



## **DNA - Mixture Test No. 09-586 Summary Report**

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This proficiency test was sent to 69 participants. Each participant received a sample pack consisting of two known bloodstains and two questioned stains which they were requested to analyze using their existing protocols. Data were returned from 56 participants (81% response rate) and are compiled into the following tables:

	<u>Page</u>
<u><a href="#">Manufacturer's Information</a></u>	<u><a href="#">2</a></u>
<u><a href="#">Summary Comments</a></u>	<u><a href="#">4</a></u>
<u><a href="#">Table 1: Amplification Kit &amp; STR Results - Part I</a></u>	<u><a href="#">5</a></u>
<u><a href="#">Table 2: STR Results - Part II</a></u>	<u><a href="#">12</a></u>
<u><a href="#">Table 3: STR Results - Part III</a></u>	<u><a href="#">19</a></u>
<u><a href="#">Table 4: Amplification Kit &amp; YSTR Results - Part I</a></u>	<u><a href="#">24</a></u>
<u><a href="#">Table 5: YSTR Results - Part II</a></u>	<u><a href="#">27</a></u>
<u><a href="#">Table 6: DNA Interpretations</a></u>	<u><a href="#">30</a></u>
<u><a href="#">Table 7: Additional Comments</a></u>	<u><a href="#">32</a></u>
<u><a href="#">Appendix: Data Sheet</a></u>	<u><a href="#">34</a></u>

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 pack consisted of two known bloodstains on FTA Genecards (Items 1 & 2), and two questioned stains one on clean, blue material with white flowers (Item 3) and one on clean, solid blue material (Item 4). The stain on Items 1, 2 and 4 were prepared from human whole blood which was drawn into citric acid preservative bloodbank bags. The stain in Item 3 was a mixture prepared from human whole blood and semen. The semen, procured from a cryobank, was from a single donor, but stored frozen in multiple vials at -196° C in liquid nitrogen tanks. The semen was thawed and first mixed 1:1 with TAE buffer, then mixed 1:1 with the blood. This mixture was used to spot the Item 3 substrates. Items 1 and 4 were blood collected from one female donor and Item 2 was blood collected from a male donor. Item 3 was a mixture of blood from the Item 1 female donor and semen from a donor whose known blood standard was not provided to participants. Stains from different sources were prepared on separate days and were packaged once they were thoroughly dried.

## *Sample Preparation Schedule*

<u>Item</u>	<u>Sample Collected</u>	<u>Prepared</u>	<u>Packaged</u>	<u>Volume</u>
1	August 19, 2009	August 31, 2009	September 1, 2009	75 µl
2	August 19, 2009	August 28, 2009	August 31, 2009	75 µl
3	Blood: Aug. 19, 2009; Semen: July 30, 2004	September 9, 2009	September 10, 2009	50 µl
4	August 19, 2009	August 31, 2009	September 1, 2009	50 µl

The blood was refrigerated before being spotted. Completed sample sets were stored at -20°C until shipment on October 20, 2009, following receipt of predistribution results.

## *Amelogenin and STR Results*

Results compiled by predistribution laboratories and a consensus of at least 10 participants.

<u>Item</u>	<u>D3S1358</u>	<u>D5S818</u>	<u>D7S820</u>	<u>D8S1179</u>	<u>D13S317</u>	<u>D16S539</u>	<u>D18S51</u>	<u>D21S11</u>
1	16,16	8,11	10,12	13,14	12,12	9,10	13,16	28,32.2
2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
3-Blood	16,16	8,11	10,12	13,14	12,12	9,10	13,16	28,32.2
3-Semen	15,15	12,12	9,12	12,14	11,12	11,13	16,17	29,29
4	16,16	8,11	10,12	13,14	12,12	9,10	13,16	28,32.2

<u>Item</u>	<u>Amel</u>	<u>CSF1PO</u>	<u>FGA</u>	<u>TH01</u>	<u>TPOX</u>	<u>vWA</u>	<u>PentaD*</u>	<u>PentaE*</u>
1	X,X	12,13	21,26	8,9	8,10	15,17	7,11	8,10
2	X,Y	12,12	21,26	7,9	7,11	14,18	7,14	10,12
3-Blood	X,X	12,13	21,26	8,9	8,10	15,17	7,11	8,10
3-Semen	X,Y	11,12	22,23	7,9.3	8,11	15,15	10,11	5,14
4	X,X	12,13	21,26	8,9	8,10	15,17	7,11	8,10

\* Please note: A consensus of 10 participants was not achieved for Item 3-Semen at loci Penta D and Penta E, the above results are a reflection of the data received.

<u>Item</u>	<u>D2S1338</u>	<u>D19S433</u>
1	18,23	11,13
2	21,21	12,13
3-Blood	18,23	11,13
3-Semen	17,19	15,15
4	18,23	11,13

## Manufacturer's Information, continued

### YSTR Results

*Results compiled from predistribution laboratories and a consensus of at least 10 participants.*

<u>Item</u>	<u>DYS19</u>	<u>DYS385</u>	<u>DYS389-I</u>	<u>DYS389-II</u>	<u>DYS390</u>	<u>DYS391</u>
2	14	14,14	13	29	24	11
3-Semen	14	14,15	13	29	24	11

  

<u>Item</u>	<u>DYS392</u>	<u>DYS393</u>	<u>DYS437</u>	<u>DYS438</u>	<u>DYS439</u>	<u>DYS448</u>	<u>DYS456</u>	<u>DYS458</u>	<u>DYS635</u>	<u>YGATAH4</u>
2	13	13	15	12	13	19	16	17	23	13
3-Semen	13	13	15	12	13	19	16	17	23	12

## **Summary Comments**

The DNA-Mixture test is part of the Sample Specific Series; where participants are advised of the body fluid(s) that make up the questioned stains and that therefore required no identification. The test is designed to allow participants to assess their proficiency in the analysis of dried stains containing potential mixtures. Participants were supplied with two "known" bloodstains (Items 1 and 2) and two "questioned" stains (Items 3 and 4). Items 1 and 4 were blood collected from one female donor and Item 2 was blood collected from a male donor. Item 3 was a mixture of blood from the Item 1 female donor and semen from a donor whose known blood standard was not provided to participants. (See Manufacturer's Information for preparation details)

Of the 56 responding participants, 52 reported DNA interpretations. All of these included the victim as a possible contributor to the Item 3 mixture and the Item 4 stain. All but one participant excluded the suspect as a possible contributor to Item 3 and Item 4. The exception reported inconclusive for Items 3 and 4 with no further explanation. The four participants that did not report DNA interpretations stated that they analyzed the samples for database purposes only.

Nine participants reported allelic results that were inconsistent with the consensus/predistribution results. These participants reported either a "10.3" or indicated that an off ladder existed at the D16S539 locus for Item 3. One of these participants also reported an additional allele at another locus. Additionally, five participants reported NR, \*, or other laboratory specific notations at one or more loci.

# Amplification Kit(s) & STR Results - Part I

TABLE 1

WebCode	Item	D3S1358	D5S818	D7S820	D8S1179	D13S317	D16S539	D18S51	D21S11
2XWHSQ	Kit(s) Reported: Identifiler® PowerPlex®16								
	1	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	15,16	8,11,12	9,10,12	12,13,14	11,12	9,10,11,13	13,16,17	28,29,32.2
	3sp	15	12	9,12	12,14	11,12	11,13	16,17	29
	4	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
3N4PX4	Kit(s) Reported: Identifiler®								
	1	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	15,16	8,11,12	9,10,12	12,13,14	11,12	9,10,11,13	13,16,17	28,29,32.2
	3sp	15	12	9,12	12,14	11,12	11,13	16,17	29
	4	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
43XDRF	Kit(s) Reported: Identifiler®								
	1	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3	15,[16]	[8],[11],12	9,[10],12	12,[13],14	11,12	[9],[10],11,13	[13],16,17	[28],29,[32.2]
	4	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
4YG63F	Kit(s) Reported: Identifiler®								
	1	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	[15],16	8,11,[12]	[9],10,12	[12],13,14	[11],12	9,10,[11],[13]	13,16,[17]	28,[29],32.2
	3sp	15	12	9,12	12,14	11,12	11,13	16,17	29
	4	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
5T5H55	Kit(s) Reported: Identifiler®								
	1	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	15,16	8,11,12	9,10,12	12,13,14	11,12	9,10,11,13	13,16,17	28,29,32.2
	3sp	15	12	9,12	12,14	11,12	11,13	16,17	29
	4	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
6SDRKB	Kit(s) Reported: PowerPlex®16								
	1	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
774694	Kit(s) Reported: Identifiler®								
	1	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	[15],16	8,11,[12]	[9],10,12	[12],13,14	[11],12	9,10,[11],[13]	13,16,[17]	28,[29],32.2
	3sp	15	12	9,12	12,14	11,12	11,13	16,17	29
	4	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
7ZHCVJ	Kit(s) Reported: Identifiler®								
	1	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3	15,16	8,11,12	9,10,12	12,13,14	11,12	9,10,10.3,13	13,16,17	28,29,32.2
	4	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2

TABLE 1

WebCode	Item	D3S1358	D5S818	D7S820	D8S1179	D13S317	D16S539	D18S51	D21S11
8V6PX8	Kit(s) Reported: COfiler® and Profiler Plus® Identifiler® MiniFiler								
	1	16,16	8,11	10,12	13,14	12,12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	[15],16	8,11,[12]	[9],10,12	[12],13,14	[11],12	9,10,[11],[13]	13,16	28,[29],32.2
	3sp	15,15	12,12	9,12	12,14	11,12	11,13	16,17	29,29
	4	16,16	8,11	10,12	13,14	12,12	9,10	13,16	28,32.2
8XU1WD	Kit(s) Reported: COfiler® and Profiler Plus®								
	1	16	8,11	10,12	13,14	12		13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12		16,17	31,32.2
	3blood	15,16	8,11,12	9,10,12	12,13,14	11,12		13,16,17	28,29,32.2
	3sp	15	12	9,12	12,14	11,12		16,17	29
	4	16	8,11	10,12	13,14	12		13,16	28,32.2
8Z3ZH8	Kit(s) Reported: Identifiler®								
	1	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	[15],16	8,11,[12]	[9],10,12	[12],13,14	[11],12	9,10,[10.3],[13]	13,16	28,[29],32.2
	3sp	15	12	9,12	12,14	11,12	10,3,13	16,17	29
	4	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
95QHPV	Kit(s) Reported: COfiler® and Profiler Plus®								
	1	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	[15],16	8,11,[12]	[9],10,12	[12],13,14	[11],12	9,10,[13]	13,16,[17]	28,[29],32.2
	3sp	15	12	9,12	12,14	11,12		16,17	29
	4	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
97DUN1	Kit(s) Reported: SGM+								
	1	16,16			13,14		9,10	13,16	28,32.2
	2	14,16			14,16		11,13	16,17	31,32.2
	3	15,16			[12],13,14		9,10,[R]*,[13]	13,16,[17]	28,29,32.2
	4	16,16			13,14		9,10	13,16	28,32.2
ALTBT9	Kit(s) Reported: COfiler® and Profiler Plus®								
	1	16	8,11	10,12	13,14	12	/	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	/	16,17	31,32.2
	3blood	15,16	8,11,12	9,10,12	12,13,14	11,12	/	13,16,17	28,29,32.2
	3sp	15	12	9,12	12,14	11,12	/	16,17	29
	4	16	8,11	10,12	13,14	12	/	13,16	28,32.2
AR2LA4	Kit(s) Reported: Identifiler®								
	1	16,16	8,11	10,12	13,14	12,12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	15,16	8,11,12	9,10,12	12,13,14	11,12	9,10,[11],[13]	13,16,17	28,29,32.2
	3sp	15,15	12,12	9,12	12,14	11,12	11,13	16,17	29,29
	4	16,16	8,11	10,12	13,14	12,12	9,10	13,16	28,32.2
AULM5Q	Kit(s) Reported: COfiler® and Profiler Plus® PowerPlex®16								
	1	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	[15],16	8,11,[12]	[9],10,12	[12],13,14	[11],12	9,10,[11],[13]	13,16,[17]	28,[29],32.2
	3sp	15	12	9,12	12,14	11,12	11,13	16,17	29
	4	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2

TABLE 1

WebCode	Item	D3S1358	D5S818	D7S820	D8S1179	D13S317	D16S539	D18S51	D21S11
BJM3R4	Kit(s) Reported: Identifiler®								
	1	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	[15],16	8,11,12	[9],10,12	[12],13,14	[11],12	9,10,[10.3],*13	13,16	28,29,32.2
	3sp	15	12	9,12	12,14	11,12	10.3,13	16,17	29
	4	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
BXM131	Kit(s) Reported: COfiler® and Profiler Plus®								
	1	16,16	8,11	10,12	13,14	12,12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	[15],16	8,11,[12]	[9],10,12	[12],13,14	[11],12		16,[17]	28,[29]
	3sp	15,NR	12,NR	NSD	14,NR	12,NR		17,NR	29,NR
	4	16,16	8,11	10,12	13,14	12,12	9,10	13,16	28,32.2
BZACD7	Kit(s) Reported: PowerPlex®16								
	1	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
CTHKR5	Kit(s) Reported: Identifiler®								
	1	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	[15],16	8,11,[12]	[9],10,12	[12],13,14	[11],12	9,10,[11],[13]	13,16,[17]	28,[29],32.2
	3sp	15	12	9,12	12,14	11,12	11,13	16,17	29
	4	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
D1J4JT	Kit(s) Reported: COfiler® and Profiler Plus®								
	1	16,16	8,11	10,12	13,14	12,12		13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12		16,17	31,32.2
	3e	[15],16	8,11,[12]	[9],10,12	[12],13,14	12,12		13,16,[17]	28,[29],32.2
	3sp	15,15	12,12	9,12	12,14	11,12		16,17	29,29
	4	16,16	8,11	10,12	13,14	12,12		13,16	28,32.2
E5AYUZ	Kit(s) Reported: COfiler® and Profiler Plus® PowerPlex®16								
	1	16,16	8,11	10,12	13,14	12,12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	15,16	8,11,12	9,10,12	12,13,14	11,12	9,10,11,13	13,16,17	28,29,32.2
	3sp	15,15	12,12	9,12	12,14	11,12	11,13	16,17	29,29
	4	16,16	8,11	10,12	13,14	12,12	9,10	13,16	28,32.2
E7YAT5	Kit(s) Reported: PowerPlex®16								
	1	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
EN5HJ7	Kit(s) Reported: MiniFiler								
	1			10,12		12	9,10	13,16	28,32.2
	2			10,13		11,12	11,13	16,17	31,32.2
	3e			9,10,12		11,12	9,10,11,13	13,16,17	28,29,32.2
	3sp			9,12		11,12	11,13	16,17	29
	4			10,12		12	9,10	13,16	28,32.2
F899QZ	Kit(s) Reported: COfiler® and Profiler Plus® PowerPlex®16 PowerPlex Y								
	1	16,16	8,11	10,12	13,14	12,12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	15,16	8,11,12	9,10,12	12,13,14	11,12	9,10,11,13	13,16,17	28,29,32.2
	3sp	15,15	12,12	9,12	12,14	11,12	11,13	16,17	29,29
	4	16,16	8,11	10,12	13,14	12,12	9,10	13,16	28,32.2

TABLE 1

WebCode	Item	D3S1358	D5S818	D7S820	D8S1179	D13S317	D16S539	D18S51	D21S11
FJPCMX	Kit(s) Reported: COfiler® and Profiler Plus®								
	1	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	[15],16	8,11,12	[9],10,12	[12],13,14	[11],12	9,10,[11],[13]	13,16,[17]	28,[29],32.2
	3sp	15	12	9,12	12,14	11,12	11,13	16,17	29
	4	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
GDCPNL	Kit(s) Reported: COfiler® and Profiler Plus®								
	1	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	[15],16	8,11,[12]	[9],10,12	[12],13,14	[11],12	9,10,[11],[13]	13,16,[17]	28,[29],32.2
	3sp	15	12	9,12	12,14	11,12	11,13	16,17	29
	4	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
HUYPsq	Kit(s) Reported: Identifiler® PowerPlex®16								
	1	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
	3sp	15	12	9,12	12,14	11,12	11,13	16,17	29
	4	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
K2PUYW	Kit(s) Reported: COfiler® and Profiler Plus® Identifiler® MiniFiler								
	1	16,16	8,11	10,12	13,14	12,12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	[15],16	8,11,[12]	[9],10,12	[12],13,14	[11],12	9,10,[11],[13]	13,16,[17]	28,[29],32.2
	3sp	15,15	12,12	9,12	12,14	11,12	11,13	16,17	29,29
	4	16,16	8,11	10,12	13,14	12,12	9,10	13,16	28,32.2
KG7GAF	Kit(s) Reported: Identifiler®								
	1	16,16	8,11	10,12	13,14	12,12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	[15],16	8,11,[12]	[9],10,12	[12],13,14	[11],12	9,10,[10.3],[13]	13,16,[17]	28,[29],32.2
	3sp	15,15	12,12	9,12	12,14	11,12	10.3,13	16,17	29,29
	4	16,16	8,11	10,12	13,14	12,12	9,10	13,16	28,32.2
KK7T6F	Kit(s) Reported: COfiler® and Profiler Plus®								
	1	16,16	8,11	10,12	13,14	12,12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	[15],16	8,11,[12]	[9],10,12	[12],13,14	[11],12	9,10,[11],[13]	13,16,[17]	28,[29],32.2
	3sp	15,15	12,12	9,12	12,14	11,12	11,13	16,17	29,29
	4	16,16	8,11	10,12	13,14	12,12	9,10	13,16	28,32.2
NHKL8N	Kit(s) Reported: Identifiler®								
	1	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	15,16	8,11,12	9,10,12	12,13,14	11,12	9,10,11,13	13,16,17	28,29,32.2
	3sp	15	12	9,12	12,14	11,12	11,13	16,17	29
	4	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
PD8X9B	Kit(s) Reported: SGM+								
	1	16,16			13,14		9,10	13,16	28,32.2
	2	14,16			14,16		11,13	16,17	31,32.2
	3e	[15],16			[12],13,14		9,10,[10.3],[13]	[13],16,[17]	28,[29],32.2
	3sp	15,15			12,14		10.3,13	16,17	29,29
	4	16,16			13,14		9,10	13,16	28,32.2

TABLE 1

WebCode	Item	D3S1358	D5S818	D7S820	D8S1179	D13S317	D16S539	D18S51	D21S11
PFW98H	Kit(s) Reported: COfiler® and Profiler Plus®								
	1	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	[15],16	8,11,[12]	[9],10,12	[12],13,14	[11],12	9,10,[OLA]*,[13]- inc.	13,16,[17]	28,[29],32.2
	3sp	15	12	9,12	12,14	11,12	[OLA]*,[13]-inc.	16,17	29
	4	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
PWNXST	Kit(s) Reported: COfiler® and Profiler Plus®								
	1	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	[15],16	8,11,[12]	[9],10,12	[12],13,14	12	9,10,[11],[13]	13,16,[17]	28,29,32.2
	3sp	15*	12	9,12	12,14	11,12	11,13	16,17	29
	4	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
PXJMM9	Kit(s) Reported: Identifiler®								
	1	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	[15],16	8,11,12	[9],10,12	[12],13,14	[11],12	9,10,[11],[13]	13,16,[17]	28,29,32.2
	3sp	15	12	9,12	12,14	11,12	11,13	16,17	29
	4	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
SB967F	Kit(s) Reported: Identifiler®								
	1	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	15,16	8,11,12	9,10,12	12,13,14	11,12	9,10,11,13	13,16,17	28,29,32.2
	3sp	15	12	9,12	12,14	11,12	11,13	16,17	29
	4	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
SDX56K	Kit(s) Reported: Identifiler®								
	1	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	15,16	8,11,12	9,10,12	12,13,14	11,12	9,10,11,13	13,16,17	28,29,32.2
	3sp	15	12	9,12	12,14	11,12	11,13	16,17	29
	4	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
SULETN	Kit(s) Reported: COfiler® and Profiler Plus® PowerPlex®16 MiniFiler								
	1	16,16	8,11	10,12	13,14	12,12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	15,[16]	12,12	9,12	12,14	11,12	11,13	16,17	[28],29
	3sp	15,[16]	[8],[11],12	9,[10],12	12,[13],14	11,12	[9],[10],11,13	[13],16,17	[28],29,[32.2]
	4			10,12		12,12	9,10	13,16	28,*
SW9RST	Kit(s) Reported: Identifiler®								
	1	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	[15],16	8,11,[12]	[9],10,12	[12],13,14	[11],12	9,10,[11],[13]	13,16,[17]	28,[29],32.2
	3sp	15	12	9,12	12,14	11,12	11,13	16,17	29
	4	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
SYKTFC	Kit(s) Reported: COfiler® and Profiler Plus®								
	1	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	[15],16	8,11,12	[9],10,12	[12],13,14	[11],12	9,10,[11],[13]	13,16,[17]	28,[29],32.2
	3sp	15	12	9,12	12,14	11,12	11,13	16,17	29
	4	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2

TABLE 1

WebCode	Item	D3S1358	D5S818	D7S820	D8S1179	D13S317	D16S539	D18S51	D21S11
TEUNXD	Kit(s) Reported: COfiler® and Profiler Plus®								
	1	16,16	8,11	10,12	13,14	12,12		13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12		16,17	31,32.2
	3e	15,16	8,11,12	9,10,12	12,13,14	11,12		13,16,17	28,29,32.2
	3sp	15,15	12,12	9,12	12,14	11,12		16,17	29,29
	4	16,16	8,11	10,12	13,14	12,12		13,16	28,32.2
UBJGKB	Kit(s) Reported: COfiler® and Profiler Plus®								
	1	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	[15],16	8,11,[12]	[9],10,12	[12],13,14	[11],12	9,10,[10.3],[13]	13,16,[17]	28,[29],32.2
	3sp	15	12	9,12	12,14	11,12	10,3,13	16,17	29
	4	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
V5HAUF	Kit(s) Reported: Identifiler®								
	1	16,16	8,11	10,12	13,14	12,12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	[15],16,16	8,11,[12]	[9],10,12	[12],13,14	[11],12,12	9,10,[11],[13]	13,16,[17]	28,[29],32.2
	3sp	15,15	12,12	9,12	12,14	11,12	11,13	16,17	29,29
	4	16,16	8,11	10,12	13,14	12,12	9,10	13,16	28,32.2
V72BP2	Kit(s) Reported: SGM+ and Profiler								
	1	16,16	8,11	10,12	13,14	12,12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	15,16	8,11,12	9,10,12	12,13,14	11,12	9,10,11,13	13,16,17	28,29,32.2
	3sp	15,[16]	[8],12	9,[10],12	12,[13],14	11,12	[9],[10],11,13	[13],16,17	[28],29,[32.2]
	4	16,16	8,11	10,12	13,14	12,12	9,10	13,16	28,32.2
VJWQLC	Kit(s) Reported: Identifiler®								
	1	16,16	8,11	10,12	13,14	12,12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	15,16	8,11,12	9,10,12	12,13,14	11,12	9,10,13	13,16,17	28,29,32.2
	3s	15	12	9,12	12,14	11,12	11,13	16,17	29
	4	16,16	8,11	10,12	13,14	12,12	9,10	13,16	28,32.2
VLK2LJ	Kit(s) Reported: Identifiler® PowerPlex®16 for traces Identifiler only								
	1	16,16	8,11	10,12	13,14	12,12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	[15],16	8,11,[12]	10,12	13,14	12	9,10,[11],[13]	13,16	28,[29],32.2
	3sp	15	12	9,12	12,14	11,12	11,13	16,17	29,29
	4	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
VPKG CJ	Kit(s) Reported: Identifiler®								
	1	16,16	8,11	10,12	13,14	12,12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	15,16	8,11,12	9,10,12	12,13,14	11,12	9,10,11,13	13,16,17	28,29,32.2
	3sp	15,15	12,12	9,12	12,14	11,12	11,13	16,17	29,29
	4	16,16	8,11	10,12	13,14	12,12	9,10	13,16	28,32.2
WFSGU8	Kit(s) Reported: COfiler® and Profiler Plus®								
	1	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	[15],16	8,11,[12]	[9],10,12	[12],13,14	[11],12	9,10,[10.3],[13]	13,16,[17]	28,[29],32.2
	3sp	15	12	9,12	12,14	11,12	10,3,13	16,17	29
	4	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2

TABLE 1

WebCode	Item	D3S1358	D5S818	D7S820	D8S1179	D13S317	D16S539	D18S51	D21S11
WK8QH7	Kit(s) Reported: Identifiler®								
	1	16,16	8,11	10,12	13,14	12,12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3	15,15,[16]	[8],[11],12,12	9,[10],12	12,[13],14	11,12	[9],[10],11,13	[13],16,17	[28],29,29,[32.2]
	4	16,16	8,11	10,12	13,14	12,12	9,10	13,16	28,32.2
WTFJCZ	Kit(s) Reported: SGM Plus								
	1	16,16			13,14		9,10	13,16	28,32.2
	2	14,16			14,16		11,13	16,17	31,32.2
	3e	[15],16,16			[12],13,14		9,10,[11],[13]	13,16,[17]	28,[29],32.2
	3sp	15,15			12,14		11,13	16,17	29,29
	4	16,16			13,14		9,10	13,16	28,32.2
WV4VB6	Kit(s) Reported:								
	1	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	15,16	8,11,12	9,10,12	12,13,14	11,12	9,10,10.3,13	13,16,17	28,29,32.2
	3sp	15	12	9,12	12,14	11,12	10.3,13	16,17	29
	4	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
WXS7BB	Kit(s) Reported: PowerPlex®16								
	1	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	15,16	8,11,12	9,10,12	12,13,14	11,12	9,10,11,13	13,16,17	28,29,32.2
	3sp	15	12	9,12	12,14	11,12	11,13	16,17	29
	4	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
X1TLKM	Kit(s) Reported: PowerPlex®16								
	1	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
Z3D9VD	Kit(s) Reported: COfiler® and Profiler Plus®								
	1	16,16	8,11	10,12	13,14	12,12		13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12		16,17	31,32.2
	3e	[15],16	8,11,[12]	[9],10,12	[12],13,14	[11],12		13,16,[17]	28,[29],32.2
	3sp	15,15	12,12	9,12	12,14	11,12		16,17	29,29
	4	16,16	8,11	10,12	13,14	12,12		13,16	28,32.2
Z9DHDY	Kit(s) Reported: Identifiler®								
	1	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2
	2	14,16	12,13	10,13	14,16	11,12	11,13	16,17	31,32.2
	3e	[15],16	8,11,[12]	[9],10,12	[12],13,14	[11],12	9,10,[11],[13]	13,16,[17]	28,[29],32.2
	3sp	15	12	9,12	12,14	11,12	11,13	16,17	29
	4	16	8,11	10,12	13,14	12	9,10	13,16	28,32.2

Results in brackets "[ ]" indicate minor or weaker alleles

\* See Additional Comments (Table 7)

# STR Results - Part II

TABLE 2

WebCode	Item	Amel	CSF1PO	FGA	TH01	TPOX	vWA	Penta D	Penta E
2XWHSQ	1	X	12,13	21,26	8,9	8,10	15,17	7,11	8,10
	2	X,Y	12	21,26	7,9	7,11	14,18	7,14	10,12
	3e	X,Y	11,12,13	21,22,23,26	7,8,9,9.3	8,10,11	15,17	7,10,11	5,8,10,14
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15	10,11	5,14
	4	X	12,13	21,26	8,9	8,10	15,17	7,11	8,10
3N4PX4	1	X,X	12,13	21,26	8,9	8,10	15,17		
	2	X,Y	12	21,26	7,9	7,11	14,18		
	3e	X,Y	11,12,13	21,22,23,26	7,8,9,9.3	8,10,11	15,17		
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15		
	4	X,X	12,13	21,26	8,9	8,10	15,17		
43XDRF	1	X	12,13	21,26	8,9	8,10	15,17		
	2	X,Y	12	21,26	7,9	7,11	14,18		
	3	X,[Y]	11,12,[13]	[21],22,23,[26]	7,[8],[9],9.3	8,[10],11	15,[17]		
	4	X	12,13	21,26	8,9	8,10	15,17		
4YG63F	1	X	12,13	21,26	8,9	8,10	15,17		
	2	X,Y	12	21,26	7,9	7,11	14,18		
	3e	X,[Y]	12,13	21,[22],26	[7],8,9,[9.3]	8,10,[11]	15,17		
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15		
	4	X	12,13	21,26	8,9	8,10	15,17		
5T5H55	1	X,X	12,13	21,26	8,9	8,10	15,17		
	2	X,Y	12	21,26	7,9	7,11	14,18		
	3e	X,Y	11,12,13	21,22,23,26	7,8,9,9.3	8,10,11	15,17		
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15		
	4	X,X	12,13	21,26	8,9	8,10	15,17		
6SDRKB	1	X	12,13	21,26	8,9	8,10	15,17	7,11	8,10
	2	X,Y	12	21,26	7,9	7,11	14,18	7,14	10,12
774694	1	X,X	12,13	21,26	8,9	8,10	15,17		
	2	X,Y	12	21,26	7,9	7,11	14,18		
	3e	X,[Y]	[11],12,13	21,[22],[23],26	[7],8,9,[9.3]	8,10,[11]	15,17		
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15		
	4	X,X	12,13	21,26	8,9	8,10	15,17		
7ZHCVJ	1	X	12,13	21,26	8,9	8,10	15,17		
	2	X,Y	12	21,26	7,9	7,11	14,18		
	3	X,Y	11,12,13	21,22,23,26	7,8,9,9.3	8,10,11	15,17		
	4	X	12,13	21,26	8,9	8,10	15,17		

TABLE 2

WebCode	Item	Amel	CSF1PO	FGA	TH01	TPOX	vWA	Penta D	Penta E
8V6PX8	1	X,X	12,13	21,26	8,9	8,10	15,17	NT	NT
	2	X,Y	12,12	21,26	7,9	7,11	14,18	NT	NT
	3e	X,[Y]	[11],12,13	21,[22],[23],26	[7],8,9,[9.3]	8,10,[11]	15,17	NT	NT
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15,15	NT	NT
	4	X,X	12,13	21,26	8,9	8,10	15,17	NT	NT
8XU1WD	1	X		21,26			15,17		
	2	X,Y		21,26			14,18		
	3blood	X,Y		21,22,23,26			15,17		
	3sp	X,Y		22,23			15		
	4	X		21,26			15,17		
8Z3ZH8	1	X	12,13	21,26	8,9	8,10	15,17		
	2	X,Y	12	21,26	7,9	7,11	14,18		
	3e	X,[Y]	12,13	21,26	[7],8,9,[9.3]	8,10,[11]	15,17		
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15		
	4	X	12,13	21,26	8,9	8,10	15,17		
95QHPV	1	X	12,13	21,26	8,9	8,10	15,17		
	2	X,Y	12	21,26	7,9	7,11	14,18		
	3e	X,[Y]	[11],12,13	21,[22],[23],26	8,9	8,10,[11]	15,17		
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15		
	4	X	12,13	21,26	8,9	8,10	15,17		
97DUN1	1	X,X		21,26	8,9		15,17		
	2	X,Y		21,26	7,9		14,18		
	3	X,[Y]		21,[22],[23],26	[7],8,9,[9.3]		15,17		
	4	X,X		21,26	8,9		15,17		
ALTBT9	1	X	/	21,26	/	/	15,17	/	/
	2	X,Y	/	21,26	/	/	14,18	/	/
	3blood	X,Y	/	21,22,23,26	/	/	15,17	/	/
	3sp	X,Y	/	22,23	/	/	15	/	/
	4	X	/	21,26	/	/	15,17	/	/
AR2LA4	1	X,X	12,13	21,26	8,9	8,10	15,17		
	2	X,Y	12,12	21,26	7,9	7,11	14,18		
	3e	X,X,[Y]	11,12,13	21,22,23,26	7,8,9,9.3	8,10,11	15,17		
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15,15		
	4	X,X	12,13	21,26	8,9	8,10	15,17		
AULM5Q	1	X,X	12,13	21,26	8,9	8,10	15,17	7,11	8,10
	2	X,Y	12	21,26	7,9	7,11	14,18	7,14	10,12
	3e	X,[Y]	[11],12,13	21,[22],[23],26	[7],8,9,[9.3]	8,10,[*11]	15,17		
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15		
	4	X,X	12,13	21,26	8,9	8,10	15,17		

TABLE 2

WebCode	Item	Amel	CSF1PO	FGA	TH01	TPOX	vWA	Penta D	Penta E
BJM3R4	1	X,X	12,13	21,26	8,9	8,10	15,17		
	2	X,Y	12	21,26	7,9	7,11	14,18		
	3e	X,[Y]	[11],12,[13]	21,*22,*23,26	[7],8,9,[9.3]	8,10,[11]	15,[17]		
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15		
	4	X,X	12,13	21,26	8,9	8,10	15,17		
BXM131	1	X,X	12,13	21,26	8,9	8,10	15,17		
	2	X,Y	12,12	21,26	7,9	7,11	14,18		
	3e	X,X	[11],12	21,[22],[23],26		8,NR	15,17		
	3sp	X,NR		22,23			15,NR		
	4	X,X	12,13	21,26	8,9	8,10	15,17		
BZACD7	1	X,X	12,13	21,26	8,9	8,10	15,17	7,11	8,10
	2	X,Y	12	21,26	7,9	7,11	14,18	7,14	10,12
CTHKR5	1	X	12,13	21,26	8,9	8,10	15,17		
	2	X,Y	12	21,26	7,9	7,11	14,18		
	3e	X,[Y]	[11],12,13	21,[22],[23],26	[7],8,9,[9.3]	8,10,[11]	15,17		
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15		
	4	X	12,13	21,26	8,9	8,10	15,17		
D1J4JT	1	X,X		21,26			15,17		
	2	X,Y		21,26			14,18		
	3e	X,[Y]		21,[22],[23],26			15,17		
	3sp	X,Y		22,23			15,15		
	4	X,X		21,26			15,17		
E5AYUZ	1	X,X	12,13	21,26	8,9	8,10	15,17	7,11	8,10
	2	X,Y	12,12	21,26	7,9	7,11	14,18	7,14	10,12
	3e	X,Y	11,12,13	21,22,23,26	7,8,9,9.3	8,10,11	15,17	7,10,11	5,8,10,14
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15,15	10,11	5,14
	4	X,X	12,13	21,26	8,9	8,10	15,17	7,11	8,10
E7YAT5	1	X	12,13	21,26	8,9	8,10	15,17	7,11	8,10
	2	X,Y	12	21,26	7,9	7,11	14,18	7,14	10,12
EN5HJ7	1	X	12,13	21,26					
	2	X,Y	12	21,26					
	3e	X,Y	11,12,13	21,22,23,26					
	3sp	X,Y	11,12	22,23					
	4	X	12,13	21,26					
F899QZ	1	X,X	12,13	21,26	8,9	8,10	15,17	7,11	8,10
	2	X,Y	12,12	21,26	7,9	7,11	14,18	7,14	10,12
	3e	X,Y	11,12,13	21,22,23,26	7,8,9,9.3	8,10,11	15,17	7,11	5,8,10,14
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15,15	10,11	5,14
	4	X,X	12,13	21,26	8,9	8,10	15,17	7,11	8,10

TABLE 2

WebCode	Item	Amel	CSF1PO	FGA	TH01	TPOX	vWA	Penta D	Penta E
FJPCMX	1	X	12,13	21,26	8,9	8,10	15,17		
	2	X,Y	12	21,26	7,9	7,11	14,18		
	3e	X,[Y]	[11],12,13	21,[22],[23],26	[7],8,9,[9.3]	8,10,[11]	15,17		
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15		
	4	X	12,13	21,26	8,9	8,10	15,17		
GDCPNL	1	X	12,13	21,26	8,9	8,10	15,17		
	2	X,Y	12	21,26	7,9	7,11	14,18		
	3e	X,[Y]	[11],12,13	21,[22],[23],26	[7],8,9,[9.3]	8,10,[11]	15,17		
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15		
	4	X	12,13	21,26	8,9	8,10	15,17		
HUYPsq	1	X	12,13	21,26	8,9	8,10	15,17	7,11	8,10
	2	X,Y	12	21,26	7,9	7,11	14,18	7,14	10,12
	3e	X	12,13	21,26	8,9	8,10	15,17	7,11	8,10
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15	10,11	5,14
	4	X	12,13	21,26	8,9	8,10	15,17	7,11	8,10
K2PUYW	1	X,X	12,13	21,26	8,9	8,10	15,17		
	2	X,Y	12,12	21,26	7,9	7,11	14,18		
	3e	X,[Y]	[11],12,13	21,[22],[23],26	[7],8,9,[9.3]	8,10,[11]	15,17		
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15,15		
	4	X,X	12,13	21,26	8,9	8,10	15,17		
KG7GAF	1	X,X	12,13	21,26	8,9	8,10	15,17		
	2	X,Y	12,12	21,26	7,9	7,11	14,18		
	3e	X,[Y]	[11],12,13	21,[22],[23],26	[7],8,9,[9.3]	8,10,[11]	15,17		
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15,15		
	4	X,X	12,13	21,26	8,9	8,10	15,17		
KK7T6F	1	X,X	12,13	21,26	8,9	8,10	15,17		
	2	X,Y	12,12	21,26	7,9	7,11	14,18		
	3e	X,[Y]	[11],12,13	21,[22],[23],26	[7],8,9,[9.3]	8,10,[11]	15,[17]		
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15,15		
	4	X,X	12,13	21,26	8,9	8,10	15,17		
NHKL8N	1	X,X	12,13	21,26	8,9	8,10	15,17		
	2	X,Y	12	21,26	7,9	7,11	14,18		
	3e	X,Y	11,12,13	21,22,23,26	7,8,9,9.3	8,10,11	15,17		
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15		
	4	X,X	12,13	21,26	8,9	8,10	15,17		
PD8X9B	1	X,X		21,26	8,9		15,17		
	2	X,Y		21,[25],26	7,9		14,18		
	3e	X,[Y]		21,[22],[23],26	[7],8,9,[9.3]		15,17		
	3sp	X,Y		22,23	7,9.3		15,15		
	4	X,X		21,26	8,9		15,17		

TABLE 2

WebCode	Item	Amel	CSF1PO	FGA	TH01	TPOX	vWA	Penta D	Penta E
PFW98H	1	X	12,13	21,26	8,9	8,10	15,17	-	-
	2	X,Y	12	21,26	7,9	7,11	14,18	-	-
	3e	X,[Y]	[11],12,13	21,[22],[23],26	[7],8,9,[9.3]	8,10,[11]	15,17	-	-
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15	-	-
	4	X	12,13	21,26	8,9	8,10	15,17	-	-
PWNXST	1	X	12,13	21,26	8,9	8,10	15,17	-	-
	2	X,Y	12	21,26	7,9	7,11	14,18	-	-
	3e	X,[Y]	[11],12,13	21,[22],[23],26	[7],8,9,[9.3]	8,10,[11]	15,17	-	-
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15	-	-
	4	X	12,13	21,26	8,9	8,10	15,17	-	-
PXJMM9	1	X	12,13	21,26	8,9	8,10	15,17	-	-
	2	X,Y	12	21,26	7,9	7,11	14,18	-	-
	3e	X,[Y]	11,12,13	21,22,23,26	8,9,[9.3]	8,10,11	15,17	-	-
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15	-	-
	4	X	12,13	21,26	8,9	8,10	15,17	-	-
SB967F	1	X,X	12,13	21,26	8,9	8,10	15,17	-	-
	2	X,Y	12	21,26	7,9	7,11	14,18	-	-
	3e	X,Y	11,12,13	21,22,23,26	7,8,9,9.3	8,10,11	15,17	-	-
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15	-	-
	4	X,X	12,13	21,26	8,9	8,10	15,17	-	-
SDX56K	1	X	12,13	21,26	8,9	8,10	15,17	-	-
	2	X,Y	12	21,26	7,9	7,11	14,18	-	-
	3e	X	11,12,13	21,22,23,26	7,8,9,9.3	8,10,11	15,17	-	-
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15	-	-
	4	X	12,13	21,26	8,9	8,10	15,17	-	-
SULETN	1	X,X	12,13	21,26	8,9	8,10	15,17	-	-
	2	X,Y	12,12	21,26	7,9	7,11	14,18	-	-
	3e	X,Y	11,12	22,23	7,9.3	8,11	15,15	NR	5,*
	3sp	X,Y	11,12,[13]	[21],22,23,[26]	7,[8],[9],9.3	8,[10],11	15,[17]	[7],10,11	5,[8],[10],14
	4	X,X	12,13	21,26					
SW9RST	1	X	12,13	21,26	8,9	8,10	15,17	-	-
	2	X,Y	12	21,26	7,9	7,11	14,18	-	-
	3e	Xa*	[11],12,13	21,[22],[23],26	[7],8,9,[9.3]	8,10,[11]	15,17	-	-
	3sp	X,y	11,12	22,23	7,9.3	8,11	15	-	-
	4	X	12,13	21,26	8,9	8,10	15,17	-	-
SYKTFC	1	X	12,13	21,26	8,9	8,10	15,17	-	-
	2	X,Y	12	21,26	7,9	7,11	14,18	-	-
	3e	X,[Y]	[11],12,13	21,[22],[23],26	[7],8,9,[9.3]	8,10,[11]	15,17	-	-
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15	-	-
	4	X	12,13	21,26	8,9	8,10	15,17	-	-

TABLE 2

WebCode	Item	Amel	CSF1PO	FGA	TH01	TPOX	vWA	Penta D	Penta E
TEUNXD	1	X,X		21,26			15,17		
	2	X,Y		21,26			14,18		
	3e	X,Y		21,22,23,26			15,17		
	3sp	X,Y		22,23			15,15		
	4	X,X		21,26			15,17		
UBJGKB	1	X	12,13	21,26	8,9	8,10	15,17	-	-
	2	X,Y	12	21,26	7,9	7,11	14,18	-	-
	3e	X,[Y]	[11],12,13	21,[22],[23],26	[7],8,9,[9.3]	8,10,[11]	15,17	-	-
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15	-	-
	4	X	12,13	21,26	8,9	8,10	15,17	-	-
V5HAUF	1	X,X	12,13	21,26	8,9	8,10	15,17		
	2	X,Y	12,12	21,26	7,9	7,11	14,18		
	3e	X,X,[X],[Y]	[11],12,13	21,[22],[23],26	[7],8,9,[9.3]	8,10,[11]	15,17		
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15,15		
	4	X,X	12,13	21,26	8,9	8,10	15,17		
V72BP2	1	X,X	12,13	21,26	8,9	8,10	15,17		
	2	X,Y	12,12	21,26	7,9	7,11	14,18		
	3e	X,Y	11,12,13	21,22,23,26	7,8,9,9.3	8,10,11	15,17		
	3sp	X,Y	11,12,[13]	[21],22,23,[26]	7,[8],[9],9.3	8,[10],11	15,[17]		
	4	X,X	12,13	21,26	8,9	8,10	15,17		
VJWQLC	1	X,X	12,13	21,26	8,9	8,10	15,17		
	2	X,Y	12,12	21,26	7,9	7,11	14,18		
	3e	X,X	11,12,13	21,22,23,26	7,8,9,9.3	8,10,11	15,17		
	3s	X,Y	11,12	22,23	7,9.3	8,11	15		
	4	X,X	12,13	21,26	8,9	8,10	15,17		
VLK2LJ	1	X,X	12,13	21,26	8,9	8,10	15,17	7,11	8,10
	2	X,Y	12,12	21,26	7,9	7,11	14,18	7,14	10,12
	3e	X,[Y]	12,13	21,26	[7],8,9,[9.3]	8,10,[11]	15,17		
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15		
	4	X	12,13	21,26	8,9	8,10	15,17		
VPKG CJ	1	X,X	12,13	21,26	8,9	8,10	15,17		
	2	X,Y	12,12	21,26	7,9	7,11	14,18		
	3e	X,X	11,12,13	21,22,23,26	7,8,9,9.3	8,10,11	15,17		
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15,15		
	4	X,X	12,13	21,26	8,9	8,10	15,17		
WFSGU8	1	X	12,13	21,26	8,9	8,10	15,17		
	2	X,Y	12	21,26	7,9	7,11	14,18		
	3e	X,[Y]	[11],12,13	21,[22],[23],26	[7],8,9,[9.3]	8,10,[11]	15,17		
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15		
	4	X	12,13	21,26	8,9	8,10	15,17		

TABLE 2

WebCode	Item	Amel	CSF1PO	FGA	TH01	TPOX	vWA	Penta D	Penta E
WK8QH7	1	X,X	12,13	21,26	8,9	8,10	15,17		
	2	X,Y	12,12	21,26	7,9	7,11	14,18		
	3	X,Y	11,12,[13]	[21],22,23,[26]	7,[8],[9],9.3	8,[10],11	15,15,[17]		
	4	X,X	12,13	21,26	8,9	8,10	15,17		
WTFJCZ	1	X,X		21,26	8,9		15,17		
	2	X,Y		21,26	7,9		14,18		
	3e	X,X,[Y]		21,[22],[23],26	[7],8,9,[9.3]		15,17		
	3sp	X,Y		22,23	7,9.3		15,15		
	4	X,X		21,26	8,9		15,17		
WV4VB6	1	X,X	12,13	21,26	8,9	8,10	15,17	/	/
	2	X,Y	12	21,26	7,9	7,11	14,18	/	/
	3e	X,Y	11,12,13	21,22,23,26	7,8,9,9.3	8,10,11	15,17	/	/
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15	/	/
	4	X	12,13	21,26	8,9	8,10	15,17	/	/
WXS7BB	1	X,X	12,13	21,26	8,9	8,10	15,17	7,11	8,10
	2	X,Y	12	21,26	7,9	7,11	14,18	7,14	10,12
	3e	X,Y	11,12,13	21,22,23,26	7,8,9,9.3	8,10,11	15,17	7,10,11	5,8,10,14
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15	10,11	5,14
	4	X,X	12,13	21,26	8,9	8,10	15,17	7,11	8,10
X1TLKM	1	X	12,13	21,26	8,9	8,10	15,17	7,11	8,10
	2	X,Y	12	21,26	7,9	7,11	14,18	7,14	10,12
Z3D9VD	1	X,X		21,26			15,17		
	2	X,Y		21,26			14,18		
	3e	X,[Y]		21,[22],[23],26			15,17		
	3sp	X,Y		22,23			15,15		
	4	X,X		21,26			15,17		
Z9DHDY	1	X	12,13	21,26	8,9	8,10	15,17		
	2	X,Y	12	21,26	7,9	7,11	14,18		
	3e	X,[Y]	[11],12,13	21,[22],[23],26	[7],8,9,[9.3]	8,10,[11]	15,17		
	3sp	X,Y	11,12	22,23	7,9.3	8,11	15		
	4	X	12,13	21,26	8,9	8,10	15,17		

Results in brackets "[ ]" indicate minor or weaker alleles

\* See Additional Comments (Table 7)

# STR Results - Part III

TABLE 3

WebCode	Item	D2S1338	D19S433
2XWHSQ	1	18,23	11,13
	2	21	12,13
	3e	17,18,19,23	11,13,15
	3sp	17,19	15
	4	18,23	11,13
3N4PX4	1	18,23	11,13
	2	21	12,13
	3e	17,18,19,23	11,13,15
	3sp	17,19	15
	4	18,23	11,13
43XDRF	1	18,23	11,13
	2	21	12,13
	3	17,[18],19,[23]	[11],[13],15
	4	18,23	11,13
4YG63F	1	18,23	11,13
	2	21	12,13
	3e	[17],18,[19],23	11,13,[15]
	3sp	17,19	15
	4	18,23	11,13
5T5H55	1	18,23	11,13
	2	21	12,13
	3e	17,18,19,23	11,13,15
	3sp	17,19	15
	4	18,23	11,13
774694	1	18,23	11,13
	2	21	12,13
	3e	[17],18,[19],23	11,13,[15]
	3sp	17,19	15
	4	18,23	11,13
7ZHCVJ	1	18,23	11,13
	2	21	12,13
	3	17,18,19,23	11,13,15
	4	18,23	11,13

TABLE 3

WebCode	Item	D2S1338	D19S433
8V6PX8	1	18,23	11,13
	2	21,21	12,13
	3e	[17],18,[19],23	11,13,[15]
	3sp	17,19	15,15
	4	18,23	NT
8Z3ZH8	1	18,23	11,13
	2	21	12,13
	3e	[17],18,[19],23	11,13,[15]
	3sp	17,19	15
	4	18,23	11,13
97DUN1	1	18,23	11,13
	2	21,21	12,13
	3	[17],18,[19],23	11,13,15
	4	18,23	11,13
AR2LA4	1	18,23	11,13
	2	21,21	12,13
	3e	17,18,19,23	11,13,15
	3sp	17,19	15,15
	4	18,23	11,13
BJM3R4	1	18,23	11,13
	2	21	12,13
	3e	[17],18,[19],23	11,13,[15]
	3sp	17,19	15
	4	18,23	11,13
CTHKR5	1	18,23	11,13
	2	21	12,13
	3e	[17],18,[19],23	11,13,[15]
	3sp	17,19	15
	4	18,23	11,13
EN5HJ7	1	18,23	
	2	21	
	3e	17,18,19,23	
	3sp	17,19	
	4	18,23	

TABLE 3

WebCode	Item	D2S1338	D19S433
HUYP5Q	1	18,23	11,13
	2	21	12,13
	3e	18,23	11,13
	3sp	17,19	15
	4	18,23	11,13
K2PUYW	1	18,23	11,13
	2	21,21	12,13
	3e	[17],18,[19],23	11,13,[15]
	3sp	17,19	15,15
	4	18,23	11,13
KG7GAF	1	18,23	11,13
	2	21,21	12,13
	3e	[17],18,[19],23	11,13,[15]
	3sp	17,19	15,15
	4	18,23	11,13
NHKL8N	1	18,23	11,13
	2	21	12,13
	3e	17,18,19,23	11,13,15
	3sp	17,19	15
	4	18,23	11,13
PD8X9B	1	18,23	11,13
	2	21,21	12,13
	3e	[17],18,[19],23	11,13,15
	3sp	17,19	15,15
	4	18,23	11,13
PXJMM9	1	18,23	11,13
	2	21	12,13
	3e	[17],18,[19],23	11,13,15
	3sp	17,19	15
	4	18,23	11,13
SB967F	1	18,23	11,13
	2	21	12,13
	3e	17,18,19,23	11,13,15
	3sp	17,19	15
	4	18,23	11,13

TABLE 3

WebCode	Item	D2S1338	D19S433
SDX56K	1	18,23	11,13
	2	21	12,13
	3e	17,18,19,23	11,13
	3sp	17,19	15
	4	18,23	11,13
SULETN	4	18,23	
SW9RST	1	18,23	11,13
	2	21	12,13
	3e	[17],18,[19],23	11,13,[15]
	3sp	17,19	15
	4	18,23	11,13
V5HAUF	1	18,23	11,13
	2	21,21	12,13
	3e	[17],18,[19],23	11,13,[15]
	3sp	17,19	15,15
	4	18,23	11,13
V72BP2	1	18,23	11,13
	2	21,21	12,13
	3e	17,18,19,23	11,13,15
	3sp	17,[18],19,[23]	[11],[13],15
	4	18,23	11,13
VJWQLC	1	18,23	11,13
	2	21,21	12,13
	3e	17,18,23	11,13,15
	3s	17,19	15
	4	18,23	11,13
VLK2LJ	1	18,23	11,13
	2	21,21	12,13
	3e	[17],18,[19],23	11,13,[15]
	3sp	17,19	15
	4	18,23	11,13
VPKGCJ	1	18,23	11,13
	2	21,21	12,13
	3e	17,18,19,23	11,13,15
	3sp	17,19	15,15
	4	18,23	11,13

TABLE 3

WebCode	Item	D2S1338	D19S433
WK8QH7	1	18,23	11,13
	2	21,21	12,13
	3	17,[18],19,[23]	[11],[13],15,15
	4	18,23	11,13
WTFJCZ	1	18,23	11,13
	2	21,21	12,13
	3e	[17],18,[19],23	11,13,[15]
	3sp	17,19	15,15
	4	18,23	11,13
Z9DHDY	1	18,23	11,13
	2	21	12,13
	3e	[17],18,[19],23	11,13,[15]
	3sp	17,19	15
	4	18,23	11,13

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Results in brackets "[ ]" indicate minor or weaker alleles

# Amplification Kit(s) & YSTR Results - Part I

TABLE 4

WebCode	Item	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391
2XWHSQ	Kit(s) Reported: Yfiler®						
	1	NONE	NONE	NONE	NONE	NONE	NONE
	2	14	14	13	29	24	11
	3e	14	14,15	13	29	24	11
	3sp	14	14,15	13	29	24	11
4	NONE	NONE	NONE	NONE	NONE	NONE	NONE
43XDRF	Kit(s) Reported: Yfiler®						
	2	14	14	13	29	24	11
	3	14	14,15	13	29	24	11
5T5H55	Kit(s) Reported: Yfiler®						
	2	14	14	13	29	24	11
	3e	14	14,15	13	29	24	11
	3sp	14	14,15	13	29	24	11
6SDRKB	Kit(s) Reported: PowerPlex®Y						
	1	-	-	-	-	-	-
	2	14	14	13	29	24	11
8V6PX8	Kit(s) Reported: Yfiler®						
	1	NR	NR	NR	NR	NR	NR
	2	14	14,14	13	29	24	11
	3e	14	14,15	13	29	24	11
	3sp	14	14,15	13	29	24	11
4	NT	NT	NT	NT	NT	NT	
8Z3ZH8	Kit(s) Reported: Yfiler®						
	2	14	14	13	29	24	11
	3e	14	14,15	13	29	24	11
	3sp	14	14,15	13	29	24	11
95QHPV	Kit(s) Reported: Yfiler®						
	2	14	14	13	29	24	11
	3sp	14	14,15	13	29	24	11
BJM3R4	Kit(s) Reported: Yfiler®						
	2	14	14	13	29	24	11
	3e	14	14,15	13	29	24	11
	3sp	14	14,15	13	29	24	11
4	NR	NR	NR	NR	NR	NR	
BZACD7	Kit(s) Reported: PowerPlex®Y						
2	14	14	13	29	24	11	

TABLE 4

WebCode	Item	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391
E5AYUZ	Kit(s) Reported: PowerPlex®Y						
	1	N/A	N/A	N/A	N/A	N/A	N/A
	2	14	14,14	13	29	24	11
	3e	N/A	N/A	N/A	N/A	N/A	N/A
	3sp	14	14,15	13	29	24	11
	4	N/A	N/A	N/A	N/A	N/A	N/A
E7YAT5	Kit(s) Reported: PowerPlex®Y						
	1	-	-	-	-	-	-
	2	14	14	13	29	24	11
F899QZ	Kit(s) Reported: PowerPlex®Y						
	2	14	14,14	13	29	24	11
	3sp	14	14,15	13	29	24	11
FJPCMX	Kit(s) Reported: PowerPlex®Y						
	1	NA	NA	NA	NA	NA	NA
	2	14	14	13	29	24	11
	3e	14	14,15	13	29	24	11
	3sp	14	14,15	13	29	24	11
	4	NA	NA	NA	NA	NA	NA
GDCPNL	Kit(s) Reported: Yfiler®						
	2	14	14	13	29	24	11
	3sp	14	14,15	13	29	24	11
HUYPSQ	Kit(s) Reported: Yfiler®						
	2	14	14,14	13	29	24	11
	3sp	14	14,15	13	29	24	11
K2PUYW	Kit(s) Reported: Yfiler®						
	2	14	14,14	13	29	24	11
	3e	14	14,15	13	29	24	11
	3sp	14	14,15	13	29	24	11
	4	NR	NR	NR	NR	NR	NR
KG7GAF	Kit(s) Reported: Yfiler®						
	2	14	14	13	29	24	11
	3e	14	14,15	13	29	24	11
	3sp	14	14,15	13	29	24	11
NHKL8N	Kit(s) Reported: Yfiler®						
	2	14	14	13	29	24	11
	3sp	14	14,15	13	29	24	11
PFW98H	Kit(s) Reported: Yfiler®						
	2	14	14	13	29	24	11
	3e	14	14,15	13	29	24	11
	3sp	14	14,15	13	29	24	11
PWNXST	Kit(s) Reported: Yfiler®						
	2	14	14	13	29	24	11
	3	14	14,15	13	29	24	11

TABLE 4

WebCode	Item	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391
PXJMM9	Kit(s) Reported: Yfiler®						
	2	14	14	13	29	24	11
	3e	14	14,15	13	29	24	11
	3sp	14	14,15	13	29	24	11
SB967F	Kit(s) Reported: Yfiler®						
	2	14	14	13	29	24	11
	3e	14	14,15	13	29	24	11
	3sp	14	14,15	13	29	24	11
SULETN	Kit(s) Reported: Yfiler®						
	2	14	14,14	13	29	24	11
	3e	14	14,15	13	NR	24	11
	3sp	14	14,15	13	29	24	11
SYKTFC	Kit(s) Reported: Yfiler®						
	2	14	14	13	29	24	11
	3e	14	14,15	13	29	24	11
	3sp	14	14,15	13	29	24	11
UBJGKB	Kit(s) Reported:						
	2	14	14	13	29	24	11
	3e	14	14,15	13	29	24	11
	3sp	14	14,15	13	29	24	11
V72BP2	Kit(s) Reported: Yfiler®						
	1	-	-	-	-	-	-
	2	14	14	13	29	24	11
	3e	14	14,15	13	29	24	11
	3sp	14	14,15	13	29	24	11
	4	-	-	-	-	-	-
WFSGU8	Kit(s) Reported: Yfiler®						
	2	14	14	13	29	24	11
	3e	14	14,15	13	29	24	11
	3sp	14	14,15	13	29	24	11
WK8QH7	Kit(s) Reported: Yfiler®						
	2	14	14,14	13	29	24	11
	3	14	14,15	13	29	24	11
WV4VB6	Kit(s) Reported: Yfiler®						
	2	14	14	13	29	24	11
	3e	14	14,15	13	29	24	11
	3sp	14	14,15	13	29	24	11
X1TLKM	Kit(s) Reported: PowerPlex®Y						
	2	14	14	13	29	24	11

# YSTR Results - Part II

TABLE 5

WebCode	Item	DYS392	DYS393	DYS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS635	YGATAH4
2XWHSQ	1	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
	2	13	13	15	12	13	19	16	17	23	13
	3e	13	13	15	12	13	19	16	17	23	12
	3sp	13	13	15	12	13	19	16	17	23	12
	4	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
43XDRF	2	13	13	15	12	13	19	16	17	23	13
	3	13	13	15	12	13	19	16	17	23	12
5T5H55	2	13	13	15	12	13	19	16	17	23	13
	3e	13	13	15	12	13	19	16	17	23	12
	3sp	13	13	15	12	13	19	16	17	23	12
6SDRKB	1	-	-	-	-	-	-	-	-	-	-
	2	13	13	15	12	13	-	-	-	-	-
8V6PX8	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
	2	13	13	15	12	13	19	16	17	23	13
	3e	13	13	15	12	13	19	16	17	23	12
	3sp	13	13	15	12	13	19	16	17	23	12
	4	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
8Z3ZH8	2	13	13	15	12	13	19	16	17	23	13
	3e	13	13	15	12	13	19	16	17	23	12
	3sp	13	13	15	12	13	19	16	17	23	12
95QHPV	2	13	13	15	12	13	19	16	17	23	13
	3sp	13	13	15	12	13	19	16	17	23	12
BJM3R4	2	13	13	15	12	13	19	16	17	23	13
	3e	13	13	15	12	13	19	16	17	23	12
	3sp	13	13	15	12	13	19	16	17	23	12
	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
BZACD7	2	13	13	15	12	13	-	-	-	-	-
E5AYUZ	1	N/A	N/A	N/A	N/A	N/A	-	-	-	-	-
	2	13	13	15	12	13	-	-	-	-	-
	3e	N/A	N/A	N/A	N/A	N/A	-	-	-	-	-
	3sp	13	13	15	12	13	-	-	-	-	-
	4	N/A	N/A	N/A	N/A	N/A	-	-	-	-	-
E7YAT5	1	-	-	-	-	-	-	-	-	-	-
	2	13	13	15	12	13	-	-	-	-	-
F899QZ	2	13	13	15	12	13	-	-	-	-	-
	3sp	13	13	15	12	13	-	-	-	-	-

TABLE 5

WebCode	Item	DYS392	DYS393	DYS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS635	YGATAH4
FJPCMX	1	NA	NA	NA	NA	NA					
	2	13	13	15	12	13					
	3e	13	13	15	12	13					
	3sp	13	13	15	12	13					
	4	NA	NA	NA	NA	NA					
GDCPNL	2	13	13	15	12	13	19	16	17	23	13
	3sp	13	13	15	12	13	19	16	17	23	12
HUYP SQ	2	13	13	15	12	13	19	16	17	23	13
	3sp	13	13	15	12	13	19	16	17	23	12
K2PUYW	2	13	13	15	12	13	19	16	17	23	13
	3e	13	13	15	12	13	19	16	17	23	12
	3sp	13	13	15	12	13	19	16	17	23	12
	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
KG7GAF	2	13	13	15	12	13	19	16	17	23	13
	3e	13	13	15	12	13	19	16	17	23	12
	3sp	13	13	15	12	13	19	16	17	23	12
NHKL8N	2	13	13	15	12	13	19	16	17	23	13
	3sp	13	13	15	12	13	19	16	17	23	12
PFW98H	2	13	13	15	12	13	19	16	17	23	13
	3e	13	13	15	12	13	19	16	17	23	12
	3sp	13	13	15	12	13	19	16	17	23	12
PWNXST	2	13	13	15	12	13	19	16	17	23	13
	3	13**	13	15	12	13	19	16**	17	23	12
PXJMM9	2	13	13	15	12	13	19	16	17	23	13
	3e	13	13	15	12	13	19	16	17	23	12
	3sp	13	13	15	12	13	19	16	17	23	12
SB967F	2	13	13	15	12	13	19	16	17	23	13
	3e	13	13	15	12	13	19	16	17	23	12
	3sp	13	13	15	12	13	19	16	17	23	12
SULETN	2	13	13	15	12	13	19	16	17	23	13
	3e	13	13	15	12	13	19	16	17	23	12
	3sp	13	13	15	12	13	19	16	17	23	12
SYKTFC	2	13	13	15	12	13	19	16	17	23	13
	3e	13	13	15	12	13	19	16	17	23	12
	3sp	13	13	15	12	13	19	16	17	23	12
UBJGKB	2	13	13	15	12	13	19	16	17	23	13
	3e	13	13	15	12	13	19	16	17	23	12
	3sp	13	13	15	12	13	19	16	17	23	12

TABLE 5

WebCode	Item	DYS392	DYS393	DYS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS635	YGATAH4
V72BP2	1	-	-	-	-	-	-	-	-	-	-
	2	13	13	15	12	13	19	16	17	23	13
	3e	13	13	15	12	13	19	16	17	23	12
	3sp	13	13	15	12	13	19	16	17	23	12
	4	-	-	-	-	-	-	-	-	-	-
WFSGU8	2	13	13	15	12	13	19	16	17	23	13
	3e	13	13	15	12	13	19	16	17	23	12
	3sp	13	13	15	12	13	19	16	17	23	12
WK8QH7	2	13	13	15	12	13	19	16	17	23	13
	3	13	13	15	12	13	19	16	17	23	12
WV4VB6	2	13	13	15	12	13	19	16	17	23	13
	3e	13	13	15	12	13	19	16	17	23	12
	3sp	13	13	15	12	13	19	16	17	23	12
X1TLKM	2	13	13	15	12	13					

\* See Additional Comments (Table 7)

# 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 6

WebCode	<u>Victim (Item 1)</u>		<u>Suspect (Item 2)</u>		WebCode	<u>Victim (Item 1)</u>		<u>Suspect (Item 2)</u>	
	Item 3	Item 4	Item 3	Item 4		Item 3	Item 4	Item 3	Item 4
2XWHSQ	Yes	Yes	No	No	FJPCMX	Yes	Yes	No	No
3N4PX4	Yes	Yes	No	No	GDCPNL	Yes	Yes	No	No
43XDRF	Yes	Yes	No	No	HUYPSQ	Yes	Yes	No	No
4YG63F	Yes	Yes	No	No	K2PUYW	Yes	Yes	No	No
5T5H55	Yes	Yes	No	No	KG7GAF	Yes	Yes	No	No
6SDRKB	No Interpretations Reported, DNA Analyzed for Database purposes only.				KK7T6F	Yes	Yes	No	No
774694	Yes	Yes	No	No	NHKL8N	Yes	Yes	No	No
7ZHCVJ	Yes	Yes	No	No	PD8X9B	Yes	Yes	No	No
8V6PX8	Yes	Yes	No	No	PFW98H	Yes	Yes	No	No
8XU1WD	Y/N*	Yes	No	No	PWNXST	Yes	Yes	No	No
8Z3ZH8	Yes	Yes	No	No	PXJMM9	Yes	Yes	No	No
95QHPV	Yes	Yes	No	No	SB967F	Yes	Yes	No	No
97DUN1	Yes	Yes	No	No	SDX56K	Yes	Yes	No	No
ALBT9	Y/N*	Yes	No	No	SULETN	Yes	Yes	No	No
AR2LA4	Yes	Yes	No	No	SW9RST	Yes	Yes	No	No
AULM5Q	Yes	Yes	No	No	SYKTFC	Yes	Yes	No	No
BJM3R4	Yes	Yes	No	No	TEUNXD	Yes	Yes	No	No
BXM131	Yes	Yes	No	No	UBJGKB	Yes	Yes	No	No
BZACD7	No Interpretations Reported, DNA Analyzed for Database purposes only.				V5HAUF	Yes	Yes	No	No
CTHKR5	Yes	Yes	Inc	Inc	V72BP2	Yes	Yes	No	No
D1J4JT	Yes	Yes	No	No	VJWQLC	Yes	Yes	No	No
E5AYUZ	Yes	Yes	No	No	VLK2LJ	Yes	Yes	No	No
E7YAT5	No Interpretations Reported, DNA Analyzed for Database purposes only.				VPKGCJ	Yes	Yes	No	No
EN5HJ7	Yes	Yes	No	No	WFSGU8	Yes	Yes	No	No
F899QZ	Yes	Yes	No	No	WK8QH7	Yes	Yes	No	No

TABLE 6

WebCode	Victim (Item 1)		Suspect (Item 2)		WebCode	Victim (Item 1)		Suspect (Item 2)	
	Item 3	Item 4	Item 3	Item 4		Item 3	Item 4	Item 3	Item 4
WTFJCZ	Yes	Yes	No	No					
WV4VB6	Yes	Yes	No	No					
WXS7BB	Yes	Yes	No	No					
X1TLKM	No Interpretations Reported, DNA Analyzed for Database purposes only.								
Z3D9VD	Yes	Yes	No	No					
Z9DHDY	Yes	Yes	No	No					

Response Summary				Participants reporting DNA results: 56			
<p><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></p>							
<b>Responses</b>		Victim (Item 1)		Suspect (Item 2)			
		<u>Item 3</u>	<u>Item 4</u>	<u>Item 3</u>	<u>Item 4</u>		
	Yes	<b>50</b>	<b>52</b>	<b>0</b>	<b>0</b>		
	No	<b>0</b>	<b>0</b>	<b>51</b>	<b>51</b>		
	Inc	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>		

Participants not reporting Interpretation results: 4

# Additional Comments

TABLE 7

WebCode	Additional Comments
5T5H55	(1) In-situ extraction method was used for Item 1 and Item 2. (2) Chelex extraction method was used for Item 3 and Item 4. (3) Quantitation was done (for Item 3 and Item 4) using the Applied Biosystems Quantifiler Human DNA Quantification kit. (4) Electrophoresis was carried out using the 3130 Genetic Analyzer from Applied Biosystems.
774694	1. Item 1 and Item 2 were extracted using FTA extraction method. 2. Item 3 and Item 4 were extracted using Chelex extraction method. 3. Quantitation was carried out using Human Quantifiler Kit and run on ABI 7500 Real Time PCR. 4. Reagent Blank and negative control were carried out along with the test. 5. Electrophoresis was carried out on ABI 3130xl Genetic Analyzer.
7ZHCVJ	The DNA-STR typing result of item4 matches with the Victim (item 1). The DNA-STR typing result of item 3 is a mixed DNA-STR that includes the DNA-STR of the Victim and an unknown male. At last, both the DNA-STR typing result of item 3 and item 4 can be excluded from the Suspect (item 2). [Additional results reported by participant: "Kastle-Meyer: Item 1- untreated, Item 2- untreated, Item 3- positive, Item 4- positive"]
8XU1WD	[From Table 6 - DNA Interpretations: "Victim (Item 1), Item 3: Yes - Blood; No - semen"]
97DUN1	R = Rare Allele
ALTBT9	The suspect is excluded, however another male profile is present in the sp. found in Item 3. If another suspect is available send in his sample for analyses. [From Table 6 - DNA Interpretations: "Victim (Item 1), Item 3: Yes - Blood; No - sperm fraction"]
AULM5Q	* indicates peaks at heights below the [Laboratory] reporting threshold.
BJM3R4	*indicates alleles below interpretation threshold of 150 RFU. [ ] indicates minor alleles.
F899QZ	Item 1 did not amplify in PowerPlex Y. Items 3e and 4 were not amplified in PowerPlex Y.
HUYP5Q	The genetic profile obtained from Item4 (Questioned blood stain from victim's shirt) is matched with that from Item1 (known blood from the victim). Item3 (Questioned blood and semen mixture stain from victim's shorts) presents a mixed genetic profile from a female and male person. When a differential extraction was performed, the Item3's genetic profile from the female person is matched with Item1. The Item3's genetic profile from the male person is mismatched with Item2 (known blood from the suspect) and its Y-haplotype is mismatched with Item2 as well.
NHKL8N	1) Chelex extraction method was used to extract all the samples. 2) Quantitation was done using the Applied Biosystems Quantifiler Human DNA Quantification Kit. 3) Amplification process was carried out using the Applied Biosystems Identifiler Kit. 4) Electrophoresis was carried out using the Applied Biosystems 3130 xl Genetic Analyzer.
PFW98H	In samples 3Sp and 3E at D16S539 loci there is an OLA observed in three separate injections of each of the two samples. The OLA was not calculated at this time - per our SOP this is currently a non-probative sample and was defined as being an inconclusive result at that loci. If in the event this sample was to be deemed probative in nature - the calculations for the OLA would be conducted. [From Table 1 - STR Results - Part 1: "inc: inconclusive due to OLA (see comment section)"]
PWNXST	* = possible allele below threshold. ** = (possible) n + 4 stutter observed, peak below our stochastic threshold, so would not be reported out.
SB967F	Multiplex PCR Amplification was performed on organic-extracted (Item 4), chelex-extracted (Item 3) and direct-extracted (Item 1 & Item 2) samples using the AmpFISTR Identifiler and Yfiler Amplification kits.
SDX56K	Based on results obtained from DNA analysis the pieces of evidence Item 3 (victim's shorts) and Item 4 (victim's shirt) match with the reference sample Item 1 (victim). Victim (Item 1) can't be excluded of be[sic] the donor of the genetic profile of pieces of evidence Item 3 (victim's shorts) and Item 4 (victim's shirt). Suspect (Item 2) is excluded of be[sic] the donor of the genetic profile of the pieces of evidence Item 3 (victim's shorts) and Item 4 (victim's shirt).
SW9RST	Page 2 of 5: a = Additional peak detected, however it fails to meet reporting standards.
V5HAUF	RE: Item 4: A differential digest was performed on area C sampled from Item 4. However no sperm, or

TABLE 7

WebCode	Additional Comments
	epithelial cells were observed. Therefore the "No" toggle was selected for reporting genotypes for Item 4.
VPKGCJ	The genetic profile on item #3sp (victim's short) present a male genetic profile. Suspect (item #2) is excluded of being the donor on item #4 (victim's short). The genetic profile on item #3e (victim's short) present a genetic profile from more than one person. Victim and other person can't be excluded of being the donors of the genetic profile on item #3e (victim short). Victim (item #1) can't be excluded of being the major contributor on item #3e (victim short). The genetic profile on item #4 (victim's shirt) matched with the genetic profile from the victim (item #1). Victim (item #1) can't be excluded of being the donor of the genetic profile on item #4 (victim's shirt).
WTFJCZ	Item 3 stain comprised semen + blood. DNA which could be from victim is present as blood. DNA from unknown 1 male is present as semen. Item 4 stain comprised blood. DNA which could be from victim is present as blood.
Z9DHDY	Results in brackets represents minor alleles.

# **Appendix: Data Sheet**

Collaborative Testing Services ~ Forensic Testing Program

\*\*\*\*\*

## **Test No. 09-586: DNA-Mixture**

DATA MUST BE RECEIVED BY December 21, 2009 TO BE INCLUDED IN THE REPORT

Participant Code:

WebCode:

### **Please Note: The Accreditation Release Section Has Moved**

CTS submits external proficiency test data directly to ASCLD/LAB and FQS-International. Please select one of the following statements to ensure your data is handled appropriately.

This participant's data is intended for submission to ASCLD/LAB and/or FQS-International. (Accreditation Release section on the last page must be completed and submitted.)

This participant's data is **NOT** intended for submission to ASCLD/LAB or FQS-International.

#### Scenario:

Police are investigating the rape and murder of a teenage girl found in the woods. The suspect is a man who was just recently arrested for the rape of another young teen. Investigators have received two stains: one from the victim's shorts and one from the victim's shirt. Screening has been done on the samples with the following results: Item 3 is positive for semen and blood and Item 4 is positive for blood only. The investigators are submitting the victim's shirt and shorts for analysis along with blood samples of the victim and the suspect.

#### Items Submitted (Sample Pack S6):

Item 1: Known blood from the Victim.

Item 2: Known blood from the Suspect.

Item 3: Questioned blood and semen mixture stain from victim's shorts. (blue fabric with white flowers)

Item 4: Questioned blood stain from victim's shirt. (solid blue fabric)

**Please return all pages of this data sheet.**

Page 1 of 5

**Part I: DNA ANALYSIS**

**TABLE 1a: STR & Amelogenin Results**

- \* Report alleles in numerical order, separated by a comma.
- \* Follow your laboratory procedures for reporting homozygotes (phenotype vs. genotype).
- \* Stains with more than one contributor: If a differential extraction is performed, split the box with a horizontal line and report the results of the different fractions above and below the line - indicate which is the sperm fraction (sp) and which is the epithelial fraction (e) (Example A); otherwise, list the alleles in numerical order (Example B). If you wish to indicate minor or weaker alleles, please enclose them within brackets [ ].

<b>Example</b>	<b>D3S1358</b>	<b>D5S818</b>	<b>D7S820</b>	<b>D8S1179</b>	<b>D13S317</b>	<b>D16S539</b>	<b>D18S51</b>	<b>D21S11</b>	
<b>A</b>	<i>e</i>	15,18	12,17	10	14	12	12	17,19	28,29
	<i>sp</i>	15	12	8,9	10,15	8,11	8,11	13,17	31,33.2
<b>B</b>	15,18	12,17	[8],[9],10	[10],14, [15]	8,11,12	8,11,12	13,17,19	28,29, 31,33.2	

**STR Amplification Kit Used:**

Please check all that apply.

- Cofiler™/Profiler Plus™       PowerPlex 16®  
 Identifiler®                       Other \_\_\_\_\_

<b>ITEM</b>	<b>D3S1358</b>	<b>D5S818</b>	<b>D7S820</b>	<b>D8S1179</b>	<b>D13S317</b>	<b>D16S539</b>	<b>D18S51</b>	<b>D21S11</b>
<b>1</b>								
<b>2</b>								
<b>3</b>								
<b>4</b>								

<b>ITEM</b>	<b>Amelogenin</b>	<b>CSF1PO</b>	<b>FGA</b>	<b>TH01</b>	<b>TPOX</b>	<b>vWA</b>	<b>Penta D</b>	<b>Penta E</b>
<b>1</b>								
<b>2</b>								
<b>3</b>								
<b>4</b>								

**Please return all pages of this data sheet.**

**YSTR Results**

TABLE 1a, continued

**YSTR Amplification Kit Used** Please check all that apply.  
 Yfiler®     PowerPlex Y®     Other \_\_\_\_\_

ITEM	D2S1338	D19S433	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391
1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
3	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
4	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

ITEM	DYS392	DYS393	DYS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS635	Y GATA H4
1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
3	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
4	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

TABLE 1b: Additional DNA Results

	Item 1	Item 2	Item 3	Item 4
_____	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
_____	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
_____	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
_____	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Please return all pages of this data sheet.

**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>	
		<u>Item 3</u>	<u>Item 4</u>			<u>Item 3</u>	<u>Item 4</u>
<b>Yes</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>Yes</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>No</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>No</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Inconclusive</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>Inconclusive</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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**DNA interpretations not reported; samples analyzed for database purposes only.**

**Part IV: ADDITIONAL COMMENTS**

Comments regarding any part of this Forensic Biology Test.  
*Written conclusions (including statistical information) for DNA analysis are not required.*  
*Any interpretations based on the results obtained should be indicated above.*

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**Return Instructions**  
Data Sheets can be mailed or faxed (please include a cover sheet) and must be received by **December 21, 2009** to be included in the report.

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

FAX: +1-571-434-1937  
or Toll-Free (U.S. only): 1-866-FAX-2CTS (329-2287)  
TEL: +1-571-434-1925 (8 am - 4:30 pm EST)  
EMAIL: forensics@cts-interlab.com

www.ctsforensics.com

**Please return all pages of this data sheet.**

## RELEASE OF DATA TO ACCREDITATION BODIES

The following Accreditation Releases will apply only to:

Participant Code:

WebCode:

for Test No. **09-586: DNA-Mixture**

This release page must be completed and received by **December 21, 2009** to have this participant's submitted data included in the reports forwarded to the respective Accreditation Bodies.

### **ASCLD/LAB RELEASE**

If your lab has been accredited by ASCLD/LAB and you are submitting this data as part of their external proficiency test requirements, have the laboratory's designated individual complete the following.

***The information below must be completed in its entirety for the results to be submitted to ASCLD/LAB.***

ASCLD/LAB Legacy Certificate No. \_\_\_\_\_ ASCLD/LAB International Certificate No. \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_\_

Laboratory Name \_\_\_\_\_

Location (City/State) \_\_\_\_\_

### **FQS-INTERNATIONAL RELEASE**

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

FQS-International Certificate No. \_\_\_\_\_

Signature and Title: \_\_\_\_\_ Date \_\_\_\_\_

Laboratory Name \_\_\_\_\_

Location (City/State) \_\_\_\_\_

### Accreditation Release

#### **Return Instructions**

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

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

**Please return all pages of this data sheet.**

Page 5 of 5