.24	3.80	0.02	0.10	39.20	0.24	0.12	39.17
Y66MRT-560	2.30	-0.08	-0.75	3.70	-0.08	-0.49	38.00	-0.96	-0.48	38.43
YAD6NZ-561	2.26	-0.12	-1.14	3.95	0.17	0.99	35.00	-3.96	-1.98	34.90
YF88H7-561	2.70	0.32	3.20 X	3.70	-0.08	-0.49	47.00	8.04	4.02 X	46.86 X
YLHHRE-560	2.40	0.02	0.24	3.90	0.12	0.69	38.00	-0.96	-0.48	37.98
Z2WUBY-561	2.37	-0.01	-0.06	3.83	0.05	0.28	38.00	-0.96	-0.48	38.23
Z3N27W-561	2.50	0.12	1.23	4.20	0.42	2.47	37.00	-1.96	-0.98	36.53
Z6D7Y4-560	2.30	-0.08	-0.75	3.80	0.02	0.10	37.00	-1.96	-0.98	37.25

TABLE 1

Stain D, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
Z9XY7P-561	2.40	0.02	0.24	3.70	-0.08	-0.49	40.00	1.04	0.52	40.44
ZCE9D2-561	2.40	0.02	0.24	3.90	0.12	0.69	38.00	-0.96	-0.48	37.98
ZL2EZ8-561	2.20	-0.18	-1.74	3.60	-0.18	-1.09	38.00	-0.96	-0.48	37.67
ZT2PGX-560	2.35	-0.03	-0.26	3.81	0.03	0.16	38.10	-0.86	-0.43	38.08
ZYD4B2-560	2.10	-0.28	-2.73	4.00	0.22	1.28	31.33	-7.63	-3.81 X	31.67
Grand Mean	2.38			3.78			38.96			38.99
Standard Deviation	0.10			0.17			2.00			2.44
Participants Included in calculations	184			186			182			190
Participants excluded from calculations (indicated by X)	13			11			15			7

Stain D Preparation Angle: 44.2°

TABLE 1

Stain E

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
2B83FC-560	1.40	-0.05	-0.45	6.20	0.48	1.08	13.00	-1.52	-0.91	13.05
2D3FHX-560	1.25	-0.20	-1.91	5.20	-0.52	-1.16	14.00	-0.52	-0.31	13.91
2FD4CV-560	1.44	-0.01	-0.06	5.93	0.21	0.48	14.05	-0.47	-0.28	14.05
2GDEUX-561	1.40	-0.05	-0.45	5.50	-0.22	-0.49	14.70	0.18	0.11	14.75
2HVFZY-560	1.40	-0.05	-0.45	5.80	0.08	0.18	13.90	-0.62	-0.37	13.97
2UKMCF-560	1.50	0.05	0.53	5.60	-0.12	-0.26	15.50	0.98	0.59	15.54
2X3R7H-560	1.30	-0.15	-1.42	5.70	-0.02	-0.04	13.20	-1.32	-0.79	13.18
2XWEH9-561	1.50	0.05	0.53	5.90	0.18	0.41	14.70	0.18	0.11	14.73
2YN3CJ-561	1.40	-0.05	-0.45	4.60	-1.12	-2.50	17.70	3.18	1.90	17.72
332A8V-561	1.50	0.05	0.53	6.00	0.28	0.63	14.00	-0.52	-0.31	14.48
396AMR-560	1.50	0.05	0.53	5.50	-0.22	-0.49	15.83	1.31	0.78	15.83
3EFRA7-561	1.70	0.25	2.48	7.70	1.98	4.44 X	12.70	-1.82	-1.08	12.75
3GH6MR-561	1.45	0.00	0.04	5.20	-0.52	-1.16	16.20	1.68	1.00	16.19
3J6WLB-560	1.50	0.05	0.53	5.40	-0.32	-0.71	16.13	1.61	0.96	16.13
3KLRPW-561	6.81	5.36	52.31 X	26.24	20.52	45.95 X	15.00	0.48	0.29	15.04
3PGLKD-560	1.40	-0.05	-0.45	5.40	-0.32	-0.71	15.00	0.48	0.29	15.03
3PUBL4-561	1.40	-0.05	-0.45	5.90	0.18	0.41	13.70	-0.82	-0.49	13.73
3VEHXG-560	1.50	0.05	0.53	6.10	0.38	0.86	14.20	-0.32	-0.19	14.24
3X6LQN-560	1.40	-0.05	-0.45	6.10	0.38	0.86	13.26	-1.26	-0.75	13.27
3XLTXR-560	1.30	-0.15	-1.42	6.10	0.38	0.86	12.00	-2.52	-1.50	12.30
3YFCTD-560	1.40	-0.05	-0.45	5.50	-0.22	-0.49	15.00	0.48	0.29	14.75
3ZNNCA-560	1.50	0.05	0.53	6.20	0.48	1.08	14.00	-0.52	-0.31	14.00
43XVM9-561	1.20	-0.25	-2.40	5.20	-0.52	-1.16	13.00	-1.52	-0.91	13.34
49DVA7-560	1.40	-0.05	-0.45	6.00	0.28	0.63	13.00	-1.52	-0.91	13.49

TABLE 1

Stain E, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
4DFHR3-560	15.00	13.55	132.17 X	58.00	52.28	117.05 X	15.00	0.48	0.29	14.99
4E6XTX-560	1.00	-0.45	-4.35 X	6.60	0.88	1.98	8.70	-5.82	-3.47 X	8.71 X
4HDLR8-561	1.40	-0.05	-0.45	6.20	0.48	1.08	13.00	-1.52	-0.91	13.05
4HYYFK-560	1.42	-0.03	-0.25	5.56	-0.16	-0.35	14.80	0.28	0.17	14.80
4NTQ8F-560	1.50	0.05	0.53	5.50	-0.22	-0.49	16.00	1.48	0.88	15.83
68XT2C-560	1.45	0.00	0.04	5.72	0.00	0.01	14.70	0.18	0.11	14.68
6TKBRB-561	1.50	0.05	0.53	6.00	0.28	0.63	14.00	-0.52	-0.31	14.48
6TKDD9-560	1.50	0.05	0.53	5.03	-0.69	-1.54	17.40	2.88	1.72	17.35
6VBELH-561	1.50	0.05	0.53	5.70	-0.02	-0.04	15.50	0.98	0.59	15.26
6X2KYM-561	1.50	0.05	0.53	5.80	0.08	0.18	15.00	0.48	0.29	14.99
6YAXGP-561	2.00	0.55	5.40 X	6.50	0.78	1.75	18.00	3.48	2.08	17.92
76U9C6-561	1.51	0.06	0.60	6.12	0.40	0.91	14.25	-0.27	-0.16	14.25
7AH3NJ-560	1.30	-0.15	-1.42	5.20	-0.52	-1.16	14.50	-0.02	-0.01	14.48
7E28JL-560	1.60	0.15	1.50	5.80	0.08	0.18	16.00	1.48	0.88	16.01
7EJWAT-560	1.30	-0.15	-1.42	6.20	0.48	1.08	12.10	-2.42	-1.44	12.10
84QDHY-560	1.40	-0.05	-0.45	5.40	-0.32	-0.71	15.00	0.48	0.29	15.03
8H3GKF-560	1.46	0.01	0.14	5.56	-0.16	-0.35	15.18	0.66	0.39	15.22
8QWLDG-560	1.51	0.06	0.63	6.03	0.31	0.70	14.46	-0.06	-0.04	14.50
8TXQW3-561	1.40	-0.05	-0.45	5.00	-0.72	-1.61	16.00	1.48	0.88	16.26
8VMT4C-561	1.40	-0.05	-0.45	5.20	-0.52	-1.16	16.00	1.48	0.88	15.62
98BLKX-561	1.50	0.05	0.53	5.60	-0.12	-0.26	15.54	1.02	0.61	15.54
9N38FP-560	1.40	-0.05	-0.45	5.40	-0.32	-0.71	15.00	0.48	0.29	15.03
9RE28F-561	1.50	0.05	0.53	7.00	1.28	2.87	15.00	0.48	0.29	12.37
9Y9LL3-561	1.50	0.05	0.53	6.20	0.48	1.08	14.00	-0.52	-0.31	14.00

TABLE 1

Stain E, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
A36LKY-560	1.70	0.25	2.48	5.99	0.27	0.61	16.40	1.88	1.12	16.49
A7WAND-560	1.70	0.25	2.48	5.20	-0.52	-1.16	19.00	4.48	2.67	19.08
AEC23H-560	1.40	-0.05	-0.45	5.50	-0.22	-0.49	15.00	0.48	0.29	14.75
AHLGZV-561	1.80	0.35	3.45 X	5.50	-0.22	-0.49	19.00	4.48	2.67	19.10
AHTANW-560	1.50	0.05	0.53	5.30	-0.42	-0.94	16.00	1.48	0.88	16.44
ARY6FG-560	1.57	0.12	1.21	5.92	0.20	0.45	15.00	0.48	0.29	15.38
AUVUEB-560	1.50	0.05	0.53	5.30	-0.42	-0.94	16.00	1.48	0.88	16.44
B3WBXL-560	1.50	0.05	0.53	5.40	-0.32	-0.71	16.00	1.48	0.88	16.13
B848CF-560	1.50	0.05	0.53	6.30	0.58	1.30	14.00	-0.52	-0.31	13.77
BJFE8U-560	1.30	-0.15	-1.42	4.50	-1.22	-2.73	16.00	1.48	0.88	16.79
BJJR2H-560	1.50	0.05	0.53	6.50	0.78	1.75	13.00	-1.52	-0.91	13.34
BMFFHP-561	1.30	-0.15	-1.42	5.70	-0.02	-0.04	13.30	-1.22	-0.73	13.18
BPYP2W-561	1.50	0.05	0.53	5.90	0.18	0.41	15.00	0.48	0.29	14.73
BQZAGB-561	1.40	-0.05	-0.45	5.60	-0.12	-0.26	14.50	-0.02	-0.01	14.48
BWFAZ3-560	1.43	-0.02	-0.15	6.17	0.45	1.01	13.00	-1.52	-0.91	13.40
CABKYM-560	1.40	-0.05	-0.45	5.90	0.18	0.41	14.00	-0.52	-0.31	13.73
CCJPFH-560	1.50	0.05	0.53	5.70	-0.02	-0.04	15.30	0.78	0.47	15.26
CVYNPR-561	1.40	-0.05	-0.45	5.30	-0.42	-0.94	15.00	0.48	0.29	15.32
CXEKZP-560	1.40	-0.05	-0.45	5.20	-0.52	-1.16	15.60	1.08	0.64	15.62
CYQDXD-560	1.37	-0.08	-0.74	5.05	-0.67	-1.49	16.00	1.48	0.88	15.74
D2872Q-560	1.20	-0.25	-2.40	6.20	0.48	1.08	11.20	-3.32	-1.98	11.16
D4EG4L-560	1.40	-0.05	-0.45	5.60	-0.12	-0.26	14.40	-0.12	-0.07	14.48
D8GFEE-560	1.50	0.05	0.53	5.90	0.18	0.41	14.70	0.18	0.11	14.73
D9B7KT-561	1.40	-0.05	-0.45	5.50	-0.22	-0.49	14.70	0.18	0.11	14.75

TABLE 1

Stain E, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
DED3KT-560	1.50	0.05	0.53	6.00	0.28	0.63	14.50	-0.02	-0.01	14.48
DFBHMH-560	1.40	-0.05	-0.45	5.20	-0.52	-1.16	16.00	1.48	0.88	15.62
DVL7TQ-560	1.40	-0.05	-0.45	5.00	-0.72	-1.61	16.30	1.78	1.06	16.26
DZKDKF-560	1.50	0.05	0.53	6.00	0.28	0.63	14.50	-0.02	-0.01	14.48
E8V2RM-561	1.48	0.03	0.33	5.33	-0.39	-0.87	16.20	1.68	1.00	16.12
ECCVTY-561	1.70	0.25	2.48	6.20	0.48	1.08	15.00	0.48	0.29	15.91
EF999Q-560	1.40	-0.05	-0.45	5.30	-0.42	-0.94	15.30	0.78	0.47	15.32
EFH7BM-560	1.00	-0.45	-4.35 X	6.00	0.28	0.63	9.50	-5.02	-2.99	9.59 X
EKH7ZJ-560	1.50	0.05	0.53	6.00	0.28	0.63	14.50	-0.02	-0.01	14.48
ENDC4N-560	1.50	0.05	0.53	6.10	0.38	0.86	14.20	-0.32	-0.19	14.24
EPUBEZ-560	1.00	-0.45	-4.35 X	6.00	0.28	0.63	9.60	-4.92	-2.93	9.59 X
ETBJVD-560	1.40	-0.05	-0.45	6.40	0.68	1.53	13.00	-1.52	-0.91	12.64
EU6A2R-560	1.50	0.05	0.53	5.70	-0.02	-0.04	15.30	0.78	0.47	15.26
F2HU9V-561	3.00	1.55	15.15 X	13.00	7.28	16.30 X	13.30	-1.22	-0.73	13.34
F2QH84-561	1.50	0.05	0.53	5.74	0.02	0.05	15.20	0.68	0.41	15.15
F8WN7K-560	1.50	0.05	0.53	6.00	0.28	0.63	14.50	-0.02	-0.01	14.48
FAZ4VX-560	1.43	-0.02	-0.15	6.00	0.28	0.63	13.70	-0.82	-0.49	13.79
FQU4BH-561	1.50	0.05	0.53	5.50	-0.22	-0.49	15.80	1.28	0.76	15.83
FY8ZAX-561	1.40	-0.05	-0.45	5.60	-0.12	-0.26	14.50	-0.02	-0.01	14.48
FYDZZQ-561	1.50	0.05	0.53	6.40	0.68	1.53	14.00	-0.52	-0.31	13.55
FYZEEW-561	1.25	-0.20	-1.91	6.00	0.28	0.63	12.02	-2.50	-1.49	12.02
G6C7PD-561	1.50	0.05	0.53	5.50	-0.22	-0.49	15.80	1.28	0.76	15.83
GZ69PL-560	1.20	-0.25	-2.40	6.40	0.68	1.53	10.80	-3.72	-2.22	10.81
H4LBTW-561	1.70	0.25	2.48	6.50	0.78	1.75	15.10	0.58	0.35	15.16

TABLE 1

Stain E, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
H68XXR-561	1.40	-0.05	-0.45	5.67	-0.05	-0.11	14.00	-0.52	-0.31	14.29
H8KB89-560	1.50	0.05	0.53	5.00	-0.72	-1.61	17.00	2.48	1.48	17.46
HJACJ9-560	1.50	0.05	0.53	5.00	-0.72	-1.61	17.00	2.48	1.48	17.46
HKB3WJ-561	1.40	-0.05	-0.45	5.90	0.18	0.41	14.10	-0.42	-0.25	13.73
HUWDZJ-561	1.51	0.06	0.63	5.50	-0.22	-0.49	15.94	1.42	0.85	15.93
HZYKKD-561	1.45	0.00	0.04	5.40	-0.32	-0.71	16.00	1.48	0.88	15.58
JA8WLM-561	1.32	-0.13	-1.23	5.09	-0.63	-1.41	15.03	0.51	0.30	15.03
JF6CGP-560	1.50	0.05	0.53	6.50	0.78	1.75	10.00	-4.52	-2.69	13.34
JHDJ2V-561	1.50	0.05	0.53	5.80	0.08	0.18	15.00	0.48	0.29	14.99
JHGWVJ-561	1.45	0.00	0.04	5.87	0.15	0.34	13.67	-0.85	-0.51	14.30
JN36NN-560	1.50	0.05	0.53	5.80	0.08	0.18	15.00	0.48	0.29	14.99
JNDT6N-561	1.30	-0.15	-1.42	6.90	1.18	2.65	10.86	-3.66	-2.18	10.86
K28HY8-560	4.20	2.75	26.86 X	18.00	12.28	27.50 X	13.50	-1.02	-0.61	13.49
K9FD2Z-560	1.50	0.05	0.53	5.00	-0.72	-1.61	17.00	2.48	1.48	17.46
K9LA9R-561	1.50	0.05	0.53	6.00	0.28	0.63	14.50	-0.02	-0.01	14.48
KC4NCR-561	1.40	-0.05	-0.45	5.30	-0.42	-0.94	15.00	0.48	0.29	15.32
KJD2BH-560	1.40	-0.05	-0.45	5.50	-0.22	-0.49	14.70	0.18	0.11	14.75
KNZLQC-560	1.50	0.05	0.53	5.80	0.08	0.18	15.00	0.48	0.29	14.99
KVGX4D-560	1.40	-0.05	-0.45	5.70	-0.02	-0.04	14.20	-0.32	-0.19	14.22
L2YU2Z-561	1.40	-0.05	-0.45	5.40	-0.32	-0.71	15.00	0.48	0.29	15.03
L4BMXM-561	1.25	-0.20	-1.91	5.50	-0.22	-0.49	13.10	-1.42	-0.85	13.14
LALXMF-561	1.60	0.15	1.50	5.90	0.18	0.41	16.00	1.48	0.88	15.73
LUAGHY-560	1.40	-0.05	-0.45	6.40	0.68	1.53	12.60	-1.92	-1.14	12.64
LUK4GT-561	1.25	-0.20	-1.91	5.00	-0.72	-1.61	14.00	-0.52	-0.31	14.48

TABLE 1

Stain E, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
LXLZ99-560	1.60	0.15	1.50	5.60	-0.12	-0.26	17.00	2.48	1.48	16.60
M2JWHZ-560	1.47	0.02	0.24	5.67	-0.05	-0.11	15.00	0.48	0.29	15.03
M2XCKF-561	1.49	0.04	0.43	5.90	0.18	0.41	14.62	0.10	0.06	14.63
M3UP89-560	1.50	0.05	0.53	5.70	-0.02	-0.04	15.26	0.74	0.44	15.26
MFZW4T-561	1.50	0.05	0.53	5.50	-0.22	-0.49	16.00	1.48	0.88	15.83
MH8AP2-560	1.42	-0.03	-0.25	5.70	-0.02	-0.04	14.00	-0.52	-0.31	14.43
MJG7B6-560	1.40	-0.05	-0.45	6.00	0.28	0.63	13.50	-1.02	-0.61	13.49
MKBWGJ-561	1.43	-0.02	-0.15	5.67	-0.05	-0.11	14.61	0.09	0.05	14.61
MLNGCE-561	1.50	0.05	0.53	6.00	0.28	0.63	14.00	-0.52	-0.31	14.48
MQLXN9-560	1.36	-0.09	-0.84	5.53	-0.19	-0.42	14.20	-0.32	-0.19	14.24
MT4ACD-560	1.40	-0.05	-0.45	5.80	0.08	0.18	13.90	-0.62	-0.37	13.97
MWMC8P-560	1.60	0.15	1.50	6.20	0.48	1.08	15.00	0.48	0.29	14.96
MXR23T-561	1.50	0.05	0.53	5.80	0.08	0.18	15.00	0.48	0.29	14.99
MZ4LE2-560	1.40	-0.05	-0.45	5.80	0.08	0.18	13.90	-0.62	-0.37	13.97
NCCXYA-561	1.40	-0.05	-0.45	6.20	0.48	1.08	13.05	-1.47	-0.88	13.05
NP8VFF-560	1.50	0.05	0.53	5.80	0.08	0.18	15.00	0.48	0.29	14.99
NTYE37-560	1.50	0.05	0.53	5.70	-0.02	-0.04	15.00	0.48	0.29	15.26
P2TJV8-560	1.10	-0.35	-3.37 X	4.93	-0.79	-1.76	12.89	-1.63	-0.97	12.89
PM6LNG-560	1.40	-0.05	-0.45	5.00	-0.72	-1.61	16.30	1.78	1.06	16.26
PUDTF8-560	1.32	-0.13	-1.23	5.62	-0.10	-0.22	13.60	-0.92	-0.55	13.58
Q36LAJ-561	1.40	-0.05	-0.45	6.30	0.58	1.30	13.00	-1.52	-0.91	12.84
QDHT4X-560	1.20	-0.25	-2.40	5.00	-0.72	-1.61	14.00	-0.52	-0.31	13.89
QR7DUR-561	1.48	0.03	0.33	5.63	-0.09	-0.20	15.00	0.48	0.29	15.24
QWX9AY-560	1.60	0.15	1.50	4.00	-1.72	-3.85 X	23.50	8.98	5.36 X	23.58 X

TABLE 1

Stain E, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
QXNEN6-560	1.45	0.00	0.04	5.63	-0.09	-0.20	14.90	0.38	0.23	14.92
QXP7RE-560	1.50	0.05	0.53	6.00	0.28	0.63	14.00	-0.52	-0.31	14.48
R6DMX8-560	1.30	-0.15	-1.42	5.90	0.18	0.41	12.73	-1.79	-1.07	12.73
R9GBXG-561	1.50	0.05	0.53	6.30	0.58	1.30	14.00	-0.52	-0.31	13.77
RB8FQN-560	1.50	0.05	0.53	5.20	-0.52	-1.16	16.70	2.18	1.30	16.77
RJ2HYR-561	1.42	-0.03	-0.25	4.79	-0.93	-2.08	17.00	2.48	1.48	17.24
RJ2KKP-561	1.40	-0.05	-0.45	4.50	-1.22	-2.73	18.10	3.58	2.14	18.13
RRUVUK-560	1.00	-0.45	-4.35 X	5.80	0.08	0.18	10.00	-4.52	-2.69	9.93 X
RZDJ2E-561	1.50	0.05	0.53	5.75	0.03	0.07	15.12	0.60	0.36	15.12
T3FUEU-560	1.50	0.05	0.53	5.50	-0.22	-0.49	16.00	1.48	0.88	15.83
T88GXB-560	1.50	0.05	0.53	5.60	-0.12	-0.26	15.50	0.98	0.59	15.54
TB3L2F-560	1.20	-0.25	-2.40	6.80	1.08	2.42	10.00	-4.52	-2.69	10.16
TCGYUH-561	1.40	-0.05	-0.45	5.20	-0.52	-1.16	16.00	1.48	0.88	15.62
TLLZ6H-560	1.50	0.05	0.53	6.40	0.68	1.53	13.54	-0.98	-0.58	13.55
TQ8RE7-560	1.40	-0.05	-0.45	6.40	0.68	1.53	12.50	-2.02	-1.20	12.64
TR9JR7-561	1.40	-0.05	-0.45	6.20	0.48	1.08	13.10	-1.42	-0.85	13.05
TZLQAU-561	1.46	0.01	0.14	6.23	0.51	1.15	13.50	-1.02	-0.61	13.55
U3QHYM-560	1.58	0.13	1.31	5.80	0.08	0.18	15.80	1.28	0.76	15.81
U6AVHP-561	1.20	-0.25	-2.40	6.00	0.28	0.63	11.50	-3.02	-1.80	11.54
U7JRN2-561	1.50	0.05	0.53	5.90	0.18	0.41	14.80	0.28	0.17	14.73
UBA77G-561	1.40	-0.05	-0.45	5.80	0.08	0.18	14.00	-0.52	-0.31	13.97
UEH3KK-561	1.40	-0.05	-0.45	5.80	0.08	0.18	14.00	-0.52	-0.31	13.97
UEMHY7-561	1.40	-0.05	-0.45	6.00	0.28	0.63	13.50	-1.02	-0.61	13.49
UJEQ2R-561	1.20	-0.25	-2.40	5.20	-0.52	-1.16	13.00	-1.52	-0.91	13.34

TABLE 1

Stain E, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
UJV8TY-560	1.70	0.25	2.48	5.20	-0.52	-1.16	19.10	4.58	2.73	19.08
UKF4XQ-560	1.47	0.02	0.24	5.44	-0.28	-0.62	16.00	1.48	0.88	15.68
UXVMGN-561	1.50	0.05	0.53	5.40	-0.32	-0.71	15.90	1.38	0.82	16.13
V3JTAF-560	0.10	-1.35	-13.12 X	0.60	-5.12	-11.46 X	9.60	-4.92	-2.93	9.59 X
V9Y6LP-560	1.60	0.15	1.50	4.70	-1.02	-2.28	20.00	5.48	3.27 X	19.90 X
VPNUTJ-560	1.37	-0.08	-0.74	5.69	-0.03	-0.06	14.00	-0.52	-0.31	13.93
W336FR-560	1.44	-0.01	-0.06	5.55	-0.17	-0.38	15.00	0.48	0.29	15.04
WBAT7J-561	1.50	0.05	0.53	5.60	-0.12	-0.26	15.53	1.01	0.60	15.54
WFP2RX-561	1.50	0.05	0.53	5.90	0.18	0.41	15.00	0.48	0.29	14.73
WHURXD-560	1.50	0.05	0.53	6.00	0.28	0.63	14.47	-0.05	-0.03	14.48
WJWYDX-560	1.50	0.05	0.53	5.60	-0.12	-0.26	16.00	1.48	0.88	15.54
WWBYKC-560	1.50	0.05	0.53	5.80	0.08	0.18	14.99	0.47	0.28	14.99
XLQZFT-561	1.42	-0.03	-0.25	5.09	-0.63	-1.41	16.20	1.68	1.00	16.20
XN6MQY-560	1.00	-0.45	-4.35 X	5.20	-0.52	-1.16	11.09	-3.43	-2.04	11.09
XVTBQP-560	1.50	0.05	0.53	5.50	-0.22	-0.49	16.00	1.48	0.88	15.83
XXJEJW-560	1.30	-0.15	-1.42	5.90	0.18	0.41	13.00	-1.52	-0.91	12.73
XYWYER-560	1.40	-0.05	-0.45	5.40	-0.32	-0.71	15.00	0.48	0.29	15.03
Y66MRT-560	1.40	-0.05	-0.45	6.20	0.48	1.08	13.00	-1.52	-0.91	13.05
YAD6NZ-561	1.54	0.09	0.92	5.59	-0.13	-0.29	16.00	1.48	0.88	15.99
YF88H7-561	1.70	0.25	2.48	6.00	0.28	0.63	16.00	1.48	0.88	16.46
YLHHRE-560	1.50	0.05	0.53	5.80	0.08	0.18	15.00	0.48	0.29	14.99
Z2WUBY-561	1.37	-0.08	-0.74	6.38	0.66	1.48	12.00	-2.52	-1.50	12.40
Z3N27W-561	1.70	0.25	2.48	7.30	1.58	3.54 X	13.00	-1.52	-0.91	13.47
Z6D7Y4-560	1.40	-0.05	-0.45	6.30	0.58	1.30	13.00	-1.52	-0.91	12.84

TABLE 1

Stain E, continued

	Width			Length			Angle			
WebCode-Test	mm	Diff	CPV	mm	Diff	CPV	Deg.	Diff	CPV	*CalcAng*
Z9XY7P-561	1.50	0.05	0.53	5.20	-0.52	-1.16	17.00	2.48	1.48	16.77
ZCE9D2-561	1.50	0.05	0.53	5.60	-0.12	-0.26	14.00	-0.52	-0.31	15.54
ZL2EZ8-561	1.20	-0.25	-2.40	5.80	0.08	0.18	12.00	-2.52	-1.50	11.94
ZT2PGX-560	1.40	-0.05	-0.45	5.88	0.16	0.36	13.80	-0.72	-0.43	13.77
ZYD4B2-560	1.30	-0.15	-1.42	5.90	0.18	0.41	12.71	-1.81	-1.08	12.73
Grand Mean	1.45			5.72			14.52			14.67
Standard Deviation	0.10			0.45			1.68			1.51
Participants Included in calculations	184			189			194			190
Participants excluded from calculations (indicated by X)	13			8			3			7

Stain E Preparation Angle: 16.0°

Pattern Description

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

TABLE 2a - Part 1: Mechanism of Deposition

Item 2

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
2B83FC-560	Cast-off Pattern	4HDLR8-561	Cast-off Pattern
2D3FHX-560	Cast-off Pattern	4HYYFK-560	Cast-off Pattern
2FD4CV-560	Cast-off Pattern	4NTQ8F-560	Cast-off Pattern
2GDEUX-561	Cast-off Pattern	68XT2C-560	Cast-off Pattern
2HVFZY-560	Cast-off Pattern	6DE3WG-560	Cast-off Pattern
2R7PDJ-560	Cast-off Pattern	6TKBRB-561	Cast-off Pattern
2UKMCF-560	Cast-off Pattern	6TKDD9-560	Cast-off Pattern
2X3R7H-560	Cast-off Pattern	6VBELH-561	Cast-off Pattern
2XWEH9-561	Cast-off Pattern	6X2KYM-561	Cast-off Pattern
2YN3CJ-561	Cast-off Pattern	6YAXGP-561	Cast-off Pattern
332A8V-561	Cast-off Pattern	76U9C6-561	Cast-off Pattern
396AMR-560	Cast-off Pattern	7AH3NJ-560	Cast-off Pattern
3EFRA7-561	Cast-off Pattern	7E28JL-560	Cast-off Pattern
3GH6MR-561	Cast-off Pattern	7EJWAT-560	Cast-off Pattern
3J6WLB-560	Cast-off Pattern	84QDHY-560	Cast-off Pattern
3KLRPW-561	Cast-off Pattern	8H3GKF-560	Cast-off Pattern
3PGLKD-560	Cast-off Pattern	8QWLDG-560	Cast-off Pattern
3PUBL4-561	Cast-off Pattern	8TXQW3-561	Cast-off Pattern
3VEHXG-560	Cast-off Pattern	8VMT4C-561	Cast-off Pattern
3X6LQN-560	Cast-off Pattern	98BLKX-561	Cast-off Pattern
3XLTXR-560	Cast-off Pattern	9N38FP-560	Cast-off Pattern
3YFCTD-560	Cast-off Pattern	9RE28F-561	Cast-off Pattern
3ZNNCA-560	Projected Pattern	9Y9LL3-561	Cast-off Pattern
43XVM9-561	Cast-off Pattern	A36LKY-560	Cast-off Pattern
48RXNM-560	Cast-off Pattern	A7WAND-560	Cast-off Pattern
49DVA7-560	Cast-off Pattern	AEC23H-560	Cast-off Pattern
4CLRLN-560	Cast-off Pattern	AHLGZV-561	Cast-off Pattern
4DFHR3-560	Cast-off Pattern	AHTANW-560	Cast-off Pattern
4E6XTX-560	Cast-off Pattern	ARY6FG-560	Cast-off Pattern

Item 2, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
AUVUEB-560	Cast-off Pattern	ETBJVD-560	Cast-off Pattern
B3WBXL-560	Cast-off Pattern	EU6A2R-560	Cast-off Pattern
B848CF-560	Cast-off Pattern	F2HU9V-561	Cast-off Pattern
B936RG-560	Cast-off Pattern	F2QH84-561	Cast-off Pattern
BJFE8U-560	Cast-off Pattern	F8WN7K-560	Cessation Cast-Off Pattern
BJJR2H-560	Cast-off Pattern	FAZ4VX-560	Cast-off Pattern
BMFFHP-561	Cast-off Pattern	FQU4BH-561	Cast-off Pattern
BPYP2W-561	Cast-off Pattern	FY8ZAX-561	Cast-off Pattern
BQZAGB-561	Cast-off Pattern	FYDZZQ-561	Cast-off Pattern
BWFAZ3-560	Cast-off Pattern	FYZEEW-561	Cast-off Pattern
C83F97-560	Cast-off Pattern	G6C7PD-561	Cast-off Pattern
CABKYM-560	Cast-off Pattern	GXLC63-560	Cast-off Pattern
CCJPFH-560	Cast-off Pattern	GZ69PL-560	Cast-off Pattern
CVYNPR-561	Cast-off Pattern	H4LBTW-561	Cast-off Pattern
CXEKZP-560	Cast-off Pattern	H68XXR-561	Cast-off Pattern
CYQDXD-560	Cast-off Pattern	H8KB89-560	Cast-off Pattern
D2872Q-560	Cast-off Pattern	HJACJ9-560	Cast-off Pattern
D4EG4L-560	Cast-off Pattern	HKB3WJ-561	Cast-off Pattern
D4KNCA-560	Cast-off Pattern	HUWDZJ-561	Cast-off Pattern
D8GFEE-560	Cast-off Pattern	HZYKKD-561	Cast-off Pattern
D9B7KT-561	Cast-off Pattern	JA8WLM-561	Cast-off Pattern
DED3KT-560	Cast-off Pattern	JBJ3Y7-560	Cast-off Pattern
DFBHMH-560	Cast-off Pattern	JF6CGP-560	Cast-off Pattern
DK86F7-560	Cast-off Pattern	JHDJ2V-561	Cast-off Pattern
DVL7TQ-560	Cast-off Pattern	JHGWVJ-561	Cast-off Pattern
DZKDKF-560	Cast-off Pattern	JN36NN-560	Cast-off Pattern
E8V2RM-561	Cast-off Pattern	JNDT6N-561	Cast-off Pattern
ECCVTY-561	Cast-off Pattern	K28HY8-560	Cast-off Pattern
EF999Q-560	Cast-off Pattern	K9FD2Z-560	Cast-off Pattern
EFH7BM-560	Cast-off Pattern	K9LA9R-561	Cast-off Pattern
EKH7ZJ-560	Cast-off Pattern	KC4NCR-561	Cast-off Pattern
ENDC4N-560	Cast-off Pattern	KJD2BH-560	Cast-off Pattern
EPUBEZ-560	Cast-off Pattern	KNZLQC-560	Cast-off Pattern

Item 2, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
KVGX4D-560	Cast-off Pattern	QXP7RE-560	Cast-off Pattern
L2YU2Z-561	Cast-off Pattern	R6DMX8-560	Cast-off Pattern
L4BMXM-561	Cast-off Pattern	R9GBXG-561	Cast-off Pattern
LALXMF-561	Cast-off Pattern	RB8FQN-560	Cast-off Pattern
LUAGHY-560	Cast-off Pattern	RJ2HYR-561	Cast-off Pattern
LUK4GT-561	Cast-off Pattern	RJ2KKP-561	Cast-off Pattern
LXLZ99-560	Cast-off Pattern	RRUVUK-560	Cessation Cast-Off Pattern
M2JWHZ-560	Cast-off Pattern	RZDJ2E-561	Cast-off Pattern
M2XCKF-561	Cast-off Pattern	T3FUEU-560	Cast-off Pattern
M3UP89-560	Cast-off Pattern	T88GXB-560	Cast-off Pattern
MFZW4T-561	Cast-off Pattern	TB3L2F-560	Cast-off Pattern
MH8AP2-560	Cast-off Pattern	TCGYUH-561	Cast-off Pattern
MJG7B6-560	Cast-off Pattern	TLLZ6H-560	Cast-off Pattern
MKBWGJ-561	Cast-off Pattern	TQ8RE7-560	Cast-off Pattern
MLNGCE-561	Cast-off Pattern	TR9JR7-561	Cast-off Pattern
MQLXN9-560	Cast-off Pattern	TR9RNW-560	Cast-off Pattern
MT4ACD-560	Cast-off Pattern	TZLQAU-561	Cast-off Pattern
MWMC8P-560	Cast-off Pattern	U3QHYM-560	Cast-off Pattern
MXR23T-561	Cast-off Pattern	U6AVHP-561	Cast-off Pattern
MZ4LE2-560	Cast-off Pattern	U7JRN2-561	Cast-off Pattern
NCCXYA-561	Impact Pattern	UBA77G-561	Cast-off Pattern
NHMXKZ-560	Cast-off Pattern	UEH3KK-561	Cast-off Pattern
NP8VFF-560	Cast-off Pattern	UEMHY7-561	Cast-off Pattern
NTYE37-560	Cast-off Pattern	UJEQ2R-561	Cast-off Pattern
P2TJV8-560	Cast-off Pattern	UJV8TY-560	Cast-off Pattern
PM6LNG-560	Cast-off Pattern	UKF4XQ-560	Cast-off Pattern
PUDTF8-560	Cast-off Pattern	UXVMGN-561	Cessation Cast-Off Pattern
Q36LAJ-561	Cast-off Pattern	V3JTAF-560	Cast-off Pattern
QDHT4X-560	Cast-off Pattern	V9Y6LP-560	Cast-off Pattern
QGYB4U-560	Cast-off Pattern	VLJRPV-560	Cast-off Pattern
QR7DUR-561	Cast-off Pattern	VPNUTJ-560	Cast-off Pattern
QWX9AY-560	Cast-off Pattern	W336FR-560	Cast-off Pattern
QXNEN6-560	Cast-off Pattern	WBAT7J-561	Cast-off Pattern

Item 2, continued

WebCode-Test	Pattern Type
WFP2RX-561	Cast-off Pattern
WHURXD-560	Cast-off Pattern
WJWYDX-560	Cast-off Pattern
WLEYZL-561	Cast-off Pattern
WWBYKC-560	Cast-off Pattern
XLQZFT-561	Cast-off Pattern
XN6MQY-560	Cast-off Pattern
XVTBQP-560	Cast-off Pattern
XXJEJW-560	Cast-off Pattern
XYWYER-560	Cast-off Pattern
Y66MRT-560	Cast-off Pattern
YAD6NZ-561	Cast-off Pattern
YF88H7-561	Cast-off Pattern
YLHHRE-560	Cast-off Pattern
Z2WUBY-561	Cast-off Pattern
Z3N27W-561	Cast-off Pattern
Z47RNG-560	Cast-off Pattern
Z6D7Y4-560	Cast-off Pattern
Z9XY7P-561	Cast-off Pattern
ZCE9D2-561	Cast-off Pattern
ZL2EZ8-561	Cast-off Pattern
ZT2PGX-560	Cast-off Pattern
ZYD4B2-560	Cast-off Pattern

Pattern Types reported for Item 2 (Total Participants Responding = 213)

Pattern Type	Percent Reported	
Cast-off Pattern	208	(97.7%)
Cessation Cast-Off Pattern	3	(1.4%)
Impact Pattern	1	(0.5%)
Projected Pattern	1	(0.5%)

TABLE 2a - Part 1: Mechanism of Deposition

Item 3

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
2B83FC-560	Expiration Pattern	6DE3WG-560	Expiration Pattern
2D3FHX-560	Impact Pattern	6TKBRB-561	Expiration Pattern
2FD4CV-560	Impact Pattern	6TKDD9-560	Impact Pattern
2GDEUX-561	Impact Pattern	6VBELH-561	Expiration Pattern
2HVFZY-560	Expiration Pattern	6X2KYM-561	Impact Pattern
2R7PDJ-560	Impact Pattern	6YAXGP-561	Expiration Pattern
2UKMCF-560	Expiration Pattern	76U9C6-561	Expiration Pattern
2X3R7H-560	Impact Pattern	7AH3NJ-560	Impact Pattern
2XWEH9-561	Expiration Pattern	7E28JL-560	Impact Pattern
2YN3CJ-561	Expiration Pattern	7EJWAT-560	Impact Pattern
332A8V-561	Impact Pattern	84QDHY-560	Impact Pattern
396AMR-560	Impact Pattern	8H3GKF-560	Impact Pattern
3EFRA7-561	Expiration Pattern	8QWLDG-560	Impact Pattern
3GH6MR-561	Impact Pattern	8TXQW3-561	Expiration Pattern
3J6WLB-560	Impact Pattern	8VMT4C-561	Impact Pattern
3KLRPW-561	Expiration Pattern	98BLKX-561	Expiration Pattern
3PGLKD-560	Expiration Pattern	9N38FP-560	Expiration Pattern
3PUBL4-561	Impact Pattern	9RE28F-561	Expiration Pattern
3VEHXG-560	Expiration Pattern	9Y9LL3-561	Impact Pattern
3X6LQN-560	Projected Pattern	A36LKY-560	Impact Pattern
3XLTXR-560	Impact Pattern	A7WAND-560	Expiration Pattern
3YFCTD-560	Impact Pattern	AEC23H-560	Impact Pattern
3ZNNCA-560	Expiration Pattern	AHLGZV-561	Impact Pattern
43XVM9-561	Impact Pattern	AHTANW-560	Impact Pattern
48RXNM-560		ARY6FG-560	Impact Pattern
49DVA7-560	Expiration Pattern	AUVUEB-560	Expiration Pattern
4CLRLN-560		B3WBXL-560	Expiration Pattern
4DFHR3-560	Impact Pattern, Expiration Pattern	B848CF-560	Impact Pattern
4E6XTX-560	Impact Pattern	B936RG-560	
4HDLR8-561	Expiration Pattern	BJFE8U-560	Expiration Pattern
4HYYFK-560	Expiration Pattern	BJJR2H-560	Impact Pattern
4NTQ8F-560	Expiration Pattern	BMFFHP-561	Expiration Pattern
68XT2C-560	Expiration Pattern	BPYP2W-561	Expiration Pattern

Item 3, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
BQZAGB-561	Impact Pattern	FYDZZQ-561	Expiration Pattern
BWFAZ3-560	Expiration Pattern	FYZEEW-561	Expiration Pattern
C83F97-560	Impact Pattern	G6C7PD-561	Impact Pattern
CABKYM-560	Expiration Pattern	GXLC63-560	
CCJPFH-560	Impact Pattern	GZ69PL-560	Expiration Pattern
CVYNPR-561	Expiration Pattern	H4LBTW-561	Impact Pattern, Expiration Pattern
CXEKZP-560	Expiration Pattern	H68XXR-561	Expiration Pattern
CYQDXD-560	Impact Pattern	H8KB89-560	Expiration Pattern
D2872Q-560	Expiration Pattern	HJACJ9-560	Impact Pattern
D4EG4L-560	Expiration Pattern	HKB3WJ-561	Expiration Pattern
D4KNCA-560	Impact Pattern	HUWDZJ-561	Expiration Pattern
D8GFEE-560	Expiration Pattern	HZYKKD-561	Impact Pattern
D9B7KT-561	Impact Pattern	JA8WLM-561	Impact Pattern
DED3KT-560	Impact Pattern	JBJ3Y7-560	Impact Pattern
DFBHMH-560	Expiration Pattern	JF6CGP-560	Expiration Pattern
DK86F7-560	Impact Pattern	JHDJ2V-561	Impact Pattern
DVL7TQ-560	Impact Pattern	JHGWVJ-561	Impact Pattern
DZKDKF-560	Impact Pattern	JN36NN-560	Impact Pattern
E8V2RM-561	Expiration Pattern	JNDT6N-561	Impact Pattern
ECCVTY-561	Expiration Pattern	K28HY8-560	Impact Pattern
EF999Q-560	Impact Pattern	K9FD2Z-560	Expiration Pattern
EFH7BM-560	Expiration Pattern	K9LA9R-561	Impact Pattern
EKH7ZJ-560	Expiration Pattern	KC4NCR-561	Impact Pattern
ENDC4N-560	Impact Pattern	KJD2BH-560	Impact Pattern
EPUBEZ-560	Expiration Pattern	KNZLQC-560	Impact Pattern
ETBJVD-560	Impact Pattern	KVGX4D-560	Impact Pattern
EU6A2R-560	Impact Pattern	L2YU2Z-561	Expiration Pattern
F2HU9V-561	Impact Pattern	L4BMXM-561	Impact Pattern
F2QH84-561	Expiration Pattern	LALXMF-561	Impact Pattern
F8WN7K-560	Expiration Pattern	LUAGHY-560	Expiration Pattern
FAZ4VX-560	Expiration Pattern	LUK4GT-561	Impact Pattern
FQU4BH-561	Impact Pattern	LXLZ99-560	Expiration Pattern
FY8ZAX-561	Expiration Pattern	M2JWHZ-560	Impact Pattern

Item 3, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
M2XCKF-561	Impact Pattern	T3FUEU-560	Impact Pattern
M3UP89-560	Impact Pattern	T88GXB-560	Impact Pattern
MFZW4T-561	Impact Pattern, Expiration Pattern	TB3L2F-560	Impact Pattern
MH8AP2-560	Impact Pattern	TCGYUH-561	Impact Pattern
MJG7B6-560	Impact Pattern	TLLZ6H-560	Expiration Pattern
MKBWGJ-561	Impact Pattern	TQ8RE7-560	Expiration Pattern
MLNGCE-561	Impact Pattern	TR9JR7-561	Expiration Pattern
MQLXN9-560	Impact Pattern	TR9RNW-560	Expiration Pattern
MT4ACD-560	Expiration Pattern	TZLQAU-561	Impact Pattern
MWMC8P-560	Impact Pattern	U3QHYM-560	Impact Pattern
MXR23T-561	Expiration Pattern	U6AVHP-561	Impact Pattern
MZ4LE2-560	Impact Pattern	U7JRN2-561	Projected Pattern
NCCXYA-561	Mist Pattern	UBA77G-561	Drip Pattern
NHMXKZ-560	Impact Pattern	UEH3KK-561	Impact Pattern
NP8VFF-560	Impact Pattern	UEMHY7-561	Impact Pattern
NTYE37-560	Impact Pattern	UJEQ2R-561	Impact Pattern
P2TJV8-560	Projected Pattern	UJV8TY-560	Impact Pattern
PM6LNG-560	Expiration Pattern	UKF4XQ-560	Expiration Pattern
PUDTF8-560	Impact Pattern	UXVMGN-561	Expiration Pattern
Q36LAJ-561	Expiration Pattern	V3JTAF-560	Cessation Cast-Off Pattern
QDHT4X-560	Impact Pattern	V9Y6LP-560	Impact Pattern
QGYB4U-560	Expiration Pattern	VLJRPV-560	Impact Pattern
QR7DUR-561	Expiration Pattern	VPNUTJ-560	Expiration Pattern
QWX9AY-560	Expiration Pattern	W336FR-560	Impact Pattern
QXNEN6-560	Impact Pattern	WBAT7J-561	Impact Pattern
QXP7RE-560	Impact Pattern	WFP2RX-561	Impact Pattern
R6DMX8-560	Expiration Pattern	WHURXD-560	Projected Pattern
R9GBXG-561	Expiration Pattern	WJWYDX-560	Impact Pattern
RB8FQN-560	Impact Pattern	WLEYZL-561	Expiration Pattern
RJ2HYR-561	Impact Pattern	WWBYKC-560	Expiration Pattern
RJ2KKP-561	Impact Pattern	XLQZFT-561	Impact Pattern
RRUVUK-560	Impact Pattern	XN6MQY-560	Impact Pattern
RZDJ2E-561	Impact Pattern	XVTBQP-560	Impact Pattern

Item 3, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
XXJEJW-560	Expiration Pattern		
XYWYER-560	Impact Pattern		
Y66MRT-560	Impact Pattern		
YAD6NZ-561	Impact Pattern		
YF88H7-561	Impact Pattern		
YLHHRE-560	Impact Pattern		
Z2WUBY-561	Expiration Pattern		
Z3N27W-561	Expiration Pattern		
Z47RNG-560	Impact Pattern		
Z6D7Y4-560	Impact Pattern		
Z9XY7P-561	Expiration Pattern		
ZCE9D2-561	Impact Pattern		
ZL2EZ8-561	Impact Pattern		
ZT2PGX-560	Impact Pattern		
ZYD4B2-560	Expiration Pattern		

Pattern Types reported for Item 3 (Total Participants Responding = 213)

Pattern Type	Percent Reported	
Impact Pattern	117	(54.9%)
Expiration Pattern	82	(38.5%)
Projected Pattern	4	(1.9%)
Impact Pattern, Expiration Pattern	3	(1.4%)
Cessation Cast-Off Pattern	1	(0.5%)
Drip Pattern	1	(0.5%)
Mist Pattern	1	(0.5%)

TABLE 2a - Part 1: Mechanism of Deposition

Item 4

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
2B83FC-560	Drip Pattern	6DE3WG-560	Drip Pattern
2D3FHX-560	Drip Pattern	6TKBRB-561	Drip Pattern
2FD4CV-560	Drip Pattern	6TKDD9-560	Drip Pattern
2GDEUX-561	Drip Pattern	6VBELH-561	Drip Pattern
2HVFZY-560	Drip Pattern	6X2KYM-561	Drip Pattern
2R7PDJ-560	Drip Pattern	6YAXGP-561	Drip Pattern
2UKMCF-560	Drip Pattern	76U9C6-561	Drip Pattern
2X3R7H-560	Drip Pattern	7AH3NJ-560	Drip Pattern
2XWEH9-561	Drip Pattern	7E28JL-560	Drip Pattern
2YN3CJ-561	Drip Pattern	7EJWAT-560	Drip Pattern
332A8V-561	Drip Pattern	84QDHY-560	Drip Pattern
396AMR-560	Drip Pattern	8H3GKF-560	Drip Pattern
3EFRA7-561	Drip Pattern	8QWLDG-560	Drip Pattern
3GH6MR-561	Drip Pattern	8TXQW3-561	Drip Pattern
3J6WLB-560	Drip Pattern	8VMT4C-561	Drip Pattern
3KLRPW-561	Drip Pattern	98BLKX-561	Drip Pattern
3PGLKD-560	Drip Pattern	9N38FP-560	Drip Pattern
3PUBL4-561	*	9RE28F-561	Drip Pattern
3VEHXG-560	Drip Pattern	9Y9LL3-561	Drip Pattern
3X6LQN-560	Drip Stain	A36LKY-560	Drip Pattern
3XLTXR-560	Drip Pattern	A7WAND-560	Drip Pattern
3YFCTD-560	Drip Pattern, Splash Pattern	AEC23H-560	Drip Pattern
3ZNNCA-560	Drip Pattern	AHLGZV-561	Drip Pattern
43XVM9-561	Drip Pattern	AHTANW-560	Drip Pattern
48RXNM-560	Drip Pattern	ARY6FG-560	Drip Pattern
49DVA7-560	Drip Pattern	AUVUEB-560	Drip Pattern
4CLRLN-560	Drip Pattern	B3WBXL-560	Drip Pattern
4DFHR3-560	Drip Pattern	B848CF-560	Drip Pattern
4E6XTX-560	Drip Pattern	B936RG-560	Drip Pattern
4HDLR8-561	Drip Pattern	BJFE8U-560	Drip Pattern
4HYYFK-560	Drip Pattern	BJJR2H-560	Drip Pattern
4NTQ8F-560	Drip Pattern	BMFFHP-561	Drip Pattern
68XT2C-560	Drip Pattern	BPYP2W-561	Drip Pattern

Item 4, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
BQZAGB-561	Drip Pattern	FYDZZQ-561	Drip Pattern
BWFAZ3-560	Drip Pattern	FYZEEW-561	Drip Pattern
C83F97-560	Drip Pattern	G6C7PD-561	Drip Pattern
CABKYM-560	Drip Pattern	GXLC63-560	Drip Pattern
CCJPFH-560	Drip Pattern	GZ69PL-560	Drip Pattern
CVYNPR-561	Drip Pattern	H4LBTW-561	Drip Pattern
CXEKZP-560	Drip Pattern	H68XXR-561	Drip Pattern
CYQDXD-560	Drip Pattern	H8KB89-560	Drip Pattern
D2872Q-560	Drip Pattern	HJACJ9-560	Drip Pattern
D4EG4L-560	Drip Pattern	HKB3WJ-561	Drip Pattern
D4KNCA-560	Drip Pattern	HUWDZJ-561	Drip Pattern
D8GFEE-560	Drip Pattern	HZYKKD-561	Drip Pattern
D9B7KT-561	Drip Pattern	JA8WLM-561	Drip Pattern
DED3KT-560	Drip Pattern	JBJ3Y7-560	Drip Pattern
DFBHMH-560	Drip Pattern	JF6CGP-560	Drip Pattern
DK86F7-560	Drip Pattern	JHDJ2V-561	Drip Pattern
DVL7TQ-560	Drip Pattern	JHGWVJ-561	Drip Pattern
DZKDKF-560	Drip Pattern	JN36NN-560	Drip Pattern
E8V2RM-561	Drip Pattern	JNDT6N-561	Drip Pattern
ECCVTY-561	Drip Pattern	K28HY8-560	Drip Pattern
EF999Q-560	Drip Pattern	K9FD2Z-560	Drip Pattern
EFH7BM-560	Drip Pattern	K9LA9R-561	Drip Pattern
EKH7ZJ-560	Drip Pattern	KC4NCR-561	Drip Pattern
ENDC4N-560	Drip Pattern	KJD2BH-560	Drip Pattern
EPUBEZ-560	Drip Pattern	KNZLQC-560	Drip Pattern
ETBJVD-560	Drip Pattern	KVGX4D-560	Drip Pattern
EU6A2R-560	Drip Pattern	L2YU2Z-561	Drip Pattern
F2HU9V-561	Drip Pattern	L4BMXM-561	Drip Pattern
F2QH84-561	Drip Pattern	LALXMF-561	Drip Pattern
F8WN7K-560	Drip Pattern	LUAGHY-560	Drip Pattern
FAZ4VX-560	Drip Pattern	LUK4GT-561	Drip Stain
FQU4BH-561	Drip Pattern	LXLZ99-560	Drip Pattern
FY8ZAX-561	Drip Pattern	M2JWHZ-560	Drip Pattern

Item 4, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
M2XCKF-561	Drip Pattern	T3FUEU-560	Drip Pattern
M3UP89-560	Drip Pattern	T88GXB-560	Drip Pattern
MFZW4T-561	Drip Pattern	TB3L2F-560	Drip Pattern
MH8AP2-560	Drip Pattern	TCGYUH-561	Drip Pattern
MJG7B6-560	Drip Pattern	TLLZ6H-560	Drip Pattern
MKBWGJ-561	Drip Pattern	TQ8RE7-560	Drip Pattern
MLNGCE-561	Drip Pattern	TR9JR7-561	Drip Pattern
MQLXN9-560	Drip Pattern	TR9RNW-560	Drip Pattern
MT4ACD-560	Drip Pattern	TZLQAU-561	Drip Pattern
MWMC8P-560	Drip Pattern	U3QHYM-560	Splash Pattern
MXR23T-561	Drip Pattern	U6AVHP-561	Drip Pattern
MZ4LE2-560	Drip Pattern	U7JRN2-561	Drip Pattern
NCCXYA-561	Drip Pattern	UBA77G-561	Drip Pattern
NHMXKZ-560	Drip Pattern	UEH3KK-561	Drip Pattern
NP8VFF-560	Drip Pattern	UEMHY7-561	Drip Pattern
NTYE37-560	Drip Pattern	UJEQ2R-561	Drip Pattern
P2TJV8-560	Drip Stain	UJV8TY-560	Drip Pattern
PM6LNG-560	Drip Pattern	UKF4XQ-560	Drip Pattern
PUDTF8-560	Drip Pattern	UXVMGN-561	Drip Pattern
Q36LAJ-561	Drip Pattern	V3JTAF-560	Drip Pattern
QDHT4X-560	Drip Pattern	V9Y6LP-560	Drip Pattern
QGYB4U-560	Drip Pattern	VLJRPV-560	Drip Pattern
QR7DUR-561	Drip Pattern	VPNUTJ-560	Drip Pattern
QWX9AY-560	Drip Pattern	W336FR-560	Drip Pattern
QXNEN6-560	Drip Pattern	WBAT7J-561	Drip Pattern
QXP7RE-560	Drip Pattern	WFP2RX-561	Drip Pattern
R6DMX8-560	Drip Pattern	WHURXD-560	Drip Pattern
R9GBXG-561	Drip Pattern	WJWYDX-560	Drip Pattern
RB8FQN-560	Drip Pattern	WLEYZL-561	Drip Pattern
RJ2HYR-561	Drip Stain	WWBYKC-560	Drip Pattern
RJ2KKP-561	Drip Pattern	XLQZFT-561	Drip Pattern
RRUVUK-560	Drip Pattern	XN6MQY-560	Drip Pattern
RZDJ2E-561	Drip Pattern	XVTBQP-560	Drip Pattern

TABLE 2a - Part 1: Mechanism of Deposition

Item 4, continued

WebCode-Test	Pattern Type	WebCode-Test	Pattern Type
XXJEJW-560	Drip Pattern		
XYWYER-560	Drip Pattern		
Y66MRT-560	Drip Pattern		
YAD6NZ-561	Drip Pattern		
YF88H7-561	Drip Pattern		
YLHHRE-560	Drip Pattern		
Z2WUBY-561	Drip Pattern		
Z3N27W-561	Drip Pattern		
Z47RNG-560	Drip Pattern		
Z6D7Y4-560	Drip Pattern		
Z9XY7P-561	Drip Pattern		
ZCE9D2-561	Drip Pattern		
ZL2EZ8-561	Drip Pattern		
ZT2PGX-560	Drip Pattern		
ZYD4B2-560	Drip Pattern		

Pattern Types reported for Item 4 (Total Participants Responding = 213)

Pattern Type	Percent Reported
Drip Pattern	206 (96.7%)
Drip Stain	4 (1.9%)
Drip Pattern, Splash Pattern	1 (0.5%)
Splash Pattern	1 (0.5%)

Pattern Description

TABLE 2b - Part 2: Recognition and Description

Item 5

WebCode - Test	Detailed Pattern Description
2B83FC-560	Seven total Drip Stains (appx 90 degree drops) that are in a drip trail at an angle across the field. There is a drip pattern at the lower left corner of the field (as you look at the field), possibly from drip stains landing on top of each other. There are satellite stains associated with the drip pattern. Two of the drip stains at the top of the field have been wiped through, from left to right. The Wipe occurred after the drip stains had begun to dry and after the drip pattern was created, as there are perimeter stains created from wiping through the drying satellite stains and drip stains.
2D3FHX-560	A drip trail of 7 blood stains measuring approximately 2 cm in size extends between the upper right and lower left corner. It's unclear the directionality since the edge characteristics of the small scallops around the entire periphery of these stains indicate an approximate 90 degree deposition. A drip pattern in the lower left corner may mark the beginning or end of the blood-letting sequence. The drip pattern contains satellite spatter of irregular and random stain distribution and size ranging from sub-millimeter to approximately 3mm. The parent stain, or drip stain from which this spatter originates, is approximately 3 ½ cm in width by 5 ½ cm in length but angled so the width of the stain is in line with the drip trail (lower left to upper right). A wipe pattern is evident in the second and third drop in the trail from the upper right corner. This wipe appears to start above these two drip stains since it causes a perimeter stain approximately 1 mm around that lies between and above the drip stains. The directionality of the wipe is downward and left to right as indicated by the thinning of the stain volume and displacement of the blood resulting in the feathering at the lower right end. Something wiped through the wet blood causing it's displacement a short time after its deposition since the perimeter stains resulting are very thin.
2FD4CV-560	There is a drip trail and a drip pattern. Two drops were wiped through resulting in a wipe pattern, leaving behind perimeter stains with edge characteristics. Satellite spatter is also noted as a result of the drip pattern and drip trail. Some satellite spatter was wiped through leaving perimeter stains with edge characteristics.
2GDEUX-561	In the lower left corner of the image there is a drip pattern with associated satellite stains. The drip pattern is irregular shaped and about 50mm x 40mm. From the lower left corner to the upper right corner of the image there is a drip trail comprised of seven drip stains with associated satellite stains. Each drip stain is circular with a diameter of about 20mm. The directionality of the drip trail cannot be determined. In the upper right corner of the image two of the drip stains as some satellite stains have been wiped through after the deposition of this blood and this blood drying, resulting in two perimeter stains and a wipe pattern. The directionality of this wipe is from left to right towards the bottom right corner of the image. The wipe patterns are 95mm in length and 20mm in width.
2HVFZY-560	Observed on the target surface are the following patterns: wipe pattern in the top right portion with left to right directionality, drip pattern with spines located in the bottom left corner, drip trail running horizontal across the target surface, majority of smaller bloodstains on the target surface consistent with spatter.
2R7PDJ-560	Several bloodstain patterns are present on the tile. On the bottom left side of the tile a drip pattern with satellite stains was noted. In the approximate center of the tile a drip trail with four drip stains was noted. Two perimeter stains with wipe patterns through them were observed on the top right portion of the tile. Additional perimeter stains were noted in the wipe patterns. A drip stain was noted at the top right corner of the tile.
2UKMCF-560	A drip pattern resulting from blood drip into blood was located in the lower, left hand corner of the tile. A drip trail resulting from a movement of blood source between lower, left hand corner and upper, right hand corner was found diagonally across the tile. A wipe pattern resulting from an object moving from the stains (the second and third stains from right hand side of tile) to lower, right hand side was observed.
2X3R7H-560	Several drip stains are present diagonally across the surface (bottom left to top right - or vice versa), with a drip pattern present in the bottom left corner. These drips are uniform in size. Many small regular blood stains are also present and these are typical of satellite spatter/accompanying drops,

Item 5, continued

WebCode - Test	Detailed Pattern Description
	with some radiating from the parent stain. Some of the drips have been altered, producing a wipe pattern (moving diagonally downwards, from left to right). These drips appear to have been partially dried prior to wiping, as seen by the edge characteristics/perimeter of the stains.
2XWEH9-561	There are three main patterns on the tile. These were designated as patterns A, B, and C. Pattern A consists of an approximately 55mm in diameter red-brown stain. The stain has rounded boarders[sic] and is surrounded by smaller (approximately 1-2 mm in diameter) small satellite stains. Based on the rounded edges of the larger stain and the presence of smaller satellite stains this pattern appears consistent with a drip pattern. Pattern B consists of five very round red-brown stains each approximately 25-30 mm in diameter. These stains each have spines that surround their entire rims. The round shapes and uniform distribution of spines around each stain are consistent with passive blood drips which form a drip pattern. There is no indication of which direction the drip pattern was formed in. Pattern C consists of two skeletonized red-brown drip stains with red-brown wiping originating from the drip stains and moving towards the bottom right of the photograph. The skeletonization of the red-brown stains indicate that they had time to dry slightly before the wiping occurred.
2YN3CJ-561	"With the photograph in the proper orientation, there is an accumulation of blood in the lower left corner. There is random spatter around the accumulation. This is a drip pattern, made up of at least five (5) individual drip stains. Ranging from the drip pattern to the upper right hand corner of the photograph are seven (7) drip stains. These stains are similar in size (approximately 2cm in diameter) and are circular in shape. They all have irregular, scalloped margins with satellite stains around them. These seven (7) stains form a drip trail. On the upper right side of the page, two (2) of the drip stains have wipe patterns through them. The perimeters of the drip stains are still visible. The wipe patterns show striations through the wipes. Edges of the wipes are feathered. There is diminishing volume of blood from the upper right to the lower left. There are perimeter stains of satellite spatter visible in the wipe patterns.
332A8V-561	There is a drip trail visible from the top right corner to the bottom left corner. In the bottom left corner of the ceramic tile there can also be a drip pattern observed. In the top right corner there is also a wipe pattern visible (through second and third drip stain with a direction from top left to bottom right).
396AMR-560	The item five photograph depicts drip stains that form a drip trail. The bottom left corner of the photograph depicts a drip pattern that resulted in satellite stains throughout the ceramic tile. A wipe pattern that resulted in perimeter stains appears near the top of the photograph. The stains are on a horizontal plane (ceramic tile).
3EFRA7-561	Item 5 consists of 3 patterns. From left to right, the three patterns are a drip pattern, drip trail & wipe pattern. The drip pattern consists of an irregularly shaped central stain in the lower left of the photo surrounded by spatter of varying size. The edges of the pool are scalloped, which indicates that surface of the tile may not be completely smooth. Two of the spatter indicate a direction of travel away from the central blood stain. The surface of the central stain shows cracking and the tile is visible at the edges of the stain. Cracking is also visible in some of the heavier spatter surrounding the central stain. In these small spatter drops, the center appears lighter and in some cases the tile is visible at the center of the stain. This appears to be an artifact of the blood drying on the tile and may be due to irregularities in the tile surface, and not be bubble rings or diluted blood stains. Traveling diagonally across the ~center of the photo is a drip trail made of 7 drip stains. 5 of the drip stains are undisturbed. 2 of the drip stains, as well as some of the surrounding spatter, have been wiped through from left to right & down. The 5 intact drip stains are all approximately round & have scalloped edges around the circumference of each stain. The round shape of the drip stains indicates that they hit the tile at an angle close to 90 degrees. The scalloped edge around the perimeter of the drip stains further supports that the drips hit the tile at an angle close to 90 degrees and that the tile may not be completely smooth. The drip stains also show cracking at the edges, which indicates that they had begun to dry. Where the blood has cracked/dried, the tile surface has become exposed. The 2 drip stains & spatter that are wiped through were deposited before the wipe. I can say this because of the skeletonization of the 2 drip stains & spatter drops. Skeletonization indicates partial drying occurred prior to wipe.

TABLE 2b - Part 2: Recognition and Description

Item 5, continued

WebCode - Test	Detailed Pattern Description
3GH6MR-561	In the lower left hand corner of the image there is a bloodstain wich[sic] is a drip pattern. In the center of the photo, there is a drip trail surrounded by small satellite stains. Then, two of the drip stains become an altered stain since there is a wipe pattern going from the upper left part of the drip trail towards the bottom right part of the photo. This mouvement[sic] through the existing stains occurred before the drip stains had thoroughly dried causing perimeter stains.
3J6WLB-560	Drip trail traversing the distance between lower left and upper right corners. A drip pattern in lower left corner resulting in satellite stains. A wipe pattern originating at the top and center of the tile and moving to the bottom right side, resulting in perimeter stains of two drip stains and affiliated perimeter stains.
3KLRPW-561	A series of drip stains extending between the upper right corner and the lower left corner with a small drip pattern in the lower left corner. Two of the drip stains have been wiped, leaving behind perimeter stains that show the original stain contours.
3PGLKD-560	Examination of Item 5 showed seven circular drip stains (each approximately 2cm in diameter) with scalloped edge characteristics, no significant spines and associated satellite stains (circular/elliptical, less than 2mm). The stains extended between the upper right corner and the lower left corner in a linear fashion creating a drip trail, but a direction of travel could not be determined. An area in the lower left corner, consistent with more than one passive drop hitting the same general area, created an asymmetrical blood pool/parent stain approximately 5 ½ cm by 3 ½ cm. Associated satellite stains (circular/elliptical, less than 2 mm) were observed and the larger stains were closer to the parent stain, which exhibited minor spines. The stains were consistent with a drip pattern. Two of the circular stains near the top of the photo were altered stains and perimeter stains were observed. Diagonal movement from the upper left toward the lower right was observed and contact with the target extended approximately 10 cm. Feathering was observed on the lower edges of the stains. These stains were consistent with a wipe pattern.
3PUBL4-561	A drip pattern consisting of at least four drip stains is located in the lower left corner of the target. Seven additional drip stains are in a near linear pattern from the lower left quadrant of the target to the upper right quadrant of the target. Two of the drip stains in the upper right quadrant have been wiped in a direction towards the lower right quadrant of the target. The diameter of each drip stain is approximately 20mm.
3VEHXG-560	A drip pattern is present in the lower left corner and a drip trail is visible across the image. The passive drops within this drip trail do not exhibit any apparent direction. A wipe pattern, leaving perimeter staining (skeletonisation) of two of these passive drops is visible in the upper right corner of the image. A fine blood spatter pattern is visible throughout the image.
3X6LQN-560	Wipe pattern from upper left to lower right. Drip stain with satellite stains. Drip trail.
3XLTXR-560	There are 7 individual drip stains with edge characteristics which measure approximately 20mm in diameter creating a drip trail. In the upper right corner there is wipe patterns through 2 larger and 1 smaller perimeter stains in a left to right downward direction. The drip trail pattern extends from the lower left corner to the upper right corner. In the lower left corner there is a drip pattern with droplets which vary from approximately 0.5 mm to 1 mm in diameter.
3YFCTD-560	8-13 bloodstains are drip stains, possibly forming the beginning of a bloodstain pattern drip trail. Some of the stains appear to be a drip pattern. Several of the stains are parent stains with associated satellite stains. Two stains are altered stains that consist of a perimeter stain. Edge characteristics are present. These altered stains form a wipe pattern.
3ZNNCA-560	Several drip stains present in a relatively linear pattern (drip trail) extending between the bottom left corner and the top right corner. The lower left end of the drip trail contains an irregular shaped stain appearing to be several overlapping drip stains with smaller surrounding satellite spatter (Drip pattern). Toward the top right area are two round perimeter stains with an overall diminishing volume of blood below and to the right of the two perimeter stains (Wipe pattern). Smaller perimeter stains are present within the larger wipe patterns. Also, a smaller satellite stain between the two larger wipe patterns has been altered into a smaller wipe pattern with perimeter stain.

TABLE 2b - Part 2: Recognition and Description

Item 5, continued

WebCode - Test	Detailed Pattern Description
43XVM9-561	A drip pattern, stain with irregular edge characteristics & multiple satellite stains, is in the lower left corner of the image. There is a drip trail, seven circular stains (approximately 20mm each) in a linear pattern, between the drip pattern and the upper right corner of the image. Two of the stains in the drip trail near the upper right corner are perimeter stains, with a wipe pattern going down to the right.
48RXNM-560	Many red-brown stains consistent with a drip pattern were observed in the lower left hand corner of the photo. Several red-brown stains consistent with drip stains were observed in the center and upper right hand corner of the photo. Several light red-brown altered stains consistent with a wipe pattern were observed in the top of the photo.
49DVA7-560	This bloodstain pattern consists of circular drip stains that are ~2 cm diameter. These stains extend from the bottom left corner of the target to the top right corner, indicating a drip trail. A drip pattern is present in the bottom left corner. There is a wipe pattern resulting in several perimeter stains in the top right portion of the pattern. The wipe pattern goes from the top left to the bottom right.
4CLRLN-560	This photograph depicted several red-brown stains, consistent with drip stains, including several overlapping stains that created a drip pattern and two altered drip stains with a wipe pattern. The drip stains were circular with a scalloped edge and measured approximately 20 mm in diameter. The overlapping drip stains created an irregular-shaped bloodstain measuring approximately 2" by 1¼" with several circular and elliptical stains of various directionalities surrounding it, indicating a drip pattern. The circular stains measured approximately 1mm to 4mm in diameter and the elliptical stains measured approximately 3mm x 2mm. The altered drip stains had a perimeter stain measuring approximately 20 mm in diameter with the wipe travelling outward from the perimeter stain for approximately 3 ½". The wipe had feathering and lightening of the red-brown coloring over the length of the pattern.
4DFHR3-560	There are drip stains/drip trail and a drip pattern on the left down corner. After some time two of the drip stains have been wiped from left up to right downwards.
4E6XTX-560	Drip trail going diagonally from one corner to the other. Two of the drip stains show a wipe pattern going across from top towards right bottom of photo. Some of drips falling causing a drip pattern + 2° spatter.
4HDLR8-561	A drip trail consisting of at least ten drip stains is present across the pattern. Two of the drip stains have been disturbed after they were deposited, as evidenced by two individual wipe patterns. The edge characteristics of these two drip stains disturbed by a wiping motion are visible. Additional sub-millimeter stains in this general area have also been disturbed by the wiping motion. A drip pattern is present in the lower left corner of the pattern.
4HYYFK-560	The pattern presented shows- A drip pattern in the bottom left corner with associated satellite spatter. Seven seperate[sic] drip stains between the bottom left corner and the top right corner. Two of these drip stains have been altered leaving perimeter stains with wipe patterns showing movement in a downwards (towards bottom right corner) diagonal direction. Also, a few of the satellite spatters have been altered within the wipe patterns.
4NTQ8F-560	A drip trail can be seen from bottom left to top right, it is not possible to determine the directionality of the drip trail. A drip pattern is visible in the bottom left corner of blood dripping into blood. This is an indication of the source of the blood pausing. There is wipe pattern of 2 (two) of the larger stains in the drip trail as well as some of the satellite stains. The stains are the 2nd and 3rd stains from the top right corner. The direction of the wipe is from top left to bottom right. There was a time interval between the deposit of the drip trail and the wipe as can be seen by the perimeter stain showing the edges that clotted.
68XT2C-560	A drip trail with no indication of directionality, formed by drip bloodstains with the size of approximately 2cm in diameter, was found across the ceramic tile diagonally between the lower left corner and the upper right corner. A drip pattern was noted at the lower left end of the drip trail. A wipe pattern indicating an object moving towards the lower right direction was noted near the upper right end of the drip trail. Two drip bloodstains with edge characteristics were observed along the wiping path.

TABLE 2b - Part 2: Recognition and Description

Item 5, continued

WebCode - Test	Detailed Pattern Description
6DE3WG-560	Several red-brown drip stains were observed extending between the top right corner of the tile and the bottom left corner of the tile. These drip stains measured approximately 18mm to 20mm in diameter. Two of these drip stains have been altered resulting in a wipe pattern. A drip pattern was observed in the bottom left corner of the tile, with satellite stains radiating out from the volume of the red-brown stains in the center of the drip pattern.
6TKBRB-561	In the lower left corner of the photo there is a 'drip pattern' resulting from several blood drops dripping onto an existing bloodstain. There are several small 'satellite stains' around the drip pattern which originated during the formation of the drip pattern. Up and to the right of the drip pattern at an aprx 45 degree angle is a 'drip trail'. The 'drip trail' is evidenced by 7 singular blood drops impacting the surface at aprx 90 degrees and spread out across the ceramic tile showing movement between the lower left and upper right corners of the photo. There is a 'wipe pattern' created by movement through 2 of the 7 blood drops in the drip trail, which occurred while the blood drops were still wet. The 'wipe pattern' shows direction of movement, left to right and downwards at an aprx 45 degree angle, altering these 2 blood drops. The 2 altered blood drops still contain the peripheral characteristics of the original drops, thus they can also be referred to as a 'perimeter stain'.
6TKDD9-560	7 drip stains + drip pattern with accompanying drops/satellite spatter, formed by blood dripping into blood creating smaller accompanying drops/and/or as the blood drips and breaks up ejecting smaller blood drops due to the impact as it drips onto the surface. A possible drip trail. Top right hand corner - wipe pattern, wiping action of wet blood from upper left diagonally down to the right. Blood had time to dry slightly as evidenced by faint perimeter stains.
6VBELH-561	1/ Lower left corner: There is a drip pattern surrounded by satellite stains. 2/ From lower left to upper right corner: There is a drip trail. There are not enough criteria in order to determine a "from A to B, or from B to A" orientation. 3/ At the upper part of the ceramic tile, there is a wipe pattern oriented from left to right, in a downward movement. This wipe pattern has been created a few time after the drip trail and drip pattern creation, because we can observe a light perimeter stain on two drip stains, and some of the satellite stains related to the drip pattern are also altered by the wipe pattern.
6X2KYM-561	The pattern is comprised of a passive drip pattern, some of which is blood into blood crating[sic] satellite spatter. Two of the large passive drops were secondarily wiped through creating two large perimeter (skeletonized) stains.
6YAXGP-561	Starting from bottom left hand corner, there is a drip pattern indicating source of blood is static dripping blood into blood + satellite stain. Source of blood then moves towards top right hand corner creating a drip trail with some satellite stains. A short time after drip trail was deposited an object has wiped through 2 of the drip stains, moving from top left towards bottom R corner smearing the blood towards the bottom right corner.
76U9C6-561	Item 5 depicts a drip pattern caused by blood dropping into blood caisung a larger stain with irregular margins and irregular randomly ditributed spatter stains (satellite stains)around the parent stain. There were 7 additional drip stains resulting from blood falling from a surface after the force of gravity caused it to fall. 2 of the drip stains exhibit a wipe pattern resuling from an object moving through those stains while they were still partially wet. The wipe was downward and and to the right. A dried outer ring (perimeter stain) was observed on the 2 stains that were wiped indicating a period of time passed between the deposit of the stains and the wiping action to allow for the partial drying and creation of the perimeter stains. [sic]
7AH3NJ-560	Item 5 consists of a drip pattern in the bottom left hand corner. A drip trail (7 stains approximately 200mm in diameter) runs between the bottom left corner and the top right corner. Two of the stains in this drip trail display wipe patterns with accompanying perimeter stains. There are various smaller stains which are likely to be small drip stains or satellite stains.
7E28JL-560	There is a drip pattern of at least eight individual drip stains that are diagonally across the target surface. There is a cessation of movement in the drip trail in the lower left corner of the target surface which resulted in several (more than one) drip stains coming in contact with one another. This resulted in satellite stains on the target surface. Prior to the blood drying on two of the drip stains in the drip trail, an object came into contact with them creating wipe stains. The directionality of the

Item 5, continued

WebCode - Test	Detailed Pattern Description
	wipe of the two stains was from the upper left to the lower right. The result of the wipe stains also created a perimeter stain.
7EJWAT-560	The target is observed to have a drip pattern in the lower left corner of the target. There are also several drip stains in a diagonal orientation in the area of the drip pattern in the lower left corner to the upper right edge of the target, forming a drip trail. A number of satellite stains are also observed surrounding the drip trail and drip pattern. In addition, a wipe pattern is observed going through two (2) of the drip stains and satellite stains near the upper right edge of the target, resulting in perimeter stains within this pattern. The wipe pattern appears to have a directionality going from the drip stains towards the lower right corner of the target.
84QDHY-560	Item 5 consists of assorted bloodstains on a horizontal ceramic tile. There are multiple drip stains, forming a possible drip trail along the diagonal from the lower left side to the upper right side. There are several overlapping drip stains in the lower left corner which form a small pool. Smaller spatter stains are present which could be satellite stains from the drip stains. In the top center of the photo there is a wipe, resulting from movement in a diagonal direction from the upper left to the lower right, through two drip stains and several satellite stains, leaving behind perimeter stains.
8H3GKF-560	The photograph depicts a pattern of round drip stains, all approximately 2cm in diameter, in a drip trail spanning from the upper right of the photograph to the lower left of the photograph. Two of the drip stains appear altered resulting in perimeter stains and wipe patterns. The directionality of the wipe patterns are to the right and slightly downwards. Additional small stains were also altered resulting in perimeter staining and wipe patterns in this same area. In the bottom left of the photograph, there is a larger area of staining that appears likely to have arisen from overlapping drip stains resulting in a stain of an overall size of about 5.25 x 3.5 cm measuring from the longest and widest points. There is a pattern of small satellite stains radiating from the larger stain indicating a small drip pattern. There are small stains dispersed throughout other areas of the photograph that could also be satellite stains resulting from the drip pattern or from the impact of the other drip stains to the target.
8QWLDG-560	Nearly round stains measuring approximately 2 cm in diameter are present from the lower left to the upper right of the photograph. These appear to be drip stains forming a drip trail. The stain in the lower left appears to be composed of several of the drip stains thus making a drip pattern. Satellite spatter, measuring sub mm to greater than 3 mm, is present over the majority of the target as a result of the drip pattern. Two of the drip stains and several of the satellite spatter stains in the upper right corner have been altered creating a wipe pattern with perimeter stains.
8TXQW3-561	There are 10 blood drops on the floor. All 10 bloodstains accompanied with satellite stains. The bloodstains have no directionalities, which indicated that they were resulted from a motionless source. The lower, left hand corner has a drip pattern, which is composed of 3 drip stains. There are 2 wipe patterns on the upper, right hand corner, which suggest after 10 bloodstains formed there was an object moving through the two of them.
8VMT4C-561	Item #5- The ceramic tile contains multiple bloodstain patterns. A drip pattern is in the lower left portion of the photograph based on the volume of blood that appears to have been dripped on the surface with the subsequent drops being dripped into the preceding blood creating satellite staining around the area. There are several drip stains, based upon individual drops that resulted from falling due to gravity, creating a trail that extends from the lower left portion of the photograph through the upper right portion of the photograph in a diagonal manner of travel. There are two distinct wipe patterns in the upper right portion of the photograph that resulted from a non-bloodied object moving through the pre-existing drip stains on the tile. The wipe patterns, which resulted from an object moving from the left to the right, occurred after the drips stains as well as the drip pattern based upon the examination of satellite stains that were altered as the object moved through the pre-existing drip stains.
98BLKX-561	There are three distinct patterns present in item 5. On the top right side is a drip stain. Next to the drip stain are wipe patterns moving from upper left to lower right. Next to the wipe patterns are drip stains. On the bottom left side is a drip pattern.

TABLE 2b - Part 2: Recognition and Description

Item 5, continued

WebCode - Test	Detailed Pattern Description
9N38FP-560	The target includes 5 Drip Stains that are circular in shape with scalloped edges and are approximately 2cm wide from the bottom left corner diagonally to the upper right hand corner. Two additional bloodstains, consistent in shape and size of the Drip Stains noted above, are Perimeter Stains that have a Wipe Pattern through them. The Wipe Pattern has directionality from the upper left to the lower right side of the target. Several small Perimeter Stains are also noted within the Wipe Pattern (<1mm - ~2mm in size). The bottom left hand corner has a Drip Pattern that consists of an area of Pooled blood with surrounding Sattelite[sic] Stains in a random distribution and shape from <1mm to approximately 3.5mm in size. This Drip Pattern and the Drip Stains appear to be a Drip Trail.
9RE28F-561	A number of drips that have fallen vertically onto a horizontal surface causing drip stains. Also some drips have fallen into blood already present causing a drip pattern and satellite stains. Some evidence of a drip trial[sic]. Two of the drip stains have been wiped by another surface while the blood was still wet causing wipe patterns and some evidence of perimeter stains.
9Y9LL3-561	Item 5 contains a drip trail with seven drip stains along the diagonal of the photograph from the upper right corner to the lower left. The second and third drip stain from the upper right corner were altered by an object traveling from the upper left toward the lower right. The alteration of these two stains resulted in a wipe pattern. A drip pattern is located near the lower left corner. The number of drops that produced the drip pattern could not be determined. Satellite spatter are present throughout the photo.
A36LKY-560	Item 5 depicted a drip trail bloodstain pattern on a ceramic tile. The drip stains in the trail were circular with spines and averaged 20 to 21 millimeters in diameter. A wipe pattern was located within the drip trail at the top right side of the photograph. Mulitiple[sic] circular stains had been wiped through. The direction of travel of the wipe was from left to right and top to bottom. A drip pattern was located in the lower left corner of the photograph. Satellite stains surrounded the drip pattern.
A7WAND-560	The item 001-005 photograph (item 5) depicts bloodstains on a horizontal surface. The photograph depicts a drip trail located from the lower left toward the upper right as depicted in the photograph. These stains lack sufficient characteristics to determine the directionality of the trail of drip stains. A drip pattern bloodstain is located at the lower left as depicted in the photograph. This pattern is surrounded by satellite bloodstains radiating away from the parent stain. Toward the upper right of the drip trail is a wipe pattern bloodstain. This pattern contains two drip stains that have been altered. The wipe pattern extends downward and to the right as depicted in the photograph.
AEC23H-560	A drip trail is present diagonally across the target between the upper right quadrant and the lower left quadrant. A drip pattern is present in the lower left quadrant of the target. A wipe pattern is present in the upper right quadrant of the target, altering two drip stains in the drip trail, along with several satellite stains associated with the drip pattern and/or drip trail, leaving perimeter stains visible.
AHLGZV-561	I examined Item 5 and observed the following patterns: Drip pattern, Satellite stains, Drip stains, Drip trail, Perimeter stains, Wipe pattern.
AHTANW-560	This photograph consists of seven drip stains which make up a drip trail next to a drip pattern. Satellite staining is present on the ceramic tile around the parent stains. No consistent directionality was observed among the satellite stains. On the right side of the image, two drip stains were altered from their original appearance creating a wipe pattern, leaving perimeter stains around the outer edges of the bloodstains, both on the drip stains and satellite stains in that area.
ARY6FG-560	Drip pattern lower left with satellite stains across tile. 5 Drip stains undisturbed (4 + 1) from lower left to upper right. 2 Drip stains with parallel wipe patterns moving from upper left to lower right direction located between 4 Drip stains and 1 Drip stain upper right.
AUVUEB-560	There is a drip pattern in the lower left corner. Between the drip pattern and the upper right corner is a drip trail consisting of seven drip stains. Two of the drip stains have been wiped from the left toward the right, leaving perimeter stains.
B3WBXL-560	A drip pattern with resulting satellite spatter is present near the bottom left corner of the target surface. The pool of blood created by the drip pattern is approximately 52mm x 35mm (measuring

WebCode - Test	Detailed Pattern Description
	widest points). A drip trail (diameter of drip stains approximately 19-21mm) is on the target surface between the drip pattern and upper right corner. Two of these drip stains and some satellite spatter stains have wipe patterns through them resulting in visible perimeter stains.
B848CF-560	In the lower left hand corner of the photo there is a drip pattern with radiating satellite spatter. The drip pattern is 5.4cm by 3.5cm with approximately 100 satellite stains associated with the drip pattern. There is a drip trail oriented from the lower left hand corner to the upper right. There are seven drip stains in the drip trail. The drip stains are 2cm in diameter. There are two wipe patterns within the drip trail. The two wipe patterns are in the upper right hand corner and below the farthest upper right drip stain. The wipes have an upper left to lower right directionality. The wipes are 9.5cm in length. The two drip stains were altered and a perimeter stain is still visible.
B936RG-560	Splash (apparent) pattern on lower left corner of target. Seven drip stains between splash (apparent) pattern and top right corner of target. Spatter stains measuring approx. 0.2mm - 2 mm in diameter were noted on most areas of the target. Two drip stains and a few spatter stains were altered by a wipe from left to right and downward (the 2nd and 3rd drip stains from the top right corner of the target). Some (few) spatter stains deposited after the wipe.
BJFE8U-560	Photo shows a ceramic tile on a horizontal plane, the focus of the pattern was created as a result of forcible events or mechanisms. Spatter in the lower left corner of the ceramic tile is consistent with a Drip pattern, a bloodstain pattern resulting from a liquid that dripped into another liquid, at least one of which was blood. This drip pattern created satellite stains, which are smaller bloodstains that originated during the formation of the parent stain as a result of blood impacting a surface. A secondary event created seven (7) drip stains resulting from a falling drop that formed due to gravity, over the existing satellite stains. Last to occur on the ceramic tile was secondary movement that interrupted the original stain pattern of two (2) of the drip stains and several satellite stains were wiped, altered bloodstain pattern resulting from an object moving through a preexisting wet bloodstain, after the blood was deposited. These stains were there long enough for the stains to begin to dry or clot. The wiping and displacement of the liquid blood shows motion in a downward right direction. In addition, the trail leading away from the two (2) main stains shows evidence of thinning of the original stains in appearance and color; this helps indicate motion along with a feathering effect of the stain which is indicative of the blood having uneven pressure or contact with the target surface. These stains are consistent with multiple events occurring in this area.
BJJR2H-560	There are seven drip stains (two of which have been disturbed) which measure approximately 20mm in diameter. The drip pattern extends from the upper right portion of the image to the lower left. There are three wipe patterns located in the top portion of the image. The upper most wipe pattern measures approximately 9.5cm in length x 2.3cm at its widest point. There appears to be downward left to right movement associated with the wipe pattern. There appears to be a perimeter stain at the left side of the wipe pattern as well as several smaller perimeter stains within the wipe pattern. There is a smaller wipe pattern between the two larger wipe patterns which measures approximately 17mm in length x 1mm at its widest point. There appears to be downward left to right movement associated with the wipe pattern. There appears to be a perimeter stain at the left side of the wipe pattern. The lower most wipe pattern measures approximately 10cm in length x 2cm at its widest point. There appears to be downward left to right movement associated with the wipe pattern. There appears to be a perimeter stain at the left side of the wipe pattern as well as several smaller perimeter stains within the wipe pattern. There is a pool of blood in the lower left corner of the image which measures approximately 5.2cm x 3.5cm. There is a drip pattern throughout the image that is more concentrated around the pool of blood with stains measuring approximately 1mm to 5mm in diameter.
BMFFHP-561	At the bottom left corner: a stain of blood with irregular margin and random (secondary) spatter surrounding it. This stain is classified as a DRIP PATTERN. The number of individual drip stains within this drip pattern cannot be determined, but is probably a minimum of 6. Between this stain at the bottom left corner and the top right corner, there are 7 DRIP STAINS with a linear orientation present. There are no progressive changes in the shape of the individual stains visable[sic]. These stains together are classified as a DRIP TRAIL. No indication for the direction of movement is present in the

WebCode - Test	Detailed Pattern Description
	pattern nor in the individual stains. At the top right corner, two drip stains show alteration by movement through the blood, somewhat from top left towards right bottom. As a result of this movement, perimeter stains of the drip stains can be distinguished. These two alterations are classified as WIPE PATTERNS. Additionally, some of the secondary spatter is wiped out, which can also be classified as WIPE PATTERNS. None of the wipe patterns show characteristics which can lead to the nature of the source of this movement.
BPYP2W-561	The tan colored ceramic tile surface exhibits a drip trail consisting of at least eight round drip stains with slightly scalloped edge characteristics. The majority of the drip stains are approximately 20 mm in size with no discernible directionality indicating deposition was roughly perpendicular to the surface. The upper, right hand corner of the image shows two of the drip stains have wipe patterns altering them, resulting in the presence of perimeter stains. The perimeter stains indicate that the drip trail was deposited prior to the event creating the wipe patterns. The wipe patterns are each approximately 9 cm in length. The lower, left hand corner of the image exhibits a drip pattern of blood into blood.
BQZAGB-561	A pattern of bloodstains described as a drip pattern with an associated drip trail. Altered bloodstains within the drip trail exhibit the characteristics of a wipe pattern. The bloodstains were deposited on the ceramic tile prior to an object moving from the upper left to the lower right (of the target) through the stains producing the wipe pattern.
BWFAZ3-560	There are drip stains in the middle of the photograph that form a drip trail. At one end of the drip trail, a drip pattern is present. There are small stains that appear to be part of the drip pattern, but as you move away from the main part of the drip pattern, it is unclear of the origin of these small stains. The size and presence of these small stains decrease as you move away from the main part of the drip pattern. Towards the other end of the drip trail, there is a wipe pattern that created some perimeter stains. Two of the perimeter stains appear to originally be drip stains.
C83F97-560	This item consisted of a photograph depicting red-brown stains, consistent with drip stains, a drip pattern and a wipe pattern. The drip pattern was located on the bottom left of the photograph. The drip stains were located between the drip pattern and the top right corner of the photograph. The wipe pattern was located between the drip stains, near the right corner of the photograph. Additional spatter stains, measuring less than 1 mm to ~1 mm, were also observed throughout the photograph.
CABKYM-560	Item 5 shows a drip trail extending diagonally across the target with no apparent directionality. A drip pattern along with accompanying satellite stains is in the bottom left quadrant. In the top right quadrant, two of the drip stains are altered via a wipe toward the lower right corner. Perimeter staining is evident.
CCJPFH-560	A drip pattern was noted as present in the lower left corner of the target. Drip stains were noted as present across the target from the lower left corner to the top right corner. A wipe pattern was noted as present through two of the drip stains near the top right corner of the target. Satellite stains were noted as present around the drip stains.
CVYNPR-561	The image was oriented with the ruler at the upper, left hand corner. A drip pattern was observed at the lower left corner consisting of several blood drops depositing into one another. A drip trail consisting of seven passive circular drops of approximately 20 mm in diameter was observed more or less in a diagonal line from the lower left quadrant, away from the drip pattern, to the upper right quadrant. Accompanying satellite stains were observed in the surrounding area of the blood dripped into blood and blood trail. In the upper right quadrant, a wipe pattern of approximately 10 cm length and 6.5 cm width was observed passing through two of the passive circular drops and some nearby satellite stains. This wipe pattern was along a liner[sic] path, from left to right and in a downward direction. The wiping event occurred after the drip pattern and drip trail were deposited, and the blood stains were allowed to dry for a short period of time, since perimeter stains were observed for the altered drip stains and satellite stains.
CXEKZP-560	Overall item 5 appears to contain three distinct bloodstain patterns located on the horizontal surface of a ceramic tile: a drip pattern, seven drip stains, and a wipe pattern within the drip stains. A drip pattern containing random spatter around the irregular margin of the stain (due to blood into blood)

WebCode - Test	Detailed Pattern Description
	is located in the bottom left corner of the tile measuring approximately 4 cm wide by 5.2 cm long. Seven circular drip stains span approximately 25 cm across the tile from the bottom left corner towards the top right corner. The lack of directionality in the 7 drip stains indicates lack of motion between two points and therefore is not a drip trail. Two of the seven drip stains (located near the top right corner of Item 5) present only as perimeter stains. This is due to a wipe pattern (with directionality going from the top middle section of Item 5 towards the middle right side of Item 5) which wiped/displaced the majority of the blood within these two drip stains.
CYQDXD-560	The bloodstaining photographed and submitted as item #5 contains a complex bloodstain pattern. The bloodstain pattern consisting of drip stains, a drip trail, wipes, and a drip pattern. Additional staining may be present that was not captured in the photograph submitted for analysis. The drip trail is comprised of seven circular drip stains, each 2 cm in diameter. The trail is 25 cm in length at an approximate 45 degree angle across the photograph, with an average of 4 cm between drips. At the lower end of the drip trail is a pool of blood 5 cm in length and 4 cm in width with over 100 smaller randomly distributed satellite spatter stains, the majority of which are 1-2 mm in size. From the top right corner of the photograph, the second and third drip stains have been wiped through. There is a diminishing blood volume as the blood from the drip stain was displaced from left to right with feathered boundaries at the right ends. Perimeter staining is present from the wiped drip stains as well as some perimeter stains from some small spatter stains already present at the time the wipe occurred. The photograph contains a complex bloodstain pattern consistent with drip stains, bloodstains resulting from falling drops of blood that formed due to gravity; drip trail, bloodstains resulting from the movement of a source of drip stains between two points; wipe pattern, an altered bloodstain pattern resulting from an object moving through a preexisting wet bloodstain; and a drip pattern, bloodstaining resulting from a liquid that dripped into another liquid, at least one of which was blood.
D2872Q-560	Several drip stains present, landing at 90 degrees to the surface, forming a drip trail. Two of these drip stains have subsequently been wiped whilst still wet towards the lower right corner producing wipe patterns. Several drips of blood have landed on top of one another in the lower left corner producing a drip pattern with associated satellite stains.
D4EG4L-560	There is a drip trail on the tile with two of the drip stains disturbed leaving behind perimeter stains and creating a wipe pattern where the motion was down and right. There is a drip pattern in the bottom left of the photograph.
D4KNCA-560	This item consisted of a photograph labeled "Bloodstain Pattern Analysis Test 14-560, Item 5 (Ceramic tile-horizontal plane): The ceramic tile was tan + white colored. A red-brown drip pattern was noted. A drip pattern is a bloodstain pattern resulting from a liquid that dropped into another liquid, at least one of which is blood. Five red-brown drip stains were noted. These drip stains measured approximately 17mm to 19mm in diameter. A drip stain is a bloodstain resulting from a falling drop that formed due to gravity. Two red-brown wipe patterns were also noted. A wipe pattern is an altered bloodstain pattern resulting from an object moving through pre-existing wet bloodstain.
D8GFEE-560	There are drip stains that turn into a drip trail. There is also a drip pattern w/ some satellite stains around the area. There is also wipe pattern through two of the drip stains showing the perimeter stains after alteration of original stain.
D9B7KT-561	This target includes five circular drip stains. There are also two circular drip stains that have been wiped downward and to the right leaving on the perimeter staining. These stains are all approximately 2 cm in size. There is a group of overlapping circular stains that created a small drip pattern. There is satellite staining around the circular stains. The wipe of the two circular stains altered some of the satellite spatter indicating the spatter was on the target before the wipe occurred. The circular stains form a drip trail between the lower left corner and upper right corner of the target.
DED3KT-560	The target bears a DRIP TRAIL comprising 7 x DRIP STAINS (between the upper right corner and lower left corner of target) and a DRIP PATTERN (located in the lower left corner of target) formed by blood dripping into blood. SATELLITE STAINS (smaller blood spots) are visible around the drip stains and drip pattern, some of which are directional. 2 x drip stains (towards the upper right corner) have

Item 5, continued

WebCode - Test	Detailed Pattern Description
	been wiped through whilst the blood stains were wet creating two WIPE PATTERNS and two PERIMETER STAINS.
DFBHMH-560	A drip pattern is located in the lower left hand corner of the target. This pattern consists of a blood pool (~5.5cm x 3.5cm) having scalloped edge characteristics with satellite spatter of various sizes (~1-3mm in diameter) surrounding it. There is a drip trail (circular stains, each ~2cm in diameter) located from the lower left to the upper right of the target. Two of the drip stains near the upper right area of the target are altered. The stains have been wiped through, and the perimeter staining along with the wipe pattern suggests movement from the upper left to the lower right of the target.
DK86F7-560	This photograph depicts red-brown stains on a ceramic tile. The following were observed: Five red-brown drip stains between the upper right hand corner and the lower left hand corner of the photograph. A drip pattern in the lower left hand corner of the photograph. Wipe patterns and perimeter stains in the upper portion of the photograph. The wipe patterns have a diagonal directionality toward the lower right.
DVL7TQ-560	A small drip pattern is observed in the lower left corner of the target surface with a drip trail extending towards the upper right corner where there is a wipe pattern going through two of the drip stains and several smaller satellite stains showing the edge characteristics of those two drip stains and smaller satellite stains.
DZKDKF-560	Several drip stains are noted. Two (2) wipe patterns are noted toward upper right area of target with an upper left to lower right directionality. A drip pattern is noted toward the lower left area of the target.
E8V2RM-561	Seven drip stains diagonal across the target, at the lower left corner a drip pattern. Both bloodstain patterns are surrounded by satellite stains. No indication for any directionality within the series of drip stains neither an sequence of events is recognized (i.e. no overlapping stains).[sic] Two of the drip stains are wiped out in the direction (right downwards), leaving two perimeter (drip) stains and several perimeter satellite stains and resulting is several parallel wipe patterns.
ECCVTY-561	Drip trail is present running from lower left to upper right of photograph. A drip pattern with associated satellite stains is present at the lower left end of the drip trail. Two wipe stains are located in the upper right portion of the drip trail. The direction of the wipe is from the upper left towards the lower right.
EF999Q-560	Drip pattern in the lower left corner with corresponding satellite stains from the drip pattern observed. Seven drip stains observed - two of which demonstrated a wipe pattern with a downward/right directionality and remaining perimeter stains from the wiped drip and satellite stains.
EFH7BM-560	At the bottom left of the photograph is a drip pattern - drips into drips (which can be seen to be overlapping) with the production of associated spots. There is a drip stain to the right of this and towards the centre of the photo are 3 further drip stains; 2 further drip stains, which have been disrupted while still wet (partly dried) and additional small spots, also disrupted, producing a wipe pattern with movement from top left to bottom right, leaving perimeter stains. The pattern is in keeping with a blood drip trail, with the source being stationary at the bottom left so that a drip pattern is produced. The stains at the top right have been wiped leaving perimeter stains, while the blood was only partly dried.
EKH7ZJ-560	There is a drip pattern in the lower left corner. There are seven drip stains, diagonal across the surface, lower left to upper right. Two of the drip stains and some of the surrounding satellite stains were wiped. These two drip stains were located in the upper right corner. The wipe was from top to bottom and left to right.
ENDC4N-560	Blood pattern formed by a number of drops of blood landing on the surface from above, forming large (18-20mm diameter) parent blood stains. A drip pattern is evident where blood has dripped into a parent blood stain(s) causing a number of smaller satellite blood stains. Two of the parent blood stains, and a few of the satellite blood stains, appear to have been altered by a wiping motion, causing a wipe pattern. The perimeter stain is still visible in these blood stains. A number of the satellite stains appear to exhibit bubble rings.

TABLE 2b - Part 2: Recognition and Description

Item 5, continued

WebCode - Test	Detailed Pattern Description
EPUBEZ-560	Apparent bloodstains covering a total area of ~32cm by ~22.5cm. The lower left hand corner of the tile consisted of an apparent drip pattern, with the parent stain (~53mm x ~35mm) surrounded by satellite stains (size range ~ <1mm to 4mm in diameter). There is an apparent drip trail in the area from the parent stain to the upper right hand corner. The direction of travel of the blood source could not be determined. The drip trail consisted of 7 apparent drip stains numbered 1 to 7 (1 was closest to the parent stain). Drip stains 1, 2, 3, 4, and 7 were circular in shape with ~20 mm diameter. Stains #5 and 6 were apparently altered, with some perimeter stain remaining. Stains #5 and 6 had wipe patterns in the direction from the upper left corner towards the lower right corner of the tile.
ETBJVD-560	The photo has multiple bloodstain patterns present. In the lower left corner is a drip pattern, characterized by an irregular shaped stain with the appearance of overlapped circular stains, with scalloped edges. Irregular, circular, and elliptical stains (satellites) are around this grouping and extend the view of the photo. There are 7 additional drip stains between the lower left and upper right corners; circular stains approximately 2cm in diameter with scalloped edges. Based on the limited view of this photo, these 7 drip stains cannot be conclusively defined as a "drip trail." The upper right corner also has a wipe pattern through two of the previously described drip stains. The drips have their original edge characteristics mostly on the upper left parts of the stain but are altered. The smeared stain appears linear downwards and to the right approximately 9.5cm and has feathering of the lower right edge of the pattern.
EU6A2R-560	The picture shows a drip trail consisting of 7 drops of blood leading to a slightly larger bloodstain pattern. The larger bloodstain pattern is a drip pattern which created several satellite stains surrounding the drip pattern and drip trail. Within the drip trail, 2 drops were wiped through with an unknown object after the blood drops had landed on the surface, creating a wipe pattern for those two drops. The wipe pattern left behind a perimeter stain of the original drop.
F2HU9V-561	Drip stains are observed in a drip trail from the lower left of the image to the upper right of the image. The lower left pattern also exhibits characteristics of a drip pattern. Two wipe patterns are noted towards the upper right portion of the image. All of the major stains are large in size consistent with low-velocity spatter. Some medium size spatter is observed that is consistent with satellite spatter and/or movement of the bloody object.
F2QH84-561	There is a possible drip trail present that is located diagonally from the lower left corner of the image to the upper right corner. The drip stains appear to have impacted the tile at approximately 90 degrees. There are two possible wipe patterns present in the upper right corner of the image that appear to have occurred when an object moved across two of the drip stains moving from the upper left area of the image downward toward the lower right. Perimeter stains are present in these two wipe patterns.
F8WN7K-560	Overall pattern is a drip trail. In the lower left corner of photo is a drip pattern and in the upper right corner area is a wipe pattern of two large drops and at least one smaller drop.
FAZ4VX-560	Drip pattern with accompanying drops in the lower left corner. Drip trail (seven large stains) with small accompanying drops diagonally from lower left to upper right. Wipe pattern through two drip stains and some of the small accompanying stains in a downward direction (upper left to lower right).
FQU4BH-561	This blood stain pattern consists of approximately 10 drip stains in a diagonal across the surface from upper right corner to lower left corner. Each of the drip stains have created smaller satellite stains from the parent stain being the drip pattern. In the lower left hand corner there has been at least 3 drip stains overlapping each other creating a drip pattern. This drip pattern has created a greater amount of satellite stains. Towards the top right corner two of the drip stains have become altered stains due to a wipe pattern through the original drip stains. The wipe pattern shows a direction diagonally from the top left to the bottom right for approximately 10cm. This has occurred some time after the original drip stain as there is evidence of a perimeter stain where the edge characteristic is still evident. The edge characteristics are evident in both the parent drip stains and also the smaller satellite stains through the wipe pattern.
FY8ZAX-561	Item 5 is a horizontal target with bloodstain patterns. The lower left portion of the target has a drip pattern with some pooling and associated satellite spatter. Several drops contribute to the drip pattern

WebCode - Test	Detailed Pattern Description
	and pooling. Satellite spatter radiates from the pool in all directions and is present on most of the target. Between the lower left of the target, next to the drip pattern, and the upper right portion of the target, are seven drip stains in a drip trail. The second and third stains from the upper right corner have been altered and perimeter stains are visible. The altered stains appear to have been wiped while still wet in a left to right diagonal direction. The wipes also altered some satellite spatter, leaving perimeter stains behind.
FYDZZQ-561	Drip Pattern + Drip Stains. Wipe Pattern on two drip stains from the top left to the bottom right.
FYZEEW-561	Target consists of a drip pattern in the lower left hand corner with seven drip stains separate from the drip pattern which exhibit characteristics of a drip trail. Two of drip stains have been altered by a wipe through the stains from right to left. These stains exhibit a perimeter stain leading to believe the drip stains and corresponding satellite stains were present prior to the wipe pattern.
G6C7PD-561	A small drip pattern in the bottom left corner around wich[sic] is evident the presence of multiple satellite stains mainly at the left side of the pattern. At right of the drip pattern from the bottom left corner to the upper right corner there is a drip trail formed by seven individual drip stains. The directionality of this drip trail is not entirely clear but the edge characteristics of the parent stains and the satellite stains suggest that is upwards and from left to right. Two of the individual drip stains of the drip trail (located at the upper right quadrant) form a wipe pattern whose directionality is downwards and from left to right.
GXLC63-560	This Item consists of a photograph labelled Item 1-5. Photograph shows several red-brown stains on a ceramic tile. The bottom left hand corner depicts red-brown drip stains producing a drip pattern. The middle of the photograph depicts several round red-brown drip stains. The top right of the photograph depicts a round red-brown drip stain and two red-brown stain wipe patterns. The wipe patterns each resulted from a drip stain being wiped, producing a perimeter stain.
GZ69PL-560	Drip pattern beginning in the lower left corner of the photo and seven additional drip stains across the center and upper right of the photo. Possible expirated blood in the background throughout the photo. Two drip stains have an upper left to lower right wipe pattern.
H4LBTW-561	The pattern on this target depicts a series of individual drip stains which appear to have originated from directly above. The stains trail diagonally across the target. Several of these individual drips occur on the lower left corner of this target and overlap each other creating a drip pattern where blood dripping into to blood causes surrounding satellite spatter that extend outward from the parent stains. Satellite spatter is also observed surrounding the individual drip stains that trail across the target. After a period of time, two individual stains on the upper right side of this target were altered resulting in a wipe pattern. Perimeter staining is evident on these altered bloodstains. This wipe moves in a downward (upper left to lower right) direction.
H68XXR-561	The primary bloodstain pattern is a Drip Trail roughly extending from the bottom left corner to the top right corner of the target. The stains are round in shape indicating they struck the target at approximately 90 degrees. The drip trail consists of seven individual Drip Stains (approximately 2cm each) and a drip pattern in the lower left corner (approximately 3.5 x 5.2 cm). Satellite stains are visible throughout the target surface, but are most densely distributed around the drip pattern. The second and third stains below the top right corner were altered resulting in a wipe pattern. Edge characteristics of the two wipe patterns show Perimeter stains along their periphery, indicating the alterations occurred after partial drying.
H8KB89-560	There is a drip pattern in the lower left corner, with associated satellite stains, caused by several drops of blood dripping into one another. Running to or from this pattern, in a diagonal direction to the top right corner, there is a drip trail of seven drip stains. Two of the drip stains in the drip trail have been wiped while still wet in a diagonal direction from top left to bottom right altering the appearance of these stains. Some satellite stains appear as perimeter stains through alteration by this wiping.
HJACJ9-560	(Descriptions oriented with the ruler in upper left hand corner of the photograph.) An irregular shaped stain measuring approximately 5.0cm x 3.5cm is present in the lower left corner. This stain is consistent with a Drip Pattern. Smaller stains of approximately 0.5cm or less are also present around

WebCode - Test	Detailed Pattern Description
	the drip pattern and other bloodstains and may be described as satellite stains. Located on the diagonal (approximately 1 o'clock position) above and to the right of the drip pattern are 5 bloodstains measuring approximately 2cm in diameter. These bloodstains are consistent with Drip Stains. Two lighter stains are present along this same diagonal. They appear to have been altered: the peripheral circular characteristics of a drip stain are present; therefore, these may be characterized as perimeter stains. Associated with the perimeter stains are long light stains measuring approximately 2cm x 8cm with a feathered edge on the end opposite of the circular perimeters. These are wipe patterns moving in a downward right direction, approx. 10 o'clock to 4:30 o'clock.
HKB3WJ-561	Item #5 is a blood stain pattern containing a drip stain and a drip trial[sic]. Within the pattern is an altered stain in the form of a wipe pattern through two of the drips. Also present is a drip pattern, which is located at the 7 o'clock position within the pattern.
HUWDZJ-561	Item 5 shows drip stains in a horizontal plane. There are also a drip pattern resulting from blood drops falling into previously deposited wet bloodstains. The surface/ceramic tile creates a caracteritics egde of the periphery of the stains. There is satellite spatter around the pheriphery of the parent stains. Some of the drip stains are skeletonized as a result from wiping through partially dried stains, leaving the peripheral rim intact. [sic]
HZYKKD-561	There is a drip trail and a drip pattern of blood. Two of the existing drip stains were wiped from the upper left part towards the lower right part resulting in a wipe pattern and 2 perimeter stains.
JA8WLM-561	Item #5 consists of bloodstains located on a ceramic tile target placed on a horizontal place. This tile is colored in shades of pink and brown. A drip trail containing a drip pattern, drip stains and a wipe pattern was observed on this tile. The drip pattern is located in the lower left corner. Satellite stains are located around this pooled bloodstain. Four drip stains, each of similar size, shape and edge characteristics, are located above and to the right of this drip pattern. A wipe pattern containing two altered drip stains and a spatter-type stain is located above and to the right of the four drip stains. The direction of this wipe pattern travels towards the lower right corner. The wiped drip stains are similar in size, shape and edge characteristics as the other drip stains. These wipes appear to have traveled over and altered some spatter stains, creating perimeter stains. The edge characteristics of these perimeter stains remain intact. Other spatter-type stains appear to have been deposited on top of these wiped drip stains. The wiped spatter-type stain has edge characteristics that remain intact. Above, and to the right of, the wipe pattern is another drip stain. This drip stain similar in size, shape and edge characteristics to the other drip stains in this drip trail. Spatter stains are located on the entire length and width of the tile. Some of these spatter stains have directionality, with an area of convergence located around or with in the drip pattern in the lower left corner.
JBJ3Y7-560	Several red-brown stains consistent with a drip trail were noted on this item. Two of these drip stains were consistent with having a wipe pattern. A red-brown stain, consistent with a drip pattern was noted on this item. Smaller Red-brown stains, consistent with accompanying drops, were also noted.
JF6CGP-560	Item 5 consists of several apparent bloodstain patterns. In the bottom left corner is a drip pattern. Extending between this pattern and the upper right corner are four drip stains, two wipe patterns, and another drip stain. Portions of two perimeter stains can also be seen in the wipe patterns; these indicate that the two altered stains were originally drip stains. The direction of the wipes are from upper left to lower right. Taken together, the five drip stains and two perimeter stains constitute an apparent drip trail, although direction of travel could not be determined.
JHDJ2V-561	Drip pattern with accompanying drop formation in lower left corner. Drip stains above and to the right of drip pattern mentioned above. Perimeter stains with edge characteristic visible. Wipe pattern, direction of motion from top to bottom left to right.
JHGWVJ-561	Drip pattern with satellite stains on the lower left corner of the target. Drip trail composed of 7 drip stains, stretching between the drip pattern and the upper right corner of the target. 2 drip stains were altered becoming a wipe pattern, movement from the drip stains down & to the right. Few perimeter stains were obnserved[sic] along the wipe pattern.
JN36NN-560	Photo depicts seven drip stains and a larger mass of apparent blood that appears to consist of at

WebCode - Test	Detailed Pattern Description
	least 5 drip stains. Each of the seven drip stains are circular in appearance and measure 19-20mm in diameter. The impact angles for all drip stains appear to be approximately 90 degrees. The drip stains visible in the larger mass of apparent blood in the lower left corner of the photo also appear to have been circular. Their angles of impact also appear to be approximately 90 degrees. Several satellite stains are seen in the photo. The directionality of these stains suggest they originated from blood falling into blood in the larger mass in the lower left corner of the photo. Two of the drip stains are altered stains. Wipe patterns are seen in both of these drip stains, with movement from upper left to lower right. Perimeter stains are visible in both of these altered stains.
JNDT6N-561	Drip pattern in lower left corner leading to a drip trail on bottom left corner to upper right. A wipe pattern is noted on two drops on the upper right corner.
K28HY8-560	A series of seven drip stains ending (if pattern goes right to left) with a stain which appears to be several drip stains on top of each other consistent with being a drip pattern was present diagonally across the target. The drip stains measured ~20 mm in diameter. Two of the drip stains were wiped through prior to drying indicated by the presence of perimeter stains. Stains were wiped towards bottom right side of target.
K9FD2Z-560	At bottom left of the image is a pattern of overlapping blood drip stains with associated satellite spatter extending over the majority of the image. In my opinion this pattern has been caused by blood dripping into blood, from a bleeding individual, or a heavily bloodied object, while stationary in this area. Extending diagonally upward to the right across the image is a line of seven drip stains, each approximately 20 millimetres in diameter. Two of the drip stains in the upper right of the image, and a number of the smaller satellite spatter stains, have been wiped through leaving a fainter perimeter stain and a wipe mark heading diagonally downward to the right of the image.
K9LA9R-561	In the lower left corner of the ceramic tile there are drip pattern bloodstains with satellite stains radiating around the parent stain. There are seven blood drip stains from the lower left corner of the ceramic tile to the upper right corner of the tile. These stains have edge characteristics consistent with the blood falling from near 90 degree angle and are approximately 20mm in diameter. Two of the blood drip stains in the upper right are of the ceramic tile have been altered and are consistent with a wipe pattern moving from upper left to lower right in direction.
KC4NCR-561	At least 7 individual drip stains are observed, arranged in a somewhat linear fashion. To the left of the stains is a drip pattern, with resulting satellite spatter. Two of the drip stains (and some of the satellite spatter) have been wiped through and perimeter stains are observed.
KJD2BH-560	Lab Item #5: Photograph of bloodstain pattern on ceramic tile in the horizontal plane. The photograph depicts a series of circular bloodstains that measure approximately twenty (20) mm in size. On the lower left-hand side of the photograph, there is an accumulation of the circular stains deposited on the target in an overlapping fashion to create a drip pattern. As the bloodstain pattern moves upward and to the right in the photograph, the circular drip stains become deposited in a single fashion on the target creating a drip trail. The photograph also depicts small circular to elliptical bloodstains around the periphery of the drip pattern and drip trail. These circular to elliptical bloodstains measure from less than one (1) mm to approximately two and a half (2.5) mm in size and are suggestive of satellite stains. The concentration of satellite stains appears heavier on the left-hand side of the photograph than it does on the right-hand side. On the upper right-hand side of the photograph, two (2) of the drip stains, that are a part of the drip trail, appear to be altered stains. These two (2) bloodstains exhibit perimeter stains, in which one can see the outline of the original drip stain however they have been altered by an object moving through them and extending the liquid blood down and to the right in the photograph. These two stains are suggestive of a wipe pattern. Several of the satellite stains near the two (2) drip stains on the upper right-hand side of the photograph, that have now become part of the wipe pattern, were also altered by the wiping action. These affected satellite stains now also have become perimeter stains as a result of the wiping action.
KNZLQC-560	A drip pattern was observed at the bottom left area of the target. Drip stains were observed in an area extending from the bottom left to the top right area of the target. Satellite stains were observed around the drip pattern and drip stains. Two (2) apparent drip stains near the top of the target and

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	satellite stains around these two (2) stains have perimeter staining with wipe patterns extending from the stains toward the bottom right of the target.
KVGX4D-560	A drip trail, in a some what linear fashion, exists on this target. Near the upper right corner of this drip trail are wipe patterns through some of the drip trail's pre-existing stains. Overlapping drip stains are seen in the lower left corner with satellite stains.
L2YU2Z-561	Drip pattern in left bottom corner. Drip trail diagonally from left bottom corner to top right corner. Wpie[sic] pattern through two large pre-exsisting[sic] stains diagonally from top left to bottom right.
L4BMXM-561	The pattern consists of a drip pattern in the lower left corner with seven drip stains each measuring approximately 2 centimeters in diameter in a somewhat linear pattern diagonally up to the top right corner of the photograph. There are numerous circular, elliptical, and irregularly shaped satellite stains ranging in size from less than 1 millimeter in diameter to approximately 4 millimeters by 2 millimeters emanating from the parent stain in the drip pattern. There is a wipe pattern through two of the drips at the top right of the photograph moving diagonally toward the lower right side. There are perimeter stains located where the preexisting drip stains were wiped.
LALXMF-561	Drip Pattern, Drip Trail, Wipe pattern. There is a drip pattern consisting of at least 6 overlapping bloodstains (blood in blood, lower left corner of the image). There are also seven individual drip stains (drip trail diagonally oriented across the image, lower left to upper right). Many smaller satellite stains are present as well. The individual drip stains are approximately 2cm in diameter and are circular, indicating an angle of impact to the tile surface of, or near, 90°. The stain in the top right corner of the image is approximately 27cm from the drip pattern (at the lower left corner).The 5th and 6th individual stains (numbering starts from the drip pattern) have been altered by a wipe action resulting in perimeter stains; the directionality of the wipe is towards the lower right of the image and the wipe pattern extends approximately 8.5cm from the original stains. Some adjacent satellite stains have also been wiped indicating they had been deposited before the wipe.
LUAGHY-560	A large bloodstain is present in the lower left corner. Scalloped edges of smaller bloodstains are apparent within this stain, indicating more than one drop of blood has contributed to this stain. A pattern of satellite spatter stains extends from this large bloodstain onto the remaining areas of the target. This pattern is consistent with being formed by blood dripping into blood, known as a drip pattern. Seven circular bloodstains consistent with a drip trail are also present positioned in an approximate line from the lower left corner to the upper right corner of the target. Two of these drip stains have been altered by a non bloodstained object with a wiping action in a left to right and downward direction, resulting in the blood from these stains moving across the target. Skeletonised spatter stains are visible within and close to the wiped drip stains indicating the spatter stains of the drip pattern were formed before the wiping action.
LUK4GT-561	A drip bloodstain pattern is observed in the lower left hand corner of the image. The drip pattern resulted from blood dripping into existing blood drops on the ceramic tile surface. Additional individual drip stains are also observed across the center of the image from corner to corner. Smaller satellite bloodstains that originated from the formation of the parent drip stains are observed throughout the image as a result of the parent drip bloodstains impacting the surface. A wipe pattern is observed near the upper margin of the image. The altered bloodstain pattern resulted from an object moving through two preexisting wet drip bloodstains. Bloodstain pattern: a grouping or distribution of bloodstains that indicates through regular or repetitive form, order, or arrangement the manner in which the pattern was deposited. Drip pattern: a bloodstain pattern resulting from a liquid that dripped into another liquid, at least one of which was blood. Drip stain: a bloodstain resulting from a falling drop that formed due to gravity. Satellite stain: a smaller bloodstain that originated during the formation of the parent stain as a result of blood impacting a surface. Parent stain: a bloodstain from which a satellite stain originated. Wipe pattern: an altered bloodstain pattern resulting from an object moving through a preexisting wet bloodstain. Altered stain: a bloodstain with characteristics that indicate a physical change has occurred.
LXLZ99-560	There were individual drip stains making up a drip trail between the lower-left and upper-right corners. There was a drip pattern in the lower-left corner. There were two altered stains in the

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	upper-right quadrant, exhibiting perimeter stains and wipe patterns (with directionality left-to-right and downward).
M2JWHZ-560	There are al[sic] least 10 drip stains spanning from the bottom left to the top right of the photograph (no directionality determined). At least 3 of these drip stains create a drip pattern in the bottom left of the photograph. 2 of the drip stains in the top right corner have been altered and would be classified as wipe patterns, exhibit perimeter stains. Finally, there are small satellite spatter, ranging in size from ~1mm to 3mm, around the areas where the drip stains and drip pattern are present and distributed throughout the entire photograph.
M2XCKF-561	Distinct parent bloodstains with circular shaped demarcations are recognized. The size of these stains are about 20 mm in diameter. So these stains are inferred as drip stains. Some combination of blood exhibiting overlapping drips surrounded by a random distribution of small satellite spatters is recognized. So these stains are inferred as drip patterns. Two bloodstains that were smeared and has peripheral characteristics of the original stains are recognized. So these stains are inferred as perimeter stains.
M3UP89-560	This pattern was a drip trail that moved between the bottom left corner and the upper right corner. The drops were circular in shape which indicated that they fell from a ninety degree angle or very close to a ninety degree angle. Several drops were present in the lower left corner which indicated that the source of blood was there for a period of time. Satellite spatter was also present near the parent stains. Near the upper right corner, the stains had been altered with a wipe pattern. This wipe pattern was observed not only on the larger stains, but also in the satellite spatter that was present.
MFZW4T-561	A blood stain pattern exhibiting a blood into blood drip pattern in the lower left corner resulting in associated satellite spatter. A drip trail pattern is observed at the center of the target with two of the stains from the drip trail exhibiting characteristics of having been altered by a wiping motion from the upper center of the target toward the lower right side. This wiping motion caused associated perimeter stains exhibiting characteristics of the original drip stains.
MH8AP2-560	Seven (7) Drip Stains are oriented diagonally from lower left corner to upper right corner of the target. Two (2) of the Drip Stains have been altered (Wipe Pattern). The wiping action occurred downwards diagonally left to right from the drip stains. The altered stains remaining after the wiping actions can also be described as Perimeter Stains. A Drip Pattern is located in the lower left area of the target. Satellite Stains which can be attributed to either the Drip Stains or the Drip Pattern, some of which have been Altered (Wipe Pattern) are located in the upper right area of the target. The altered stains remaining after the wiping actions can also be described as Perimeter Stains. Note: Due to the lack of clear directionality, no identification of a drip trail was determined. However, it is possible that the drip stains may be associated with a drip trail.
MJG7B6-560	A drip pattern is present in the lower left section of the photograph. Seven drip stains are present forming an apparent drip trail. Numerous satellite drops corresponding to the drip stains are visible. Two drip stains have been altered creating a wipe pattern in the upper right section of the photograph. The wipe pattern includes the perimeter stains of the affected drip stains and exhibits a left to right downward direction.
MKBWGJ-561	In the lower left hand corner a closely-spaced together drip trail pattern can be seen. Several drip stains with drops of blood falling close together resulted in a drip pattern causing satellite stains to fall around the parent stains. The drip trail moves diagonally between the lower left and upper right corners of Item 5. Two drip stains in the upper right corner have resulted in a wipe pattern. The wipe trailed down towards the lower right corner creating a perimeter stain of the original drip stain. All the blood drops forming the above-mentioned stains fell at a 90 degree angle to the tile surface.
MLNGCE-561	This pattern is composed of a drip pattern with associated satellite spatter. There are also a number of drip stains forming a drip trail. Two of the drip stains have been disturbed and exhibit perimeter staining and wipes. Some of the satellite spatter stains adjacent to the wiped drip stains also exhibit perimeter staining with wipes.
MQLXN9-560	There is a drip pattern in the lower left corner, which is surrounded by satellite stains. Drip stains that

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	form a drip trail are in the area between the lower left corner and the upper right corner. Two (2) drip stains have perimeter staining formed from a wipe pattern in the top right corner of the target. There is spatter staining throughout the entire target surface.
MT4ACD-560	The overall pattern is a drip trail with the following specific characteristics: In the lower left corner there is a drip pattern. There are drip stains at a diagonal between the lower left and upper right corners of the photo. There are two drip stains in the upper right corner that have been wiped through with a directionality from left to right at an angle. The majority of the stains in the photo are spatter stains.
MWMC8P-560	A drip pattern was observed in the lower left portion of the photograph. Drip stains were observed in the approximate center and upper right portions of the photograph that were aligned linearly indicating a drip trail. Two drip stains within the drip trail were perimeter stains. A wipe pattern was observed that involved the two perimeter stains from the drip trail and additional perimeter stains.
MXR23T-561	A small drip pattern is seen in the lower left. Seven single dripstains are seen from lower left to upper right suggesting a drip trail (direction unknown). Two of the drip stains are altered leaving perimeter stains and wipe patterns.
MZ4LE2-560	Item 5 is a photograph of a complex bloodstain pattern. The complex pattern consists of three individual bloodstains patterns designated as patterns A, B, and C. Pattern A is a drip pattern ~5.5cm x 3.5cm towards the bottom left of the image. A slight scalloped edge is apparent around the primary stain. Circular, irregular, and elliptical satellite spatter stains ranging in size from less than 1mm to ~5mm x 2mm are present around the primary stain. Pattern B is a drip trail between the drip pattern (pattern A) and the top right corner of the image. The drip trail consists of 7 individual drip stains, two of which have been altered (see pattern C). Each unaltered drip stain is circular and ~2cm in diameter with scalloped edges. Pattern C is a wipe pattern towards the top right corner of the image. The pattern consists of two individual wipe stains ~9.2cm x 2.3cm and 9.7cm x 2cm. It is apparent that these stains were originally drip stains that were part of the drip trail (pattern B) prior to being wiped through. Slight perimeter staining is present around the original drip stains. Feathering is present at the right edge of each stain indicating the direction of the wipe was from left to right and downward. Small perimeter stains from satellite spatter are also present within the wipe patterns and it is evident that these were deposited prior to the stain being wiped through.
NCCXYA-561	In the under, left hand corner, is a drip pattern. A drip trail goes from the under left hand corner to the upper right hand corner, but it isn't evident, started the drip trail from the under left hand corner or the opposite corner. Around the drip pattern and the drip trail are satellite stains. In the right, upper quarter is a wipe pattern. The wipe pattern came into existence with the blood from two units of the drip trail and a few satellite stains. The wipe pattern started on the left side of the drip trail and goes across the drip trail. The border off the two units from the drip trail and the satellite stains began to dry, before the wipe pattern came into existence and the borders are reasonable apparent. [sic]
NHMXKZ-560	Starting from the bottom left hand corner of the tile and moving towards the upper right hand corner of the tile, the following was observed: a red-brown drip pattern with a parent stain and satellite stains, four red-brown drip stains, two red-brown wipe patterns, with perimeter stains w/in the wipe patterns, and an additional red-brown drip stain.
NP8VFF-560	Drip stains are present between the left and the top right of this target. A drip pattern is present with the parent stain at the bottom left and corresponding satellite stains across the entire target. Wipe patterns with corresponding perimeter stains are present at the top right. Movement across wet blood toward the bottom right is evident in the wipe patterns.
NTYE37-560	Image contains a drip pattern in the lower left and several drip stains diagonally from the bottom left to the top right. Two of the drip stains near the top right include wipe stains from top to bottom with perimeter stains still visible. All of the drip stains, including the perimeter stains with the wipe patterns are 90 degree stains.
P2TJV8-560	It seems a Drip Stain, and five of them look fallen in 90 degrees angle, could vary in shape but the different between eachother are not that different in form. There are two skeletonized wipe pattern

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	that look like ann object were moved through and existy stain. [sic]
PM6LNG-560	1. Drip Trail consisting of seven circular drip stains measuring roughly 19 mm in diameter, located diagonally between the upper right hand corner and the lower left hand corner. 2. Two of the drip stains at the upper right area have been altered, resulting in two wipe patterns (directionality: left to right, downwards) and two circular perimeter stains. 3. A drip pattern located at the lower left hand corner.
PUDTF8-560	Overlapping drip stains create a drip pattern in the lower left corner of the target. Drip stains in a linear pattern are located diagonally across the target, creating a drip trail. Satellite stains can be seen alongside the drip pattern and drip trail. There is a wipe through two (2) of the drip stains near the top of the target (downward and to the right); there are perimeter stains where the drip stains were altered as a result. The wipe passes through some satellite stains as well, also leaving perimeter stains.
Q36LAJ-561	The pattern consists of drip trail and a drip pattern with satellite stains. There is a wipe pattern in the upper right portion of the pattern. The stains which have been altered exhibit perimeter stains.
QDHT4X-560	Item 5 was a combination of a drip pattern and a drip trail. A small irregular-shaped drip pattern measuring 4 cm by 5 cm in size was present at the lower left corner of the image. Approximately 6 blood drops appear to make up this drip pattern creating an accumulation of blood volume with irregular margins. Random satellite spatter were present around the area of the drip pattern. Scalloped edges were present along the majority of the edges of this pattern. Seven drip stains were observed in this image and were oriented diagonally from the drip pattern in the lower left corner to the upper right corner of the image. The drip stains were circular in shape, exhibit scalloped edges and each stain was generally 2 cm in size. The drip stains were in a generally linear orientation that forms a drip trail that was 25 cm in length. There was no clear indication on the direction of travel within the drip trail. The second and third drip stains from the upper right end (upper right corner of the image) of the drip trail had been altered by a wiping mechanism. Perimeter staining was present due to a wiping motion from the upper left to the lower right corner of the image producing two individual wipe marks that paralleled each other and were approximately 9.5 cm in length. The perimeter staining indicated that some drying time had passed between the deposition of those drip stains and the wiping action that followed in order to produce perimeter staining. Altered spatter stains, possibly the result of satellite spatter from the drip stains or the drip pattern, were also observed within these wiped areas.
QGYB4U-560	The item consisted of a red-brown drip trail. This red-brown drip trail consisted of a red-brown drip pattern, four red-brown drip stains, two red-brown wipe patterns with each containing a red-brown perimeter stain consistent with a red-brown drip stain, and another red-brown drip stain.
QR7DUR-561	A drip pattern was found at the lower left corner. The drip pattern, together with several drip stains, formed a drip trail across the lower left corner and the upper right corner. A wipe pattern was found on two of the drip stains of the drip trail, with the direction of wiping downwards from top to lower right corner.
QWX9AY-560	In the lower left corner is a stain resulting from blood dropping into blood causing some satellite stains. There are seven more blood drops that traverse the surface (upwards to the right in photo). The stains have the appearance of passive drops onto the floor. Two of the bloodstains have the appearance of a wipe pattern, something was passed through these two stains before they had dried.
QXNEN6-560	A drip pattern is observed in the lower left corner of the target with an irregularly shaped parent stain surrounded by satellite stains. Several drip stains are observed diagonally across the target creating a drip trail. There are also numerous spatter stains located over the entire surface of the target. Two (2) of the drip stains and some of the spatter stains are altered stains due to a wipe pattern, which resulted in perimeter stains with skeletonized edge characteristics.
QXP7RE-560	There is a drip trail which extends from the lower left quadrant of the image to the upper right quadrant of the image which contains 7 individual drip stains each with a diameter of approximately 20mm; 2 of the drip stains appear to have been disturbed. There is a drip pattern in the lower left

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	quadrant with drip stains with diameters ranging from approximately 20mm-less than 1mm. There are 3 wipe patterns in the upper right quadrant of the image through 3 perimeter stains. The wipe patterns appears to be in a downward direction from left to right.
R6DMX8-560	There are six drip stains located between the bottom left of the image and the top right, collectively forming a drip trail. At the bottom left of the drip trail several further drip stains have been deposited at approximately the same location resulting in drip pattern including satellite stains. Two of the drip stains near the top right of the image have become wipe patterns due to movement of an object through them towards the bottom right. Some of the satellite stains from the drip pattern have also been disturbed by this wipe action resulting in perimeter stains. This suggest the drip pattern was formed prior to the wipe pattern.
R9GBXG-561	There are three different major types of Bloodstain pattern on Item 5, which are drip stain, drip pattern and wipe pattern. It is clear to see that seven circular bloodstains on ceramic tile – horizontal plane, which can be referred as drip stain. According to their diameter (size), all of them are around 20mm; it is shown that these are from similar height. The second and third bloodstains (from right to left) are wipe pattern. The directionality of the action is from upper left to lower right. At lower left, it can be seen that three bloodstains are recongised[sic] as drip pattern.
RB8FQN-560	1- Drip pattern observed in lower left corner with small satelite spatter around main stain, satelite spatter originating from main stain. 2- Drip Trail - (linear) in line individual passive drops, no direction of trail could be determined. 3- Perimeter stain - Two individual passive drops were altered, edges of original stains still visible. Disturbance occurred short after deposit of original stain or before completion of the clotting process. 4- Wipe pattern - uncomtaminated object moved through existing passive drops, resulting in the alteration of the two stains observed. Directionality could be determine, from left to right downwards with feathering visible at the end and also the diminishing of the stain (wipe pattern) to the end. [sic]
RJ2HYR-561	The bloodstain pattern depicted in Item 5 on the horizontal plane of ceramic tile was characterized as a drip trail blood stain that apparently moved from the upper right to the lower left of the photograph. At the bottom of the lower left of the photograph, the blood source continued to drip into the existing blood drops on the ceramic tile, which subsequently resulted in secondary spatter which was observed to be radiating outwards across the photograph. In all likelihood the blood trail droplets were allowed to dry for possibly at least 30 seconds of time before an object was wiped through two of the separate blood trail droplets in the upper right hand corner of the photo in an upper left to lower right directionality. This wiping motion resulted in the observed wipe marks with feathering towards the lower right of the wipe as well as skeletonization of the two blood trail droplets as well as the smaller radiating secondary blood spatters observed within the feathering wipe marks.
RJ2KKP-561	The image shows a drip pattern with its accompanying drops in the bottom left corner. There is a drip trail evident with accompanying droplets from the parent stains within this trail. There is a wipe pattern existing of two parent stains in the drip trail along with some surrounding accompanying drops. There is also a mist pattern over the tile and mentioned patterns. There is a perimeter stain of accompanying drops within the wipe pattern.
RRUVUK-560	(Left Bottom Corner): Drip patterns caused by Blood Droplets Dripping into another ones. (After the Drip Patterns): 90°C droplets of bloods falling due to gravity two of which was wiped at top right corner. [sic]
RZDJ2E-561	A series of drip stains form a drip trail from the upper right-hand corner down to the lower left-hand corner. The trail ends with a drip pattern in the lower left-hand corner. Two (2) wipe patterns made from two (2) of the drip stains are located near the upper right-hand corner.
T3FUEU-560	Drip pattern with associated satellite stains in the lower left corner. Drip trail from lower left corner to top right corner. Two of the drip stains in the upper right corner have been altered by an object contacting them & moving downwards resulting in wipe patterns.
T88GXB-560	Multiple drip stains are observed at the bottom left corner of the target area with satellite stains observed around the area of the drip stains. A drip trial[sic] is then observed leading from the bottom

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	left corner of the target area to the upper right area of the target area. In two of the drip stains, observed in the upper right corner of the target area, a wipe patter[sic] is observed and appeared to have been deposited after the drip stains were placed on the target area due to the edge characteristics left behind.
TB3L2F-560	1. Left Corner = Drip pattern (a bloodstain pattern resulting from a liquid that dripped into another liquid, at least one of which was blood. 2. Middle = Drip stain (a bloodstain resulting from a falling drop that formed due to gravity. 3. Right corner = Wipe pattern (an altered bloodstain pattern resulting from an object moving through a preexisting wet bloodstain.
TCGYUH-561	A drip pattern is observed at the lower left corner of the image. Multiple drip stains are observed diagonally across the image. The multiple drip stains form a drip trail. Two of the drip stains in the drip trail show wipe patterns with lateral motion from left to right across the image.
TLLZ6H-560	A drip pattern is present on the ceramic tile along with a drip trail consisting of several drip stains. Two of the drip stains in the drip trail are wipe patterns. There are additional spatter stains on the tile which are consistent with satellite stains.
TQ8RE7-560	A drip stain pattern with a conglomerate of drops present in the bottom left hand corner of cermic[sic] tile. Associated satellite stain patterns are present as a result of the parent drop stains impacting the tile surface. Movement through two pre-existing wet drip stains, with direction from upper left hand corner to lower right hand corner of the tile, is evident with the presence of a wipe stain and the presence of a perimeter stain of the original parent stain.
TR9JR7-561	A drip pattern is present in the lower left corner of the image surrounded by satellite stains. A drip trail is present in the image with a wipe pattern observed in two of the drip stains. A portion of perimeter stain is still visible in the two drip stains. The wipe pattern was created by movement downward and to the right in the image.
TR9RNW-560	Item 5 consists of a drip trail with drip stains measuring approximately 20mm in diameter. Within the drip trail, there are two wipe patterns and a drip pattern located in the left lower corner of the photo at one end of the drip trail.
TZLQAU-561	For orientation purposes, the top of the target is north. There is a drip pattern in the southwest (lower left) portion of the tile. Extending from the drip pattern to the northeast is a drip trail. Due to the hard, non-porous surface of the tile, directionality of the drip trail cannot be determined. There are two perimeter stains at the northeast portion of the drip trail. There is wiping across the stains and to the southeast. Wiping occurs over some satellite stains which were deposited before the wiping event.
U3QHYM-560	Drip Stain - A bloodstain resulting from a falling drop that formed due to gravity. Drip Trail - A bloodstain pattern resulting from the movement of a source of drip stains between two prints. Satellite stains - Smaller bloodstains that originated during the formation of the parent stain as a result of blood impacting on a surface. Wipe Pattern - An altered bloodstain pattern resulting from an object moving through a pre-existing wet bloodstain.
U6AVHP-561	The ceramic tile in the horizontal plane is a bloodstain pattern consisting of multiple drip stains creating a drip trail. The lower left corner has multiple drips thereby creating a drip pattern. Two (2) drip stains located to the upper right corner, drips 2+3 from right to left, are altered stains of a wipe pattern. The wipe pattern moves from the stain origination towards the lower right corner. A perimeter stain is evident in the two (2) altered drip stains. The drip stains are approximated 90°, or 90°, measuring approximately 20 mm x 20 mm. Some small satellite stains appear in the pattern.
U7JRN2-561	There is a drip pattern in the lower left and a series of drip stains forming an apparent drip trail between the lower left and the upper right. Two of the drip stains, in the upper right, and nearby satellite stains have been wiped, from upper left to lower right, leaving perimeter stains. Some of the satellite stains appear to be undisturbed by the wiping and may have dried before the wiping occurred.
UBA77G-561	A drip trail is oriented from lower left to upper right, but with no obvious direction of travel. A drip pattern is seen in the lower left region of the stain due to multiple drops landing in the same pool of

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	blood. Two of the drip stains in the upper right were wiped before they dried, directionally from upper left to lower right.
UEH3KK-561	A drip pattern with multiple satellite stains is observed in the lower left corner of the image. A drip trail consisting of multiple drip stains is observed between the lower left corner and the upper right corner of the image. The drip stains exhibit a 90 degree approximate angle of impact; unable to determine directionality of drip trail. Two of the drip stains in the upper right quadrant of the image appear to be altered stains, forming a wipe pattern.
UEMHY7-561	There is a drip pattern in the lower left corner of the photograph. There is a drip trail that extends diagonally across the photograph from lower left to upper right, with no apparent directionality. There are two drip stains in this trail that have been wiped through. The feathering of the wipe indicates a diagonal directionality, downward and to the right. There are numerous satellite stains throughout the photograph that appear to emanate from the main drip stains.
UJEQ2R-561	Item #5 The photo contains at least eight possible drip stains that form a possible drip trail. Two possible perimeter stains in the upper portion of the photograph appear to exhibit wipe patterns towards the lower right. Possible satellite stains are present around some of the parent stains and a possible drip pattern is located on the lower left portion of the photograph.
UJV8TY-560	The target for item 5 is approximately 320mm x 222mm in size. There is a drip pattern in the lower left quadrant. The pattern is approximately 48mm x 43mm and has satellite stains around it. There is a drip trail pattern consisting of at least seven drops, approximately 18-20mm in size that extend across the target from the drip pattern to the upper right quadrant. There are smaller satellite stains in the area of the drip stain pattern. There is a wipe pattern that extends through two drops of the drip stain pattern. The wipe pattern is in the upper right quadrant and shows directionality from upper left to lower right. Several perimeter stains are present within the wipe pattern. The wipe pattern is approximately 108 x 106 mm in size.
UKF4XQ-560	Bottom (L) corner - a small drip pattern with surrounding satellite stains. Diagonally from (L) - (R) upwards - seven drip stains creating a drip trail - the direction of travel of the source cannot be determined. An object or surface (or plural) has moved (wiped) through 2 of the drip stains while they were still wet (from top (L) towards bottom (R)) transforming the drip stains into wipe patterns (the drip stains have become altered stains/perimeter stains) and also doing the same to a few of the satellite stains from the drip pattern. Therefore the wiping of the drip stains has occurred after the formation of the drip pattern.
UXVMGN-561	A drip pattern contains at least 6 drops probably up to a few more at the bottom of the left corner. The blood dripping came approximately from 80 cm of height. Another 7 drips can be seen across the target. Two of them became perimeter stain due to a 10 cm long wipe pattern right after the drips appeared. The size of the soft wipping[sic] area does not reach 110 mm.
V3JTAF-560	Passive stain were seen as it forced by gravity with a low velocity resulting in round blood stain that measuring more than 20mm called (Drip stain). Transfer stain were seen and this type of pattern called (wipe pattern) because there is object that moved through the preexisting wet bloodstain. (Drip pattern) were seen in which a drops of blood dripped into another blood. [sic]
V9Y6LP-560	Observation of drip trail where 7 symmetrical drip stains appear to be forming a trail indicating the movement from one point (upper right of photo) to a stopping point(Lower left. The symmetrical feature of these drops indicate that possibly all the stains were dropped at the same height. The edge characteristic of these stains has a small number of spines indicating the drops were not deposited at a very high level. The stopping point of the blood trail appears to be a drip pattern where blood is dripping into each other causing a pool of liquid blood. Can also see there are numerous random spatter round the pool. Two of the symmetrical stains out of the 7 stains in the drip pattern trail illustrates a wipe pattern. The skeleton of two stains can be seen as an object comes into contact with the slowly drying stains causing a wipe pattern from left to right. This wipe event occurred after the drip pattern trail was deposited.
VLJRPV-560	A drip pattern was observed in the lower left corner of the target. A drip trail was observed between

WebCode - Test	Detailed Pattern Description
	the lower left corner and the upper right corner of the target. The direction of the drip trail could not be determined. A wipe pattern was observed within the drip trail altering several stains. Perimeter stains were present in the wipe pattern. Spatter stains were noted across the entire target.
VPNUTJ-560	There are drip stains that are circular with spines and measure approximately 17-21 mm in diameter that form a drip trail that extends from the bottom left to the top right of the photograph. There is a drip pattern that consists of a small pool of blood on the lower left side of the photograph and small stains that radiate outward across the tile. The pool is made up of an accumulation of drip stains and measures approximately 35x52 mm. The pool of blood has multiple rounded edges with spines. The small stains measure approximately 1-3 mm in size and are round to oblong in shape. There are altered stains on the upper right side of the photograph that consist of perimeter stains and wipe patterns.
W336FR-560	A Drip Pattern is located in the lower left corner of the target; associated Satellite stains (Spatter) are distributed across the entire target. Seven (7) near-round Drip Stains, are arranged linearly between the drip pattern and the upper right corner of the target, forming a Drip Trail. Two (2) Altered drip stains are present within the drip trail and exhibit characteristics consistent with being wiped through in an overall direction downward and to the right (Wipe Pattern), resulting in Perimeter Stains and disturbing spatter stains in this area.
WBAT7J-561	Drip stain trail. Short after, a drag over this trail was produced (wipe pattern).
WFP2RX-561	Item 5 consists of an image of a ceramic tile in the horizontal plane. A right angle metric ruler is located in the upper left corner providing viewing orientation and a scale along both the vertical axis and horizontal axis of the image. All measurements reported originate from the "0" position of the visible scale at the upper left corner of the image. A drip pattern with associated satellite staining is located in the lower left quadrant of the image. The center of the drip pattern is located approximately 185 mm below and 60 mm to the right of the scale "0" position. Seven (7) individual drip stains with random satellite staining are present in the image. These drip stains are located above and to the right of the center of the drip pattern, and oriented diagonally from lower left to upper right within the image. The center of the lowest drip stain is located approximately 150 mm below and 75 mm to the right of the scale "0" position. The center of the uppermost drip stain is located approximately 10 mm below and 261 mm to the right of the scale "0" position. Two of the drip stains have been altered and display perimeter staining. The center of these stains are located approximately 55 mm below and 177 mm to the right of the scale "0" position; and approximately 20 mm below and 203 mm to the right of the scale "0" position respectively. Both of these stains display a wipe pattern with motion indicated diagonally from upper left to lower right. Perimeter staining is also indicated in satellite stains visible beneath the wipe patterns of the larger drip stains.
WHURXD-560	The stains observed on Item 5 are visually consistent with a drip trail that includes scalloped edge characteristics, and wipes through a portion of the existing blood drops that travel from left to right and downward, leaving behind a well defined perimeter stain.
WJWYDX-560	A series of drip stains creating a drip trail, with associated satellite stains. In the lower left corner there are a number of drip stains overlapping creating a drip pattern. Two passive drips in the upper right corner have been altered by way of a wiping action causing smearing towards the lower right side and leaving perimeter stains. Some stains with diameters of 1mm or less are undisturbed within the smeared staining indicating they have been completely dried prior to the smearing or were deposited after the smearing. Due to the wide distribution of stains that have a diameter of 1mm or less, these stains could be a part of a spatter pattern.
WLEYZL-561	Drip pattern in the lower left corner and seven drip stains in a drip trail diagonally across the photograph with associated satellite stains. Two of the drip stains subsequently altered by a wipe resulting in a wipe pattern with perimeter staining of the drip stains and satellite stains. Some smaller satellite stains not disrupted by the wipe (dried before wiping action). There are edge characteristics (spines/crenulations) present on the drip stains. Blood dropped into blood on lower left hand corner resulting in a drip pattern. Blood dropped creating seven other drops with associated satellite staining, two blood drops then disrupted some time after landing by a wiping motion from left to right

WebCode - Test	Detailed Pattern Description
	with a downward trajectory. The smaller stains are satellite stains. Some of the smaller stains in the wipe pattern do not appear altered presumably because they had dried before being wiped.
WWBYKC-560	Based on the choices provided by CTS, this target surface possessed the following bloodstain patterns: A drip pattern was located at the bottom left corner. A drip trail extended from drip pattern toward the top right corner of the target surface. Two perimeter stains were located near the top right corner of the target surface within the drip trail. Wipe patterns extended from these stains. Numerous individual spatter stains were located on the target surface with many being consistent with satellite stains. CTS specifically stated that this was not a reconstruction and to focus on pattern recognition. No sequencing was conducted based on this direction.
XLQZFT-561	Drip pattern at lower left corner, drip trail from upper right to lower left (small stains on top of wipe patter[sic]). Wipe pattern upper right, movement from left to right.
XN6MQY-560	A drip pattern was observed on bottom left corner of tile, with associated satellite stains. A drip trail was observed extending diagonally across the tile, between the bottom left and upper right corners. Two of the drip stains in the drip trail (towards the top of the tile) have been altered by way of wiping, resulting in a perimeter stain and wipe pattern that has a downwards directionality (left to right). Some of the spatter stains near the two drip stains have also been altered by wiping, also resulting in perimeter stains. This indicates that at least some of the spatter was deposited before the wiping action. Other spatter stains within the wipe pattern do not appear to have been altered and may have been deposited after the wiping action has occurred, however it is not possible to determine this with any certainty from a photograph. Spatter was observed over most of surface of the tile. In my opinion, it is likely that at least some of these spatter stains are satellite stains originating from the drip pattern, however due to the wide distribution and the lack of context regarding the surrounding tiles, I cannot exclude the possibility that there may be a further action contributing to at least some of the spatter stains.
XVTBQP-560	Approximately 10 drip stains were observed distributed across the target in a diagonal orientation between the lower left and upper right corner. Satellite spatter was observed distributed throughout the majority of the target surface. Two of the drip stains near the upper right corner have been altered leaving perimeter staining along the left margins of the stains. The two stains have wipe characteristics with the motion observed in a upper left to lower right fashion. A drip pattern was observed in the lower left corner of the pattern.
XXJEJW-560	Image contains 3 predominant stains. 1) Drip trail from top right corner to lower left corner w/ a linear orientation. No flows, & no change in impact angle. 2) Drip pattern seen at lower left corner w/ an irregular margin, volume accumulation, and associated random spatter. 3) Wipe pattern near the top right corner at drip stains #2 & 3. Stain consists of irregular margins, no spatter or spines, and evidence of a pre-existing stain seen by the skeletonization (drying rings) of the stain.
XYWYER-560	A drip pattern is located on the lower left quadrant of this target. A drip trail extends across the lower left and upper right quadrants of this target. A wipe pattern on the upper right quadrant of this target altered two (2) of the drip stains within the drip trail and some of the satellite stains associated with the drip pattern; these altered stains can also be described as perimeter stains. This wipe pattern exhibits an apparent downward, left to right, diagonal directionality.
Y66MRT-560	Extending from the lower left of the target, diagonally, to the upper right of the target are drip stains, with associated satellite stains, in a drip trail (not necessarily the direction of travel). A drip pattern with associated satellite stains is present in the lower left area of the target. Two (2) of the drip stains and some of the satellite stains in the upper right area of the target exhibit wipe patterns. The drip stains and satellite stains with wipe patterns have perimeter stains. There are spatter stains on the target some distance away from the drip trail and drip pattern that may or may not be satellite stains from the drip trail and drip pattern.
YAD6NZ-561	Located in the lower left hand corner is a drip pattern with seven individual approximate 20mm diameter drip stains oriented in a diagonal pattern towards the upper right hand corner. Two of the drip stains in the upper right hand corner have been wiped in a downward diagonal direction towards the bottom right hand side of the target.

TABLE 2b - Part 2: Recognition and Description

Item 5, continued

WebCode - Test	Detailed Pattern Description
YF88H7-561	Drip pattern, Drip Stain, Satellite Stain, Wipe Pattern, Drip Trail Pattern, Perimeter Stain.
YLHHRE-560	Drip stain trail across image lower left to upper right. No direction indication from stains. The stains are about 20mm each. There is a drip stain pattern on lower left of image. Upper right of the image shows a wipe pattern. 2 stains have been wiped through in a 10 o'clock to 4 o'clock direction.
Z2WUBY-561	The horizontal ceramic tile target has a drip pattern on the lower left corner of the tile and a drip trail diagonally across the tile. A wipe pattern was created through part of the drip trail on the upper portion of the target.
Z3N27W-561	A drip pattern could be observed in a left bottom corner. Moreover, seven drop stains could be observed among which two were wiped thought partially dried stain. The drip pattern and seven drop stains create a drip trial[sic] (on diagonal of the photo). The seven drops are nearly circular thus it is not possible to indicate direction of travel.
Z47RNG-560	A red-brown drip trail with red-brown drip stains measuring approximately 19 mm to 20 mm in diameter was observed between the bottom left to the top right of the picture. Red-brown stains consistant[sic] with a drip pattern was noted on the bottom left of the picture. Spatter stains surrounding an accumulation of blood measured approximately 1mm to 2mm in diameter. Red-brown stains, consistent with a wipe pattern were noted near the top of the picture. An object moved through the wet red-brown stains leaving perimeter stains around the original stains. Red-brown stains consistant[sic] with an expiration pattern were noted throughout the picture. These stains consisted of related non-linear spatter measuring approximately <1 mm to 2mm in diameter. Some of the spatter stains appear diluted and several spatter stains contain bubble rings.
Z6D7Y4-560	Pattern appears to be a series of drip stains, with seven appearing as distinctly defined circular droplets. Pattern extends across ceramic tile from the lower left, to upper right regions of the image. Two of the drip stains appear as perimeter stains that also exhibit wipe characteristics. The implied directionality for these actions appears to extend from the upper left, toward the lower right of the stains' locations. Also depicted in the lower left hand corner of the image are several possible stains that have impacted each other, resulting in a drip pattern with several smaller stains (< 1 mm in diameter) extending across the entire image.
Z9XY7P-561	A drip pattern is located in the lower left quadrant of the photograph with satellite stains distributed randomly around the target. Seven (7) distinct drip stains are located diagonally across the target, from just above and right of the drip pattern to the upper right corner of the image. The drip stains have been numbered #1 through #7, respectively, from left to right. Drip stains #5 and #6 are remarkable in that they each display as a wipe, indicating that the stains were altered through contact with a downward and right-moving motion. Some of the satellite stains in the vicinity of these two drip stains also display alteration from the wiping mechanism.
ZCE9D2-561	Three bloodstain pattern types were determined: drip pattern, drip trail and wipe. A drip pattern stain approximately 5.5 cm x 3.5 cm was located in the lower left corner. The drip pattern also had satellite stains approximately 1-3 mm extending away from the pattern. A drip trail was observed orientated diagonally (lower left to upper right) with no direction of travel observed. The circular drip stains forming the drip trail measured approximately 2 cm in diameter. Two drip stains and numerous additional smaller stains were part of a wipe pattern. The wipe direction was down and to the right.
ZL2EZ8-561	The target is a horizontal surface. There are 7 circular stains each approximately 2 cm in diameter, that extend diagonally from the upper right hand corner to the lower left hand corner. These stains form a drip trail. The 2nd and 3rd drip stains from the top have been wiped through after the stains were allowed to dry for a brief amount of time due to the skeletonization of the perimeter of the stains. The wipe movement is from top to bottom and left to right and is approximately 9.0 cm long. In the lower left hand corner is an irregular shaped pattern stain that has satellite staining radiating out from it in all directions. The parent stain is consistent with a drip pattern. The drip pattern is approximately 3.5 x 5.0 cm in size. Some of the satellite stains show directionality back toward the parent stain. The satellite stains range in size from less then 1 mm to approximately 2 mm in size.

TABLE 2b - Part 2: Recognition and Description

Item 5, continued

WebCode - Test	Detailed Pattern Description
ZT2PGX-560	In the lower left corner is a drip pattern. It is a large irregular stain with satellite spatter present. There is additional spatter stains across the surface of the ceramic tile. There are drip stains from the lower left to upper right corner of the ceramic tile. These drip stains form a drip trail with no visible directionality. In the upper right corner, there is a wipe pattern. Two (2) of the large drip stains and some of the spatter stains are altered resulting from an object moving through pre-existing wet bloodstains resulting in perimeter stains.
ZYD4B2-560	A series of drip stains are present forming part of a drip trail across the image. At the bottom left of the image it appears as though a number of drip stains have been deposited on top of each other forming what is effectively a small blood pool (~5cm x 3cm) which also has many associated satellite stains. Note: There are satellite stains associated around all drip stains but they are most concentrated at the bottom left of the image. On the upper right of the image there are two drip stains (partial perimeter stains) that have been altered by an object or person contacting and moving through these stains with a left to right, downward motion. This is an example of a wipe pattern. There are also a number of satellite stains forming part of the overall wipe pattern that exhibit characteristics of perimeter stains.

Additional Comments

TABLE 3

WebCode - Test	Additional Comments
2R7PDJ-560	Angle of impact determination not required (not performed in casework).
396AMR-560	The following statements would be included on the report: All stains are presumed to be blood until confirmed by the DNA Department. The above listed conclusions are based on the information provided and may change upon receipt of additional information.
3EFRA7-561	DVD: This was the first time I took the proficiency with the DVD. The files were so large that they were difficult to print (took almost 30 min. for one of the files) and crashed one of the computers I tried to use to view them. Item 3: This is only a partial pattern & looks to consist of multiple events/patterns deposited on top of each other. It also looks like a lab created/artificial pattern. This made it difficult to interpret since it resembled an artificial pattern more than a "real world" pattern. Since the pattern appeared artificial, it made multiple patterns possible as a choice (e.g. projected & expiration). I felt that I was able to see the way the pattern may have been created in the lab (projected) and this complicated the interpretation. I shouldn't have to make a distinction between how the pattern was made and what CTS intended for the pattern to mimic (e.g. expiration). Additionally, expired patterns are a subset of projected patterns, so having both as a choice further complicates the issue. Item 5: The surface coloring and mottled appearance of the tile made interpretation of some of the smaller stains difficult. Additional information regarding the surface texture would be helpful since samples of the tile used to produce the patterns were not provided.
3KLRPW-561	[From Table 1 - Angle of Impact Determination: "Stains were enlarged to make measuring easier"]
3PGLKD-560	Regarding Item 3: Characteristics of a number of stains overlap with those of impact spatter. Due to the limited information available (unknown wounds, unable to confirm the presence of amylase, single photo of an incomplete pattern), an impact pattern could not be excluded.
3PUBL4-561	*Unable to analyze Item 4 on CD due to it being a corrupted file.
3YFCTD-560	In reporting, angles would have been as follows: A = 32.5° ± 0.5°, B = 18° ± 1°. C = 25° ± 1°, D = 37.9° ± 1.8°, E = 15° ± 1°.
48RXNM-560	I do not perform angle of impact determination analysis (Item 1-1). No pattern was selected for Item 1-3. The reason for this is because I do not possess the level of training and practical experience needed to confidently identify the pattern in question. I would not identify this pattern during the course of normal work in a Criminalistics or Crime Scene Report. [From Table 2a Part 1: Mechanism of Deposition - Item 3: "no pattern selected"]
4CLRLN-560	Could not make a conclusion for Item 3. The pattern is consistent with non-linear spatter in a radiating distribution. The presence of small circular stains and apparent bubble rings may indicate expiration pattern but without contextual information or biological testing a conclusion of impact pattern vs expiration pattern cannot be made.
4HYYFK-560	Of note: Item 3 In my opnion[sic] this pattern appears to be an expiration pattern due to the aeriated[sic] bubbles present. However, further photographs/information would be required and chemical testing to confirm this.
4NTQ8F-560	Item 3 - Also shows (misting) mist pattern, but even the mist pattern has different shades of red, indicating a possible mixture with saliva. The bubble rings in the majority of the stains leads one to select experation[sic] pattern instead of mist pattern.
6TKBRB-561	I have attempted to submit this test several times and get no response when I click on the 'continue to final submission' button.
6YAXGP-561	[From Table 1- Angle of Impact Determination - Angle of Impact (degrees): Stain A: "35° (34.8)", Stain D: "39° (38.68)", Stain E: "18° (17.9)"]
76U9C6-561	Item #4 also exhibits drip stains however the single pattern that best describes the pattern is drip pattern.
84QDHY-560	The stains present in Item 3 contained air bubbles and connected droplets, which would imply (at a

WebCode - Test	Additional Comments
	real crime scene) an Expiration Pattern. However, these same traits were also present in Item 4, suggesting that these were not meant to inform the mechanism of deposition but instead were a feature of the blood used to create the test. Therefore, based on the overall pattern of radiating spatter, I determined Item 3 to be an Impact Pattern.
A7WAND-560	Numerous apparent bubble ring stains were observed in the pattern (Item 3). It would be beneficial to know if there were any airway injuries to anyone inolved[sic] in the case if this was actual casework.
AHTANW-560	Photos without context or photos not depicting the entire pattern may lead to incorrect conclusions.
ARY6FG-560	Drip pattern lower left six drops or more is likely the parent stain for satellite stains.
B3WBXL-560	It seems odd that the photographs provided cut off some of the patterns we are evaluating. It would be more useful and realistic to include the entire pattern.
B936RG-560	More information should be provided regarding the stains on the targets - reports! (Police+ME's). [From Table 2a Part 1: Mechanism of Deposition - Item 3: "Bad example of a single pattern. This would require a report of scene and ME's report."]
C83F97-560	Laboratory does not conduct angle of impact analysis.
CVYNPR-561	Item 3: The overall directional appearance of this pattern could be interpreted as an impact pattern on the horizontal plane. However, air bubble rings in the bloodstains, diluted blood stains, and some irregularly shaped bloodstains, made this pattern more consistent with an expiration pattern.
D4KNCA-560	I do not perform angle of impact determination.
DK86F7-560	Don't perform angle of impact exams at our laboratory.
EFH7BM-560	Some smaller spots are visible across the drip pattern. This is difficult to determine whether all are part of the drip pattern, without seeing more of the pattern.
ENDC4N-560	In relation to Section 1[Table 1 - Angle of Impact Determination] Stains directly measured from photo, not adjusted to scale
FQU4BH-561	To take the measurements I used a ruler with 1/2mm increments.
GXLC63-560	Item 1-1 - I do not perform angle of Impact Determination. Item 1-3 - In casework, I would not make a determination on this pattern.
H4LBTW-561	Item 3 was examined extensively. Observations were noted and after much consideration and failure to make a definite pattern determination, an experiment was conducted for the general purpose of observation and comparison of two particular stain patterns; expriated[sic] and impact. Human blood was drawn from a subject who then put blood into their mouth and coughed, sneezed and sputtered onto target surfaces. Separately, human blood was then impacted onto target surfaces using various impact mechanisms (rat trap, finger slapping, and hammer). Item 3 depicts an overall stain pattern which radiates outward from a source/s which originated on the left side of the target. It appears that two events occurred, creating the stains seen moving across the center of the target and then the stains extending outward in upward and downward directions. A larger irregular shaped stain with air bubbles is surrounded by small elliptical shaped stains which travel left to right and many of which appear to be diluted. Air bubbles/vacuoles are present in several of the stains. Numerous minute (<1mm) stains are present on the target. Although the presence of air bubbles/vacuoles and dilution suggests an expirated bloodstain event, the overall size, shape and distribution of the stains is also consistent with an impact pattern. Mucous strands were present in each of the experimental expirated events however not present in Item 3. The experimental stain patterns most similar to Item 3 were impact patterns created with a rat trap and hammer.
H68XXR-561	Note: My description of Item 5 is not intended to include the sequencing of stain events or origin of the bloodstain patterns.

TABLE 3

WebCode - Test	Additional Comments
JBJ3Y7-560	Item 1-1: Angle of impact determination: section 1 is n/a because I do not perform this type of analysis.
JF6CGP-560	The resolution of the photo of item 3 makes it difficult to see details in apparent bubble rings in the stains. Item 3 could be interpreted as an impact pattern if apparent bubble rings were not present.
K9FD2Z-560	For the purposes of this statement all stains having the visual appearance of blood will be reported as blood.
KJD2BH-560	Item 3 was confusing. This spatter stain pattern has bubble rings or voids present in the larger stain on the left/center of the pattern as well as in several of the individual spatter stains. This stain may have been caused by several different mechanisms to include impact and expiration. More information, such as autopsy results and amylase test results, would be needed to conclusively differentiate between the two.
LALXMF-561	The number of overlapping drip stains (6) stated above is based on the number of arcs that border the blood pool.
LXLZ99-560	The wiping motion occurred after two drops (upper-right) in the drip trail were deposited.
M3UP89-560	All results are based on the information provided and is subject to change if additional information is received. Any reference to blood is presumed blood until confirmed by DNA testing.
MFZW4T-561	Two choices were made for the Item 3 pattern because the pattern exhibits characteristics from two different pattern types, expiration and impact. The size, shape and distribution of this stain pattern including vacuoles, apparent stain dilution and common area of origin suggest expiration. The darker color of many of the stains, wide dispersion and common area of origin suggest and[sic] impact spatter pattern. While I believe that the stain is best represented by identification as an impact spatter pattern, I cannot eliminate expiration as a possibility. In casework, I would not make a call either way on this pattern as it could be either one or the other.
MWMC8P-560	The photograph for Item 3 contains pattern characteristics that can be seen in more than one pattern type, including impact and expiration patterns. Based on observations from the photo, a single pattern type cannot be concluded. Impact Pattern was selected because the directions call for indicating a single pattern.
NCCXYA-561	Item 3: possible with Insect Stains
P2TJV8-560	There are eight passive blood stain created by the force of gravity, on the left of the ceramic tile it seem a drip pattern due a resulting from a liquid drip into another liquid.[sic]
QGYB4U-560	I do not perform Angle of Impact Determination.
RJ2KKP-561	The mist pattern was created after the wipe pattern. The surface area of the image is not sufficient to indicate whether there is actually a drip trail or whether these drops are merely passive drips.
TQ8RE7-560	The staining depicts sequencing of the drip stain first, followed by wipe.
U7JRN2-561	There was insufficient information to determine if pattern 3 was expiration or impact so it was reported as projected.
UBA77G-561	Item 3 pattern is consistent with blood dripping onto an intermediate object, in the same spot several times. The resultant spatter then deposits into an adjacent or nearby horizontal surface. See notes. [Notes were not included with the report].
UKF4XQ-560	Re items 2 and 3: The whole of the pattern should be presented for analysis, not just part of it! Re item 2 - is the partially cut-off pattern at the RH edge meant to be considered? If so, why is it not more in the photo?
WLEYZL-561	The size of the image files (ranging from 220 MB to 1.5 GB) caused our IT system difficulties. It was not possible to open the images on a number of computers and therefore it took a lot of time to open/view and to print the images. Are such large file sizes necessary and/or is it possible to provide smaller file sizes?

TABLE 3

WebCode - Test	Additional Comments
Z2WUBY-561	Please use a larger volume to create the stains for angle determination - Section 1.
Z47RNG-560	I do not perform angle of impact analysis.
Z9XY7P-561	Item #3 is a terrible exhibit as the photo cuts out what appears to be approximately half of the pattern. It has many features consistent with an expiration pattern, but others, such as an impact pattern cannot be excluded without access to the totality of this pattern area. How did this exhibit make it through beta testing? At best with the information provided, this pattern should be called "spatter," which is not an available option.

Appendix: Data Sheet

Collaborative Testing Services ~ Forensic Testing Program

Test No. 14-560: Bloodstain Pattern Analysis

DATA MUST BE RECEIVED BY *August 25, 2014* TO BE INCLUDED IN THE REPORT

Participant Code: WebCode:

Accreditation Release Statement

CTS submits external proficiency test data directly to ASCLD/LAB and ANSI-ASQ NAB/FQS. 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 and/or ANSI-ASQ NAB/FQS. (Accreditation Release section on the last page must be completed and submitted.)

☐ This participant's data is NOT intended for submission to ASCLD/LAB or ANSI-ASQ NAB/FQS.

Online Data Entry

Visit www.cts-portal.com to enter your proficiency test results online. If you have any questions please do not hesitate to contact CTS.

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

Items Submitted (Sample Pack BSP - Photographs):

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

Items 2 - 4: Pattern Description: Part 1

Item 5: Pattern Description: Part 2

Appendix: Suggested Terminology Glossary

Section I: ANGLE OF IMPACT DETERMINATION

Item 1 - Examine bloodstains A through E and report the length and width of each stain, along with the calculated angle of impact. For all stains, the blood was dropped from a pipette onto white coated posterboard targets at predetermined angles from the vertical.

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

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

Please return all pages of this data sheet.

Section II: PATTERN DESCRIPTION

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

Part 1 - Mechanism of Deposition: For each of the following patterns, indicate the single pattern type that best describes the mechanism of deposition. Although you may use different terminology in your casework, in order to standardize responses for this exercise, please make your selection using the terminology provided.

Item 2: Target is a piece of white foamboard in the vertical plane.

____Cast-off Pattern	____Impact Pattern	____Splash Pattern
____Cessation Cast-off Pattern	____Mist Pattern	____Swipe Pattern
____Drip Pattern	____Projected Pattern	____Transfer Stain
____Drip Stain	____Saturation Stain	____Wipe Pattern
____Expiration Pattern		

Item 3: Target is a piece of white foamboard in the horizontal plane.

____Cast-off Pattern	____Impact Pattern	____Splash Pattern
____Cessation Cast-off Pattern	____Mist Pattern	____Swipe Pattern
____Drip Pattern	____Projected Pattern	____Transfer Stain
____Drip Stain	____Saturation Stain	____Wipe Pattern
____Expiration Pattern		

Item 4: Target is a piece of white foamboard in the horizontal plane.

____Cast-off Pattern	____Impact Pattern	____Splash Pattern
____Cessation Cast-off Pattern	____Mist Pattern	____Swipe Pattern
____Drip Pattern	____Projected Pattern	____Transfer Stain
____Drip Stain	____Saturation Stain	____Wipe Pattern
____Expiration Pattern		

Please return all pages of this data sheet.

Section II: PATTERN DESCRIPTION cont.

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

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

Item 5: Target is a ceramic tile in the horizontal plane.

Additional Comments

Return Instructions: Data must be received via online data entry, fax (please include a cover sheet), or mail by *August 25, 2014* to be included in the report.

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

Participant Code:

ONLINE DATA ENTRY: www.cts-portal.com

FAX: +1-571-434-1937
or Toll-Free: 1-866-FAX-2CTS (329-2287)

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

Please return all pages of this data sheet.

Collaborative Testing Services ~ Forensic Testing Program

RELEASE OF DATA TO ACCREDITATION BODIES

The following Accreditation Releases will apply only to:

Participant Code: WebCode:

for Test No. **14-560: Bloodstain Pattern Analysis**

This release page must be completed and received by ***August 25, 2014*** to have this participant's submitted data included in the reports forwarded to the respective Accreditation Bodies.

ASCLD/LAB RELEASE

If your lab has been accredited by ASCLD/LAB and you are submitting this data as part of their external proficiency test requirements, have the laboratory's designated individual complete the following.
The information below must be completed in its entirety for the results to be submitted to ASCLD/LAB.

*** NOTE: Per the request of ASCLD/LAB, do not complete the ASCLD/LAB release section below if your laboratory is not accredited in the category of testing Bloodstain Pattern Analysis. ***

ASCLD/LAB Legacy Certificate No. _____ ASCLD/LAB International Certificate No. _____

Signature _____ Date _____

Laboratory Name _____

Location (City/State) _____

ANSI-ASQ NAB/FQS RELEASE

If your laboratory maintains its accreditation through ANSI-ASQ NAB/FQS, please complete the following form in its entirety to have your results forwarded.

ANSI-ASQ NAB/FQS Certificate No. _____

Signature and Title: _____ Date _____

Laboratory Name _____

Location (City/State) _____

Accreditation Release

Return Instructions

Please submit the completed Accreditation Release at the same time as your full data sheet. See Data Sheet Return Instructions on the previous page.

Questions? Contact us 8 am-4:30 pm EST
Telephone: +1-571-434-1925
email: forensics@cts-interlab.com

Please return all pages of this data sheet.

Appendix: Suggested Terminology Glossary*

Accompanying Drop	A small blood drop produced as a by-product of drop formation.
Altered Stain	A bloodstain with characteristics that indicate a physical change has occurred.
Angle of Impact	The acute angle (alpha), relative to the plane of a target, at which a blood drop strikes the target.
Area of Convergence	The area containing the intersections generated by lines drawn through the long axes of individual stains that indicates in two dimensions the location of the blood source.
Area of Origin	The three-dimensional location from which spatter originated.
Backspatter Pattern	A bloodstain pattern resulting from blood drops that traveled in the opposite direction of the external force applied; associated with an entrance wound created by a projectile.
Blood Clot	A gelatinous mass formed by a complex mechanism involving red blood cells, fibrinogen, platelets, and other clotting factors.
Bloodstain	A deposit of blood on a surface.
Bloodstain Pattern	A grouping or distribution of bloodstains that indicates through regular or repetitive form, order, or arrangement the manner in which the pattern was deposited.
Bubble Ring	An outline within a bloodstain resulting from air in the blood.
Cast-off Pattern	A bloodstain pattern resulting from blood drops released from an object due to its motion.
Cessation Cast-off Pattern	A bloodstain pattern resulting from blood drops released from an object due to its rapid deceleration.
Directional Angle	The angle (gamma) between the long axis of a spatter stain and a defined reference line on the target.
Directionality	The characteristic of a bloodstain that indicates the direction blood was moving at the time of deposition.
Drip Pattern	A bloodstain pattern resulting from a liquid that dripped into another liquid, at least one of which was blood.
Drip Stain	A bloodstain resulting from a falling drop that formed due to gravity.
Drip Trail	A bloodstain pattern resulting from the movement of a source of drip stains between two points.
Edge Characteristic	A physical feature of the periphery of a bloodstain.
Expiration Pattern	A bloodstain pattern resulting from blood forced by airflow out of the nose, mouth, or a wound.
Flow Pattern	A bloodstain pattern resulting from the movement of a volume of blood on a surface due to gravity or movement of the target.

Forward Spatter Pattern	A bloodstain pattern resulting from blood drops that traveled in the same direction as the impact force.
Impact Pattern	A bloodstain pattern resulting from an object striking liquid blood.
Insect Stain	A bloodstain resulting from insect activity.
Mist Pattern	A bloodstain pattern resulting from blood reduced to a spray of micro-drops as a result of the force applied.
Parent Stain	A bloodstain from which a satellite stain originated.
Perimeter Stain	An altered stain that consists of the peripheral characteristics of the original stain.
Pool	A bloodstain resulting from an accumulation of liquid blood on a surface.
Projected Pattern	A bloodstain pattern resulting from the ejection of a volume of blood under pressure.
Satellite Stain	A smaller bloodstain that originated during the formation of the parent stain as a result of blood impacting a surface.
Saturation Stain	A bloodstain resulting from the accumulation of liquid blood in an absorbent material.
Serum Stain	The stain resulting from the liquid portion of blood (serum) that separates during coagulation.
Spatter Stain	A bloodstain resulting from a blood drop dispersed through the air due to an external force applied to a source of liquid blood.
Splash Pattern	A bloodstain pattern resulting from a volume of liquid blood that falls or spills onto a surface.
Swipe Pattern	A bloodstain pattern resulting from the transfer of blood from a blood-bearing surface onto another surface, with characteristics that indicate relative motion between the two surfaces.
Target	A surface onto which blood has been deposited.
Transfer Stain	A bloodstain resulting from contact between a blood-bearing surface and another surface.
Void	An absence of blood in an otherwise continuous bloodstain or bloodstain pattern.
Wipe Pattern	An altered bloodstain pattern resulting from an object moving through a preexisting wet bloodstain.

** As established by the Scientific Working Group on Bloodstain Pattern Analysis (SWGSTAIN) - April 2009*

