



# **Probabilistic Genotyping Test No. 23-5901/2**

## **Summary Report**

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Each participant received a sample set consisting of two known bloodstains and two questioned stains which they were requested to analyze using their existing protocols. Data were returned from 48 participants and are compiled into the following tables:

<b>Report Contents:</b>	<b>Page:</b>
<a href="#"><u>Manufacturer's Information</u></a>	<a href="#"><u>2</u></a>
<a href="#"><u>Summary Comments</u></a>	<a href="#"><u>4</u></a>
<a href="#"><u>Key to Screening Results</u></a>	<a href="#"><u>5</u></a>
<a href="#"><u>Table 1: Serology Screening Results</u></a>	<a href="#"><u>6</u></a>
<a href="#"><u>Table 2: DNA Interpretations</u></a>	<a href="#"><u>14</u></a>
<a href="#"><u>Table 3: STR Amplification Kit(s) &amp; Results</u></a>	<a href="#"><u>16</u></a>
<a href="#"><u>Table 4: YSTR Amplification Kit(s) &amp; Results</u></a>	<a href="#"><u>54</u></a>
<a href="#"><u>Table 5: Additional DNA Results</u></a>	<a href="#"><u>65</u></a>
<a href="#"><u>Table 6: DNA Mixture Concentrations and Proportions</u></a>	<a href="#"><u>66</u></a>
<a href="#"><u>Table 7: Statistical Analysis for Item 3</u></a>	<a href="#"><u>74</u></a>
<a href="#"><u>Table 8: Statistical Analysis for Item 4</u></a>	<a href="#"><u>81</u></a>
<a href="#"><u>Table 9: Additional Comments</u></a>	<a href="#"><u>89</u></a>
<a href="#"><u>Appendix: Data Sheet</u></a>	

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 consisted of two known bloodstains provided on either white fabric or FTA™ Micro Cards (Items 1 & 2), and two questioned stains on colored fabric (Items 3 & 4). Participants were requested to analyze these items using their existing protocols.

**SAMPLE PREPARATION:** The substrates for Items 1, 2, and 4 were prepared using human whole blood which was either drawn into citric acid preservative bags or EDTA tubes. The substrates for Item 3 were prepared using a mixture of human whole blood and semen. The white fabric known bloodstains were spotted with 50  $\mu\text{l}$  of sample and the FTA™ Micro Card known bloodstains were spotted with 75  $\mu\text{l}$  of sample. Item 1 was created using blood from a female donor. Item 2 was created using blood from a male donor. Item 3 was created by combining two parts blood from the Item 1 female donor and one part semen from a male donor whose known standard was not provided. Item 4 was created by combining one part blood from the Item 1 female donor, three parts blood from the Item 2 male donor, and two parts blood from a third male donor whose known standard was not provided. The items were prepared at separate times and were packaged once they were thoroughly dried. Completed sample sets were stored at -20°C until shipment on February 08, 2023.

**SAMPLE SET ASSEMBLY:** For each sample set, all Items (1-4) were packaged into separate envelopes and then placed together in a pre-labeled sample set envelope and sealed. The sealed sample set envelopes were then packaged in pre-labeled heat seal envelopes and sealed. This process was repeated until all of the sample sets were prepared.

**VERIFICATION:** All predistribution laboratories confirmed the manufacturer's expected associations. Consistent allelic results were reported for all STR loci, with the exception of Item 4. Two predistribution participants were missing one or more alleles at a few loci. After completion of an internal investigation the test was approved for release. No predistribution laboratories analyzed the samples for YSTR data.

### **Key to Test Substrates**

5901 - Cloth Swatches

5902 - FTA™ Micro Cards

## Manufacturer's Information, continued

<b>Amelogenin and STR Results</b>						
Results compiled from predistribution laboratories and a consensus of at least 10 participants.						
Item	<b>D1S1656</b>	<b>D2S1338</b>	<b>D2S441</b>	<b>D3S1358</b>	<b>D5S818</b>	<b>D6S1043</b>
	<b>D7S820</b>	<b>D8S1179</b>	<b>D10S1248</b>	<b>D12S391</b>	<b>D13S317</b>	<b>D16S539</b>
	<b>D18S51</b>	<b>D19S433</b>	<b>D21S11</b>	<b>D22S1045</b>	Amelogenin	<b>CSF1PO</b>
	<b>FGA</b>	<b>Penta D</b>	<b>Penta E</b>	<b>SE33</b>	<b>TH01</b>	<b>TPOX</b>
	<b>vWA</b>	<b>DYS391</b>	<b>DYS570</b>	<b>DYS576</b>	<b>Y Indel</b>	
1	14,16	18,23	11,11.3	15,19	13,14	11,18
	9,11	13,17	12,14	15,20	12,13	9,11
	16,18	14,14	31,32.2	16,18	X,X	9,12
	22,25	9,12	13,13	18,28.2	7,9	9,11
	14,15	NM	NM	NM	NM	
2	14,15	19,21	11,14	15,15	11,13	12,24
	10,10	12,15	10,15	17,19.1	12,12	10,11
	15,15	13,14	29,31	11,17	X,Y	10,12
	21,23	9,12	9,14	18,18	8,9	6,11
	16,17	11	*	*	2	
3-Blood	14,16	18,23	11,11.3	15,19	13,14	11,18
	9,11	13,17	12,14	15,20	12,13	9,11
	16,18	14,14	31,32.2	16,18	X,X	9,12
	22,25	9,12	13,13	18,28.2	7,9	9,11
	14,15	NM	NM	NM	NM	
3-Semen	11,17.3	24,24	12,14	15,19	12,12	11,14
	9,12	14,14	14,14	19.3,20	11,12	10,12
	17,18	13,13	29,32.2	16,17	X,Y	10,13
	22,23	12,13	7,12	16,27.2	7,9.3	8,11
	15,17	11	*	*	2	
4	11,14,15,16	18,19,21,22,23	11,11.3,14	14,15,19	11,13,14	11,12,13,18,24
	9,10,11,12	12,13,14,15,17	10,12,14,15	15,17,19,19.1,20,24	12,13	8,9,10,11
	15,16,18,22.2	10,13,14	28,29,31,32.2	11,15,16,17,18	X,Y	9,10,12
	20,21,22,23,25	2.2,9,12	7,8,9,13,14	18,19,20,28.2	7,8,9,9.3	6,8,9,11
	14,15,16,17	11	*	*	2	

<b>YSTR Results</b>									
Results compiled from a consensus of at least 10 participants.									
Item	<b>DYF387S1</b>	<b>DYS19</b>	<b>DYS385</b>	<b>DYS389-I</b>	<b>DYS389-II</b>	<b>DYS390</b>	<b>DYS391</b>	<b>DYS392</b>	<b>DYS393</b>
	<b>DYS437</b>	<b>DYS438</b>	<b>DYS439</b>	<b>DYS448</b>	<b>DYS449</b>	<b>DYS456</b>	<b>DYS458</b>	<b>DYS460</b>	<b>DYS481</b>
	<b>DYS518</b>	<b>DYS533</b>	<b>DYS549</b>	<b>DYS570</b>	<b>DYS576</b>	<b>DYS627</b>	<b>DYS635</b>	<b>DYS643</b>	<b>YGATAH4</b>
2	35,37	14	11,12	13	29	24	11	13	13
	15	12	11	19	30	16	17	11	22
	40	12	*	17	19	21	23	*	12
3-Semen	35,36	14	11,11	13	29	24	11	13	13
	14	12	12	19	31	15	17	11	22
	38	12	*	16	18	23	23	*	12
4	*	14	11,12,14	13	29	24	11	13	13
	15	12	11	19,20	*	15,16	17	*	22
	*	12,13	*	17	19,20	*	23	*	12

\* Results were not received by a minimum of 10 participants for the loci indicated.

NM - Non-Male profile, YSTR results not expected.

## Summary Comments

The Probabilistic Genotyping (PG) test was designed to allow participants to assess their proficiency in the identification and comparison of dried stains by means of body fluid screening and/or DNA profiling utilizing PG software. Participants were supplied with two "known" bloodstains (Items 1 and 2) and two "questioned" stains (Items 3 and 4). Item 1 was created using blood from a female donor. Item 2 was created using blood from a male donor. Item 3 was created by combining two parts blood from the Item 1 female donor and one part semen from a male donor whose known standard was not provided. Item 4 was created by combining one part blood from the Item 1 female donor, three parts blood from the Item 2 male donor, and two parts blood from a third male donor whose known standard was not provided. (See Manufacturer's Information for preparation details)

Data were returned by 48 participants.

### Screening Test Results:

All participants reported screening results for at least one body fluid (blood, semen, saliva). However, not all of these participants returned screening results for all fluids for both questioned items.

For Item 3, all participants reported "Positive" for the presence of blood and semen. For the presence of saliva, all participants reported "Negative." Additionally, all participants reported "Positive" for Human Origin and Y-Screening.

For Item 4, all participants reported "Positive" for the presence of blood. For the presence of semen and saliva, all participants reported "Negative." Additionally, all participants reported "Positive" for Human Origin and Y-Screening.

### DNA Analysis Results:

All participants reported DNA results. Only allelic results not containing the minimum expected alleles are highlighted as inconsistent.

For Item 3, all participants included the victim (Item 1) and excluded the suspect (Item 2) as possible contributors. All but one participant identified two contributors to this stain. The remaining participant identified three contributors in the epithelial fraction and one contributor in the sperm fraction of this stain.

For Item 4, all but two participants included the victim (Item 1) as a possible contributor. The remaining participants excluded the victim as a possible contributor. Additionally, all participants included the suspect (Item 2) as a possible contributor. All but two participants identified three contributors to this stain. The remaining participants reported three contributors to the stain, but listed a fourth contributor in their DNA Concentration and Proportion results.

## Key for Screening Tests Used

Participants were asked to use, where possible, the following chart of abbreviated screening test names. This was not an all inclusive list and was not designed to determine what tests should be performed. Participants were advised that tests not on this list may be used for screening.

Test	Abbreviation
Acid Phosphatase	AP
Kastle Meyer	KM
Leucomalachite Green	LMG
Microscopic	Micro
Ortho-tolidine	O-tol
Phenolphthalein-Tetramethyl benzidine	PTMB
Prostate Specific Antigen	PSA
Quantiblot	QB
Quantifiler	QF
Tetramethyl benzidine	TMB

# Serology Screening Results

Indicate the results of any screening tests performed on the questioned stains (Items 3 & 4).

TABLE 1a

Blood Screening Results		
WebCode - Test	Item 3	Item 4
2DPRLB - 5901	Pos KM	Pos KM
2K2ZQM - 5902	Pos LMG	Pos LMG
2MZT8B - 5901	Pos KM	Pos KM
362K2C - 5902	Pos KM, HemaTrace	Pos KM, HemaTrace
38V7WP - 5902	Pos LMG	Pos LMG
3HRA2H - 5902	Pos PTMB	Pos PTMB
3XRZGZ - 5901	Pos KM, Hexagon OBTI	Pos KM, Hexagon OBTI
4VGCFZ - 5901	Pos KM	Pos KM
6P8FA7 - 5901	Pos Kastle Meyer	Pos Kastle Meyer
6RADLM - 5901	Pos O-tol and HemaTrace	Pos O-tol and HemaTrace
6RRGV9 - 5901	Pos KM	Pos KM
74PMLW - 5901	Pos KM	Pos KM
7LHKND - 5902	Pos PTMB	Pos PTMB
82D8RW - 5901	Pos KM	Pos KM
82TQDH - 5901	Pos HemaTrace	Pos HemaTrace
83Z7LA - 5901	Pos TMB, HemaTrace	Pos TMB, HemaTrace
8PEQHA - 5902	Pos TMB, HemaTrace	Pos TMB, HemaTrace
8WUCN8 - 5902	Pos TMB, HemaTrace	Pos TMB, HemaTrace
B6H6QH - 5902	Pos LMG	Pos LMG
CJWUZ4 - 5902	Pos TMB, HemaTrace	Pos TMB, HemaTrace
ERF8RY - 5901	Pos TMB, HemaTrace	Pos TMB, HemaTrace
G632HU - 5901	Pos KM	Pos KM
GRCZ6X - 5902	Pos PTMB	Pos PTMB
HDMM48 - 5901	Pos O-tol, HemaTrace	Pos O-tol, HemaTrace
J99CLX - 5901	Pos TMB	Pos TMB
JGHZZV - 5901	Pos TMB	Pos TMB
JQ7NY6 - 5901	Pos KM, HemDirect	Pos KM, HemDirect
JX9X7X - 5901	Pos TMB, HemaTrace	Pos TMB, HemaTrace

TABLE 1a

Blood Screening Results		
WebCode - Test	Item 3	Item 4
JXTGB4 - 5902	Pos PTMB	Pos PTMB
K8XREJ - 5901	Pos KM	Pos KM
KVY9FT - 5902	Pos PTMB	Pos PTMB
LPPCAY - 5901	Pos LMG, Bluestar OBTI	Pos LMG, Bluestar OBTI
NMAQDU - 5901	Pos TMB, HemaTrace	Pos TMB
NN6EU4 - 5902	Pos LMG	Pos LMG
P8FLKQ - 5902	Pos HS, HT	Pos HS, HT
QCP2RU - 5902	Pos PTMB	Pos PTMB
QJA3AR - 5901	Pos Hemastix, HemaTrace	Pos Hemastix, HemaTrace
RAEJ9N - 5901	Pos KM	Pos KM
T46M3T - 5902	Pos PTMB	Pos PTMB
THNB9G - 5902	Pos KM	Pos KM
TRB7DR - 5902	Pos KM	Pos KM
UHWYPN - 5902	Pos TMB, HemaTrace	Pos TMB, HemaTrace
UUZ3CG - 5901	Pos KM	Pos KM
YAB63G - 5902	Pos KM	Pos KM
YDBGXG - 5901	Pos Visual, KM	Pos Visual, KM
Z78W9Q - 5901	Pos Hemophan, Seratec Blood	Pos Hemophan, Seratec Blood
Z8KMYL - 5902	Pos PTMB	Pos PTMB
ZTYATR - 5902	Pos TMB	Pos TMB

Table 1a: Serology Screening Response Summary - Blood		Participants: 48	
This table excludes participants who did not report or reported "Not Tested" for both Item 3 and Item 4.			
	Item 3	Item 4	
Positive	48	48	
Negative	0	0	
Inconclusive	0	0	
Not Tested (NT)	0	0	
Not Reported	0	0	

# Serology Screening Results

Indicate the results of any screening tests performed on the questioned stains (Items 3 & 4).

TABLE 1b

Semen Screening Results		
WebCode - Test	Item 3	Item 4
2DPRLB - 5901	Pos PSA	Neg PSA
2K2ZQM - 5902	Pos Micro, AP	Neg Micro, AP
2MZT8B - 5901	Pos ALS, PSA	NT
362K2C - 5902	Pos AP, ALS, Micro, RSID Semen	Neg AP, ALS
38V7WP - 5902	Pos PSA	Neg PSA
3HRA2H - 5902	Pos AP, Micro	Neg AP
3XRZGZ - 5901	Pos AP, PSA, Micro	Neg AP
4VGCFZ - 5901	Pos AP, Micro	Neg AP, Micro
6RADLM - 5901	Pos AP, Micro, PSA	Neg AP and PSA
6RRGV9 - 5901	Pos ALS, AP	Neg ALS, AP
74PMLW - 5901	Pos AP, PSA	Neg AP
7LHKND - 5902	Pos ALS, AP, Micro	Neg ALS, AP
82D8RW - 5901	Pos AP, Micro	Neg AP
82TQDH - 5901	Pos p30	Neg p30
83Z7LA - 5901	Pos AP, PSA, Micro	Neg AP
8PEQHA - 5902	Pos AP, PSA, Microscopy (H&E)	Neg AP, PSA
8WUCN8 - 5902	Pos AP, Micro, PSA	Neg AP
B6H6QH - 5902	Pos AP, p30	Neg AP
CJWUZ4 - 5902	Pos AP, PSA, Micro	Neg AP, PSA, Micro
ERF8RY - 5901	Pos AP, p30	Neg AP
G632HU - 5901	Pos AP, Micro, PSA	Neg PSA
GRCZ6X - 5902	Pos AP, Micro	Neg AP
HDMM48 - 5901	Pos AP, PSA, Micro	Neg AP, PSA, Micro
J99CLX - 5901	Pos Microscopy	Neg Microscopy, p30
JGHZZV - 5901	Pos RSID, Micro	Neg RSID, Micro
JQ7NY6 - 5901	Pos ALS, AP, PSA, Micro	Neg ALS, AP, PSA, Micro
JX9X7X - 5901	Pos AP, PSA, Micro	Neg AP
JXTGB4 - 5902	Pos AP, Micro	Neg AP
K8XREJ - 5901	Pos AP, Micro	Neg AP, Micro
KVY9FT - 5902	Pos AP, Micro	Neg AP
LPPCAY - 5901	Pos PSA	Neg PSA



TABLE 1b

Semen Screening Results		
WebCode - Test	Item 3	Item 4
NMAQDU - 5901	Pos AP, PSA, Micro	Neg AP
NN6EU4 - 5902	Pos AP, p30	Neg AP, p30
P8FLKQ - 5902	Pos AP, PSA, Micro	Neg AP
QCP2RU - 5902	Pos AP, Micro	Neg AP
QJA3AR - 5901	Pos AP, Micro	Neg AP, PSA
RAEJ9N - 5901	Pos AP, PSA, Differential extraction	Neg AP
T46M3T - 5902	Pos AP, Micro	Neg AP
THNB9G - 5902	Pos AP, Micro	Neg AP
TRB7DR - 5902	Pos AP	Neg AP
UHWYPN - 5902	Pos AP, PSA, Micro	Neg AP, PSA, Micro
UUZ3CG - 5901	Pos AP, PSA	Neg AP
YAB63G - 5902	Pos AP, PSA	NT
YDBGXG - 5901	Pos AP, PSA, differential extraction	Neg AP
Z78W9Q - 5901	Pos Phosphadesmo KM, Seratec PSA	Neg Phosphadesmo KM, Seratec PSA
Z8KMYL - 5902	Pos AP, Micro	Neg AP
ZTYATR - 5902	Pos AP, PSA, Micro, ALS	Neg AP, ALS

Table 1b: Serology Screening Response Summary - Semen		Participants: 47	
This table excludes participants who did not report or reported "Not Tested" for both Item 3 and Item 4.			
	Item 3	Item 4	
Positive	47	0	
Negative	0	45	
Inconclusive	0	0	
Not Tested (NT)	0	2	
Not Reported	0	0	

# Serology Screening Results

Indicate the results of any screening tests performed on the questioned stains (Items 3 & 4).

TABLE 1c

Saliva Screening Results		
WebCode - Test	Item 3	Item 4
38V7WP - 5902	Neg RSID	Neg RSID
6RADLM - 5901	Neg RSID	Neg RSID
8PEQHA - 5902	Neg RSID Saliva	Neg RSID Saliva
8WUCN8 - 5902	Neg RSID	NT
B6H6QH - 5902	Neg RSID	Neg RSID
CJWUZ4 - 5902	Neg RSID Saliva	Neg RSID Saliva
ERF8RY - 5901	Neg RSID Saliva	Neg RSID Saliva
HDMM48 - 5901	Neg RSID	Neg RSID
JGHZZV - 5901	Neg	Neg
JQ7NY6 - 5901	Neg Seratec a-Amylase Test	Neg Seratec a-Amylase Test
JX9X7X - 5901	NT	Neg RSID
LPPCAY - 5901	Neg Phadebas	Neg Phadebas
NMAQDU - 5901	Neg RSID: Saliva	
NN6EU4 - 5902	Neg RSID	Neg RSID
P8FLKQ - 5902	Neg RSID	Neg RSID
QJA3AR - 5901	Neg RSID	Neg RSID
UHWYPN - 5902	Neg RSID Saliva	Neg RSID Saliva
YAB63G - 5902	Neg Phadebas Press	NT
Z78W9Q - 5901	Neg Seratec AMY	Neg Seratec AMY

Table 1c: Serology Screening Response Summary - Saliva		Participants: 19	
This table excludes participants who did not report or reported "Not Tested" for both Item 3 and Item 4.			
	Item 3	Item 4	
Positive	0	0	
Negative	18	16	
Inconclusive	0	0	
Not Tested (NT)	1	2	
Not Reported	0	1	

# Serology Screening Results

Indicate the results of any screening tests performed on the questioned stains (Items 3 & 4).

TABLE 1d

Human Origin Screening Results		
WebCode - Test	Item 3	Item 4
2MZT8B - 5901	NT	Pos HemDirect
4VGCYZ - 5901	Pos PowerQuant	Pos PowerQuant
83Z7LA - 5901	Pos Quant Trio, PowerPlex 21	Pos Quant Trio, PowerPlex 21
8PEQHA - 5902	Pos Quantifiler Trio	Pos Quantifiler Trio
8WUCN8 - 5902	Pos QuantTrio, Powerplex 21	Pos QuantTrio, Powerplex 21
CJWUZ4 - 5902	Pos Quant trio, PP21	Pos Quant trio, PP21
ERF8RY - 5901	Pos Quant Trio, PP21, YFP	Pos Quant Trio, PP21
G632HU - 5901	NT	Pos HemDirect
JQ7NY6 - 5901	Pos Ouchterlony Double ImmunoDiffusion Assay	Pos Ouchterlony Double ImmunoDiffusion Assay
K8XREJ - 5901	Pos PowerQuant	Pos PowerQuant
P8FLKQ - 5902	Pos Quant Trio/PP21	Pos Quant Trio/PP21
QJA3AR - 5901	Pos Quantifiler Trio, PP21	Pos Quantifiler Trio, PP21
RAEJ9N - 5901	Pos ABACard HemaTrace	Pos ABACard HemaTrace
UUZ3CG - 5901	Pos HemDirect card test	Pos HemDirect card test
YAB63G - 5902	Pos ABACard HemaTrace	NT
YDBGXG - 5901	Pos ABACard	Pos ABACard
Z78W9Q - 5901	Pos	Pos
ZTYATR - 5902	Pos HemaTrace	Pos HemaTrace

Table 1d: Serology Screening Response Summary - Human Origin		Participants: 18	
This table excludes participants who did not report or reported "Not Tested" for both Item 3 and Item 4.			
	Item 3	Item 4	
Positive	16	17	
Negative	0	0	
Inconclusive	0	0	
Not Tested (NT)	2	1	
Not Reported	0	0	

# Serology Screening Results

Indicate the results of any screening tests performed on the questioned stains (Items 3 & 4).

TABLE 1e

Y Screening Results		
WebCode - Test	Item 3	Item 4
362K2C - 5902	Pos QuantifilerTrio	Pos QuantifilerTrio
4VGCFZ - 5901	Pos PowerQuant	Pos PowerQuant
6RRGV9 - 5901	Pos Trio	NT Trio
8PEQHA - 5902	Pos YFP	Pos YFP
8WUCN8 - 5902	Pos QuantTrio, YFilerPlus	Pos QuantTrio
B6H6QH - 5902	Pos	Pos
CJWUZ4 - 5902	Pos Quant trio, YFP	Pos Quant trio YFP
ERF8RY - 5901	Pos Quant Trio, PP21, YFP	Pos Quant Trio, PP21
HDMM48 - 5901	Pos Powerquant	Pos Powerquant
K8XREJ - 5901	Pos PowerQuant	Pos PowerQuant
NN6EU4 - 5902	Pos	NT
QJA3AR - 5901	Pos Quantifiler Trio, YFP	Pos Quantifiler Trio, YFP
RAEJ9N - 5901	Pos PlexorHY	Pos PlexorHY
YAB63G - 5902	Pos Plexor HY	Pos Plexor HY
YDBGXG - 5901	Pos PlexorHY	Pos PlexorHY
Z78W9Q - 5901	Pos	Pos

Table 1e: Serology Screening Response Summary - Y Screening			Participants: 16
This table excludes participants who did not report or reported "Not Tested" for both Item 3 and Item 4.			
	Item 3	Item 4	
Positive	16	14	
Negative	0	0	
Inconclusive	0	0	
Not Tested (NT)	0	2	
Not Reported	0	0	

# Serology Screening Results

Indicate the results of any screening tests performed on the questioned stains (Items 3 & 4).

TABLE 1f

Other Screening Results		
WebCode - Test	Item 3	Item 4

No Other Screening results were reported.

# DNA Interpretations

*Based on results obtained from DNA analysis, could the Victim (Item 1) and/or the Suspect (Item 2) be a contributor to the questioned stains (Items 3 & 4)?*

TABLE 2

WebCode-Test	Victim (Item 1)		Suspect (Item 2)		WebCode-Test	Victim (Item 1)		Suspect (Item 2)	
	Item 3	Item 4	Item 3	Item 4		Item 3	Item 4	Item 3	Item 4
2DPRLB - 5901	Yes	Yes	No	Yes	B6H6QH - 5902	Yes	Yes	No	Yes
2K2ZQM - 5902	Yes	Yes	No	Yes	CJWUZ4 - 5902	Yes	Yes	No	Yes
2MZT8B - 5901	Yes	No	No	Yes	ERF8RY - 5901	Yes	Yes	No	Yes
362K2C - 5902	Yes	Yes	No	Yes	G632HU - 5901	Yes	Yes	No	Yes
38V7WP - 5902	Yes	Yes	No	Yes	GRCZ6X - 5902	Yes	Yes	No	Yes
3HRA2H - 5902	Yes	Yes	No	Yes	HDMM48 - 5901	Yes	Yes	No	Yes
3XRZGZ - 5901	Yes	Yes	No	Yes	J99CLX - 5901	Yes	Yes	No	Yes
4VGCFZ - 5901	Yes	Yes	No	Yes	JGHZZV - 5901	Yes	No	No	Yes
6P8FA7 - 5901	Yes	Yes	No	Yes	JQ7NY6 - 5901	Yes	Yes	No	Yes
6RADLM - 5901	Yes	Yes	No	Yes	JX9X7X - 5901	Yes	Yes	No	Yes
6RRGV9 - 5901	Yes	Yes	No	Yes	JXTGB4 - 5902	Yes	Yes	No	Yes
74PMLW - 5901	Yes	Yes	No	Yes	K8XREJ - 5901	Yes	Yes	No	Yes
7LHKND - 5902	Yes	Yes	No	Yes	KVY9FT - 5902	Yes	Yes	No	Yes
82D8RW - 5901	Yes	Yes	No	Yes	LPPCAY - 5901	Yes	Yes	No	Yes
82TQDH - 5901	Yes	Yes	No	Yes	NMAQDU - 5901	Yes	Yes	No	Yes
83Z7LA - 5901	Yes	Yes	No	Yes	NN6EU4 - 5902	Yes	Yes	No	Yes
8PEQHA - 5902	Yes	Yes	No	Yes	P8FLKQ - 5902	Yes	Yes	No	Yes
8WUCN8 - 5902	Yes	Yes	No	Yes	QCP2RU - 5902	Yes	Yes	No	Yes

TABLE 2

WebCode-Test	Victim (Item 1)		Suspect (Item 2)		WebCode-Test	Victim (Item 1)		Suspect (Item 2)	
	Item 3	Item 4	Item 3	Item 4		Item 3	Item 4	Item 3	Item 4
QJA3AR - 5901	Yes	Yes	No	Yes					
RAEJ9N - 5901	Yes	Yes	No	Yes					
T46M3T - 5902	Yes	Yes	No	Yes					
THNB9G - 5902	Yes	Yes	No	Yes					
TRB7DR - 5902	Yes	Yes	No	Yes					
UHWYPN - 5902	Yes	Yes	No	Yes					
UUZ3CG - 5901	Yes	Yes	No	Yes					
YAB63G - 5902	Yes	Yes	No	Yes					
YDBGXG - 5901	Yes	Yes	No	Yes					
Z78W9Q - 5901	Yes	Yes	No	Yes					
Z8KMYL - 5902	Yes	Yes	No	Yes					
ZTYATR - 5902	Yes	Yes	No	Yes					

<b>DNA Interpretation</b>					
<b>Response Summary</b>			<b>Participants reporting DNA results: 48</b>		
<i>Based on results obtained from DNA analysis, could the Victim (Item 1) and/or the Suspect (Item 2) be a contributor to the questioned stains (Items 3 &amp; 4)?</i>					
		Victim (Item 1)		Suspect (Item 2)	
		<u>Item 3</u>	<u>Item 4</u>	<u>Item 3</u>	<u>Item 4</u>
	Yes	<b>48</b>	<b>46</b>	<b>0</b>	<b>48</b>
	No	<b>0</b>	<b>2</b>	<b>48</b>	<b>0</b>
	Inc	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	No Interpretation	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	No Response	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

# STR Amplification Kit(s) & Results

TABLE 3

WebCode - Test		Amplification Kits - Probabilistic Genotyping Software				
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

### Item 1 - STR Results

2DPRLB - 5901		GlobalFiler™				
	14,16	18,23	11,11.3	15,19	13,14	
1	9,11	13,17	12,14	15,20	12,13	9,11
	16,18	14,14	31,32.2	16,18	X,X	9,12
	22,25			18,28.2	7,9	9,11
	14,15	--			--	
2K2ZQM - 5902		PowerPlex® ESX 16 Fast - DNAXs				
	14,16	18,23	11,11.3	15,19		
1		13,17	12,14	15,20		9,11
	16,18	14	31,32.2	16,18	X	
	22,25				7,9	
	14,15					
2MZT8B - 5901		GlobalFiler™				
	14,16	18,23	11,11.3	15,19	13,14	
1	9,11	13,17	12,14	15,20	12,13	9,11
	16,18	14,14	31,32.2	16,18	X,X	9,12
	22,25			18,28.2	7,9	9,11
	14,15	--			--	
362K2C - 5902		PowerPlex® 21- STRMix™ 2.7				
	14,16	18,23		15,19	13,14	11,18
1	9,11	13,17		15,20	12,13	9,11
	16,18	14,14	31,32.2		X,X	9,12
	22,25	9,12	13,13		7,9	9,11
	14,15					
38V7WP - 5902		Investigator® 24plex				
	14,16	18,23	11,11.3	15,19	13,14	
1	9,11	13,17	12,14	15,20	12,13	9,11
	16,18	14	31,32.2	16,18	X	9,12
	22,25			18,28.2	7,9	9,11
	14,15					
3HRA2H - 5902		PowerPlex® Fusion- STRMix™ 2.6.3				
	14,16	18,23	11,11.3	15,19	13,14	
1	9,11	13,17	12,14	15,20	12,13	9,11
	16,18	14	31,32.2	16,18	X	9,12
	22,25	9,12	13		7,9	9,11
	14,15					



TABLE 3

WebCode - Test Amplification Kits - Probabilistic Genotyping Software						
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 1 - STR Results

3XRZGZ - 5901	Investigator® 24plex QS					
	14,16	18,23	11,11.3	15,19	13,14	
1	9,11	13,17	12,14	15,20	12,13	9,11
	16,18	14,14	31,32.2	16,18	X,X	9,12
	22,25			18,28.2	7,9	9,11
	14,15					
4VGCYZ - 5901	Identifiler® Plus, PowerPlex® Fusion 6C, MiniFiler					
	14,16	18,23	11,11.3	15,19	13,14	
1	9,11	13,17	12,14	15,20	12,13	9,11
	16,18	14	31,32.2	16,18	X	9,12
	22,25	9,12	13	18,28.2	7,9	9,11
	14,15					
6P8FA7 - 5901	PowerPlex® ESI-17					
	14,16	18,23	11,11.3	15,19		
1		13,17	12,14	15,20		9,11
	16,18	14,14	31,32.2	16,18	X,X	
	22,25			18,28.2	7,9	
	14,15					
6RADLM - 5901	PowerPlex® Fusion 6C- STRMix™ 2.6.3					
	14,16	18,23	11,11.3	15,19	13,14	
1	9,11	13,17	12,14	15,20	12,13	9,11
	16,18	14	31,32.2	16,18	X	9,12
	22,25	9,12	13	18,28.2	7,9	9,11
	14,15					
6RRGV9 - 5901	GlobalFiler™					
	14,16	18,23	11,11.3	15,19	13,14	
1	9,11	13,17	12,14	15,20	12,13	9,11
	16,18	14	31,32.2	16,18	X	9,12
	22,25			18,28.2	7,9	9,11
	14,15	NR			NR	
74PMLW - 5901	GlobalFiler™ - STRMix™ 2.7.0					
	14,16	18,23	11,11.3	15,19	13,14	
1	9,11	13,17	12,14	15,20	12,13	9,11
	16,18	14,14	31,32.2	16,18	X,X	9,12
	22,25			18,28.2	7,9	9,11
	14,15	-			-	
7LHKND - 5902	PowerPlex® Fusion					
	14,16	18,23	11,11.3	15,19	13,14	
1	9,11	13,17	12,14	15,20	12,13	9,11
	16,18	14	31,32.2	16,18	X	9,12
	22,25	9,12	13		7,9	9,11
	14,15					

TABLE 3

WebCode - Test Amplification Kits - Probabilistic Genotyping Software						
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 1 - STR Results

82D8RW - 5901	GlobalFiler™ - STRMix™ 2.7					
	14,16	18,23	11,11.3	15,19	13,14	
1	9,11	13,17	12,14	15,20	12,13	9,11
	16,18	14,14	31,32.2	16,18	X,X	9,12
	22,25			18,28.2	7,9	9,11
	14,15	-			-	
82TQDH - 5901	GlobalFiler™					
	14,16	18,23	11,11.3	15,19	13,14	
1	9,11	13,17	12,14	15,20	12,13	9,11
	16,18	14,14	31,32.2	16,18	X,X	9,12
	22,25			18,28.2	7,9	9,11
	14,15					
83Z7LA - 5901	PowerPlex® 21- STRMix™ 2.8					
	14,16	18,23		15,19	13,14	11,18
1	9,11	13,17		15,20	12,13	9,11
	16,18	14,14	31,32.2		X,X	9,12
	22,25	9,12	13,13		7,9	9,11
	14,15					
8PEQHA - 5902	PowerPlex® 21- STRMix™ v 2.8					
	14,16	18,23		15,19	13,14	11,18
1	9,11	13,17		15,20	12,13	9,11
	16,18	14,14	31,32.2		X,X	9,12
	22,25	9,12	13,13		7,9	9,11
	14,15					
8WUCN8 - 5902	PowerPlex® 21- STRMix™ v2.8					
	14,16	18,23		15,19	13,14	11,18
1	9,11	13,17		15,20	12,13	9,11
	16,18	14,14	31,32.2		X,X	9,12
	22,25	9,12	13,13		7,9	9,11
	14,15					
B6H6QH - 5902	Investigator® 24plex					
	14,16	18,23	11,11.3	15,19	13,14	
1	9,11	13,17	12,14	15,20	12,13	9,11
	16,18	14	31,32.2	16,18	X	9,12
	22,25			18,28.2	7,9	9,11
	14,15					
CJWUZ4 - 5902	PowerPlex® 21- STRMix™ 2.8					
	14,16	18,23		15,19	13,14	11,18
1	9,11	13,17		15,20	12,13	9,11
	16,18	14,14	31,32.2		X,X	9,12
	22,25	9,12	13,13		7,9	9,11
	14,15					

TABLE 3

WebCode - Test Amplification Kits - Probabilistic Genotyping Software						
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 1 - STR Results

ERF8RY - 5901		PowerPlex® 21- STRMix™ v2.8				
		14,16	18,23	15,19	13,14	11,18
1		9,11	13,17	15,20	12,13	9,11
		16,18	14,14	31,32.2	X,X	9,12
		22,25	9,12	13,13	7,9	9,11
		14,15				
G632HU - 5901		GlobalFiler™				
		14,16	18,23	11,11.3	15,19	13,14
1		9,11	13,17	12,14	15,20	12,13
		16,18	14,14	31,32.2	16,18	X,X
		22,25		18,28.2	7,9	9,11
		14,15	-		-	
GRCZ6X - 5902		PowerPlex® Fusion				
		14,16	18,23	11,11.3	15,19	13,14
1		9,11	13,17	12,14	15,20	12,13
		16,18	14	31,32.2	16,18	X
		22,25	9,12	13	7,9	9,11
		14,15				
HDMM48 - 5901		PowerPlex® Fusion 6C				
		14,16	18,23	11,11.3	15,19	13,14
1		9,11	13,17	12,14	15,20	12,13
		16,18	14	31,32.2	16,18	X
		22,25	9,12	13	18,28.2	7,9
		14,15				
J99CLX - 5901		PowerPlex® PP21- STRMix™ V2.8.0				
		14,16	18,23	15,19	13,14	11,18
1		9,11	13,17	15,20	12,13	9,11
		16,18	14,14	31,32.2	X,X	9,12
		22,25	9,12	13,13	7,9	9,11
		14,15				
JGHZZV - 5901		GlobalFiler™				
		14,16	18,23	11,11.3	15,19	13,14
1		9,11	13,17	12,14	15,20	12,13
		16,18	14,14	31,32.2	16,18	X,X
		22,25		18,28.2	7,9	9,11
		14,15				
JQ7NY6 - 5901		Identifiler® Plus - EuroForMix				
			18,23	15,19	13,14	
1		9,11	13,17		12,13	9,11
		16,18	14,14	31,32.2	X,X	9,12
		22,25			7,9	9,11
		14,15				

TABLE 3

WebCode - Test Amplification Kits - Probabilistic Genotyping Software						
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 1 - STR Results

JX9X7X - 5901	PowerPlex® 21- STRMix™					
	14,16	18,23		15,19	13,14	11,18
1	9,11	13,17		15,20	12,13	9,11
	16,18	14,14	31,32.2		X,X	9,12
	22,25	9,12	13,13		7,9	9,11
	14,15					
JXTGB4 - 5902	PowerPlex® Fusion- STRMix™					
	14,16	18,23	11,11.3	15,19	13,14	
1	9,11	13,17	12,14	15,20	12,13	9,11
	16,18	14	31,32.2	16,18	X	9,12
	22,25	9,12	13		7,9	9,11
	14,15					
K8XREJ - 5901	Identifiler® Plus, PowerPlex® Fusion, Minifiler					
	14,16	18,23	11,11.3	15,19	13,14	
1	9,11	13,17	12,14	15,20	12,13	9,11
	16,18	14	31,32.2	16,18	X	9,12
	22,25	9,12	13	18,28.2	7,9	9,11
	14,15					
KVY9FT - 5902	PowerPlex® Fusion 5C- STRMix™					
	14,16	18,23	11,11.3	15,19	13,14	
1	9,11	13,17	12,14	15,20	12,13	9,11
	16,18	14	31,32.2	16,18	X	9,12
	22,25	9,12	13		7,9	9,11
	14,15					
LPPCAY - 5901	Investigator ESX 17 Fast- STRMix™ V2.5.11					
	14,16	18,23	11,11.3	15,19		
1		13,17	12,14	15,20		9,11
	16,18	14,14	31,32.2	16,18	X,X	
	22,25			18,28.2	7,9	
	14,15					
NMAQDU - 5901	PowerPlex® 21- STRMix™ v2.8					
	14,16	18,23		15,19	13,14	11,18
1	9,11	13,17		15,20	12,13	9,11
	16,18	14,14	31,32.2		X,X	9,12
	22,25	9,12	13,13		7,9	9,11
	14,15					
NN6EU4 - 5902	Investigator® 24plex					
	14,16	18,23	11,11.3	15,19	13,14	
1	9,11	13,17	12,14	15,20	12,13	9,11
	16,18	14	31,32.2	16,18	X	9,12
	22,25			18,28.2	7,9	9,11
	14,15					

TABLE 3

WebCode - Test Amplification Kits - Probabilistic Genotyping Software						
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 1 - STR Results

P8FLKQ - 5902	PowerPlex® 21- STRMix™					
	14,16	18,23		15,19	13,14	11,18
1	9,11	13,17		15,20	12,13	9,11
	16,18	14,14	31,32.2		X,X	9,12
	22,25	9,12	13,13		7,9	9,11
	14,15					
QCP2RU - 5902	PowerPlex® Fusion- STRMix™					
	14,16	18,23	11,11.3	15,19	13,14	
1	9,11	13,17	12,14	15,20	12,13	9,11
	16,18	14	31,32.2	16,18	X	9,12
	22,25	9,12	13		7,9	9,11
	14,15					
QJA3AR - 5901	PowerPlex® 21- STRMix™ 2.8					
	14,16	18,23		15,19	13,14	11,18
1	9,11	13,17		15,20	12,13	9,11
	16,18	14,14	31,32.2		X,X	9,12
	22,25	9,12	13,13		7,9	9,11
	14,15					
RAEJ9N - 5901	Identifiler® Plus					
		18,23		15,19	13,14	
1	9,11	13,17			12,13	9,11
	16,18	14,14	31,32.2		X,X	9,12
	22,25				7,9	9,11
	14,15					
T46M3T - 5902	PowerPlex® Fusion 5c- STRMix™					
	14,16	18,23	11,11.3	15,19	13,14	
1	9,11	13,17	12,14	15,20	12,13	9,11
	16,18	14	31,32.2	16,18	X	9,12
	22,25	9,12	13		7,9	9,11
	14,15					
THNB9G - 5902	GlobalFiler™ Express- STRMix™					
	14,16	18,23	11,11.3	15,19	13,14	
1	9,11	13,17	12,14	15,20	12,13	9,11
	16,18	14,14	31,32.2	16,18	X,X	9,12
	22,25			18,28.2	7,9	9,11
	14,15					
TRB7DR - 5902	PowerPlex® Fusion 6C					
	14,16	18,23	11,11.3	15,19	13,14	
1	9,11	13,17	12,14	15,20	12,13	9,11
	16,18	14	31,32.2	16,18	X	9,12
	22,25	9,12	13	18,28.2	7,9	9,11
	14,15					

TABLE 3

WebCode - Test Amplification Kits - Probabilistic Genotyping Software						
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 1 - STR Results

UHWYPN - 5902		PowerPlex® 21				
	14,16	18,23		15,19	13,14	11,18
1	9,11	13,17		15,20	12,13	9,11
	16,18	14,14	31,32.2		X,X	9,12
	22,25	9,12	13,13		7,9	9,11
	14,15					
UUZ3CG - 5901		GlobalFiler™				
	14,16	18,23	11,11.3	15,19	13,14	
1	9,11	13,17	12,14	15,20	12,13	9,11
	16,18	14,14	31,32.2	16,18	X,X	9,12
	22,25			18,28.2	7,9	9,11
	14,15	-			-	
YAB63G - 5902		Identifiler® Plus				
		18,23		15,19	13,14	
1	9,11	13,17			12,13	9,11
	16,18	14,14	31,32.2		X,X	9,12
	22,25				7,9	9,11
	14,15					
YDBGXG - 5901		Identifiler® Plus- STRMix™ 2.7.0				
		18,23		15,19	13,14	
1	9,11	13,17			12,13	9,11
	16,18	14,14	31,32.2		X,X	9,12
	22,25				7,9	9,11
	14,15					
Z78W9Q - 5901		NGM Detect				
	14,16	18,23	11,11.3	15,19		
1		13,17	12,14	15,20		9,11
	16,18	14,14	31,32.2	16,18	X,X	
	22,25			18,28.2	7,9	
	14,15					
Z8KMYL - 5902		PowerPlex® Fusion- TrueAllele®				
	14,16	18,23	11,11.3	15,19	13,14	
1	9,11	13,17	12,14	15,20	12,13	9,11
	16,18	14	31,32.2	16,18	X	9,12
	22,25	9,12	13		7,9	9,11
	14,15					
ZTYATR - 5902		Investigator® 24plex- STRMix™				
	14,16	18,23	11,11.3	15,19	13,14	
1	9,11	13,17	12,14	15,20	12,13	9,11
	16,18	14,14	31,32.2	16,18	X,X	9,12
	22,25			18,28.2	7,9	9,11
	14,15					

TABLE 3

WebCode - Test Amplification Kits - Probabilistic Genotyping Software						
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
vWA	DYS391	DYS570	DYS576	Y Indel		

Item 2 - STR Results

2DPRLB - 5901	GlobalFiler™					
	14,15	19,21	11,14	15,15	11,13	
2	10,10	12,15	10,15	17,19.1	12,12	10,11
	15,15	13,14	29,31	11,17	X,Y	10,12
	21,23			18,18	8,9	6,11
	16,17	11			2	
2K2ZQM - 5902	PowerPlex® ESX 16 Fast - DNAxs					
	14,15	19,21	11,14	15		
2		12,15	10,15	17,19.1		10,11
	15	13,14	29,31	11,17	X,Y	
	21,23				8,9	
	16,17					
2MZT8B - 5901	GlobalFiler™					
	14,15	19,21	11,14	15,15	11,13	
2	10,10	12,15	10,15	17,19.1	12,12	10,11
	15,15	13,14	29,31	11,17	X,Y	10,12
	21,23			18,18	8,9	6,11
	16,17	11			2	
362K2C - 5902	PowerPlex® 21- STRMix™ 2.7					
	14,15	19,21		15,15	11,13	12,24
2	10,10	12,15		17,19.1	12,12	10,11
	15,15	13,14	29,31		X,Y	10,12
	21,23	9,12	9,14		8,9	6,11
	16,17					
38V7WP - 5902	Investigator® 24plex					
	14,15	19,21	11,14	15	11,13	
2	10	12,15	10,15	17,19.1	12	10,11
	15	13,14	29,31	11,17	X,Y	10,12
	21,23			18	8,9	6,11
	16,17	11				
3HRA2H - 5902	PowerPlex® Fusion- STRMix™ 2.6.3					
	14,15	19,21	11,14	15	11,13	
2	10	12,15	10,15	17,19.1	12	10,11
	15	13,14	29,31	11,17	X,Y	10,12
	21,23	9,12	9,14		8,9	6,11
	16,17	11				
3XRZGZ - 5901	Investigator® 24plex QS					
	14,15	19,21	11,14	15,15	11,13	
2	10,10	12,15	10,15	17,19.1	12,12	10,11
	15,15	13,14	29,31	11,17	X,Y	10,12
	21,23			18,18	8,9	6,11
	16,17	11				

TABLE 3

WebCode - Test Amplification Kits - Probabilistic Genotyping Software						
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 2 - STR Results

4VGCYZ - 5901	Identifiler® Plus, PowerPlex® Fusion 6C, MiniFiler					
	14,15	19,21	11,14	15	11,13	
2	10	12,15	10,15	17,19.1	12	10,11
	15	13,14	29,31	11,17	X,Y	10,12
	21,23	9,12	9,14	18	8,9	6,11
	16,17	11	17	19		
6P8FA7 - 5901	PowerPlex® ESI-17					
	14,15	19,21	11,14	15,15		
2		12,15	10,15	17,19.1		10,11
	15,15	13,14	29,31	11,17	X,Y	
	21,23			18,18	8,9	
	16,17					
6RADLM - 5901	PowerPlex® Fusion 6C- STRMix™ 2.6.3					
	14,15	19,21	11,14	15	11,13	
2	10	12,15	10,15	17,19.1	12	10,11
	15	13,14	29,31	11,17	X,Y	10,12
	21,23	9,12	9,14	18	8,9	6,11
	16,17	11	17	19		
6RRGV9 - 5901	GlobalFiler™					
	14,15	19,21	11,14	15	11,13	
2	10	12,15	10,15	17,19.1	12	10,11
	15	13,14	29,31	11,17	X,Y	10,12
	21,23			18	8,9	6,11
	16,17	11			2	
74PMLW - 5901	GlobalFiler™ - STRMix™ 2.7.0					
	14,15	19,21	11,14	15,15	11,13	
2	10,10	12,15	10,15	17,19.1	12,12	10,11
	15,15	13,14	29,31	11,17	X,Y	10,12
	21,23			18,18	8,9	6,11
	16,17	11			2	
7LHKND - 5902	PowerPlex® Fusion					
	14,15	19,21	11,14	15	11,13	
2	10	12,15	10,15	17,19.1	12	10,11
	15	13,14	29,31	11,17	X,Y	10,12
	21,23	9,12	9,14		8,9	6,11
	16,17	11				
82D8RW - 5901	GlobalFiler™ - STRMix™ 2.7					
	14,15	19,21	11,14	15,15	11,13	
2	10,10	12,15	10,15	17,19.1	12,12	10,11
	15,15	13,14	29,31	11,17	X,Y	10,12
	21,23			18,18	8,9	6,11
	16,17	11			2	



TABLE 3

WebCode - Test Amplification Kits - Probabilistic Genotyping Software						
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 2 - STR Results

82TQDH - 5901	GlobalFiler™					
	14,15	19,21	11,14	15,15	11,13	
2	10,10	12,15	10,15	17,19.1	12,12	10,11
	15,15	13,14	29,31	11,17	X,Y	10,12
	21,23			18,18	8,9	6,11
	16,17	11			2	
83Z7LA - 5901	PowerPlex® 21- STRMix™ 2.8					
	14,15	19,21		15,15	11,13	12,24
2	10,10	12,15		17,19.1	12,12	10,11
	15,15	13,14	29,31		X,Y	10,12
	21,23	9,12	9,14		8,9	6,11
	16,17					
8PEQHA - 5902	PowerPlex® 21- STRMix™ v 2.8					
	14,15	19,21		15,15	11,13	12,24
2	10,10	12,15		17,19.1	12,12	10,11
	15,15	13,14	29,31		X,Y	10,12
	21,23	9,12	9,14		8,9	6,11
	16,17					
8WUCN8 - 5902	PowerPlex® 21- STRMix™ v2.8					
	14,15	19,21		15,15	11,13	12,24
2	10,10	12,15		17,19.1	12,12	10,11
	15,15	13,14	29,31		X,Y	10,12
	21,23	9,10	9,14		8,9	6,11
	16,17					
B6H6QH - 5902	Investigator® 24plex					
	14,15	19,21	11,14	15	11,13	
2	10	12,15	10,15	17,19.1	12	10,11
	15	13,14	29,31	11,17	X,Y	10,12
	21,23			18	8,9	6,11
	16,17	11				
CJWUZ4 - 5902	PowerPlex® 21- STRMix™ 2.8					
	14,15	19,21		15,15	11,13	12,24
2	10,10	12,15		17,19.1	12,12	10,11
	15,15	13,14	29,31		X,Y	10,12
	21,23	9,12	9,14		8,9	6,11
	16,17					
ERF8RY - 5901	PowerPlex® 21- STRMix™ v2.8					
	14,15	19,21		15,15	11,13	12,24
2	10,10	12,15		17,19.1	12,12	10,11
	15,15	13,14	29,31		X,Y	10,12
	21,23	9,12	9,14		8,9	6,11
	16,17					

TABLE 3

WebCode - Test Amplification Kits - Probabilistic Genotyping Software						
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 2 - STR Results

G632HU - 5901		GlobalFiler™				
		14,15	19,21	11,14	15,15	11,13
2		10,10	12,15	10,15	17,19.1	12,12 10,11
		15,15	13,14	29,31	11,17	X,Y 10,12
		21,23			18,18	8,9 6,11
		16,17	11			2
GRCZ6X - 5902		PowerPlex® Fusion				
		14,15	19,21	11,14	15	11,13
2		10	12,15	10,15	17,19.1	12 10,11
		15	13,14	29,31	11,17	X,Y 10,12
		21,23	9,12	9,14		8,9 6,11
		16,17	11			
HDMM48 - 5901		PowerPlex® Fusion 6C				
		14,15	19,21	11,14	15	11,13
2		10	12,15	10,15	17,19.1	12 10,11
		15	13,14	29,31	11,17	X,Y 10,12
		21,23	9,12	9,14	18	8,9 6,11
		16,17	11	17	19	
J99CLX - 5901		PowerPlex® PP21- STRMix™ v2.8.0				
		14,15	19,21		15,15	11,13 12,24
2		10,10	12,15		17,19.1	12,12 10,11
		15,15	13,14	29,31		X,Y 10,12
		21,23	9,12	9,14		8,9 6,11
		16,17				
JGHZZV - 5901		GlobalFiler™				
		14,15	19,21	11,14	15,15	11,13
2		10,10	12,15	10,15	17,19.1	12,12 10,11
		15,15	13,14	29,31	11,17	X,Y 10,12
		21,23			18,18	8,9 6,11
		16,17	11			2
JQ7NY6 - 5901		Identifiler® Plus - EuroForMix				
			19,21		15,15	11,13
2		10,10	12,15			12,12 10,11
		15,15	13,14	29,31		X,Y 10,12
		21,23				8,9 6,11
		16,17				
JX9X7X - 5901		PowerPlex® 21- STRMix™				
		14,15	19,21		15,15	11,13 12,24
2		10,10	12,15		17,19.1	12,12 10,11
		15,15	13,14	29,31		X,Y 10,12
		21,23	9,12	9,14		8,9 6,11
		16,17				

TABLE 3

WebCode - Test Amplification Kits - Probabilistic Genotyping Software						
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 2 - STR Results

JXTGB4 - 5902	PowerPlex® Fusion- STRMix™					
	14,15	19,21	11,14	15	11,13	
2	10	12,15	10,15	17,19.1	12	10,11
	15	13,14	29,31	11,17	X,Y	10,12
	21,23	9,12	9,14		8,9	6,11
	16,17	11				
K8XREJ - 5901	Identifiler® Plus, PowerPlex® Fusion 6C, Minifiler					
	14,15	19,21	11,14	15	11,13	
2	10	12,15	10,15	17,19.1	12	10,11
	15	13,14	29,31	11,17	X,Y	10,12
	21,23	9,12	9,14	18	8,9	6,11
	16,17	11	17	19		
KVY9FT - 5902	PowerPlex® Fusion 5C- STRMix™					
	14,15	19,21	11,14	15	11,13	
2	10	12,15	10,15	17,19.1	12	10,11
	15	13,14	29,31	11,17	X,Y	10,12
	21,23	9,12	9,14		8,9	6,11
	16,17	11				
LPPCAY - 5901	Investigator ESX 17 Fast- STRMix™ V2.5.11					
	14,15	19,21	11,14	15,15		
2		12,15	10,15	17,19.1		10,11
	15,15	13,14	29,31	11,17	X,Y	
	21,23			18,18	8,9	
	16,17					
NMAQDU - 5901	PowerPlex® 21- STRMix™ 2.8					
	14,15	19,21		15,15	11,13	12,24
2	10,10	12,15		17,19.1	12,12	10,11
	15,15	13,14	29,31		X,Y	10,12
	21,23	9,12	9,14		8,9	6,11
	16,17					
NN6EU4 - 5902	Investigator® 24plex					
	14,15	19,21	11,14	15	11,13	
2	10	12,15	10,15	17,19.1	12	10,11
	15	13,14	29,31	11,17	X,Y	10,12
	21,23			18	8,9	6,11
	16,17	11				
P8FLKQ - 5902	PowerPlex® 21- STRMix™					
	14,15	19,21		15,15	11,13	12,24
2	10,10	12,15		17,19.1	12,12	10,11
	15,15	13,14	29,31		X,Y	10,12
	21,23	9,12	9,14		8,9	6,11
	16,17					

TABLE 3

WebCode - Test Amplification Kits - Probabilistic Genotyping Software						
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 2 - STR Results

QCP2RU - 5902	PowerPlex® Fusion- STRMix™					
	14,15	19,21	11,14	15	11,13	
2	10	12,15	10,15	17,19.1	12	10,11
	15	13,14	29,31	11,17	X,Y	10,12
	21,23	9,12	9,14		8,9	6,11
	16,17	11				
QJA3AR - 5901	PowerPlex® 21- STRMix™ 2.8					
	14,15	19,21		15,15	11,13	12,24
2	10,10	12,15		17,19.1	12,12	10,11
	15,15	13,14	29,31		X,Y	10,12
	21,23	9,12	9,14		8,9	6,11
	16,17					
RAEJ9N - 5901	Identifiler® Plus, PowerPlex® Y23					
		19,21		15,15	11,13	
2	10,10	12,15			12,12	10,11
	15,15	13,14	29,31		X,Y	10,12
	21,23				8,9	6,11
	16,17					
T46M3T - 5902	PowerPlex® Fusion 5c- STRMix™					
	14,15	19,21	11,14	15	11,13	
2	10	12,15	10,15	17,19.1	12	10,11
	15	13,14	29,31	11,17	X,Y	10,12
	21,23	9,12	9,14		8,9	6,11
	16,17	11				
THNB9G - 5902	GlobalFiler™ Express- STRMix™					
	14,15	19,21	11,14	15,15	11,13	
2	10,10	12,15	10,15	17,19.1	12,12	10,11
	15,15	13,14	29,31	11,17	X,Y	10,12
	21,23			18,18	8,9	6,11
	16,17	11			2	
TRB7DR - 5902	PowerPlex® Fusion 6C					
	14,15	19,21	11,14	15	11,13	
2	10	12,15	10,15	17,19.1	12	10,11
	15	13,14	29,31	11,17	X,Y	10,12
	21,23	9,12	9,14	18	8,9	6,11
	16,17	11	17	19		
UHWYPN - 5902	PowerPlex® 21					
	14,15	19,21		15,15	11,13	12,24
2	10,10	12,15		17,19.1	12,12	10,11
	15,15	13,14	29,31		X,Y	10,12
	21,23	9,12	9,14		8,9	6,11
	16,17					

TABLE 3

WebCode - Test Amplification Kits - Probabilistic Genotyping Software						
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 2 - STR Results

UUZ3CG - 5901	GlobalFiler™					
	14,15	19,21	11,14	15,15	11,13	
2	10,10	12,15	10,15	17,19.1	12,12	10,11
	15,15	13,14	29,31	11,17	X,Y	10,12
	21,23			18,18	8,9	6,11
	16,17	11			2	
YAB63G - 5902	Identifiler® Plus					
		19,21		15,15	11,13	
2	10,10	12,15			12,12	10,11
	15,15	13,14	29,31		X,Y	10,12
	21,23				8,9	6,11
	16,17					
YDBGXG - 5901	Identifiler® Plus- STRMix™ 2.7.0					
		19,21		15,15	11,13	
2	10,10	12,15			12,12	10,11
	15,15	13,14	29,31		X,Y	10,12
	21,23				8,9	6,11
	16,17					
Z78W9Q - 5901	NGM Detect					
	14,15	19,21	11,14	15,15		
2		12,15	10,15	17,19.1		10,11
	15,15	13,14	29,31	11,17	X,Y	
	21,23			18,18	8,9	
	16,17				2	
Z8KMYL - 5902	PowerPlex® Fusion- TrueAllele®					
	14,15	19,21	11,14	15	11,13	
2	10	12,15	10,15	17,19.1	12	10,11
	15	13,14	29,31	11,17	X,Y	10,12
	21,23	9,12	9,14		8,9	6,11
	16,17	11				
ZTYATR - 5902	Investigator® 24plex- STRMix™					
	14,15	19,21	11,14	15,15	11,13	
2	10,10	12,15	10,15	17,19.1	12,12	10,11
	15,15	13,14	29,31	11,17	X,Y	10,12
	21,23			18,18	8,9	6,11
	16,17	11				

TABLE 3

WebCode - Test		Amplification Kits - Probabilistic Genotyping Software				
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 3 - STR Results

6P8FA7 - 5901		PowerPlex® ESI-17 - LiRa v3.0				
	11,14,16,17.3	18,23,24	11,11.3,12,14	15,19		
3		13,14,17	12,14	15,19.3,20		9,10,11,12
	16,17,18	13,14	29,31,32.2	16,17,18	X,Y	
	22,23,25			16,18,27.2,28.2	7,9,9.3	
	15,15,17					
LPPCAY - 5901		Investigator ESX 17 Fast- STRMix™ V2.5.11				
	11,14,16,17.3	18,23,24	11,11.3,12,14	15,19		
3		13,14,17	12,14	15,19.3,20		9,10,11,12
	16,17,18	13,14	29,31,32.2	16,17,18	X,Y	
	22,23,25			16,18,27.2,28.2	7,9,9.3	
	14,15,17					
Z78W9Q - 5901						
	11,14,16,17.3	18,23,24	11,11.3,12,14	15,19		
3		13,14,17	12,14	15,19.3,20		9,10,11,12
	16,17,18	13,14	29,31,32.2	16,17,18	X,Y	
	22,23,25			16,18,27.2,28.2	7,9,9.3	
	14,15,17				2	

TABLE 3

WebCode - Test Amplification Kits - Probabilistic Genotyping Software						
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 3e - STR Results

2DPRLB - 5901	GlobalFiler™					
	11,14,16,17.3	18,23,24	11,11.3,12,14	15,19	12,13,14	
3e	9,11,12	13,14,17	12,14	15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2	16,17,18	X,Y	9,10,12,13
	22,23,25			16,18,27.2,28.2	7,9,9.3	8,9,11
	14,15,17	11			2	
2K2ZQM - 5902	PowerPlex® ESX 16 Fast - DNAxs					
	11,14,16,17.3	18,23,24	11,11.3,12,14	15,19		
3e		13,14,17	12,14	15,19.3,20		9,10,11,12
	16,17,18	13,14	29,31,32.2	16,17,18	X,Y	
	22,23,25				7,9,9.3	
	14,15,17					
2MZT8B - 5901	GlobalFiler™					
	11,14,16,17.3	18,23,24	11,11.3,12,14	15,19	12,13,14	
3e	9,11,12	13,14,17	12,14	15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2	16,17,18	X,Y	9,10,12,13
	22,23,25			16,18,27.2,28.2	7,9,9.3	8,9,11
	14,15,17	11			2	
362K2C - 5902	PowerPlex® 21- STRMix™ 2.7					
	11,14,16,17.3	18,23,24		15,19	12,13,14	11,14,18
3e	9,11,12	13,14,17		15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2		X,Y	9,10,12,13
	22,23,25	9,12,13	7,12,13		7,9,9.3	8,9,11
	14,15,17					
38V7WP - 5902	Investigator® 24plex- STRMix™ 2.5.11					
	11,14,16,17.3	18,23,24	11,11.3,12,14	15,19	12,13,14	
3e	9,11,12	13,14,17	12,14	15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2	16,17,18	X,Y	9,10,12,13
	22,23,25			16,18,27.2,28.2	7,9,9.3	8,9,11
	14,15,17	11				
3HRA2H - 5902	PowerPlex® Fusion- STRMix™ 2.6.3					
	11,14,16,17.3	18,23,24	11,11.3,12,14	15,19	12,13,14	
3e	9,11,12	13,14,17	12,14	15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2	16,17,18	X,Y	9,10,12,13
	22,23,25	9,12,13	7,12,13		7,9,9.3	8,9,11
	14,15,17	11				
3XRZGZ - 5901	Investigator® 24plex QS - Euro For Mix					
	11,14,16,17.3	18,23,24	11,11.3,12,14	15,19	12,13,14	
3e	9,11,12	13,14,17	(12),14	15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2	16,17,18	X,Y	9,10,12,13
	22,23,(25)			16,18,27.2,28.2	7,(9),9.3	8,9,11
	14,15,17	11				

TABLE 3

WebCode - Test Amplification Kits - Probabilistic Genotyping Software						
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 3e - STR Results

4VGCYZ - 5901	Identifiler® Plus, PowerPlex® Fusion 6C- STRMix™					
	11,14,16,17.3	18,23,24	11,11.3,12,14	15,19	12,13,14	
3e	9,11,12	13,14,17	12,14	15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2	16,17,18	X,Y	9,10,12,13
	22,23,25	9,12,13	7,12,13	16,18,27.2,28.2	7,9,9.3	8,9,11
	14,15,17	11	16	18		
6RADLM - 5901	PowerPlex® Fusion 6C- STRMix™ 2.6.3					
	11,14,16,17.3	18,23,24	11,11.3,12,14	15,19	12,13,14	
3e	9,11,12	13,14,17	12,14	15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2	16,17,18	X,Y	9,10,12,13
	22,23,25	9,12,13	7,12,13	16,18,27.2,28.2	7,9,9.3	8,9,11
	14,15,17	11	16	18		
6RRGV9 - 5901	GlobalFiler™ - STRMix™					
	11,14,16,17.3	18,23,24	11,11.3,12,14	15,19	12,13,14	
3e	9,11,12	13,14,17	12,14	15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,30,31,32.2	16,17,18	X,Y	9,10,12,13
	22,23,25			16,18,27.2,28.2	7,9,9.3	8,9,11
	14,15,17	11			2	
74PMLW - 5901	GlobalFiler™ - STRMix™ 2.7.0					
	11,14,16,17.3	18,23,24	11,11.3,12,14	15,19	12,13,14	
3e	9,11,12	13,14,17	12,14	15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2	16,17,18	X,Y	9,10,12,13
	22,23,25			16,18,27.2,28.2	7,9,9.3	8,9,11
	14,15,17	11			2	
7LHKND - 5902	PowerPlex® Fusion					
	11,14,16,17.3	18,23,24	11,11.3,12,14	15,19	12,13,14	
3e	9,11,12	13,14,17	12,14	15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2	16,17,18	X,Y	9,10,12,13
	22,23,25	9,12,13	7,12,13		7,9,9.3	8,9,11
	14,15,17	11				
82D8RW - 5901	GlobalFiler™					
	11,14,16,17.3	18,23,24	11,11.3,12,14	15,19	12,13,14	
3e	9,11,12	13,14,17	12,14	15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2	16,17,18	X,Y	9,10,12,13
	22,23,25			16,18,27.2,28.2	7,9,9.3	8,9,11
	14,15,17	11			2	
82TQDH - 5901	GlobalFiler™ - EuroForMix					
	11,14,16,17.3	18,23,24	11,11.3,12,14	15,19	12,13,14	
3e	9,11,12	13,14,17	12,14	15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2	16,17,18	X,Y	9,10,12,13
	22,23,25			16,18,27.2,28.2	7,9,9.3	8,9,11
	14,15,17	11			2	



TABLE 3

WebCode - Test Amplification Kits - Probabilistic Genotyping Software						
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 3e - STR Results

83Z7LA - 5901	PowerPlex® 21- STRMix™ 2.8					
	11,14,16,17.3	18,23,24		15,19	12,13,14	11,14,18
3e	9,11,12	13,14,17		15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2		X,Y	9,10,12,13
	22,23,25	9,12,13	7,12,13		7,9,9.3	8,9,11
	14,15,17					
8PEQHA - 5902	PowerPlex® 21- STRMix™ v 2.8					
	11,14,16,17.3	18,23,24		15,19	12,13,14	11,14,18
3e	9,11,12	13,14,17		15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2		X,Y	9,10,12,13
	22,23,25	9,12,13	7,12,13		7,9,9.3	8,9,11
	14,15,17					
8WUCN8 - 5902	PowerPlex® 21- STRMix™ v2.8					
	11,14,16,17.3	18,23,24		15,19	12,13,14	11,14,18
3e	9,11,12	13,14,17		15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2		X,Y	9,10,12,13
	22,23,25	9,12,13	7,12,13		7,9,9.3	8,9,11
	14,15,17					
B6H6QH - 5902	Investigator® 24plex- STRMix™ v2.5.11					
	11,14,16,17.3	18,23,24	11,11.3,12,14	15,19	12,13,14	
3e	9,11,12	13,14,17	12,14	15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2	16,17,18	X,Y	9,10,12,13
	22,23,25			16,18,27.2,28.2	7,9,9.3	8,9,11
	14,15,17	11				
CJWUZ4 - 5902	PowerPlex® 21- STRMix™ 2.8					
	11,14,16,17.3	18,23,24		15,19	12,13,14	11,14,18
3e	9,11,12	13,14,17		15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2		X,Y	9,10,12,13
	19,22,23,25	9,12,13	7,12,13		7,9,9.3	8,9,11
	14,15,17					
ERF8RY - 5901	PowerPlex® 21- STRMix™ v2.8					
	11,14,16,17.3	18,23,24		15,19	12,13,14	11,14,18
3e	9,11,12	13,14,17		15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2		X,Y	9,10,12,13
	22,23,25	9,12,13	7,12,13		7,9,9.3	8,9,11
	14,15,17					
G632HU - 5901	GlobalFiler™					
	11,14,16,17.3	18,23,24	11,11.3,12,14	15,19	12,13,14	
3e	9,11,12	13,14,17	12,14	15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2	16,17,18	X,Y	9,10,12,13
	22,23,25			16,18,27.2,28.2	7,9,9.3	8,9,11
	14,15,17	11			2	

TABLE 3

WebCode - Test Amplification Kits - Probabilistic Genotyping Software						
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 3e - STR Results

GRCZ6X - 5902		PowerPlex® Fusion				
3e	11,14,16,17.3	18,23,24	11,11.3,12,14	15,19	12,13,14	
	9,11,12	13,14,17	12,14	15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2	16,17,18	X,Y	9,10,12,13
	22,23,25	9,12,13	7,12,13		7,9,9.3	8,9,11
	14,15,17	11				
HDMM48 - 5901		PowerPlex® Fusion 6C- STRMix™ 2.6.3				
3e	11,14,16,17.3	18,23,24	11,11.3,12,14	15,19	12,13,14	
	9,11,12	13,14,17	12,14	15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2	16,17,18	X,Y	9,10,12,13
	22,23,25	9,12,13	7,12,13	16,18,27.2,28.2	7,9,9.3	8,9,11
	14,15,17	11	16	18		
J99CLX - 5901		PowerPlex® PP21- STRMix™ v2.8.0				
3e	11,14,16,17.3	18,23,24		15,19	12,13,14	11,14,18
	9,11,12	13,14,17		15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2		X,Y	9,10,12,13
	22,23,25	9,12,13	7,12,13		7,9,9.3	8,9,11
	14,15,17					
JGHZZV - 5901		GlobalFiler™ - STRMix™ v2.7				
3e	11,13,14,15,16,17.3	17,18,22,23,24	10,11,11.3,12,14	14,15,18,19	11,12,13,14	
	8,9,10,11,12	12,13,14,16,17	11,12,13,14		10,11,12,13	9,10,11,12
	15,16,17,18	12,13,14	29,30,31,31.2,32.2	15,16,17,18,19	X,Y	9,10,12,13
	21,22,23,24,25			15,16,17,18,26.2, 7.2,28.2	7,9,9.3	8,9,11
	13,14,15,17	11			2	
JQ7NY6 - 5901		Identifiler® Plus - EuroForMix				
3e		18,23,24		15,19	12,13,14	
	9,11,12	13,14,17			11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2		X,Y	9,10,12,13
	22,23,25				7,9,9.3	8,9,11
	14,15,17					
JX9X7X - 5901		PowerPlex® 21- STRMix™				
3e	11,14,16,17.3	18,23,24		15,19	12,13,14	11,14,18
	9,11,12	13,14,17		15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2		X,Y	9,10,12,13
	22,23,25	9,12,13	7,12,13		7,9,9.3	8,9,11
	14,15,17					
JXTGB4 - 5902		PowerPlex® Fusion- STRMix™				
3e	11,14,16,17.3	18,23,24	11,11.3,12,14	15,19	12,13,14	
	9,11,12	13,14,17	12,14	15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2	16,17,18	X,Y	9,10,12,13
	22,23,25	9,12,13	7,12,13		7,9,9.3	8,9,11
	14,15,17	11				

TABLE 3

WebCode - Test Amplification Kits - Probabilistic Genotyping Software						
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 3e - STR Results

K8XREJ - 5901		Identifiler® Plus, PowerPlex® Fusion 6C- STRMix™				
	11,14,16,17.3	18,23,24	11,11.3,12,14	15,19	12,13,14	
3e	9,11,12	13,14,17	12,14	15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2	16,17,18	X,Y	9,10,12,13
	22,23,25	9,12,13	7,12,13	16,18,27.2,28.2	7,9,9.3	8,9,11
	14,15,17	11	16	18		
KVY9FT - 5902		PowerPlex® Fusion 5C				
	11,14,16,17.3	18,23,24	11,11.3,12,14	15,19	12,13,14	
3e	9,11,12	13,14,17	12,14	15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2	16,17,18	X,Y	9,10,12,13
	22,23,25	9,12,13	7,12,13		7,9,9.3	8,9,11
	14,15,17	11				
NMAQDU - 5901		PowerPlex® 21- STRMix™ 2.8				
	11,14,16,17.3	18,23,24		15,19	12,13,14	11,14,18
3e	9,11,12	13,14,17		15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2		X,Y	9,10,12,13
	22,23,25	9,12,13	7,12,13		7,9,9.3	8,9,11
	14,15,17					
NN6EU4 - 5902		Investigator® 24plex- STRMix™ v2.5.11				
	11,14,16,17.3	18,23,24	11,11.3,12,14	15,19	12,13,14	
3e	9,11,12	13,14,17	12,14	15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2	16,17,18	X,Y	9,10,12,13
	22,23,25			16,18,27.2,28.2	7,9,9.3	8,9,11
	14,15,17	11				
P8FLKQ - 5902		PowerPlex® 21- STRMix™				
	11,14,16,17.3	18,23,24		15,19	12,13,14	11,14,18
3e	9,11,12	13,14,17		15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2		X,X,Y	9,10,12,13
	22,23,25	9,12,13	7,12,13		7,9,9.3	8,9,11
	14,15,17					
QCP2RU - 5902		PowerPlex® Fusion				
	11,14,16,17.3	18,23,24	11,11.3,12,14	15,19	12,13,14	
3e	9,11,12	13,14,17	12,14	15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2	16,17,18	X,Y	9,10,12,13
	22,23,25	9,12,13	7,12,13		7,9,9.3	8,9,11
	14,15,17	11				
QJA3AR - 5901		PowerPlex® 21- STRMix™ 2.8				
	11,14,16,17.3	18,23,24		15,19	12,13,14	11,14,18
3e	9,11,12	13,14,17		15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2		X,Y	9,10,12,13
	22,23,25	9,12,13	7,12,13		7,9,9.3	8,9,11
	14,15,17					

TABLE 3

WebCode - Test Amplification Kits - Probabilistic Genotyping Software						
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 3e - STR Results

RAEJ9N - 5901	Identifiler® Plus, PowerPlex® Y23- STRMix™ 2.7.0					
		18,23,24		15,19	12,13,14	
3e	9,11,12	13,14,17			11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2		X,Y	9,10,12,13
	22,23,25				7,9,9.3	8,9,11
	14,15,17					
T46M3T - 5902	PowerPlex® Fusion 5c- STRMix™					
	11,14,16,17.3	18,23,24	11,11.3,12,14	15,19	12,13,14	
3e	9,11,12	13,14,17	12,14	15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2	16,17,18	X,Y	9,10,12,13
	22,23,25	9,12,13	7,12,13		7,9,9.3	8,9,11
	14,15,17	11				
THNB9G - 5902	GlobalFiler™ - STRMix™					
	11,14,16,17.3	18,23,24	11,11.3,12,14	15,19	12,13,14	
3e	9,11,12	13,14,17	12,14	15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2	16,17,18	X,Y	9,10,12,13
	22,23,25			16,18,27.2,28.2	7,9,9.3	8,9,11
	14,15,17	11			2	
TRB7DR - 5902	PowerPlex® Fusion 6C- STRMix™					
	11,14,16,17.3	18,23,24	11,11.3,12,14	15,19	12,13,14	
3e	9,11,12	13,14,17	12,14	15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2	16,17,18	X,Y	9,10,12,13
	22,23,25	9,12,13	7,12,13	16,18,27.2,28.2	7,9,9.3	8,9,11
	14,15,17	11	16	18		
UHWYPN - 5902	PowerPlex® 21- STRMix™ v2.8.0					
	11,14,16,17.3	18,23,24		15,19	12,13,14	11,14,18
3e	9,11,12	13,14,17		15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2		X,Y	9,10,12,13
	22,23,25	9,12,13	7,12,13		7,9,9.3	8,9,11
	14,15,17					
UUZ3CG - 5901	GlobalFiler™					
	11,14,16,17.3	18,23,24	11,11.3,12,14	15,19	12,13,14	
3e	9,11,12	13,14,17	12,14	15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2	16,17,18	X,Y	9,10,12,13
	22,23,25			16,18,27.2,28.2	7,9,9.3	8,9,11
	14,15,17	11			2	
YAB63G - 5902	Identifiler® Plus					
		18,23,24		15,19	12,13,14	
3e	9,11,12	13,14,17			11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2		X,Y	9,10,12,13
	22,23,25				7,9,9.3	8,9,11
	14,15,17					

TABLE 3

WebCode - Test Amplification Kits - Probabilistic Genotyping Software						
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 3e - STR Results

YDBGXG - 5901	Identifiler® Plus- STRMix™ 2.7.0					
		18,23,24		15,19	12,13,14	
3e	9,11,12	13,14,17			11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2		X,Y	9,10,12,13
	22,23,25				7,9,9.3	8,9,11
	14,15,17					
Z8KMYL - 5902	PowerPlex® Fusion					
	11,14,16,17.3	18,23,24	11,11.3,12,14	15,19	12,13,14	
3e	9,11,12	13,14,17	12,14	15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2	16,17,18	X,Y	9,10,12,13
	22,23,25	9,12,13	7,12,13		7,9,9.3	8,9,11
	14,15,17	11				
ZTYATR - 5902	Investigator® 24plex- STRMix™					
	11,14,16,17.3	18,23,24	11,11.3,12,14	15,19	12,13,14	
3e	9,11,12	13,14,17	12,14	15,19.3,20	11,12,13	9,10,11,12
	16,17,18	13,14	29,31,32.2	15,16,17,18	X,Y	9,10,12,13
	22,23,25			16,18,27.2,28.2	7,9,9.3	8,9,11
	14,15,17	11				

TABLE 3

WebCode - Test Amplification Kits - Probabilistic Genotyping Software						
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 3sp - STR Results

2DPRLB - 5901		GlobalFiler™				
3sp	11,17.3	24,24	12,14	15,19	12,12	
	9,12	14,14	14,14	19.3,20	11,12	10,12
	17,18	13,13	29,32.2	16,17	X,Y	10,13
	22,23			16,27.2,28.2	7,9.3	8,11
	15,17	11			2	
2K2ZQM - 5902		PowerPlex® ESX 16 Fast - DNAxs				
3sp	11,17.3	24	12,14	15,19		
	9,12	14	14	19.3,20		10,12
	17,18	13	29,32.2	16,17	X,Y	
	22,23				7,9.3	
	15,17					
2MZT8B - 5901		GlobalFiler™				
3sp	11,17.3	24,24	12,14	15,19	12,12	
	9,12	14,14	14,14	19.3,20	11,12	10,12
	17,18	13,13	29,32.2	16,17	X,Y	10,13
	22,23			16,27.2	7,9.3	8,11
	15,17	11			2	
362K2C - 5902		PowerPlex® 21- STRMix™ 2.7				
3sp	11,17.3	24,24		15,19	12,12	11,14
	9,12	14,14		19.3,20	11,12	10,12
	17,18	13,14	29,32.2		X,Y	10,13
	22,23	12,13	7,12		7,9.3	8,11
	15,17					
38V7WP - 5902		Investigator® 24plex- STRMix™ 2.5.11				
3sp	11,17.3	24	12,14	15,19	12	
	9,12	14	14	19.3,20	11,12	10,12
	17,18	13	29,32.2	16,17	X,Y	10,13
	22,23			16,27.2	7,9.3	8,11
	15,17	11				
3HRA2H - 5902		PowerPlex® Fusion- STRMix™ 2.6.3				
3sp	11,17.3	24	12,14	15,19	12	
	9,12	14	14	19.3,20	11,12	10,12
	17,18	13	29,32.2	16,17	X,Y	10,13
	22,23	12,13	7,12		7,9.3	8,11
	15,17	11				
3XRZGZ - 5901		Investigator® 24plex QS - Euro For Mix				
3sp	11,17.3	(18),24	12,14	15,19	12,12	
	9,12	14,14	14,14	19.3,20	11,12	10,12
	17,18	13,13	29,32.2	16,17	X,Y	10,13
	22,23			16,27.2	7,9.3	8,11
	15,17	11				

TABLE 3

WebCode - Test Amplification Kits - Probabilistic Genotyping Software						
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 3sp - STR Results

4VGCYZ - 5901	Identifiler® Plus, PowerPlex® Fusion 6C- STRMix™					
	11,17.3	24	12,14	15,19	12	
3sp	9,12	14	14	19,3,20	11,12	10,12
	17,18	13	29,32.2	16,17	X,Y	10,13
	22,23	12,13	7,12	16,27.2	7,9.3	8,11
	15,17	11	16	18		
6RADLM - 5901	PowerPlex® Fusion 6C- STRMix™ 2.6.3					
	11,17.3	24	12,14	15,19	12,13,14	
3sp	9,12	14,17	14	19,3,20	11,12,13	10,12
	17,18	13	29,32.2	16,17	X,Y	10,13
	22,23	9,12,13	7,12,13	16,18,27.2	7,9,9.3	8,11
	15,17	11	16	18		
6RRGV9 - 5901	GlobalFiler™ - STRMix™					
	11,17.3	24	12,14	15,19	12	
3sp	9,12	14	14	19,3,20	11,12	10,12
	17,18	13	29,32.2	16,17	X,Y	10,13
	22,23			16,27.2	7,9.3	8,11
	15,17	11			2	
74PMLW - 5901	GlobalFiler™ - STRMix™ 2.7.0					
	11,17.3	24,24	12,14	15,19	12,12	
3sp	9,12	14,14	14,14	19,3,20	11,12	10,12
	17,18	13,13	29,32.2	16,17	X,Y	10,13
	22,23			16,27.2	7,9.3	8,11
	15,17	11			2	
7LHKND - 5902	PowerPlex® Fusion					
	11,17.3	24	12,14	15,19	12	
3sp	9,12	14	14	19,3,20	11,12	10,12
	17,18	13	29,32.2	16,17	X,Y	10,13
	22,23	12,13	7,12		7,9.3	8,11
	15,17	11				
82D8RW - 5901	GlobalFiler™					
	11,17.3	24,24	12,14	15,19	12,12	
3sp	9,12	14,14	14,14	19,3,20	11,12	10,12
	17,18	13,13	29,32.2	16,17	X,Y	10,13
	22,23			16,27.2	7,9.3	8,11
	15,17	11			2	
82TQDH - 5901	GlobalFiler™ - EuroForMix					
	11,17.3	24,24	12,14	15,19	12,12	
3sp	9,12	14,14	14,14	19,3,20	11,12	10,12
	17,18	13,13	29,32.2	16,17	X,Y	10,13
	22,23			16,27.2	7,9.3	8,11
	15,17	11			2	

TABLE 3

WebCode - Test Amplification Kits - Probabilistic Genotyping Software						
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 3sp - STR Results

83Z7LA - 5901	PowerPlex® 21- STRMix™ 2.8					
	11,17.3	24		15,19	12,12	11,14
3sp	9,12	14		19,3,20	11,12	10,12
	17,18	13,13	29,32.2		X,Y	10,13
	22,23	12,13	7,12		7,9.3	8,11
	15,17					
8PEQHA - 5902	PowerPlex® 21- STRMix™ v 2.8					
	11,17.3	24,24		15,19	12,12	11,14
3sp	9,12	14,14		19,3,20	11,12	10,12
	17,18	13,13	29,32.2		X,Y	10,13
	22,23	12,13	7,12		7,9.3	8,11
	15,17					
8WUCN8 - 5902	PowerPlex® 21- STRMix™ v2.8					
	11,17.3	24,24		15,19	12,12	11,14
3sp	9,12	14,14		19,3,20	11,12	10,12
	17,18	13,13	29,32.2		X,Y	10,13
	22,23	12,13	7,12		7,9.3	8,11
	15,17					
B6H6QH - 5902	Investigator® 24plex- STRMix™ v2.5.11					
	11,17.3	24	12,14	15,19	12	
3sp	9,12	14	14	19,3,20	11,12	10,12
	17,18	13	29,32.2	16,17	X,Y	10,13
	22,23			16,27.2	7,9.3	8,11
	15,17	11				
CJWUZ4 - 5902	PowerPlex® 21- STRMix™ 2.8					
	11,17.3	24,24		15,19	12,12	11,14
3sp	9,12	14,14		19,3,20	11,12	10,12
	17,18	13,13	29,32.2		X,Y	10,13
	22,23	12,13	7,12		7,9.3	8,11
	15,17					
ERF8RY - 5901	PowerPlex® 21- STRMix™ v2.8					
	11,17.3	24,24		15,19	12,12	11,14
3sp	9,12	14,14		19,3,20	11,12	10,12
	17,18	13,13	29,32.2		X,Y	10,13
	22,23	12,13	7,12		7,9.3	8,11
	15,17					
G632HU - 5901	GlobalFiler™					
	11,17.3	24,24	12,14	15,19	12,12	
3sp	9,12	14,14	14,14	19,3,20	11,12	10,12
	17,18	13,13	29,32.2	16,17	X,Y	10,13
	22,23			16,27.2	7,9.3	8,11
	15,17	11			2	



TABLE 3

WebCode - Test Amplification Kits - Probabilistic Genotyping Software						
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 3sp - STR Results

GRCZ6X - 5902		PowerPlex® Fusion				
3sp	11,17.3	24	12,14	15,19	12	
	9,12	14	14	19.3,20	11,12	10,12
	17,18	13	29,32.2	16,17	X,Y	10,13
	22,23	12,13	7,12		7,9.3	8,11
	15,17	11				
HDMM48 - 5901		PowerPlex® Fusion 6C- STRMix™ 2.6.3				
3sp	11,17.3	24	12,14	15,19	12	
	9,12	14	14	19.3,20	11,12	10,12
	17,18	13	29,32.2	16,17	X,Y	10,13
	22,23	12,13	7,12	16,27.2	7,9.3	8,11
	15,17	11	16	18		
J99CLX - 5901		PowerPlex® PP21- STRMix™ v2.8.0				
3sp	11,17.3	(18),24		15,19	12,12	11,14
	9,12	14		19.3,20	11,12	10,12
	17,18	13	29,32.2		X,Y	10,13
	22,23	12,13	7,12		7,9.3	8,11
	15,17					
JGHZZV - 5901		GlobalFiler™ - STRMix™ v2.7				
3sp	10,11,16.3,17.3	23,24	11,12,13,14	14,15,18,19	11,12	
	8,9,11,12	13,14	13,14	19,19.3,20	10,11,12	9,10,11,12
	16,17,18	12,13	28,29,31.2,32.2	15,16,17,18	X,Y	9,10,12,13
	21,22,23			15,16,26.2,27,27.2	7,9.3	8,11
	14,15,16,17	10,11			2	
JQ7NY6 - 5901		Identifiler® Plus - EuroForMix				
3sp		24,24		15,19	12,12	
	9,12	14,14			11,12	10,12
	17,18	13,13	29,32.2		X,Y	10,13
	22,23				7,9.3	8,11
	15,17					
JX9X7X - 5901		PowerPlex® 21- STRMix™				
3sp	11,17.3	24,24		15,19	12,12	11,14
	9,12	14,14		19.3,20	11,12	10,12
	17,18	13,13	29,32.2		X,Y	10,13
	22,23	12,13	7,12		7,9.3	8,11
	15,17					
JXTGB4 - 5902		PowerPlex® Fusion- STRMix™				
3sp	11,17.3	24	12,14	15,19	12	
	9,12	14	14	19.3,20	11,12	10,12
	17,18	13	29,32.2	16,17	X,Y	10,13
	22,23	12,13	7,12		7,9.3	8,11
	15,17	11				

TABLE 3

WebCode - Test Amplification Kits - Probabilistic Genotyping Software						
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 3sp - STR Results

K8XREJ - 5901		Identifiler® Plus, PowerPlex® Fusion 6C- STRMix™				
3sp	11,17.3	24	12,14	15,19	12	
	9,12	14	14	19,3,20	11,12	10,12
	17,18	13	29,32.2	16,17	X,Y	10,13
	22,23	12,13	7,12	16,27.2	7,9.3	8,11
	15,17	11	16	18		
KVY9FT - 5902		PowerPlex® Fusion 5C				
3sp	11,17.3	24	12,14	15,19	12	
	9,12	14	14	19,3,20	11,12	10,12
	17,18	13	29,32.2	16,17	X,Y	10,13
	22,23	12,13	7,12		7,9.3	8,11
	15,17	11				
NMAQDU - 5901		PowerPlex® 21- STRMix™ 2.8				
3sp	11,17.3	24,24		15,19	12,12	11,14
	9,12	14,14		19,3,20	11,12	10,12
	17,18	13,13	29,32.2		X,Y	10,13
	22,23	12,13	7,12		7,9.3	8,11
	15,17					
NN6EU4 - 5902		Investigator® 24plex- STRMix™ v2.5.11				
3sp	11,17.3	24	12,14	15,19	12	
	9,12	14	14	19,3,20	11,12	10,12
	17,18	13	29,32.2	16,17	X,Y	10,13
	22,23			16,27.2	7,9.3	8,11
	15,17	11				
P8FLKQ - 5902		PowerPlex® 21- STRMix™				
3sp	11,17.3	24,24		15,19	12,12	11,14
	9,12	14,14		19,3,20	11,12	10,12
	17,18	13,13	29,32.2		X,Y	10,13
	22,23	12,13	7,12		7,9.3	8,11
	15,17					
QCP2RU - 5902		PowerPlex® Fusion				
3sp	11,17.3	24	12,14	15,19	12	
	9,12	14	14	19,3,20	11,12	10,12
	17,18	13	29,32.2	16,17	X,Y	10,13
	22,23	12,13	7,12		7,9.3	8,11
	15,17	11				
QJA3AR - 5901		PowerPlex® 21- STRMix™ 2.8				
3sp	11,17.3	24,24		15,19	12,12	11,14
	9,12	14,14		19,3,20	11,12	10,12
	17,18	13,13	29,32.2		X,Y	10,13
	22,23	12,13	7,12		7,9.3	8,11
	15,17					

TABLE 3

WebCode - Test Amplification Kits - Probabilistic Genotyping Software						
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 3sp - STR Results

RAEJ9N - 5901	Identifiler® Plus, PowerPlex® Y23- STRMix™ 2.7.0					
		24,24		15,19	12,12	
3sp	9,12	14,14			11,12	10,12
	17,18	13,13	29,32.2		X,Y	10,13
	22,23				7,9.3	8,11
	15,17					
THNB9G - 5902	GlobalFiler™ - STRMix™					
	11,17.3	24	12,14	15,19	12	
3sp	9,12	14	14	19.3,20	11,12	10,12
	17,18	13	29,32.2	16,17	X,Y	10,13
	22,23	12,13	7,12		7,9.3	8,11
	15,17	11				
TRB7DR - 5902	PowerPlex® Fusion 6C- STRMix™					
	11,17.3	24	12,14	15,19	12	
3sp	9,12	14	14	19.3,20	11,12	10,12
	17,18	13	29,32.2	16,17	X,Y	10,13
	22,23	12,13	7,12	16,27.2	7,9.3	8,11
	15,17	11	16	18		
UHWYPN - 5902	PowerPlex® 21- STRMix™ v2.8.0					
	11,17.3	24,24		15,19	12,12	11,14
3sp	9,12	14,14		15,19.3,20	11,12	10,12
	17,18	13,13	29,32.2		X,Y	10,13
	22,23	12,13	7,12		7,9.3	8,11
	15,17					
UUZ3CG - 5901	GlobalFiler™					
	11,17.3	24,24	12,14	15,19	12,12	
3sp	9,12	14,14	14,14	19.3,20	11,12	10,12
	17,18	13,13	29,32.2	16,17	X,Y	10,13
	22,23			16,27.2	7,9.3	8,11
	15,17	11			2	
YAB63G - 5902	Identifiler® Plus					
		24,24		15,19	12,12	
3sp	9,12	14			11,12	10,12
	17,18	13,13	29,32.2		X,Y	10,13
	22,23				7,9.3	8,11
	15,17					

TABLE 3

WebCode - Test Amplification Kits - Probabilistic Genotyping Software						
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 3sp - STR Results

YDBGXG - 5901	Identifiler® Plus- STRMix™ 2.7.0					
		24,24		15,19	12,12	
3sp	9,12	14,14			11,12	10,12
	17,18	13,13	29,32.2		X,Y	10,13
	22,23				7,9.3	8,11
	15,17					
Z8KMYL - 5902	PowerPlex® Fusion					
	11,17.3	24	12,14	15,19	12	
3sp	9,12	14	14	19.3,20	11,12	10,12
	17,18	13	29,32.2	16,17	X,Y	10,13
	22,23	12,13	7,12		7,9.3	8,11
	15,17	11				
ZTYATR - 5902	Investigator® 24plex- STRMix™					
	11,17.3	24,24	12,14	15,19	12,12	
3sp	9,12	14,14	14,14	19.3,20	11,12	10,12
	17,18	13,13	29,32.2	16,17	X,Y	10,13
	22,23			16,27.2	7,9.3	8,11
	15,17	11				

TABLE 3

WebCode - Test Amplification Kits - Probabilistic Genotyping Software						
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 4 - STR Results

2DPRLB - 5901		GlobalFiler™ - STRMix™ 2.7.0				
4	11,14,15,16	18,19,21,22,23	11,11.3,14	14,15,19	11,13,14	
	9,10,11,12	12,13,14,15,17	10,12,14,15	15,17,19,19.1,20,24	12,13	8,9,10,11
	15,16,18,22.2	10,13,14	28,29,31,32.2	11,15,16,17,18	X,Y	9,10,12
	20,21,22,23,25			18,19,20,28.2	7,8,9,9.3	6,8,9,11
	14,15,16,17	11			2	
2K2ZQM - 5902		PowerPlex® ESX 16 Fast - DNAxs				
4	11,14,15,16	18,19,21,22,23	11,11.3,14	14,15,19		
		12,13,14,15,17	10,12,14,15	15,17,19,19.1,20,24		8,9,10,11
	15,16,17,18,20.2,2.2	10,13,14	28,29,31,32.2	11,15,16,17,18	X,Y	
	20,21,22,23,25				7,8,9,9.3	
	14,16,17					
2MZT8B - 5901		GlobalFiler™ - STRMix™ v2.7.0				
4	11,14,15	18,19,21,22	11,11.3,14	14,15	11,13	
	10,11,12	12,13,14,15,17	10,14,15	17,19,19.1,24	12,13	8,10,11
	15,22.2	10,13,14	28,29,31,32.2	11,15,16,17	X,Y	10,12
	20,21,22,23,25			18,19,20	7,8,9,9.3	6,8,11
	16,17	11			2	
362K2C - 5902		PowerPlex® 21- STRMix™ 2.7				
4	11,14,15	19,21,22		14,15,19	11,13	11,12,13,24
	9,10,11,12	12,14,15		17,19.1,20,24	12,13	8,10,11
	15,18,22.2	10,13,14	28,29,31,32.2		X,Y	9,10,12
	20,21,22,23	2.2,9,12	7,8,9,14		7,8,9,9.3	6,8,11
	16,17					
38V7WP - 5902		Investigator® 24plex- STRMix™ 2.5.11				
4	11,14,15	19,21,22	11,11.3,14	14,15	11,13	
	9,10,12	12,14,15,17	10,12,15	15,17,19,19.1,24	12	8,10,11
	15,18	10,13,14	28,29,31,32.2	11,15,17	X,Y	9,10,12
	20,21,22,23,25			18,20,28.2	7,8,9,9.3	6,8,9,11
	14,15,16,17	11				
3HRA2H - 5902		PowerPlex® Fusion- STRMix™ 2.6.3				
4	11,14,15,16	18,19,21,22,23	11,11.3,14	14,15,19	11,13,14	
	9,10,12	12,13,14,15,17	10,12,14,15	15,17,19,19.1,20,24	12,13	8,9,10,11
	15,16,18,22.2	10,13,14	28,29,31,32.2	11,15,17,18	X,Y	9,10,12
	20,21,22,23,25	2.2,9,12	7,8,9,13,14		7,8,9,9.3	6,8,9,11
	14,15,16,17	11				
3XRZGZ - 5901		Investigator® 24plex QS - Euro For Mix				
4	11,14,15,(16)	(18),19,21,22,(23)	11,(11.3),14	(14),15,(19)	11,13,(14)	
	(9),10,(11,12)	12,(13),14,15,(17)	10,(12,14),15	(15),17,19,19.1,(20),24	12,13	8,(9),10,11
	15,(16,18),22.2	10,13,14	(28),29,31,(32.2)	11,15,(16),17,(18)	X,Y	(9),10,12
	20,21,22,23,(25)			18,19,20,(28.2)	(7),8,9,9.3	6,8,(9),11
	(14,15),16,17	11				

TABLE 3

WebCode - Test Amplification Kits - Probabilistic Genotyping Software						
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 4 - STR Results

4VGCYZ - 5901	Identifiler® Plus, PowerPlex® Fusion 6C- STRMix™					
	11,14,15,16	18,19,21,22,23	11,11.3,14	14,15,19	11,13,14	
4	9,10,11,12	12,13,14,15,17	10,12,14,15	15,17,19,19.1,20,24	12,13	8,9,10,11
	15,16,18,22.2	10,13,14	28,29,31,32.2	11,15,16,17,18	X,Y	9,10,12
	20,21,22,23,25	2.2,9,12	7,8,9,13,14	18,19,20,28.2	7,8,9,9.3	6,8,9,11
	14,16,17	11	17	19,20		
6P8FA7 - 5901	PowerPlex® ESI-17 - LiRa v3.0					
	11,14,15,16	18,19,21,22,23	11,11.3,14	14,15,19		
4		12,13,14,15,17	10,12,14,15	15,17,19,19.1,20,24		8,9,10,11
	15,16,18,22.2	10,13,14	28,29,31,32.2	11,15,16,17,18	X,Y	
	20,21,22,23,24,25			18,19,20,28.2	7,8,9,9.3	
	14,15,16,17					
6RADLM - 5901	PowerPlex® Fusion 6C- STRMix™ 2.6.3					
	11,14,15,16	18,19,21,22,23	11,11.3,14	14,15,19	11,13,14	
4	9,10,11,12	12,13,14,15,17	10,12,14,15	15,17,19,19.1,20,24	12,13	8,9,10,11
	15,16,18,22.2	10,13,14	28,29,31,32.2	11,15,16,17,18	X,Y	9,10,12
	20,21,22,23,25	2.2,9,12	7,8,9,13,14	18,19,20,28.2	7,8,9,9.3	6,8,9,11
	14,15,16,17	11	17	19,20		
6RRGV9 - 5901	GlobalFiler™ - STRMix™					
	11,14,15	18,19,21,22,23	11,11.3,14	14,15,19	11,13,14	
4	10,11,12	12,13,14,15,17	10,12,14,15	15,17,19,19.1,20,24	12,13	8,9,10,11
	15,16,18,22.2	10,13,14	28,29,31,32.2	11,15,16,17,18	X,Y	9,10,12
	20,21,22,23,25			18,19,20,28.2	7,8,9,9.3	6,8,9,11
	14,15,16,17	11			2	
74PMLW - 5901	GlobalFiler™ - STRMix™ 2.7.0					
	11,14,15,16	18,19,21,22,23	11,11.3,14	14,15,19	11,13,14	
4	10,11,12	12,13,14,15,17	10,12,14,15	15,17,19,19.1,20,24	12,13	8,9,10,11
	15,16,18,22.2	10,13,14	28,29,31,32.2	11,15,16,17,18	X,Y	9,10,12
	20,21,22,23,25			18,19,20,28.2	7,8,9,9.3	6,8,11
	14,15,16,17	11			2	
7LHKND - 5902	PowerPlex® Fusion- STRMix™					
	11,14,15	18,19,21,22,23	11,11.3,14	14,15,19	11,13	
4	10,12	12,13,14,15,17	10,14,15	15,17,19,19.1,20,24	12,13	8,9,10,11
	15,18,22.2	10,13,14	28,29,31,32.2	11,15,16,17,18	X,Y	9,10,12
	20,21,22,23	2.2,9,12	7,8,9,13,14		7,8,9,9.3	6,8,9,11
	14,16,17	11				
82D8RW - 5901	GlobalFiler™ - STRMix™ v 2.7					
	11,14,15,16	18,19,21,22,23	11,14	14,15,19	11,13,14	
4	9,10,11,12	12,13,14,15,17	10,15	15,17,19,19.1,20,24	12,13	8,9,10,11
	15,16,18,22.2	10,13,14	28,29,31,32.2	11,15,16,17,18	X,Y	9,10,12
	20,21,22,23,25			18,19,20,28.2	7,8,9,9.3	6,8,9,11
	14,15,16,17	11			2	

TABLE 3

WebCode - Test Amplification Kits - Probablistic Genotyping Software						
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 4 - STR Results

82TQDH - 5901	GlobalFiler™ - EuroForMix					
	11,14,15,16	18,19,21,22	11,11.3,14	14,15	11,13	
4	10,11,12	12,13,14,15,17	10,12,14,15	15,17,19,19.1,24	12,13	8,9,10,11
	15,22.2	10,13,14	28,29,30,31,32.2	11,15,16,17,18	X,Y	10,12
	20,21,22,23			18,19,20	8,9,9.3	6,8,11
	14,15,16,17	11			2	
83Z7LA - 5901	PowerPlex® 21- STRMix™ 2.8					
	11,14,15,16	18,19,21,22,23		14,15,19	11,13,14	11,12,13,18,24
4	9,10,11,12	12,13,14,15,17		15,17,19,19.1,20,24	12,13	8,9,10,11
	15,16,18,22.2	10,13,14	28,29,31,32.2		X,Y	9,10,12
	20,21,22,23,25	2.2,9,12	7,8,9,13,14		7,8,9,9.3	6,8,9,11
	14,15,16,17					
8PEQHA - 5902	PowerPlex® 21- STRMix™ v 2.8					
	11,14,15,16	18,19,21,22,23		14,15,19	11,13,14	11,12,13,18,24
4	9,10,11,12	12,13,14,15,17		15,17,19,19.1,20,24	12,13	8,9,10,11
	15,16,18,22.2	10,13,14	28,29,31,32.2		X,Y	9,10,12
	20,21,22,23,25	2.2,9,12	7,8,9,13,14		7,8,9,9.3	6,8,9,11
	14,15,16,17					
8WUCN8 - 5902	PowerPlex® 21- STRMix™ v2.8					
	11,14,15,16	18,19,21,22,23		14,15,19	11,13,14	11,12,13,18,24
4	9,10,11,12	12,13,14,15,17		15,17,19,19.1,20,24	12,13	8,9,10,11
	15,16,18,22.2	10,13,14	28,29,31,32.2		X,Y	9,10,12
	20,21,22,23,25	2.2,9,12	7,8,9,13,14		7,8,9,9.3	6,8,9,11
	14,15,16,17					
B6H6QH - 5902	Investigator® 24plex- STRMix™ v2.5.11					
	11,14,15,16	18,19,21,22,23	11,11.3,14	14,15,19	11,13	
4	9,10,12	12,14,15,17	10,12,15	15,17,19,19.1,20,24	12	10,11
	15,18,22.2	10,13,14	28,29,31,32.2	11,15,16,17	X,Y	9,10,12
	20,21,22,23,25			18,19,20,28.2	7,8,9,9.3	6,8,9,11
	14,15,16,17	11				
CJWUZ4 - 5902	PowerPlex® 21- STRMix™ 2.8					
	11,14,15,16	18,19,21,22,23		14,15,19	11,13,14	11,12,13,18,24
4	9,10,11,12	12,13,14,15,17		15,17,19,19.1,20,24	12,13	8,9,10,11
	15,16,18,22.2	10,13,14	28,29,31,32.2		X,Y	9,10,12
	20,21,22,23,25	2.2,9,12	7,8,9,13,14		7,8,9,9.3	6,8,9,11
	14,16,17					
ERF8RY - 5901	PowerPlex® 21- STRMix™ v2.8					
	11,14,15,16	18,19,21,22,23		14,15,19	11,13,14	11,12,13,18,24
4	9,10,11,12	12,13,14,15,17			12,13	8,9,10,11
	15,16,18,22.2	10,13,14	28,29,31,32.2		X,Y	9,10,12
	20,21,22,23,25	2.2,9,12	7,8,9,13,14		7,8,9,9.3	6,8,9,11
	14,15,16,17					

TABLE 3

WebCode - Test Amplification Kits - Probabilistic Genotyping Software						
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 4 - STR Results

G632HU - 5901		GlobalFiler™ - STRMix™ 2.7				
4	11,14,15,16	18,19,21,22,23	11,11.3,14	14,15,19	11,13,14	
	9,10,11,12	12,13,14,15,17	10,12,14,15	15,17,19,19.1,24	12,13	8,9,10,11
	15,16,18,22.2	10,13,14	28,29,31,32.2	11,15,16,17,18	X,Y	9,10,12
	20,21,22,23,25			18,19,20,28.2	7,8,9,9.3	6,8,9,11
	14,15,16,17	11			2	
GRCZ6X - 5902		PowerPlex® Fusion- TrueAllele®				
4	11,14,15,16	18,19,21,22,23	11,14	14,15,19	11,13,14	
	9,10,12	12,13,14,15,17	10,12,15	15,17,19.1,20,24	12,13	8,10,11
	15,16,18,22.2	10,13,14	28,29,31,32.2	11,15,16,17,18	X,Y	9,10,12
	20,21,22,23,25	2.2,9,12	7,8,9,13,14		7,8,9,9.3	6,8,9,11
	14,15,16,17	11				
HDMM48 - 5901		PowerPlex® Fusion 6C- STRMix™ 2.6.3				
4	11,14,15,16	18,19,21,22,23	11,11.3,14	14,15,19	11,13,14	
	9,10,11,12	12,13,14,15,17	10,12,14,15	15,17,19,19.1,20,24	12,13	8,9,10,11
	15,16,18,22.2	10,13,14	28,29,31,32.2	11,15,16,17,18	X,Y	9,10,12
	20,21,22,23,25	2.2,9,12	7,8,9,13,14	18,19,20,28.2	7,8,9,9.3	6,8,9,11
	14,15,16,17	11	17	19,20		
JGHZZV - 5901		GlobalFiler™ - STRMix™ v2.7				
4	11,13,14,15,16	18,19,21,22,23	11,14	14,15,19	11,13	
	9,10,11,12	12,13,14,15,17	10,14,15	17,19,19.1,24	12,13	8,9,10,11
	14,15,16,18,22.2	10,12,13,14	28,29,31	11,15,16,17,18	X,Y	10,11,12
	20,21,22,23			17,18,19,20,28.2	7,8,9,9.3	6,8,11
	15,16,17	11			2	
JQ7NY6 - 5901		Identifiler® Plus - EuroForMix				
4		18,19,21,22,23		14,15,19	11,13,14	
	9,10,11,12	12,13,14,15,17			12,13	8,9,10,11
	15,16,18,22.2	10,13,14	28,29,31,32.2		X,Y	9,10,12
	20,21,22,23,25				7,8,9,9.3	6,8,9,11
	14,15,16,17					
JX9X7X - 5901		PowerPlex® 21- STRMix™				
4	11,14,15,16	18,19,21,22,23		14,15,19	11,13,14	11,12,13,18,24
	10,11,12	12,13,14,15,17		15,17,19.1,20,24	12,13	8,10,11
	15,16,18,22.2	10,13,14	28,29,31,32.2		X,Y	9,10,12
	20,21,22,23,25	2.2,9,12	7,8,9,13,14		8,9,9.3	6,8,9,11
	14,15,16,17					
JXTGB4 - 5902		PowerPlex® Fusion- STRMix™				
4	11,14,15,16	18,19,21,22,23	11,11.3,14	14,15,19	11,13	
	9,10,11,12	12,14,15,17	10,14,15	15,17,19.1,20,24	12,13	8,9,10,11
	15,18,22.2	10,13,14	28,29,31	11,15,16,17,18	X,Y	9,10,12
	20,21,22,23	2.2,9,12	7,8,9,13,14		7,8,9,9.3	6,8,9,11
	15,16,17	11				



TABLE 3

WebCode - Test Amplification Kits - Probabilistic Genotyping Software						
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 4 - STR Results

K8XREJ - 5901		Identifiler® Plus, PowerPlex® Fusion 6C- STRMix™				
		11,14,15,16	18,19,21,22,23	11,14	14,15,19	11,13
4		9,10,11,12	12,13,14,15,17	10,14,15	15,17,19,19.1,20,24	12,13
		15,16,18,22.2	10,13,14	28,29,31,32.2	11,15,16,17	X,Y
		20,21,22,23,25	2.2,9,12	7,8,9,13,14	18,19,20,28.2	7,8,9,9.3
		14,16,17	11	17	19,20	6,8,11
KVY9FT - 5902		PowerPlex® Fusion 5C- STRMix™				
		11,14,15,16	18,19,21,22,23	11,11.3,14	14,15,19	11,13
4		9,10,11,12	12,13,14,15,17	10,14,15	15,17,19,19.1,20,24	12,13
		15,16,18,22.2	10,13,14	28,29,31,32.2	11,15,16,17,18	X,Y
		20,21,22,23,25	2.2,9,12	7,8,9,13,14		7,8,9,9.3
		14,16,17	11			6,8,9,11
LPPCAY - 5901		Investigator ESX 17 Fast- STRMix™ V2.5.11				
		11,14,15,16	18,19,21,22,23	11,11.3,14	14,15,19	
4			12,13,14,15,17	10,12,14,15	15,17,19,19.1,20,24	8,9,10,11
		15,16,18,22.2	10,13,14	28,29,31,32.2	11,15,16,17,18	X,Y
		20,21,22,23,25			18,19,20,28.2	7,8,9,9.3
		14,15,16,17				
NMAQDU - 5901		PowerPlex® 21- STRMix™ 2.8				
		11,14,15,16	18,19,21,22,23		14,15,19	11,13,14
4		9,10,11,12	12,13,14,15,17		15,17,19.1,20,24	12,13
		15,16,18,22.2	10,13,14	28,29,31,32.2		X,Y
		20,21,22,23,25	2.2,9,12	7,8,9,13,14		7,8,9,9.3
		14,15,16,17				6,8,9,11
NN6EU4 - 5902		Investigator® 24plex- STRMix™ v2.5.11				
		11,14,15,16	18,19,21,22,23	11,11.3,14	14,15,19	11,13,14
4		9,10,12	12,13,14,15,17	10,12,14,15	15,17,19,19.1,20,24	12,13
		15,18,22.2	10,13,14	28,29,31,32.2	11,15,16,17,18	X,Y
		20,21,22,23,25			18,19,20,28.2	7,8,9,9.3
		14,15,16,17	11			6,8,9,11
P8FLKQ - 5902		PowerPlex® 21- STRMix™				
		11,14,15,16	18,19,21,22,23		14,15,19	11,13,14
4		10,11,12	12,13,14,15,17		17,19,19.1,20,24	12,13
		15,18,22.2	10,13,14	28,29,31,32.2		X,Y
		20,21,22,23,25	2.2,9,12	7,8,9,13,14		7,8,9,9.3
		14,15,16,17				6,8,9,11
QCP2RU - 5902		PowerPlex® Fusion- STRMix™				
		11,14,15,16	18,19,21,22,23	11,11.3,14	14,15,19	11,13,14
4		10,11,12	12,13,14,15,17	10,12,14,15	15,17,19.1,20,24	12,13
		15,16,18,22.2	10,13,14	28,29,31,32.2	11,15,17,18	X,Y
		20,21,22,23,25	2.2,9,12	7,8,9,13,14		7,8,9,9.3
		14,15,16,17	11			6,8,9,11

TABLE 3

WebCode - Test Amplification Kits - Probabilistic Genotyping Software						
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 4 - STR Results

QJA3AR - 5901	PowerPlex® 21- STRMix™ 2.8					
	11,14,15,16	18,19,21,22,23		14,15,19	11,13,14	11,12,13,18,24
4	9,10,11,12	12,13,14,15,17		15,17,19,19.1,20,24	12,13	8,9,10,11
	15,16,18,22.2	10,13,14	28,29,31,32.2		X,Y	9,10,12
	20,21,22,23,25	2.2,9,12	7,8,9,13,14		7,8,9,9.3	6,8,9,11
	14,16,17					
T46M3T - 5902	PowerPlex® Fusion 5c- STRMix™					
	11,14,15,16	18,19,21,22,23	11,11.3,14	14,15,19	11,13,14	
4	9,10,11,12	12,13,14,15,17	10,12,14,15	15,17,19.1,20,24	12,13	8,9,10,11
	15,18,22.2	10,13,14	28,29,31,32.2	11,15,17,18	X,Y	9,10,12
	20,21,22,23,25	2.2,9,12	7,8,9,13,14		7,8,9,9.3	6,8,9,11
	14,15,16,17	11				
THNB9G - 5902	GlobalFiler™ - STRMix™					
	11,14,15,16	18,19,21,22,23	11,11.3,14	14,15,19	11,13,14	
4	9,10,11,12	12,13,14,15,17	10,12,14,15	15,17,19,19.1,20,24	12,13	8,9,10,11
	15,16,18,22.2	10,13,14	28,29,31,32.2	11,15,16,17,18	X,Y	9,10,12
	20,21,22,23,25			18,19,20,28.2	7,8,9,9.3	6,8,9,11
	14,15,16,17	11			2	
TRB7DR - 5902	PowerPlex® Fusion 6C- STRMix™					
	11,14,15,16	18,19,21,22,23	11,11.3,14	14,15,19	11,13,14	
4	9,10,11,12	12,13,14,15,17	10,12,14,15	15,17,19,19.1,20,24	12,13	8,9,10,11
	15,16,18,22.2	10,13,14	28,29,31	11,15,16,17,18	X,Y	9,10,12
	20,21,22,23,25	2.2,9,12	7,8,9,13,14	18,19,20,28.2	7,8,9,9.3	6,8,9,11
	14,15,16,17	11	17	19,20		
UHWYPN - 5902	PowerPlex® 21- STRMix™ v2.8.0					
	11,14,15,16	18,19,21,22,23		14,15,19	11,13,14	11,12,13,18,24
4	9,10,11,12	12,13,14,15,17			12,13	8,9,10,11
	15,16,18,22.2	10,13,14	28,29,31,32.2		X,Y	9,10,12
	20,21,22,23,25	2.2,9,12	7,8,9,13,14		7,8,9,9.3	6,8,9,11
	14,16,17					
UUZ3CG - 5901	GlobalFiler™ - STRMix™ v2.7.0					
	11,14,15,16	18,19,21,22,23	11,11.3,14	14,15,19	11,13,14	
4	9,10,11,12	12,13,14,15,17	10,12,14,15	15,17,19,19.1,20,24	12,13	8,9,10,11
	15,16,18,21.2,22.2	10,13,14	28,29,31,32.2	11,15,16,17,18	X,Y	9,10,12
	20,21,22,23,25			18,19,20,28.2	7,8,9,9.3	6,8,9,11
	14,15,16,17	11			2	
Z78W9Q - 5901	NGM Detect					
	11,14,15,16	18,19,21,22,23	11,11.3,14	14,15,19		
4		12,13,14,15,17	10,12,14,15	15,17,19,19.1,20,24		8,9,10,11
	15,16,18,22.2	10,13,14	28,29,31,32.2	11,15,16,17,18	X,Y	
	20,21,22,23,25			18,19,20,28.2	7,8,9,9.3	
	14,15,16,17				2	

TABLE 3

WebCode - Test		Amplification Kits - Probabilistic Genotyping Software				
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 4 - STR Results

Z8KMYL - 5902		PowerPlex® Fusion- TrueAllele®				
	11,14,15,16	18,19,21,22,23	11,11.3,14	14,15,19	11,13,14	
4	9,10,11,12	12,13,14,15,17	10,12,14,15	15,17,19.1,20,24	12,13	8,9,10,11
	15,16,18,22.2	10,13,14	28,29,31,32.2	11,15,17,18	X,Y	9,10,12
	20,21,22,23,25	2.2,9,12	7,8,9,13,14		7,8,9,9.3	6,8,9,11
	14,15,16,17	11				
ZTYATR - 5902		Investigator® 24plex- STRMix™				
	11,13,14,15,16	18,19,20,21,22,23	10,11,11.3,14	13,14,15,19	10,11,12,13,14	
4	9,10,11,12	11,12,13,14,15,17	9,10,12,14,15	15,17,19,19.1,24	11,12,13	8,9,10,11
	14,15,16,18,21.2,2.2	10,12,13,14	27,28,29,30,31,32.2	11,14,15,16,17,18	X,Y	9,10,11,12
	20,21,22,23,25			17,18,19,20	7,8,9,9.3	6,8,9,10,11
	14,15,16,17	11				

TABLE 3

WebCode - Test		Amplification Kits - Probabilistic Genotyping Software				
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 4e - STR Results

J99CLX - 5901	PowerPlex® PP21- STRMix™ v2.8.0					
	11,14,15,16	18,19,21,22,23		14,15,19	11,13,14	11,12,13,18,24
4e	9,10,11,12	12,13,14,15,17		15,17,19.1,20,24	12,13	8,9,10,11
	15,16,18,22.2	10,13,14	28,29,31		X,Y	9,10,12
	20,21,22,23,25	2.2,9,12	7,8,9,13,14		7,8,9,9.3	6,8,9,11
	14,15,16,17					
RAEJ9N - 5901	Identifiler® Plus- STRMix™ 2.7.0					
		18,19,21,22,23		14,15,19	11,13	
4e	10,11,12	12,14,15,17			12,13	8,9,10,11
	15,18,22.2	10,13,14	28,29,31,32.2		X,Y	9,10,12
	20,21,22,23,25				7,8,9,9.3	6,8,9,11
	14,15,16,17					
YAB63G - 5902	Identifiler® Plus- STRMix™ v2.7					
		18,19,21,22,23		14,15,19	11,13,14	
4e	10,11,12	12,13,14,15,17			12,13	8,9,10,11
	15,16,18,22.2	10,13,14	28,29,31,32.2		X,Y	10,12
	20,21,22,23,25				7,8,9,9.3	6,8,9,11
	14,15,16,17					
YDBGXG - 5901	Identifiler® Plus- STRMix™ 2.7.0					
		18,19,21,22,23		14,15,19	11,13,14	
4e	10,11,12	12,13,14,15,17			12,13	8,9,10,11
	15,16,18,22.2	10,13,14	28,29,31,32.2		X,Y	10,12
	20,21,22,23,25				7,8,9,9.3	6,8,9,11
	14,16,17					

TABLE 3

WebCode - Test		Amplification Kits - Probabilistic Genotyping Software				
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 4sp - STR Results

J99CLX - 5901 PowerPlex® PP21- STRMix™ v2.8.0

4sp [Redacted]

[Redacted]

RAEJ9N - 5901 Identifiler® Plus- STRMix™ 2.7.0

4sp [Redacted]

[Redacted]

YAB63G - 5902 Identifiler® Plus- STRMix™ v2.7

4sp [Redacted]

[Redacted]

YDBGXG - 5901 Identifiler® Plus- STRMix™ 2.7.0

4sp [Redacted]

[Redacted]

# YSTR Amplification Kit(s) & Results

TABLE 4

WebCode - Test		Amplification Kit							
Item	DYF387S1	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
	DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
	DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	YGATAH4
<b>Item 2 - YSTR Results</b>									
2MZT8B - 5901	Yfiler® Plus								
2	35,37	14	11,12	13	29	24	11	13	13
	15	12	11	19	30	16	17	11	22
	40	12		17	19	21	23		12
362K2C - 5902	Yfiler® Plus								
2	35,37	14	11,12	13	29	24	11	13	13
	15	12	11	19	30	16	17	11	22
	40	12		17	19	21	23		12
4VGCYZ - 5901	Yfiler®								
2		14	11,12	13	29	24	11	13	13
		15	12	11	19	16	17		
							23		12
74PMLW - 5901	Yfiler® Plus								
2	35,37	14	11,12	13	29	24	11	13	13
	15	12	11	19	30	16	17	11	22
	40	12		17	19	21	23		12
7LHKND - 5902	Yfiler®								
2		14	11,12	13	29	24	11	13	13
		15	12	11	19	16	17		
							23		12
82TQDH - 5901	Yfiler® Plus								
2	35,37	14	11,12	13	29	24	11	13	13
	15	12	11	19	30	16	17	11	22
	40	12		17	19	21	23		12
8PEQHA - 5902	Yfiler® Plus								
2	35,37	14	11,12	13	29	24	11	13	13
	15	12	11	19	30	16	17	11	22
	40	12		17	19	21	23		12
8WUCN8 - 5902	Yfiler® Plus								
2	35,37	14	11,12	13	29	24	11	13	13
	15	12	11	19	30	16	17	11	22
	40	12		17	19	21	23		12
CJWUZ4 - 5902	Yfiler® Plus								
2	35,37	14	11,12	13	29	24	11	13	13
	15	12	11	19	30	16	17	11	22
	40	12		17	19	21	23		12
ERF8RY - 5901	Yfiler® Plus								
2	35,37	14	11,12	13	29	24	11	13	13
	15	12	11	19	30	16	17	11	22
	40	12		17	19	21	23		12
G632HU - 5901	Yfiler® Plus								
2	35,37	14	11,12	13	29	24	11	13	13
	15	12	11	19	30	16	17	11	22
	40	12		17	19	21	23		12

TABLE 4

WebCode - Test		Amplification Kit							
Item	DYF387S1	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
	DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
	DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	YGATAH4

Item 2 - YSTR Results

JQ7NY6 - 5901		Yfiler®							
2		14	11,12	13	29	24	11	13	13
	15	12	11	19		16	17		
							23		12
JX9X7X - 5901		Yfiler® Plus							
2	35,37	14	11,12	13	29	24	11	13	13
	15	12	11	19	30	16	17	11	22
	40	12		17	19	21	23		12
K8XREJ - 5901		Yfiler®							
2		14	11,12	13	29	24	11	13	13
	15	12	11	19		16	17		
							23		12
QCP2RU - 5902		Yfiler®							
2		14	11,12	13	29	24	11	13	13
	15	12	11	19		16	17		
							23		12
QJA3AR - 5901		Yfiler® Plus							
2	35,37	14	11,12	13	29	24	11	13	13
	15	12	11	19	30	16	17	11	22
	40	12		17	19	21	23		12
RAEJ9N - 5901		PowerPlex® Y 23							
2		14	11,12	13	29	24	11	13	13
	15	12	11	19		16	17		22
		12	12	17	19		23	9	12
YAB63G - 5902		PowerPlex® Y 23							
2		14	11,12	13	29	24	11	13	13
	15	12	11	19		16	17		22
		12	12	17	19		23	9	12
YDBGXG - 5901		PowerPlex® Y 23							
2		14	11,12	13	29	24	11	13	13
	15	12	11	19		16	17		22
		12	12	17	19		23	9	12
Z78W9Q - 5901		Yfiler®							
2		14	11,12	13	29	24	11	13	13
	15	12	11	19		16	17		22
		12	12	17	19		23	9	12

TABLE 4

WebCode - Test		Amplification Kit							
Item	DYF387S1	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
	DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
	DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	YGATAH4

Item 3 - YSTR Results

Z78W9Q - 5901

3	14	11,11	13	29	24	11	13	13
	14	12	12	19	15	17		22
	12	14	16	18		23	10	12



TABLE 4

WebCode - Test		Amplification Kit							
Item	DYF387S1	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
	DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
	DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	YGATAH4

Item 3e - YSTR Results

2MZT8B - 5901		Yfiler® Plus							
3e	35,36	14	11,11	13	29	24	11	13	13
	14	12	12	19	31	15	17	11	22
	38	12		16	18	23	23		12
362K2C - 5902		Yfiler® Plus							
3e	35,36	14	11	13	29	24	11	13	13
	14	12	12	19	31	15	17	11	22
	38	12		16	18	23	23		12
3XRZGZ - 5901		Yfiler® PLUS							
3e	35,36	14	11	13	29	24	11	13	13
	14	12	12	19	31	15	17	11	22
	38	12		16	18	23	23		12
4VGCFZ - 5901		Yfiler®							
3e	35,36	14	11	13	29	24	11	13	13
	14	12	12	19		15	17		
							23		12
74PMLW - 5901		Yfiler® Plus							
3e	35,36	14	11,11	13	29	24	11	13	13
	14	12	12	19	31	15	17	11	22
	38	12		16	18	23	23		12
7LHKND - 5902		Yfiler®							
3e	35,36	14	11	13	29	24	11	13	13
	14	12	12	19		15	17		
							23		12
82TQDH - 5901		Yfiler® Plus							
3e	35,36	14	11	13	29	24	11	13	13
	14	12	12	19	31	15	17	11	12
	38	12		16	18	23	23		12
8PEQHA - 5902		Yfiler® Plus							
3e	35,36	14	11,11	13	29	24	11	13	13
	14	12	12	19	31	15	17	11	22
	38	12		16	18	23	23		12
8WUCN8 - 5902		Yfiler® Plus							
3e	35,36	14	11,11	13	29	24	11	13	13
	14	12	12	19	31	15	17	11	22
	38	12		16	18	23	23		12
CJWUZ4 - 5902		Yfiler® Plus							
3e	35,36	14	11,11	13	29	24	11	13	13
	14	12	12	19	31	15	17	11	22
	38	12		16	18	23	23		12
ERF8RY - 5901		Yfiler® Plus							
3e	35,36	14	11,11	13	29	24	11	13	13
	14	12	12	19	31	15	17	11	22
	38	12		16	18	23	23		12
G632HU - 5901		Yfiler® Plus							
3e	35,36	14	11,11	13	29	24	11	13	13
	14	12	12	19	31	15	17	11	22
	38	12		16	18	23	23		12

TABLE 4

WebCode - Test		Amplification Kit							
Item	DYF387S1	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
	DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
	DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	YGATAH4

Item 3e - YSTR Results

JQ7NY6 - 5901	Yfiler®								
3e	14	11,11	13	29	24	11	13	13	
	14	12	12	19	15	17			
						23			12
JX9X7X - 5901	Yfiler® Plus								
3e	35,36	14	11,11	13	29	24	11	13	13
	14	12	12	19	31	15	17	11	22
	38	12		16	18	23	23		12
K8XREJ - 5901	Yfiler®								
3e	14	11	13	29	24	11	13	13	
	14	12	12	19	15	17			
						23			12
QCP2RU - 5902	Yfiler®								
3e	14	11	13	29	24	11	13	13	
	14	12	12	19	15	17			
						23			12
QJA3AR - 5901	Yfiler® Plus								
3e	35,36	14	11,11	13	29	24	11	13	13
	14	12	12	19	31	15	17	11	22
	38	12		16	18	23	23		12
RAEJ9N - 5901	PowerPlex® Y 23								
3e									
YAB63G - 5902	PowerPlex® Y 23								
3e									
YDBGXG - 5901	PowerPlex® Y 23								
3e									

TABLE 4

WebCode - Test	Amplification Kit								
Item	DYF387S1	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
	DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
	DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	YGATAH4

Item 3sp - YSTR Results

2MZT8B - 5901	Yfiler® Plus								
3sp	[REDACTED]								
362K2C - 5902	Yfiler® Plus								
3sp	35,36	14	11	13	29	24	11	13	13
	14	12	12	19	31	15	17	11	22
	38	12		16	18	23	23		12
3XRZGZ - 5901	Yfiler® PLUS								
3sp	35,36	14	11	13	29	24	11	13	13
	14	12	12	19	31	15	17	11	22
	38	12		16	18	23	23		12
4VGCYZ - 5901	Yfiler®								
3sp	14	11	13	29	24	11	13	13	
	14	12	12	19	15	17			
						23			12
74PMLW - 5901	Yfiler® Plus								
3sp	35,36	14	11,11	13	29	24	11	13	13
	14	12	12	19	31	15	17	11	22
	38	12		16	18	23	23		12
7LHKND - 5902	Yfiler®								
3sp	14	11	13	29	24	11	13	13	
	14	12	12	19	15	17			
						23			12
82TQDH - 5901	Yfiler® Plus								
3sp	35,36	14	11	13	29	24	11	13	13
	14	12	12	19	31	15	17	11	12
	38	12		16	18	23	23		12
8PEQHA - 5902	Yfiler® Plus								
3sp	35,36	14	11	13	29	24	11	13	13
	14	12	12	19	31	15	17	11	22
	38	12		16	18	23	23		12
8WUCN8 - 5902	Yfiler® Plus								
3sp	35,36	14	11,11	13	29	24	11	13	13
	14	12	12	19	31	15	17	11	22
	38	12		16	18	23	23		12
CJWUZ4 - 5902	Yfiler® Plus								
3sp	35,36	14	11,11	13	29	24	11	13	13
	14	12	12	19	31	15	17	11	22
	38	12		16	18	23	23		12
ERF8RY - 5901	Yfiler® Plus								
3sp	35,36	14	11,11	13	29	24	11	13	13
	14	12	12	19	31	15	17	11	22
	38	12		16	18	23	23		12
G632HU - 5901	Yfiler® Plus								
3sp	35,36	14	11,11	13	29	24	11	13	13
	14	12	12	19	31	15	17	11	22
	38	12		16	18	23	23		12

TABLE 4

WebCode - Test		Amplification Kit							
Item	DYF387S1	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
	DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
	DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	YGATAH4
<b>Item 3sp - YSTR Results</b>									
JQ7NY6 - 5901	Yfiler®								
3sp	14	11,11	13	29	24	11	13	13	
	14	12	12	19	15	17			
						23			12
JX9X7X - 5901	Yfiler® Plus								
3sp	35,36	14	11,11	13	29	24	11	13	13
	14	12	12	19	31	15	17	11	22
	38	12		16	18	23	23		12
K8XREJ - 5901	Yfiler®								
3sp	14	11	13	29	24	11	13	13	
	14	12	12	19	15	17			
						23			12
QCP2RU - 5902	Yfiler®								
3sp	14	11	13	29	24	11	13	13	
	14	12	12	19	15	17			
						23			12
QJA3AR - 5901	Yfiler® Plus								
3sp	35,36	14	11,11	13	29	24	11	13	13
	14	12	12	19	31	15	17	11	22
	38	12		16	18	23	23		12
RAEJ9N - 5901	PowerPlex® Y 23								
3sp	14	11,11	13	29	24	11	13	13	
	14	12	12	19	15	17			22
		12	14	16	18	23	10		12
YAB63G - 5902	PowerPlex® Y 23								
3sp	14	11,11	13	29	24	11	13	13	
	14	12	12	19	15	17			22
		12	14	16	18	23	10		12
YDBGXG - 5901	PowerPlex® Y 23								
3sp	14	11,11	13	29	24	11	13	13	
	14	12	12	19	15	17			22
		12	14	16	18	23	10		12

TABLE 4

WebCode - Test		Amplification Kit							
Item	DYF387S1	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
	DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
	DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	YGATAH4

Item 4 - YSTR Results

2MZT8B - 5901		Yfiler® Plus							
4	35,36,37	14	11,12,14	13	29	24	11,12	13	13
	15	12	11	19,20	30,31	15,16	17	11	22
	38,40	12,13		17	19,20	20,2,21	23		12
362K2C - 5902		Yfiler® Plus							
4	35,36,37	14	11,12,14	13	29	24	11	13	13
	15	12	11	19,20	30,31	15,16	17	11	22
	38,40	12,13		17	19,20	21	23		12
4VGCYZ - 5901		Yfiler®							
4		14	11,12,14	13	29	24	11	13	13
	15	12	11	19,20		15,16	17		
							23		12
7LHKND - 5902		Yfiler®							
4		14	11,12,14	13	29	24	11	13	13
	15	12	11	19,20		15,16	17		
							23		12
82TQDH - 5901		Yfiler® Plus							
4	35,36,37	14	11,12,14	13	29	24	11	13	13
	15	12	11	19,20	30,31	15,16	17	11	22
	38,40	12,13		17	19,20	21	23		12
8PEQHA - 5902		Yfiler® Plus							
4	35,36,37	14	11,12,14	13	29	24	11	13	13
	15	12	11	19,20	30,31	15,16	17	11	22
	38,40	12,13		17	19,20	21	23		12
CJWUZ4 - 5902		Yfiler® Plus							
4	35,36,37	14	11,12,14	13	29	24	11	13	13
	15	12	11	19,20	30,31	15,16	17	11	22
	38,40	12,13		17	19,20	21	23		12
ERF8RY - 5901		Yfiler® Plus							
4									
G632HU - 5901		Yfiler® Plus							
4	35,36,37	14	11,12,14	13	29	24	11	13	13
	15	12	11	19,20	30,31	15,16	17	11	22
	38,40	12,13		17	19,20	21	23		12
JQ7NY6 - 5901		Yfiler®							
4		14	11,12,14	13	29	24	11	13	13
	15	12	11	19,20		15,16	17		
							23		12
JX9X7X - 5901		Yfiler® Plus							
4	35,36,37	14	11,12,14	13	29	24	11	13	13
	15	12	11	19,20	30,31	15,16	17	11	22
	38,40	12,13		17	19,20	21	23		12
K8XREJ - 5901		Yfiler®							
4		14	11,12,14	13	29	24	11	13	13
	15	12	11	19,20		15,16	17		
							23		12

TABLE 4

WebCode - Test		Amplification Kit							
Item	DYF387S1	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
	DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
	DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	YGATAH4

Item 4 - YSTR Results

QCP2RU - 5902		Yfiler®							
4		14	11,12,14	13	29	24	11	13	13
	15	12	11	19,20		15,16	17		
							23		12
QJA3AR - 5901		Yfiler® Plus							
4	35,36,37	14	11,12,14	13	29	24	11	13	13
	15	12	11	19,20	30,31	15,16	17	11	22
	38,40	12,13		17	19,20	21	23		12
Z78W9Q - 5901									
4		14	11,12,14	13	29	24	11	13	13
	15	12	11	19,20		15,16	17		22
		12,13	11,12	17	19,20		23	9	12

TABLE 4

WebCode - Test		Amplification Kit							
Item	DYF387S1	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
	DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
	DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	YGATAH4

Item 4e - YSTR Results

YAB63G - 5902	PowerPlex® Y 23								
4e	14	11,12,14	13	29	24	11	13	13	
	15	12	11	19,20		15,16	17		22
	12,13	11,12	17	19,20			23	9	12

TABLE 4

WebCode - Test		Amplification Kit							
Item	DYF387S1	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
	DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
	DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	YGATAH4

Item 4sp - YSTR Results

YAB63G - 5902      PowerPlex® Y 23

4sp





# Additional DNA Results

TABLE 5

Additional DNA results found to be concordant at a pre-existing locus are retained solely within the applicable tables. Non-concordant results and results for loci not found elsewhere will remain in this table.

Locus	WebCode- Test	Item 1	Item 2	Item 3	Item 3e	Item 3sp	Item 4	Item 4e	Item 4sp
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No additional DNA results were reported.

# DNA Mixture Concentrations and Proportions

TABLE 6

Item 3 Results		
WebCode-Test	DNA Concentration (ng/uL)	DNA Proportion (%)
<b>Contributor: A</b>		
6P8FA7 - 5901		87.50
LPPCAY - 5901	0.3200	67.00
Z78W9Q - 5901		50.00
<b>Contributor: B</b>		
6P8FA7 - 5901		12.50
LPPCAY - 5901	0.1600	33.00
Z78W9Q - 5901		50.00

TABLE 6

Item 3e Results		
WebCode-Test	DNA Concentration (ng/uL)	DNA Proportion (%)
<b>Contributor: A</b>		
2DPRLB - 5901		50.00
2K2ZQM - 5902		62.30
2MZT8B - 5901		54.00
362K2C - 5902	3.0200	54.00
38V7WP - 5902	0.4000	54.00
3XRZGZ - 5901	0.0750	64.00
6RADLM - 5901	0.8440	51.00
74PMLW - 5901		50.00
83Z7LA - 5901	0.1350	32.00
8PEQHA - 5902	1.0800	54.00
8WUCN8 - 5902	0.2500	50.00
B6H6QH - 5902	0.3935	49.00
CJWUZ4 - 5902	1.0770	52.00
ERF8RY - 5901	1.4140	55.00
G632HU - 5901	0.2575	50.00
HDMM48 - 5901	0.8690	52.00
J99CLX - 5901		54.69
JQ7NY6 - 5901	23.29	50.00
JX9X7X - 5901	0.3300	71.00
NMAQDU - 5901	0.8998	61.00
NN6EU4 - 5902	0.3640	48.00
P8FLKQ - 5902	1.0010	67.00
QJA3AR - 5901	1.4790	54.00
THNB9G - 5902		55.00
UHWYPN - 5902	0.4800	67.00
UUZ3CG - 5901		50.00
ZTYATR - 5902	2.9500	55.00
<b>Contributor: B</b>		
2DPRLB - 5901		50.00
2K2ZQM - 5902		37.70
2MZT8B - 5901		46.00
362K2C - 5902		46.00
38V7WP - 5902	0.3400	46.00
3XRZGZ - 5901	0.0420	36.00
6RADLM - 5901	0.8110	49.00
74PMLW - 5901		50.00
83Z7LA - 5901	0.2870	68.00
8PEQHA - 5902	0.9300	46.00

TABLE 6

Item 3e Results		
WebCode-Test	DNA Concentration (ng/uL)	DNA Proportion (%)
8WUCN8 - 5902	0.2500	50.00
B6H6QH - 5902	0.4095	51.00
CJWUZ4 - 5902	0.9740	47.00
ERF8RY - 5901	1.1570	45.00
G632HU - 5901	0.2575	50.00
HDMM48 - 5901	0.8020	48.00
J99CLX - 5901		45.31
JQ7NY6 - 5901	23.29	50.00
JX9X7X - 5901	0.1400	29.00
NMAQDU - 5901	0.5753	39.00
NN6EU4 - 5902	0.3950	52.00
P8FLKQ - 5902	0.4930	33.00
QJA3AR - 5901	1.2600	46.00
THNB9G - 5902		45.00
UHWYPN - 5902	0.2400	33.00
UUZ3CG - 5901		50.00
ZTYATR - 5902	2.4100	45.00
<b>Contributor: C</b>		
CJWUZ4 - 5902	0.0210	1.00

TABLE 6

Item 3sp Results		
WebCode-Test	DNA Concentration (ng/uL)	DNA Proportion (%)
<b>Contributor: A</b>		
2DPRLB - 5901		95.00
2MZT8B - 5901		100.00
362K2C - 5902	1.9300	98.00
38V7WP - 5902	0.7400	100.00
3XRZGZ - 5901	0.0900	100.00
6RADLM - 5901	1.0400	98.00
74PMLW - 5901		100.00
83Z7LA - 5901	0.0080	100.00
8PEQHA - 5902	0.0700	100.00
8WUCN8 - 5902	0.1500	100.00
B6H6QH - 5902	0.8698	100.00
CJWUZ4 - 5902	0.6380	100.00
ERF8RY - 5901	1.9110	100.00
G632HU - 5901	0.5596	100.00
J99CLX - 5901		99.00
JQ7NY6 - 5901	5.5800	100.00
JX9X7X - 5901	0.0920	100.00
NMAQDU - 5901	0.2440	100.00
NN6EU4 - 5902	0.7540	100.00
P8FLKQ - 5902	0.3670	100.00
QJA3AR - 5901	0.4420	100.00
THNB9G - 5902	1.3488	100.00
UUZ3CG - 5901		100.00
ZTYATR - 5902	0.3796	100.00
<b>Contributor: B</b>		
2DPRLB - 5901		5.00
2K2ZQM - 5902		100.00
362K2C - 5902		2.00
6RADLM - 5901	0.0210	2.00
HDMM48 - 5901	1.7600	100.00
J99CLX - 5901		1.00

TABLE 6

Item 4 Results		
WebCode-Test	DNA Concentration (ng/uL)	DNA Proportion (%)
<b>Contributor: A</b>		
2DPRLB - 5901		59.00
2K2ZQM - 5902		10.40
2MZT8B - 5901		62.00
362K2C - 5902	5.2500	54.00
38V7WP - 5902	0.5000	66.00
3XRZGZ - 5901	1.0600	59.00
6P8FA7 - 5901		58.00
74PMLW - 5901		55.00
82D8RW - 5901		52.00
83Z7LA - 5901	0.1190	50.00
8PEQHA - 5902	1.5000	56.00
8WUCN8 - 5902	0.0900	53.00
B6H6QH - 5902	0.4993	59.00
CJWUZ4 - 5902	1.6080	59.00
ERF8RY - 5901	1.7140	61.00
G632HU - 5901	1.2040	62.00
HDMM48 - 5901	0.5310	9.00
JQ7NY6 - 5901	26.21	53.42
JX9X7X - 5901	0.2000	56.00
LPPCAY - 5901	0.8400	54.00
NMAQDU - 5901	0.6351	58.00
NN6EU4 - 5902	0.6140	59.00
P8FLKQ - 5902	0.8300	57.00
QJA3AR - 5901	1.7530	61.00
THNB9G - 5902		52.60
UHWYPN - 5902	0.9800	60.00
UUZ3CG - 5901		56.00
Z78W9Q - 5901		54.00
ZTYATR - 5902	2.2400	57.00
<b>Contributor: B</b>		
2DPRLB - 5901		32.00
2MZT8B - 5901		31.00
362K2C - 5902		36.00
38V7WP - 5902	0.2100	28.00
3XRZGZ - 5901	0.5800	32.00
6P8FA7 - 5901		33.00
6RADLM - 5901	0.2200	10.00
74PMLW - 5901		36.00

TABLE 6

Item 4 Results		
WebCode-Test	DNA Concentration (ng/uL)	DNA Proportion (%)
82D8RW - 5901		36.00
83Z7LA - 5901	0.0930	39.00
8PEQHA - 5902	0.9600	36.00
8WUCN8 - 5902	0.0600	35.00
B6H6QH - 5902	0.2793	33.00
CJWUZ4 - 5902	0.9270	34.00
ERF8RY - 5901	0.8150	29.00
G632HU - 5901	1.2040	31.00
JQ7NY6 - 5901	16.94	34.53
JX9X7X - 5901	0.1300	36.00
LPPCAY - 5901	0.4800	31.00
NMAQDU - 5901	0.3614	33.00
NN6EU4 - 5902	0.3430	33.00
P8FLKQ - 5902	0.4660	32.00
QJA3AR - 5901	0.8910	31.00
THNB9G - 5902		35.99
UHWYPN - 5902	0.5100	31.00
UUZ3CG - 5901		35.00
Z78W9Q - 5901		35.00
ZTYATR - 5902	1.3700	35.00
<b>Contributor: C</b>		
2DPRLB - 5901		9.00
2K2ZQM - 5902		59.40
2MZT8B - 5901		7.00
362K2C - 5902		10.00
38V7WP - 5902	0.0400	6.00
3XRZGZ - 5901	0.1600	9.00
6P8FA7 - 5901		9.00
6RADLM - 5901	1.1600	53.00
74PMLW - 5901		9.00
82D8RW - 5901		12.00
83Z7LA - 5901	0.0260	11.00
8PEQHA - 5902	0.2100	8.00
8WUCN8 - 5902	0.0200	11.00
B6H6QH - 5902	0.0677	8.00
CJWUZ4 - 5902	0.1910	7.00
ERF8RY - 5901	0.2810	10.00
G632HU - 5901	1.2040	7.00
HDMM48 - 5901	3.1900	54.00

TABLE 6

Item 4 Results		
WebCode-Test	DNA Concentration (ng/uL)	DNA Proportion (%)
JQ7NY6 - 5901	5.9100	12.05
JX9X7X - 5901	0.0300	8.00
LPPCAY - 5901	0.2200	14.00
NMAQDU - 5901	0.0986	9.00
NN6EU4 - 5902	0.0830	8.00
P8FLKQ - 5902	0.1602	11.00
QJA3AR - 5901	0.2300	8.00
THNB9G - 5902		11.41
UHWYPN - 5902	0.1300	8.00
UUZ3CG - 5901		9.00
Z78W9Q - 5901		11.00
ZTYATR - 5902	0.3100	8.00
<b>Contributor: D</b>		
6RADLM - 5901	0.8140	37.00
HDMM48 - 5901	2.1800	37.00



TABLE 6

Item 4e Results		
WebCode-Test	DNA Concentration (ng/uL)	DNA Proportion (%)
<b>Contributor: A</b>		
J99CLX - 5901		60.68
<b>Contributor: B</b>		
J99CLX - 5901		31.19
<b>Contributor: C</b>		
J99CLX - 5901		8.13

# Statistical Analysis for Item 3

TABLE 7

WebCode- Test	No. of Contributors	Item 3 Methods & Results
2DPRLB - 5901	2	<p><b>Method(s):</b> CPI</p> <p><b>Stats Analysis:</b> The DNA profile from the F1 fraction is a mixture of DNA from at least two individuals. The victim and an unknown male are included as being possible contributors to the mixture. The estimated probability of selecting a random, unrelated individual from the general population who could be included as being a possible contributor to the mixed DNA profile from the F1 fraction is: Population Database Estimated Probability: African American 1 in 34 trillion, Caucasian 1 in 240 trillion, Southeast Hispanic 1 in 124 trillion, Southwest Hispanic 1 in 159 trillion.</p> <p><b>Database(s) Used:</b> FBI Expanded 2015</p>
2K2ZQM - 5902	2	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> Item 1: 1.899e+21 Unknown male from item 3 sp: 7.621e+19</p> <p><b>Database(s) Used:</b> [Location Identifying Database]</p>
2MZT8B - 5901	2	<p><b>Method(s):</b> [Participant did not report a method.]</p> <p><b>Stats Analysis:</b> F1 - no stat performed due to sample not being probative at this time. Mixture includes victim and one unknown person. F2 - unknown male, no stat performed</p> <p><b>Database(s) Used:</b> [Participant did not return a database used.]</p>
362K2C - 5902	2	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> SPERM FRACTION (Mixed DNA profile from 2 individuals): Contributor from mixture (2) matched unknown male. Mixture not suitable for further interpretation. EPI FRACTION (Mixed DNA profile from 2 individuals): The DNA evidence is 21 billion times more likely if the VICTIM is a contributor. SUSPECT is excluded as a contributor.</p> <p><b>Database(s) Used:</b> [Location Identifying Database] with the most conservative reported</p>
38V7WP - 5902	2p for 3e and 1p for 3s	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> Item 3E: Hypothesis 1: Victim, Suspect. Hypothesis 2: Victim, 1 Unknown. Suspect LR=0. Item 3S: Manual exclusion of suspect.</p> <p><b>Database(s) Used:</b> FBI extended database: African, Caucasian, South East Hispanic, South West Hispanic.</p>
3HRA2H - 5902	2	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> 3.9E28 Caucasian, 1.2E27 African American, 1.1E28 Hispanic.</p> <p><b>Database(s) Used:</b> NIST STRBASE Population Database</p>
3XRZGZ - 5901	2	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> The victim (Item 1) is compatible as a possible donor to the mixture on item 3. We evaluated this result by computing a Likelihood Ratio between the following propositions: Proposition 1- the mixture is composed of the Victim and an unknown unrelated individual. Proposition 2- the mixture is composed of two unknown unrelated individuals. The LR computed by EuroForMix for these two propositions is <math>2.18 \times 10^{28}</math>. The LR expresses by how much it is more likely to observe the Mixture on item 3 if proposition 1 is true versus if proposition 2 is true. In other words, how much support there is for proposition 1 over proposition 2.</p> <p><b>Database(s) Used:</b> [Location Identifying Population], theta 0.02</p>

TABLE 7

WebCode-Test	No. of Contributors	Item 3 Methods & Results
4VGCFZ - 5901	Two	<p><b>Method(s):</b> Likelihood Ratio  <b>Stats Analysis:</b> The LR value calculated for the possible involvement of the alleged victim (Reference Item 1) to this DNA mixture (epithelial fraction of Item 3) was 2.90E18 to one, which means it is about 2.90E18 times more likely that the observed DNA profile being a mixture originating from the alleged victim and an unrelated individual than if it originating from two unrelated individuals selected at random from the [Location Identifying Population].  <b>Database(s) Used:</b> [Location Identifying Database]</p>
6P8FA7 - 5901	2	<p><b>Method(s):</b> Likelihood Ratio  <b>Stats Analysis:</b> 3.42 E+18  <b>Database(s) Used:</b> [Location Identifying Population] Caucasian</p>
6RADLM - 5901	2	<p><b>Method(s):</b> Likelihood Ratio  <b>Stats Analysis:</b> Lowest LR for inclusion of the victim in order to condition her on the couch stain = 1.7X10<sup>^20</sup>  <b>Database(s) Used:</b> NIST 1036</p>
6RRGV9 - 5901	2	<p><b>Method(s):</b> [Participant did not report a method.]  <b>Stats Analysis:</b> [Participant did not return statistical analysis.]  <b>Database(s) Used:</b> [Participant did not return a database used.]</p>
74PMLW - 5901	3e - 2; 3sp- 1	<p><b>Method(s):</b> 3e - CPI; 3sp - RMP  <b>Stats Analysis:</b> 3F1 - Population Database Estimated Probability: African American 1 in 34 trillion, Caucasian 1 in 240 trillion, Southeast Hispanic 1 in 124 trillion, Southwest Hispanic 1 in 159 trillion. 3F2- would be calculated using RMP, not performed at this time due to being unknown.  <b>Database(s) Used:</b> popstats standalone - Expanded FBI US STR population database, Feb 2015</p>
82D8RW - 5901	2	<p><b>Method(s):</b> Random Match Probability, Combined Probability of Inclusion  <b>Stats Analysis:</b> F1 fraction is a two person mixture of Item 1 and an unknown male- this would get CPI once a known from the unknown male is submitted. F2 fraction is a single source unknown male. RMP would be performed once a known from the unknown male is submitted.  <b>Database(s) Used:</b> [Participant did not return a database used.]</p>
82TQDH - 5901	2	<p><b>Method(s):</b> Likelihood Ratio  <b>Stats Analysis:</b> LR(MLE) = 9725276508682084. The probability that the crime scene stain (Item 3) DNA type includes the victim's DNA is 9.72 x 10<sup>^16</sup> times higher if the victim left the sample than if someone else left the sample.  <b>Database(s) Used:</b> [Location Identifying Database]</p>
83Z7LA - 5901	Item 3e: 2 contributors; Item 3sp: 1 contributor	<p><b>Method(s):</b> Likelihood Ratio  <b>Stats Analysis:</b> Item 3e: Item 1 (Assumed Contributor); Item 2 Excluded. Item 3sp: Item 1 Excluded; Item 2 Excluded.  <b>Database(s) Used:</b> [Location Identifying Database]</p>
8PEQHA - 5902	2 (in 'e') and 1 (in 'sp')	<p><b>Method(s):</b> Likelihood Ratio  <b>Stats Analysis:</b> LR for Suspect is 0 for both "e" and "sp" fractions; he is excluded as a contributor/source. LR for Complainant is &gt;100 billion for "e" fraction; she can be considered an assumed contributor for this profile.  <b>Database(s) Used:</b> PP21 [Location Identifying Database]</p>

TABLE 7

WebCode-Test	No. of Contributors	Item 3 Methods & Results
8WUCN8 - 5902	2 (e), 1 (sp)	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> Suspect reference - LR = 0 (excluded), Complainant reference - no LR (assumed contributor)</p> <p><b>Database(s) Used:</b> [Location Identifying Database]</p>
B6H6QH - 5902	2	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> fraction 2 (sp) - 1 contributor Unknown Individual A, victim and suspect excluded (qualitative exclusion). fraction 1 (e) - 2 contributors, 49%:51%. suspect is excluded Assuming Unknown Individual A is a contributor to this mixture, a female DNA profile was obtained from the 51% contributor and matches the DNA profile of the victim. The mixture of DNA obtained from this item is at least 2x10 to the 15th power times more likely if it originated from Unknown Individual A and the victim than if it originated from Unknown Individual A and one unknown individual.</p> <p><b>Database(s) Used:</b> FBI extended database African American, Caucasian, SE Hispanic, SW Hispanic. Lowest value reported from the four population databases.</p>
CJWUZ4 - 5902	3 (3e), 1 (3sp)	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> 3e: Item 1: 100 billion (LR = <math>1.71 \times 10^{16}</math>); Item 2: Supports Hd (LR = <math>3.95 \times 10^{-3}</math>). 3sp: Item 1: Excluded (LR = 0); Item 2: Excluded (LR = 0).</p> <p><b>Database(s) Used:</b> PP21 [Location Identifying Database]</p>
ERF8RY - 5901	2	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> ep: Item 1 - 100 billion, Item 2 - excluded. sp: Item 1 - excluded, Item 2 - excluded.</p> <p><b>Database(s) Used:</b> [Location Identifying Database]</p>
G632HU - 5901	3e: 2, 3sp: 1	<p><b>Method(s):</b> CPI</p> <p><b>Stats Analysis:</b> The estimated probability of selecting a random, unrelated individual from the general population who could be included as being a possible contributor to the mixed DNA profile from the epithelial fraction is 1 in 34 trillion in the African American database, 1 in 240 trillion in the Caucasian database, 1 in 124 trillion in the Southeast Hispanic database, and 1 in 159 trillion in the Southwest Hispanic database.</p> <p><b>Database(s) Used:</b> PopStats - FBI's Expanded U.S. STR population (2015)</p>
HDMM48 - 5901	2	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> EP fraction: The DNA result was interpreted as a mixture of two individuals, with the male profile from the sperm fraction as an assumed contributor. The remaining portion of the mixture was determined to be suitable for comparison. The mixture is at least 68 decillion (<math>10^{33}</math>) times more likely if it originated from the male from the sperm fraction and the victim than if it originated from the male from the sperm fraction and an unknown, unrelated individual. This analysis provides very strong support for the proposition that the victim is a contributor to the mixture. The suspect is excluded as a contributor to the mixture. SP fraction: A single-source male DNA profile was obtained and determined to be suitable for comparison. The victim and the suspect are excluded as contributors of the profile.</p> <p><b>Database(s) Used:</b> NIST 1036</p>
J99CLX - 5901	2	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> Item 3e: Item 1 - supports contribution &gt; 100 billion (4.2157E17). Item 2 - excluded (0). Item 3sp: Item 1 - supports non contribution (3.2629E-3). Item 2 - supports non-contribution (1.8780E-5).</p> <p><b>Database(s) Used:</b> [Location Identifying Database]</p>

TABLE 7

WebCode-Test	No. of Contributors	Item 3 Methods & Results
JGHZZV - 5901	2	<p><b>Method(s):</b> Likelihood Ratio  <b>Stats Analysis:</b> Item 3ep: At least 100 billion  <b>Database(s) Used:</b> [Location Identifying Database] Globalfiler</p>
JQ7NY6 - 5901	2	<p><b>Method(s):</b> Likelihood Ratio  <b>Stats Analysis:</b> The DNA profile obtained from the sperm fraction of item No. 3 is from single source of unknown male individual-I. Suspect (item No. 2) is excluded as being the source of this DNA profile (manual exclusion). The DNA profile obtained from the epithelial fraction of item No. 3 is a mixture of at least two individuals. The following sets of hypotheses were evaluated: (A) Hp: Item No. 1 + 1 Unknown, Hd: 2 Unknown, LR (MLE)= 1.1E+12 (B) Hp: Item 2 + 1 Unknown, Hd: 2 Unknown, LR (MLE)= 1.8E-22 (C) Hp: Unknown Male individual-I (sperm fraction of item No. 3) + 1 Unknown, Hd: 2 Unknown, LR (MLE)= 2.29E+08  <b>Database(s) Used:</b> NIST Caucasian Database (2017) with theta co-ancestry coefficient 0.03</p>
JX9X7X - 5901	e=2, sp =1	<p><b>Method(s):</b> Likelihood Ratio  <b>Stats Analysis:</b> e= Suspect (Item 2) - Excluded, Victim (item 1) = Assumed contributor. sp= Suspect (item 2) and victim (item 1) = Excluded.  <b>Database(s) Used:</b> [Participant did not return a database used.]</p>
JXTGB4 - 5902	2	<p><b>Method(s):</b> Likelihood Ratio  <b>Stats Analysis:</b> 9.7E22 Caucasian, 3.0E21 African American, 2.8E22 Hispanic.  <b>Database(s) Used:</b> NIST STRBASE Population Database</p>
K8XREJ - 5901	Two	<p><b>Method(s):</b> Likelihood Ratio  <b>Stats Analysis:</b> The LR value calculated for the possible involvement of the alleged victim in the epithelial fraction of Item 3 was 1.08E20 to 1, which means it is about 1.08E20 times more likely that the observed DNA profile being a mixture originating from the alleged victim and one unknown individual than if it originating from two unrelated individuals selected at random from the [Location Identifying Population].  <b>Database(s) Used:</b> [Location Identifying Database]</p>
KVV9FT - 5902	2	<p><b>Method(s):</b> [Participant did not report a method.]  <b>Stats Analysis:</b> [Participant did not return statistical analysis.]  <b>Database(s) Used:</b> [Participant did not return a database used.]</p>
LPPCAY - 5901	2	<p><b>Method(s):</b> Likelihood Ratio  <b>Stats Analysis:</b> Known contributor under Hp: Item 1 LR (total): 1.8E20  <b>Database(s) Used:</b> Laboratory's own database for allele frequencies of the STR loci in the population of [Country].</p>
NMAQDU - 5901	ep: 2, sp: 1	<p><b>Method(s):</b> Likelihood Ratio  <b>Stats Analysis:</b> sp: Item 1 + 2 excluded. ep: Item 1 assumed, Item 2 excluded.  <b>Database(s) Used:</b> [Location Identifying Database] (PP21)</p>

TABLE 7

WebCode-Test	No. of Contributors	Item 3 Methods & Results
NN6EU4 - 5902	2	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> Item 3, fraction 2: A male DNA profile from a single individual, Unknown Individual A (UIA), was obtained from Item 3, fraction 2 and does not match the DNA profile of the victim and the suspect. - No LR calculated, manual exclusion, both reference profiles did not match evidence profile. Item 3, fraction 1: UIAVvUIA1U: LR = <math>2 \times 10^{15}</math>. The DNA profile obtained from Item 3, fraction 1 is consistent with a mixture of 2 individuals. Assuming Unknown Individual A (from Item 3, fraction 2) is a contributor to this mixture, a female DNA profile was obtained from the 52% contributor, matches the DNA profile of the female victim and does not match the DNA profile of the suspect. The mixture of DNA obtained from Item 3, fraction 1 is at least <math>2 \times 10^{15}</math> times more likely if it originated from Unknown Individual A and the female victim than if it originated from Unknown Individual A and one unknown individual. UIASvUIA1U: LR = 0. Assuming Unknown Individual A (from Item 3, fraction 2) is a contributor to this mixture, the suspect is excluded from this profile.</p> <p><b>Database(s) Used:</b> FBI extended database African American, Caucasian, SE Hispanic, SW Hispanic, lowest value reported from four population databases</p>
P8FLKQ - 5902	2 (e), 1 (sp)	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> e: Suspect reference (item 2) Excluded, Complainant reference (item 1) LR: &gt;100 billion. sp: Suspect reference (item 2) Excluded, Complainant reference (item 1) Excluded</p> <p><b>Database(s) Used:</b> [Location Identifying Database]</p>
QCP2RU - 5902	2	<p><b>Method(s):</b> [Participant did not report a method.]</p> <p><b>Stats Analysis:</b> [Participant did not return statistical analysis.]</p> <p><b>Database(s) Used:</b> [Participant did not return a database used.]</p>
QJA3AR - 5901	2	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> Item 3(e) = Mixed DNA profile (Two contributors) where Item 1 was Not excluded (LR = 100 billion) and Item 2 was Excluded. Item 3(sp) = Single source DNA profile where Items 1 and 2 were Excluded.</p> <p><b>Database(s) Used:</b> [Location Identifying Database] (PP21)</p>
RAEJ9N - 5901	2	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> The STR DNA results are estimated to be greater than one trillion times more likely if they originate from VICTIM, and the donor of STR Profile 1 than if they originate from the donor of STR Profile 1 and one unknown person unrelated to VICTIM. Note: We stop reporting at greater than a trillion, actual LR was <math>3.46E19</math></p> <p><b>Database(s) Used:</b> NIST Asian, NIST African American, NIST Caucasian, Srivastava et al (2019) South Asian, [Location Identifying Database]</p>
T46M3T - 5902	2	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> Comparison to Item 1: <math>5.1E20</math> Caucasian, <math>1.6E19</math> African American, <math>1.4E20</math> Hispanic.</p> <p><b>Database(s) Used:</b> NIST STRBASE Population Database</p>
THNB9G - 5902	2	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> [Participant did not return statistical analysis.]</p> <p><b>Database(s) Used:</b> FBI-CAUC</p>

TABLE 7

WebCode-Test	No. of Contributors	Item 3 Methods & Results
TRB7DR - 5902	2	<p><b>Method(s):</b> Likelihood Ratio  <b>Stats Analysis:</b> [Participant did not return statistical analysis.]  <b>Database(s) Used:</b> [Participant did not return a database used.]</p>
UHWYPN - 5902	3e: 2 contributors, 3sp: 2 contributors	<p><b>Method(s):</b> Likelihood Ratio  <b>Stats Analysis:</b> 3e: Item 1 - not excluded (LR = 100 billion); Item 2 - excluded. 3sp: Item 1 - Excluded; Item 2 - Excluded.  <b>Database(s) Used:</b> [Location Identifying Database]</p>
UUZ3CG - 5901	3e:2. 3sp:1	<p><b>Method(s):</b> CPI  <b>Stats Analysis:</b> 3e = African American: 1 in 1 billion, Caucasian: 1 in 8 billion, Southeast Hispanic: 1 in 7 billion, Southwest Hispanic: 1 in 20 billion  <b>Database(s) Used:</b> POPSTATS Software - Expanded FBI STR 2015 database</p>
YAB63G - 5902	2	<p><b>Method(s):</b> Likelihood Ratio  <b>Stats Analysis:</b> VICTIM (Q01-1) cannot be excluded as the source of a female DNA profile (STR Profile 2; see Testing Summary) from blood on a cutout from a swatch (Q03-1) from VICTIM's couch. The STR DNA results are estimated to be greater than one trillion times more likely if STR Profile 2 originates from VICTIM than if it originates from an unknown person, unrelated to them. Please note: [Laboratory] reports a maximum of "greater than one trillion" for Likelihood Ratio statements. The actual calculated LR is as follows: For Q01 -  <b>Database(s) Used:</b> i) NIST Asian; ii) NIST African American; iii) NIST Caucasian; iv) Srivastava et al. (2019) South Asian; v) [Location Identifying Database]</p>
YDBGXG - 5901	2	<p><b>Method(s):</b> Likelihood Ratio  <b>Stats Analysis:</b> 1. The Victim (item 1) cannot be excluded as a contributor to the questioned stain (item 3) from the Victim's couch. The STR DNA results are estimated to be greater than one trillion times more likely if they originate from the Victim and one unknown person than if they originate from two unknown people unrelated to the Victim. NOTE: We report a maximum LR value of a trillion when the calculated value exceeds that number. The actual calculated LR is 6.0 quintillion. 2. The Suspect (item 2) is excluded as a contributor to the questioned stain (item 3) from the Victim's couch.  <b>Database(s) Used:</b> i. NIST Asian; ii. NIST African American; iii. NIST Caucasian; iv. Srivastava et al. (2019) South Asian; v. [Location Identifying Database]</p>
Z78W9Q - 5901	2	<p><b>Method(s):</b> Likelihood Ratio  <b>Stats Analysis:</b> Hypotheses: H1: Item 1 contains the DNA of Item 1 and an unknown person. H2: Item 1 contains the DNA of two unknown individuals. LR=5.7E15. The DNA results support the H1 hypothesis 5.7E15 times more than the H2 hypothesis. Dropout Probability: 0.1, Drop-in probability: 0.05, Theta correction: 0.01  <b>Database(s) Used:</b> STRidER 2.0, [Location Identifying Population]</p>
Z8KMYL - 5902	2	<p><b>Method(s):</b> [Participant did not report a method.]  <b>Stats Analysis:</b> No statistical calculation was reported for this item since the suspect, Item 2, was visually eliminated as a contributor to this sample. Item 1 could not be eliminated, however, Item 3 was taken from the victim's couch and so it is not probative to find her DNA on her couch.  <b>Database(s) Used:</b> [Participant did not return a database used.]</p>

TABLE 7

WebCode-Test	No. of Contributors	Item 3 Methods & Results
ZTYATR - 5902	2	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> E Fraction: The DNA profile from this item is interpreted as a mixture of two individuals. The probability of obtaining this profile if the DNA came from the victim is 296 quadrillion times greater than the probability of obtaining this profile if the DNA came from two unrelated, unknown individuals. This likelihood ratio indicates support for the proposition that the victim is a possible contributor to the profile. S Fraction: No statistical analysis</p> <p><b>Database(s) Used:</b> NIST</p>



# Statistical Analysis for Item 4

TABLE 8

WebCode-Test	No. of Contributors	Item 4 Methods & Results
2DPRLB - 5901	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> Very strong support for inclusion: victim. Assumed number of contributors: 3 (approximate mixture proportions 59:32:9). Assumed contributor: suspect It is approximately 3 octillion times more likely to obtain the DNA results if the victim is the foreign contributor than if an unknown, unrelated individual selected at random from the [Country] population is the foreign contributor. H1: DNA originates from the suspect, the victim, and an unknown contributor. H2: DNA originates from the suspect and two unknown contributors</p> <p><b>Database(s) Used:</b> NIST 2017</p>
2K2ZQM - 5902	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> Item 1: 2,374e+17 Item 2: 2,710e+20 Unknown male from Item 3 sp: 2.306e-19</p> <p><b>Database(s) Used:</b> [Location Identifying Database]</p>
2MZT8B - 5901	3	<p><b>Method(s):</b> [Participant did not report a method.]</p> <p><b>Stats Analysis:</b> STRmix used to deconvolute only. Suspect used to condition as they are his pants. Victim visually excluded from comparable portion of the mixture (one of the contributors is a trace contributor). H1 - Suspect (conditioned), victim, one unknown. H2 - Suspect (conditioned) and two unknowns</p> <p><b>Database(s) Used:</b> [Participant did not return database used.]</p>
362K2C - 5902	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> The DNA evidence is 4100 times more likely if the VICTIM is a contributor. The DNA evidence is 46 billion times more likely if SUSPECT is a contributor.</p> <p><b>Database(s) Used:</b> [Location Identifying Database] with the most conservative reported</p>
38V7WP - 5902	3p	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> Hypothesis 1: Suspect, Victim, 1 Unknown. Hypothesis 2: Suspect, 2 Unknowns. Victim LR=8x10<sup>13</sup>.</p> <p><b>Database(s) Used:</b> FBI extended database: African, Caucasian, South East Hispanic, South West Hispanic.</p>
3HRA2H - 5902	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> For Item 2 Suspect: 2.3E27 Caucasian, 3.6E23 African American, 6.7E26 Hispanic. For Item 1 Victim: 5.7E27 Caucasian, 1.5E26 African American, 2.8E27 Hispanic.</p> <p><b>Database(s) Used:</b> NIST STRBASE Population Database</p>

TABLE 8

WebCode-Test	No. of Contributors	Item 4 Methods & Results
3XRZGZ - 5901	3	<p><b>Method(s):</b> [Participant did not report a method.]</p> <p><b>Stats Analysis:</b> The victim (Item 1) and the suspect (Item 2) are compatible as a possible donors to the mixture on item 4. We evaluated this result by considering the following propositions: Proposition 1- the mixture is composed of the Victim and two unknown unrelated individual. Proposition 2- the mixture is composed of the Suspect and two unknown unrelated individual. Proposition 3- the mixture is composed of three unknown unrelated individuals. The LR computed by EuroForMix for proposition 1 vs. proposition 3 is <math>1.49 \times 10^{17}</math>. The LR computed by EuroForMix for proposition 2 vs. proposition 3 is <math>4.48 \times 10^{24}</math>. The LR expresses by how much it is more likely to observe the Mixture on item 4 if the first proposition is true versus if the second proposition is true. In other words, the support there is for the first proposition over the second proposition.</p> <p><b>Database(s) Used:</b> [Location Identifying Population], theta 0.02</p>
4VGCYZ - 5901	Three	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> The LR value calculated for the possible involvement of the alleged victim (Reference Item 1) to this DNA mixture (Item 4) was 5.77E28 to one, which means it is about 5.77E28 times more likely that the observed DNA profile being a mixture originating from the alleged victim and two unrelated individuals than if it originating from three unrelated individuals selected at random from the [Location Identifying Population]. The LR value calculated for the possible involvement of the suspect (Reference Item 2) to this DNA mixture (Item 4) was 2.54E28 to one, which means it is about 2.54E28 times more likely that the observed DNA profile being a mixture originating from the suspect and two unrelated individuals than if it originating from three unrelated individuals selected at random from the [Location Identifying Population].</p> <p><b>Database(s) Used:</b> [Location Identifying Database]</p>
6P8FA7 - 5901	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> 7.53 E+15</p> <p><b>Database(s) Used:</b> [Location Identifying Population] Caucasian</p>
6RADLM - 5901	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> The DNA result was interpreted as a mixture of three individuals, with the suspect as an assumed contributor. The remaining portion of the mixture was determined to be suitable for comparison but ineligible for CODIS. The mixture is at least 8.0 Octillion (<math>10^{27}</math>) times more likely if it originated from the Suspect, the Victim and one unknown, unrelated individual than if it originated from the Suspect and two unknown, unrelated individuals. This analysis provides very strong support for the proposition that the Victim is a contributor to the mixture.</p> <p><b>Database(s) Used:</b> NIST 1036</p>
6RRGV9 - 5901	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> The DNA profile from this item was interpreted as a mixture of three individuals, with at least one male contributor and with Suspect as an assumed contributor. The DNA results are approximately 6.43 sextillion times more likely if they originated from Suspect, Victim, and an unknown, unrelated individual than if they originated from Suspect and two unknown, unrelated individuals. Based on the likelihood ratio, this provides very strong support that Victim is a contributor to the DNA from this item.</p> <p><b>Database(s) Used:</b> NIST July 2017</p>

TABLE 8

WebCode-Test	No. of Contributors	Item 4 Methods & Results
74PMLW - 5901	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> Very strong support for inclusion: the female victim. Assumed number of contributors: 3 (approximate mixture proportions 55:36:9). Assumed contributor: the male suspect It is approximately 567 septillion times more likely to obtain the DNA results if the female victim is a foreign contributor than if an unknown, unrelated individual selected at random from the [Country] population is a foreign contributor. H1: DNA originates from the male suspect, the female victim, and an unknown contributor. H2: DNA originates from the male suspect and two unknown contributors.</p> <p><b>Database(s) Used:</b> in STRmix - NIST 1036 Revised US population dataset July 2017</p>
7LHKND - 5902	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> 1.1E14 Caucasian; 2.0E13 African American; 4.4E13 Hispanic</p> <p><b>Database(s) Used:</b> NIST STRBASE Population Database</p>
82D8RW - 5901	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> Item 2 was conditioned on this sample, as these were his pants. Very strong support for inclusion: Victim. Assumed number of contributors: 3 (approximate mixture proportions 52:36:12). Assumed contributor: Suspect. H1: DNA originates from Suspect, Victim, and an unknown individual. H2: DNA originates from Suspect and two unknown individuals. It is approximately 7 trillion times more likely to obtain the DNA results if Victim is a foreign contributor than if an unknown, unrelated individual selected at random from the [Country] population is a foreign contributor.</p> <p><b>Database(s) Used:</b> NIST1036_AFAM, NIST1036_CAUC, NIST1036_HISP</p>
82TQDH - 5901	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> LR(MLE) = 6.701447918582180436. The probability that the crime scene stain (Item 4) DNA type includes the victim's and the suspect's DNA both is <math>6.70 \times 10^{36}</math> times higher if the victim and the suspect both left the stain than if someone else left the stain.</p> <p><b>Database(s) Used:</b> [Location Identifying Database]</p>
83Z7LA - 5901	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> Item 4: Item 1 Not excluded (LR = 100 billion); Item 2 (Assumed Contributor)</p> <p><b>Database(s) Used:</b> [Location Identifying Database]</p>
8PEQHA - 5902	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> LR for Complainant is &gt;100 billion; she is not excluded as a contributor. LR for Suspect is &gt;100 billion; he can be considered an assumed contributor for this profile.</p> <p><b>Database(s) Used:</b> PP21 [Location Identifying Database]</p>
8WUCN8 - 5902	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> Suspect reference - no LR (assumed contributor), Complainant reference - LR = &gt;100 billion</p> <p><b>Database(s) Used:</b> [Location Identifying Database]</p>

TABLE 8

WebCode-Test	No. of Contributors	Item 4 Methods & Results
B6H6QH - 5902	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> 3 contributors, 59%:33%:8%. Assuming the suspect is a contributor to this mixture, a partial male DNA profile was obtained from the 33% contributor, Unknown Individual B. Assuming the suspect is a contributor to this mixture, a partial DNA profile was obtained from the 8% contributor and matches the DNA profile of the victim at 3 of 21 loci. The mixture of DNA from this item is at least <math>2 \times 10</math> to the 13th power more likely if it originated from the suspect, the victim and one unknown individual than if it originated from the suspect and two unknown individuals.</p> <p><b>Database(s) Used:</b> FBI extended database African American, Caucasian, SE Hispanic, SW Hispanic. Lowest value reported from the four population databases.</p>
CJWUZ4 - 5902	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> Item 1: <math>LR = 40 \times 10^4</math>. See note regarding this LR on following page. Item 2: Assumed contributor.</p> <p><b>Database(s) Used:</b> PP21 [Location Identifying Database]</p>
ERF8RY - 5901	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> Item 1 - 100 billion. Item 2 - Assumed contributor.</p> <p><b>Database(s) Used:</b> [Location Identifying Database]</p>
G632HU - 5901	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> Assumed contributor: Item 2. It is approximately 28 sextillion times more likely to obtain the DNA results if the female victim (Item 1) is the foreign contributor than if an unknown, unrelated individual selected at random from the [Country] population is the foreign contributor.</p> <p><b>Database(s) Used:</b> STRmix - NIST 1036 Population (2017)</p>
GRCZ6X - 5902	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> Item 1: 1.1 trillion African American, 12 trillion Caucasian, 5.7 trillion Hispanic. Item 2: 1.1 sextillion African American, 4.6 septillion Caucasian, 2.5 septillion Hispanic.</p> <p><b>Database(s) Used:</b> NIST STRBASE Population Database</p>
HDMM48 - 5901	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> The mixture is at least 68 octillion (<math>10^{27}</math>) times more likely if it originated from the suspect, the victim, and an unknown, unrelated individual than if it originated from the suspect and two unknown, unrelated individuals. This analysis provides very strong support for the proposition that the victim is a contributor to the mixture.</p> <p><b>Database(s) Used:</b> NIST 1036</p>
J99CLX - 5901	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> Epithelial fraction: conditioned on Item 2, LR for Item 1 supports contribution <math>&gt; 100</math> billion (<math>6.4935E17</math>)</p> <p><b>Database(s) Used:</b> [Location Identifying Database]</p>
JGHZZV - 5901	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> At least 100 billion</p> <p><b>Database(s) Used:</b> [Location Identifying Database] Globalfiler</p>

TABLE 8

WebCode-Test	No. of Contributors	Item 4 Methods & Results
JQ7NY6 - 5901	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> The DNA profile obtained from the item No. 4 is a mixture of at least three individuals. The following sets of hypotheses were evaluated: (A) Hp: Item No. 2 + 2 Unknown, Hd: 3 Unknown, LR (MLE)= 1.39E+14, (B) Hp: Item No 1 + 2 Unknown, Hd: 3 Unknown, LR (MLE)= 3.98E+14, (C) Hp: Item No. 1 + Item No. 2 + 1 Unknown, Hd: Item No. 2 + 2 Unknown, LR (MLE)= 1.51E+14</p> <p><b>Database(s) Used:</b> NIST Caucasian Database (2017) with theta co-ancestry coefficient 0.03</p>
JX9X7X - 5901	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> Victim (item 1) = Not excluded, LR 100 billion Suspect (item 2) = Assumed contributor</p> <p><b>Database(s) Used:</b> [Location Identifying Database]</p>
JXTGB4 - 5902	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> 8.1E12 Caucasian, 5.6E11 African American, 8.4E12 Hispanic.</p> <p><b>Database(s) Used:</b> NIST STRBASE Population Database</p>
K8XREJ - 5901	Three	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> For the possible involvement of the alleged victim to this DNA mixture (Item 4), the calculated LR value was 7.92E20 to 1, which means it is about 7.92E20 times more likely that the observed DNA profile being a mixture originating from the alleged victim and two unknown individuals than if it originating from three unrelated individuals selected at random from the [Location Identifying Population]. For the possible involvement of the suspect to this DNA mixture (Item 4), the calculated LR value was 8.10E26 to 1, which means it is about 8.10E26 times more likely that the observed DNA profile being a mixture originating from the suspect and two unknown individuals than if it originating from three unrelated individuals selected at random from the [Location Identifying Population].</p> <p><b>Database(s) Used:</b> [Location Identifying Database]</p>
KVY9FT - 5902	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> For 1v: 7.1E21 Caucasian; 1.5E21 African American; 4.9E21 Hispanic. For 2S: 2.5E24 Caucasian; 3.4E20 African American; 6.9E23 Hispanic</p> <p><b>Database(s) Used:</b> NIST STRBASE population Database</p>
LPPCAY - 5901	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> Known contributors under Hp: Item 1 and Item2. Known contributors under Hd: Item 2. LR (total): 3.0E18.</p> <p><b>Database(s) Used:</b> Laboratory's own database for allele frequencies of the STR loci in the population of [Country].</p>
NMAQDU - 5901	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> Item 2 assumed, Item 1 not excluded; LR = 100 billion.</p> <p><b>Database(s) Used:</b> [Location Identifying Database] (PP21)</p>

TABLE 8

WebCode-Test	No. of Contributors	Item 4 Methods & Results
NN6EU4 - 5902	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> The DNA profile obtained from Item 4 is consistent with a mixture of 3 individuals. Assuming the male suspect is a contributor to this mixture, a partial male DNA profile was obtained from the 33% contributor, Unknown Individual B. SV1UvS2U: LR = <math>3 \times 10^{13}</math>. Assuming the male suspect is a contributor to this mixture, a partial DNA profile was obtained from the 8% contributor and matches the DNA profile of the female victim at 6 of 21 loci. The mixture of DNA obtained from Item 4 is at least <math>3 \times 10^{13}</math> times more likely if it originated from the male suspect, the female victim and one unknown individual than if it originated from the male suspect and two unknown individuals.</p> <p><b>Database(s) Used:</b> FBI extended database African American, Caucasian, SE Hispanic, SW Hispanic, lowest value reported from four population databases</p>
P8FLKQ - 5902	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> Suspect reference (item 2) No LR (assumed contributor). Complainant reference (item 1) LR &gt; 100 billion</p> <p><b>Database(s) Used:</b> PP21 [Location Identifying Database]</p>
QCP2RU - 5902	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> Victim (Item 1): 4.2E23 (CAUCASIAN);3.7E22(AFRICAN AMERICAN);1.9E23(HISPANIC). Suspect (Item 2): 5.3E25(CAUCASIAN);5.9E21 (AFRICAN AMERICAN);1.4E25(HISPANIC).</p> <p><b>Database(s) Used:</b> NIST STRBASE Population Database</p>
QJA3AR - 5901	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> Item 4 = Mixed DNA profile (Three contributors) where Item 2 was an assumed contributor to the mixture and Item 1 was Not excluded (LR = 100 billion)</p> <p><b>Database(s) Used:</b> [Location Identifying Database] (PP21)</p>
RAEJ9N - 5901	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> The STR DNA results are estimated to be greater than one trillion times more likely if they originate from SUSPECT, and two unknown people than if they originate from three unknown people unrelated to SUSPECT. note actual number is 7.09E13. The STR DNA results are estimated to be greater than one trillion times more likely if they originate from VICTIM, and two unknown people than if they originate from three unknown people unrelated to VICTIM. note actual number is 3.31E16</p> <p><b>Database(s) Used:</b> NIST Asian, NIST African American, NIST Caucasian, Srivastava et al (2019) South Asian, [Location Identifying Database]</p>
T46M3T - 5902	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> Comparison to Item 1: 5.4E26 Caucasian, 4.9E24 African American, 2.2E26 Hispanic. Comparison to Item 2: 2.2E26 Caucasian, 2.7E22 African American, 5.4E25 Hispanic.</p> <p><b>Database(s) Used:</b> NIST STRBASE Population Database</p>
THNB9G - 5902	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> [Participant did not return statistical analysis.]</p> <p><b>Database(s) Used:</b> FBI-CAUC</p>

TABLE 8

WebCode-Test	No. of Contributors	Item 4 Methods & Results
TRB7DR - 5902	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> [Participant did not return statistical analysis.]</p> <p><b>Database(s) Used:</b> [Participant did not return database used.]</p>
UHWYPN - 5902	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> Item 1 - Not excluded (LR = 100 billion). Item 2 - Assumed contributor.</p> <p><b>Database(s) Used:</b> [Location Identifying Database]</p>
UUZ3CG - 5901	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> Victim (Item 1): 1 octillion, Suspect (Item 2): 283 sextillion</p> <p><b>Database(s) Used:</b> NIST 1036 Revised U.S. Population Dataset (July 2017)</p>
YAB63G - 5902	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> VICTIM (Q01-1) cannot be excluded as a contributor to Mixture 1 (see Testing Summary) from a cutout from a swatch (Q04-1) from SUSPECT's pants. The STR DNA results are estimated to be greater than one trillion times more likely if they originate from VICTIM and two unknown people than if they originate from three unknown people unrelated to VICTIM. SUSPECT (Q02-1) cannot be excluded as a contributor to Mixture 1 from a cutout from a swatch (Q04-1) from SUSPECT's pants. The STR DNA results are estimated to be greater than one trillion times more likely if they originate from SUSPECT and two unknown people than if they originate from three unknown people unrelated to SUSPECT. SUSPECT (Q02-1) also cannot be excluded as the source of a male-specific DNA profile (Y-STR Profile B) from a cutout from a swatch (Q04-1) from SUSPECT's pants. The STR DNA results are estimated to be a further 1700 times more likely if they originate from SUSPECT than if they originate from an unknown male, unrelated to them. Please note: [Laboratory] reports a maximum of "greater than one trillion" for Likelihood Ratio statements. The actual calculated LRs are as follows: For Q01 - 8.10E+15 (8.1 quadrillion). For Q02 - 1.46E+14 (140 trillion; to 2 significant figures).</p> <p><b>Database(s) Used:</b> i) NIST Asian; ii) NIST African American; iii) NIST Caucasian; iv) Srivastava et al. (2019) South Asian; v) [Location Identifying Database]</p>
YDBGXG - 5901	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> 1. The Victim (item 1) cannot be excluded as a contributor to the questioned stain (item 4) on the suspect's pants. The STR DNA results are estimated to be greater than one trillion times more likely if they originate from the Victim and two unknown people than if they originate from three unknown people unrelated to the Victim. NOTE: We report a maximum LR value of a trillion when the calculated value exceeds that number. The actual calculated LR is 13 quadrillion. 2. The Suspect (item 2) cannot be excluded as a contributor to the questioned stain (item 4) on the suspect's pants. The STR DNA results are estimated to be greater than one trillion times more likely if they originate from the Suspect and two unknown people than if they originate from three unknown people unrelated to the Suspect. NOTE: We report a maximum LR value of a trillion when the calculated value exceeds that number. The actual calculated LR is 87 trillion.</p> <p><b>Database(s) Used:</b> i. NIST Asian; ii. NIST African American; iii. NIST Caucasian; iv. Srivastava et al. (2019) South Asian; v. [Location Identifying Database]</p>

TABLE 8

WebCode-Test	No. of Contributors	Item 4 Methods & Results
Z78W9Q - 5901	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> Hypotheses: H1: Item 4 contains the DNA of Item 1 and DNA of two unknown individuals. H2: Item 4 contains the DNA of three unknown individuals. LR=1.5E11. The DNA results support the H1 hypothesis 1.5E11 times more than the H2 hypothesis. H3: Item 4 contains the DNA of Item 2 and DNA of two unknown individuals. H4: Item 4 contains the DNA of three unknown individuals. LR=1.7E9. The DNA results support the H3 hypothesis 1.7E9 times more than the H4 hypothesis. Dropout Probability: 0.1, Drop-in probability: 0.05, Theta correction: 0.01</p> <p><b>Database(s) Used:</b> STRidER 2.0, [Location Identifying Population]</p>
Z8KMYL - 5902	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> For Item 1 comparison to Item 4: 6.0E14 African American, 1.3E16 Caucasian, 9.0E15 Hispanic.</p> <p><b>Database(s) Used:</b> NIST STRBASE Population Database</p>
ZTYATR - 5902	3	<p><b>Method(s):</b> Likelihood Ratio</p> <p><b>Stats Analysis:</b> The DNA profile from this item is interpreted as a mixture of three individuals with the suspect as an assumed contributor. The probability of obtaining this profile if the DNA came from the suspect, victim and one unrelated, unknown individual is 96.4 quintillion times greater than the probability of obtaining the profile if the DNA came from the suspect and two unrelated, unknown individuals. This likelihood ratio supports the proposition that the victim is a possible contributor to the profile.</p> <p><b>Database(s) Used:</b> NIST</p>



# Additional Comments

## TABLE 9

WebCode-Test	Additional Comments
2DPRLB - 5901	The Next button does not always work, sometimes it takes you back to page 1.
2MZT8B - 5901	When entering results into the CTS portal, I could not click next to advance the screens after page 3. It would revert back to page one when clicking next or would go back one page.
362K2C - 5902	Item 4: possible unresolved allele 19 at D12. Locus not included in LR analysis.
38V7WP - 5902	Item 4 D3S1358 19 allele present in the EPG but not given 99% weight. D1S1656 16 allele present in the EPG but not given 99% weight. D12S1391 20 allele present in the EPG but not given 99% weight. D10S1248 14 allele present in the EPG but not given 99% weight. D22S1045 16 and 18 allele present in the EPG but not given 99% weight. D8S1179 13 allele present in the EPG but not given 99% weight. D2S1338 18 and 23 allele present in the EPG but not given 99% weight. D18S51 16 allele present in the EPG but not given 99% weight. D16S539 9 allele present in the EPG but not given 99% weight. D13S317 13 allele present in the EPG but not given 99% weight. D5S818 14 allele present in the EPG but not given 99% weight. D7S820 11 allele present in the EPG but not given 99% weight.
3HRA2H - 5902	D12S391 is not included in the statistical calculations, per Department policy.
6P8FA7 - 5901	Propositions for Item 3: Hp: V and U; Hd : U and U; where U = unrelated Caucasian individual. Propositions for Item 4 (conditioned on wearer = S): Hp: S and V and U; Hd : S and U and U; where U = unrelated Caucasian individual.
6RRGV9 - 5901	NR = No Results
7LHKND - 5902	D12S391 is not included in the statistical calculations, per Department policy; No statistics were calculated for Item 3, per Department policy; Item 2 was used as an assumed known contributor for the statistical analysis on Item 4.
8PEQHA - 5902	The male DNA profile detected in item 3 is from an unknown person. The statistical evaluations performed did not use an assumed contributor approach, however the DNA profiling result matching to the complainant (item 3) and the DNA profiling result matching to the suspect (item 4) could be explained and reported as such.
B6H6QH - 5902	Item 4: D10S1248 14 allele present in electropherogram but not 99% and not reported. D22S1045 18 allele present in electropherogram but not 99% and not reported. D8S1179 13 allele present in electropherogram but not 99% and not reported. D18S51 16 allele present in electropherogram but not 99% and not reported. D16S539 9 allele present in electropherogram but not 99% and not reported. D13S317 13 allele present in electropherogram but not 99% and not reported. D5S818 14 allele present in electropherogram but not 99% and not reported. D7S820 11 allele present in electropherogram but not 99% and not reported.
CJWUZ4 - 5902	Item 3 PP21 epithelial fraction: 19 peak at FGA is small in size (238 RFU) and may be drop in, however my laboratory guidelines state that this peak must be reported as allelic. As this peak is the only indication of a third contributor to the profile, my overall interpretation of the number of contributors for this profile is three people. Item 4 statistical analysis for Item 1: discrepancy between point estimate LR (1.71 x 1021) and HPD LR (4.0 x 104) due to low locus LR for D16S539. Additional amplifications of this sample and modified STRmix settings unable to resolve issue, which results from the genotype of Item 1 being given a low weighting at D16
ERF8RY - 5901	Item 4 - D12, 19 peak unresolved from 19.1 allele, therefore locus not included in results and subsequent STRmix analysis.
GRCZ6X - 5902	D12S391 is not included in the statistical calculations, per Department policy. LR values are truncated to two significant figures, per Department policy

TABLE 9

WebCode-Test	Additional Comments
J99CLX - 5901	Additional notes: 4e - A 19 allele at D12 was present but unresolved by Genemapper. This unresolved allele was not accounted for in the possible genotypes in the deconvolution and therefore D12 was dropped from the deconvolution. 4s - The spermatozoa fraction was not profiled due to standard laboratory procedure to not progress spermatozoa fractions that test negative to presumptive testing and microscopy.
JGHZZV - 5901	Results for items 3 and 4 include stutters. Item 3: Locus D12, not reported due to instrumentation inability to resolve base pairs differing by 1 base pair. All LR's above 100 billion truncated and reported as at least 100 billion.
JQ7NY6 - 5901	Part IV: DNA Mixture Concentration and Proportions DNA mixture proportions are reported as computed by probabilistic genotyping software. DNA concentrations (ng/ $\mu$ L) for each contributor is reported as concentration of item obtained by real time PCR analysis multiplied by mixture proportion of that contributor, divided by 100.
JXTGB4 - 5902	Possible unresolved 19 allele at D12S391 observed in Item 4. D12S391 is not included in the statistical calculations, per Department policy, Item 2 was used as an assumed known contributor for the statistical analysis on Item 4
KVY9FT - 5902	D12S391 is not included in the statistical calculations, per Department policy. No statistics were calculated for Item 3, per Department policy. No assumed known contributor was considered for the statistical analysis on Item 4
LPPCAY - 5901	No Y-STR analysis were performed as it is not used in statistical analysis.
NMAQDU - 5901	Item 4: D12S391 dropped from STRMix stats evaluations due to absorbed peak as per in-house interpretation method. Absorbed peak therefore not added to page 8 (D12).
NN6EU4 - 5902	Item 4, the following alleles were seen on the electropherograms that are consistent with the female victim; however, STRmix did not give an interpreted profile $\geq 99\%$ and therefore, was not reported on the allele table for Item 4: D18 - Alleles 16 D7 - Allele 11. Two amplifications was performed for Item 4. Targeted DNA amounts were for 0.755ng & 1.04ng. 1.04ng was used in calculations for quantitation portion of DNA mixture concentration.
QCP2RU - 5902	D12S391 is not included in the statistical calculations, per Department policy. Possible unresolved 19 allele observed at D12S391. This locus was not included in the STRmix Interpretation of Item 4. No statistics were calculated for Item 3, per Department policy.
RAEJ9N - 5901	The sperm fraction of item 3 was interpreted manually (called STR Profile 1), as it was single source and our organization does not use STRmix to interpret single source samples. The DNA profile for item 3 (epithelial) was interpreted assuming a contribution of DNA from the donor of STR Profile 1 (single source male generated from the sperm fraction of item 3). Note that for the samples interpreted using STRmix (the epithelial fractions of 4-1 and 3-1) alleles were recorded as per manual interpretation standards, despite the fact that STRmix has less stringent standards for considering artefactual peaks (i.e. in 4-1e at D18 the 16 allele was not recorded as it falls into manual interpretation n+1 guidelines - used towards determining the Number of Contributors. However in STRmix this peak is considered as potentially real, not artefact, and happens to be one of the top options for one contributor). This need to list alleles in samples interpreted by STRmix should be considered as whether or not it is necessary in future tests as the manual listing of alleles may be in contradiction with the STRmix interpretations.
T46M3T - 5902	Possible unresolved 19 allele at D12S391 observed for Item 4. D12S391 is not included in the statistical calculations, per Department policy.
UHWYPN - 5902	Item 3sp - Profile is major/minor (limited information in minor). Comparisons only performed to major. Item 4 - Locus D12 dropped from STRMix analysis due to absorbed peak @19 (unlabelled due to proximity to 19.1 peak). [From Table 6: DNA Mixture Concentration and Proportions: "Item 3sp: Total concentration = 0.187ng/ul (individual contributor concentration and proportion data not reported)."]

TABLE 9

<b>WebCode-Test</b>	<b>Additional Comments</b>
YAB63G - 5902	STRmix was not used for item 3 (epithelial fraction) as the mixture fell within an interpretive range that is deemed a "simple mixture" and therefore suitable for manual interpretation. Additional peaks were noted in Item 4 (epithelial fraction) within n-1 stutter positions and were considered by STRmix. Not recorded in the datasheet as they fell within stutter range for calling manually.
Z8KMYL - 5902	D12S391 is not included in the statistical calculations, per Department policy. Item 3: No statistics were reported for the Item 1 comparison to Item 3 per Department policy since it was a comparison of the victim profile to a sample taken from her couch. No statistics were performed for the Item 2 comparison to Item 3 since Item 2 (suspect) was visually excluded per Department policy. Item 4: The suspect, Item 2, could not be eliminated from the sample taken from his pants, but no statistics will be reported, per Department policy. Item 1 could not be eliminated as a contributor and statistics were reported. The D12S391 locus appeared to have an unresolved allele in Item 4 (an apparent 19 allele). This locus was still used for TrueAllele analysis since the PG program did resolve and use that allele. However, no statistics were used for the D12S391 locus as described above.
ZTYATR - 5902	Item 3 in this test was extracted by a differential extraction method. Full profiles were obtained for the epithelial cell and sperm cell fractions; however, there was incomplete separation in the epithelial fraction, resulting in a mixture profile. Allele calls from both donors were observed in the profile due to the incomplete separation.

-End of Report-  
(Appendix may follow)

## Test No. 23-5901: Probabilistic Genotyping

DATA MUST BE SUBMITTED BY **April 10, 2023, 11:59 p.m. EDT** TO BE INCLUDED IN THE REPORT

Participant Code: U1234A

WebCode: BEU6LP

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

### **Scenario:**

Police are investigating a sexual assault involving a female victim and male suspect. The victim reported that the suspect sexually assaulted her vaginally and injured her genital area, causing her to bleed (she was not menstruating at the time of the assault). The victim confirmed the assault took place on her couch and that the suspect ejaculated. Police are submitting a stain from the victim's couch (Item 3) and a stain from the pants the suspect was wearing (Item 4). Also collected, were known blood samples from the female victim (Item 1) and male suspect (Item 2).

### **Items Submitted (Sample Pack G1 - Cloth Swatches):**

Item 1: Known blood from the female victim

Item 2: Known blood from the male suspect

Item 3: Questioned stain from victim's couch (yellow)

Item 4: Questioned stain from suspect's pants (blue)

### Part I: SCREENING TESTS

**Note: Laboratories submitting their results for ASCLD/LAB or NATA accreditation MUST identify any screening tests performed and report the test results.**

Indicate the results of any screening tests performed on the questioned stains (Items 3 & 4).

Please use the abbreviations listed in this response key to fill in the Screening Test tables on this tab. This is not an all inclusive list of tests, and should not be used to determine what tests should be performed.

TESTS NOT ON THIS LIST MAY BE USED FOR SCREENING.

Test	Abbreviation	Test	Abbreviation
Acid Phosphatase	AP	Alternate Light Source	ALS
Kastle Meyer	KM	Leucomalachite Green	LMG
Microscopic	Micro	Ortho-tolidine	O-tol
Phenolphthalein-Tetramethyl benzidine	PTMB	Prostate Specific Antigen	PSA
Rapid Stain Identification	RSID	Tetramethyl benzidine	TMB

Example:	Positive	Negative	Inconclusive	Not Tested	Test(s) Performed
Blood	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	KM, O-tol, PTMB
Semen	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	PSA
Saliva	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
Human Origin	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
Y-Screening (male DNA)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
Other Specified Body Fluid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

Please indicate the Test(s) Performed on the corresponding line for each type of screening.

Screening data not reported.

Item 3:	Positive	Negative	Inconclusive	Not Tested	Test(s) Performed
Blood	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
Semen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
Saliva	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
Human Origin	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
Y-Screening (male DNA)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
Other: <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>

Item 4:	Positive	Negative	Inconclusive	Not Tested	Test(s) Performed
Blood	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
Semen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
Saliva	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
Human Origin	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
Y-Screening (male DNA)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>
Other: <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="text"/>

### Part II: DNA INTERPRETATION

Based on results obtained from DNA analysis, could the Victim (Item 1) and/or the Suspect (Item 2) be a contributor to the questioned stains (Items 3 & 4)?

<u>Victim (Item 1)</u>			<u>Suspect (Item 2)</u>		
	Item 3	Item 4		Item 3	Item 4
Yes	<input type="radio"/>	<input type="radio"/>	Yes	<input type="radio"/>	<input type="radio"/>
No	<input type="radio"/>	<input type="radio"/>	No	<input type="radio"/>	<input type="radio"/>
Inconclusive	<input type="radio"/>	<input type="radio"/>	Inconclusive	<input type="radio"/>	<input type="radio"/>
No Interpretation	<input type="radio"/>	<input type="radio"/>	No Interpretation	<input type="radio"/>	<input type="radio"/>

**Part III: DNA Results for Known Item 1**

- Report alleles in numerical order, separated by a comma.
- Follow your laboratory procedures for reporting homozygotes (i.e. X,X or X) and null responses.
- If your laboratory policy is to indicate minor or weaker alleles, please enclose them within brackets [ ].

**STR Amplification Kit(s) Used:**

Please check all the brands that apply for this item and record only additional kit specific information in the blank provided (i.e. 16, Plus, Direct, HS, Fusion, etc.).

Identifiler® 
 GlobalFiler™ 
 Investigator® 24plex

PowerPlex® 
 Other

Report the Probabilistic Genotyping Software Used:

STRmix 
 TrueAllele 
 Other

*Alleles below are sorted in Default order.*

ITEM	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
1						
ITEM	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
1						
ITEM	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
1						
ITEM	FGA	Penta D	Penta E	SE33	TH01	TPOX
1						
ITEM	vWA	DYS391	DYS570	DYS576	Y Indel	
1						











### Part IV: DNA Mixture Concentration and Proportions

Using the dropdown menu, identify the contributors using letters (starting with "A", then "B", etc.). Report the contributor determined to have the highest concentration of DNA first, and report any remaining contributors in descending order. Enter "DNA Concentration" in ng/uL and "DNA Proportion" in percentage.

Did you perform a differential extraction of Item 3? Yes  No

Did you perform a differential extraction of Item 4? Yes  No

Concentration and proportion data not reported.

**Item 3:**

Contributor	DNA Concentration (ng/uL)	DNA Proportion (%)
<input type="text"/>	<input type="text"/>	<input type="text"/>

**Item 4:**

Contributor	DNA Concentration (ng/uL)	DNA Proportion (%)
<input type="text"/>	<input type="text"/>	<input type="text"/>

## Part V: DNA Statistical Analysis

### Item 3:

1) Record the estimated number of contributors found in Item 3:

#### 2) Statistical Analysis of Item 3 DNA Typing Results:

Select the statistical method(s) used by marking the associated box and report these results in the space below:

Likelihood Ratio (LR)

Other

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

3) Please list any databases used in the statistical analysis of Item 3 below.

### Item 4:

1) Record the estimated number of contributors found in Item 4:

#### 2) Statistical Analysis of Item 4 DNA Typing Results:

Select the statistical method(s) used by marking the associated box and report these results in the space below:

Likelihood Ratio (LR)

Other

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

3) Please list any databases used in the statistical analysis of Item 4 below.

### Part VI: ADDITIONAL COMMENTS

- Use this section to report comments regarding any part of this test.
- Written conclusions (including statistical information) for DNA analysis are not required.
- Note: Laboratories submitting their results for accreditation are asked to report any additional information that will assist in the review of their results. This includes an explanation of any deviations from a full completion of the test and/or unique findings such as elevated stutter.

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

## RELEASE OF DATA TO ACCREDITATION BODIES

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

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

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

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

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

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

A2LA Certificate No.

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

Authorized Contact Person and Title

Laboratory Name

Location (City/State)