



DNA Interpretation Test No. 21-5881

Summary Report

Each participant received a sample pack consisting of a digital download packet through the CTS portal containing electropherograms and raw data files which they were requested to evaluate using their existing protocols. Data were returned from 25 participants and are compiled into the following tables:

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

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

Manufacturer's Information

Each sample pack contained digital files consisting of electropherograms from DNA profiles of two known samples (Items 1 & 2) and two questioned samples (Items 3 & 4). Participants were requested to evaluate the electropherograms and interpret the data using their existing protocols.

SAMPLE PREPARATION: Item 1 was created using blood collected from a female donor. Item 2 was created using blood collected from a male donor. The Item 3 mixture was created by combining one part of blood from the Item 1 female donor and three parts of blood from a 3rd-party male donor. The Item 4 mixture was created by combining three parts of blood from the Item 2 male donor and five parts of blood from a 3rd-party male donor (same as used in Item 3).

SAMPLE SET ASSEMBLY: Once sample preparation and verification was completed, the digital upload was checked to ensure all items were accessible.

VERIFICATION: Laboratories that conducted predistribution testing of the electropherograms reported consistent results for all loci. All associations were consistent amongst the predistribution laboratories.

Consensus results on the following pages were determined by ensuring at least 10 participants returned results for the locus. Each allele listed was determined by ensuring that at least 75% of participants that returned data for that specific locus and item had reported the same allele.

Amelogenin and STR Results

Results compiled by predistribution laboratories and a consensus of participants.

Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	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		
1	15,17	19,25	11,11	17,18	11,13	8,10
	11,13	14,14	18,22	12,13	11,11	14,15
	12,13	29,30	11,16	X,X	12,12	20,25
	*	*	14,16	9,9	8,11	16,19
	NM	NM	NM	NM		
2	12,12	17,18	11,15	16,17	12,14	8,8
	10,13	14,16	22,22	8,12	11,13	12,24
	14,14	28,28	11,14	X,Y	11,12	20,24
	*	*	18,25.2	9.3,9.3	8,8	17,19
	10	*	*	2		
3	15,15.3,17	19,20,25	11,11.3	16,17,18	11,12,13	8,10,11
	11,13	13,14,15	18,20,22	12,13	11,12	14,15,19,22
	12,13	29,30,32.2	11,16	X,Y	11,12	20,21,24.2,25
	*	*	14,16,29.2	7,9,9.3	8,11	14,16,19
	10	*	*	2		
4	12,15,15.3	17,18,20,25	11,11.3,15	16,17,18	12,14†	8,10,11
	10,13	13,14,15,16	18,20,22	8,12	11,12,13	12,19,22,24†
	13,14	28,30,32.2	11,14,16	X,Y	11,12	20,21,24,24.2
	*	*	18,25.2,29.2	7,9.3	8,8	14,16,17,19
	10	*	*	2		

YSTR Results

Results compiled from predistribution laboratories and a consensus of participants.

Item	DYF387S	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
2	37,41	15	13,17	13	29	23	10	11	12
	15	9	12	21	31	16	14	10	23
	40	12	*	17	15	17	21	*	12
3	37,38	14	13,14	13	31	24	10	11	12
	16	7	11	19	28	15	19	11	23
	40	12	*	16	16	16	22	*	13
4	37,38,41	14,15	13,14,17	13	29,31	23,24	10	11	12
	15,16	7,9	11,12	19,21	28,31	15,16	14,19	10,11	23
	40	12	*	16,17	15,16	16,17	21,22	*	12,13

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

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

† Additional alleles may be present depending on laboratory thresholds and/or amplification kit used.

Summary Comments

This test was designed to allow participants to assess their proficiency in evaluating electropherograms (EPGs) and interpreting data. Each participant received electropherograms (in HID and PDF formats, as available) of two reference items and two evidence items. The EPG data included were produced from the following amplification kits: GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C, YFiler™ Plus, PowerPlex® Y23.

Item 1 was the female victim's reference sample. Item 2 was the male suspect's reference sample. Item 3 was a mixture of samples from two individuals including the female victim and a 3rd party male contributor for whom no reference sample was provided (1:3 ratio respectively). Item 4 was a mixture of samples from two individuals including the male suspect and the same 3rd party male contributor used in Item 3 (3:5 ratio respectively).

Consensus results for each item were determined per allele for each locus. Allele determinations were identified by ensuring that at least 10 participants reported results for the locus and that of these participants, 75% of them reported the same allele(s). Results that differed from the consensus were further compared to the participant's reported interpretation guidelines.

STR Data

Twenty-five participants evaluated the provided STR data. The most frequently reported amplification kit utilized was GlobalFiler™. For reference Item 1, all participants reported data that were concordant with the consensus. For Item 2, all participants reported data that were concordant with the consensus except for one, who reported "9" at D7S820 whereas the consensus was "8,8".

For questioned Item 3, 11 participants attempted the deconvolution of this mixture. However, due to the lack of reported data, no consensus was formed for both major and minor profiles. All participants reported results in line with the consensus for the full Item 3 profile (unseparated) except for one participant, who reported "9.2,12,13" at D19S433 whereas the consensus was "12,13".

For questioned Item 4, seven participants attempted the deconvolution of this mixture. However, due to the lack of reported data, no consensus was formed for major or minor profiles. A consensus was achieved for the full Item 4 profile (unseparated), with some participants reporting an additional allele at D5S818 and D18S51 when utilizing differing analytical thresholds and/or amplification kits for interpretation. All participants reported results in line with the consensus except for three participants who each reported an additional allele at a locus that did not match consensus and could not be explained by their interpretation guidelines.

YSTR Data

Fourteen participants reported YSTR results.

For reference Item 2, thirteen participants reported allelic responses that were concordant with the consensus. The remaining participant reported "8.3,10" at DYS391 whereas the consensus was "10".

For questioned Item 3, all participants reported allelic responses that were concordant with the consensus.

For questioned Item 4, thirteen participants reported allelic responses that were concordant with the consensus. The remaining participant reported "14,14.2,15" at DYS19 whereas the consensus was "14,15".

Conclusions

For Item 3, all 25 participants reported that two (or at least two) individuals contributed to the mixture. When comparing the Item 3 mixture profile with the Item 1 (victim) reference profile, all participants

Summary Comments, continued

reported that the victim was included as a component of the mixture. When comparing the Item 3 mixture profile with the Item 2 (suspect) reference profile, 24 participants reported that the suspect was excluded as a component of the mixture and one participant reported that the suspect was included.

For Item 4, 19 participants reported that two (or at least two) individuals contributed to the mixture. The remaining six participants reported three (or at least 3) individuals contributed the mixture. When comparing the Item 4 mixture profile with the Item 1 (victim) reference profile and the Item 2 (suspect) reference profile, all 25 participants reported that the victim was excluded and that the suspect was included as a component of the mixture.

Interpretation Guidelines

TABLE 1

WebCode	Analytical Threshold (rfu)	Peak Height Ratio (%)	Stochastic Threshold (rfu)
4JKR62	125rfu	60%	600rfu
7CEWYY	125 rfu	60%	600 rfu
8CUDUR	125 rfu	60%	600 rfu
8FRWWP	50; YSTR: 50	70%; YSTR 60%	150: YSTR 150
8QVUF7	100 rfu	65%	600 rfu
94XZ8W	[Participant did not provide interpretation guidelines]		
98XB4W	75	60	100
A3Z9EM	[Participant did not provide interpretation guidelines]		
AK2W7L	75 rfu (STR & YSTR)	60% (STR); 50% (YSTR)	100 rfu (STR); 75 rfu (YSTR)
B6HQ8R	GF: 75rfu, YF+: 75rfu	GF: 60%, YF+: 50%	GF: 100rfu, YF+: 75rfu
D42F8Q	50RFU	70%	150RFU
EBB4GH	75	60	230
EUQDLP	200 rfu	70%	800 rfu
FAD9BL	60	40%	100
FB6ABG	125 blue, 150 green & yellow, 175 purple, 225 red & orange		
K9Q2FE	70 RFU	STRmix is used for analysis	STRmix is used for analysis
KEU67C	80	60	250
KV284K	125 rfu	60%	600 rfu
L226RF	STR & YSTR Analysis: 75 rfu	STR Analysis: 60%; YSTR Analysis: 50%	STR Analysis: 100 rfu; YSTR Analysis: 75 rfu
MZPQXE	75	60%	100 rfu
NG7Q9P	[Participant did not provide interpretation guidelines]		
PWGC66	120 rfu (GF), 175 rfu (GFE)	60%	360 rfu (GF), 220 rfu (GFE)
TJJEV3	120 rfu (GF), 175 rfu (GFE)	60%	360 rfu (GF), 220 rfu (GFE)
VMQKJ8	55 RFU	60%	865 RFU
ZMXK86	75 rfu	60%, 50%	100 rfu, 75 rfu

STR & Amelogenin Results

TABLE 2

WebCode	Amplification Kits (File Format)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D7S820
	D8S1179	D10S1248	D12S391	D13S317	D16S539	D18S51
Item	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO	FGA
	Penta D	Penta E	SE33	TH01	TPOX	vWA
	DYS391	DYS570	DYS576	Y Indel		

Item 1 - STR Results

4JKR62	GlobalFiler™ (PDF Format)					
	15,17	19,25	11,11	17,18	11,13	8,10
	11,13	14,14	18,22	12,13	11,11	14,15
1	12,13	29,30	11,16	X,X	12,12	20,25
			14,16	9,9	8,11	16,19
	No Results			No Results		
7CEWYY	GlobalFiler™ (PDF Format)					
	15,17	19,25	11,11	17,18	11,13	8,10
	11,13	14,14	18,22	12,13	11,11	14,15
1	12,13	29,30	11,16	X,X	12,12	20,25
			14,16	9,9	8,11	16,19
	No Results			No Results		
8CUDUR	GlobalFiler™ (PDF Format)					
	15,17	19,25	11,11	17,18	11,13	8,10
	11,13	14,14	18,22	12,13	11,11	14,15
1	12,13	29,30	11,16	X,X	12,12	20,25
			14,16	9,9	8,11	16,19
	No Results			No Results		
8FRWWP	(HID Format)					
	15,17	19,25	11	17,18	11,13	8,10
	11,13	14	18,22	12,13	11	14,15
1	12,13	29,30	11,16	X	12	20,25
	9,11	10,15		9	8,11	16,19
8QVUF7	Investigator® 24plex (HID Format)					
	15,17	19,25	11	17,18	11,13	8,10
	11,13	14	18,22	12,13	11	14,15
1	12,13	29,30	11,16	X	12	20,25
			14,16	9	8,11	16,19
94XZ8W	GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (PDF Format), (HID Format)					
	15,17	19,25	11	17,18	11,13	8,10
	11,13	14	18,22	12,13	11	14,15
1	12,13	29,30	11,16	X	12	20,25
	9,11	10,15	14,16	9	8,11	16,19

TABLE 2

WebCode	Amplification Kits (File Format)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D7S820
Item	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

98XB4W	GlobalFiler™ (PDF Format)					
	15,17	19,25	11	17,18	11,13	8,10
	11,13	14	18,22	12,13	11	14,15
1	12,13	29,30	11,16	X	12	20,25
			14,16	9	8,11	16,19
A3Z9EM	GlobalFiler™					
	15,17	19,25	11,11	17,18	11,13	8,10
	11,13	14,14	18,22	12,13	11,11	14,15
1	12,13	29,30	11,16	X,X	12,12	20,25
			14,16	9,9	8,11	16,19
	R,R			R,R		
AK2W7L	GlobalFiler™ (PDF Format)					
	15,17	19,25	11	17,18	11,13	8,10
	11,13	14	18,22	12,13	11	14,15
1	12,13	29,30	11,16	X,X	12	20,25
			14,16	9	8,11	16,19
	NM			NM		
B6HQ8R	GlobalFiler™ (PDF Format)					
	15,17	19,25	11,11	17,18	11,13	8,10
	11,13	14,14	18,22	12,13	11,11	14,15
1	12,13	29,30	11,16	X,X	12,12	20,25
	N/A	N/A	14,16	9,9	8,11	16,19
	NSD	N/A	N/A	NSD		
D42F8Q	GlobalFiler™					
	15,17	19,25	11,11	17,18	11,13	8,10
	11,13	14,14	18,22	12,13	11,11	14,15
1	12,13	29,30	11,16	X,X	12,12	20,25
			14,16	9,9	8,11	16,19
EBB4GH	PowerPlex® Fusion 6C					
	15,17	19,25	11	17,18	11,13	8,10
	11,13	14	18,22	12,13	11	14,15
1	12,13	29,30	11,16	X	12	20,25
	9,11	10,15	14,16	9	8,11	16,19
EUQDLP	GlobalFiler™ (HID Format)					
	15,17	19,25	11,11	17,18	11,13	8,10
	11,13	14,14	18,22	12,13	11,11	14,15
1	12,13	29,30	11,16	X,X	12,12	20,25
	-	-	14,16	9,9	8,11	16,19
	-	-	-	-		

TABLE 2

WebCode	Amplification Kits (File Format)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D7S820
Item	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

FAD9BL	GlobalFiler™					
	15,17	19,25	11	17,18	11,13	8,10
	11,13	14	18,22	12,13	11	14,15
1	12,13	29,30	11,16	X	12	20,25
			14,16	9	8,11	16,19
FB6ABG	GlobalFiler™ (HID Format)					
	15,17	19,25	11,11	17,18	11,13	8,10
	11,13	14,14	18,22	12,13	11,11	14,15
1	12,13	29,30	11,16	X,X	12,12	20,25
			14,16	9,9	8,11	16,19
	NR			NR		
K9Q2FE	PowerPlex® Fusion 6C (HID Format)					
	15,17	19,25	11,11	17,18	11,13	8,10
	11,13	14,14	18,22	12,13	11,11	14,15
1	12,13	29,30	11,16	X,X	12,12	20,25
	9,11	10,15	14,16	9,9	8,11	16,19
KEU67C	GlobalFiler™ (PDF Format)					
	15,17	19,25	11,11	17,18	11,13	8,10
	11,13	14,14	18,22	12,13	11,11	14,15
1	12,13	29,30	11,16	X,X	12,12	20,25
			14,16	9,9	8,11	16,19
KV284K	GlobalFiler™ (PDF Format)					
	15,17	19,25	11,11	17,18	11,13	8,10
	11,13	14,14	18,22	12,13	11,11	14,15
1	12,13	29,30	11,16	X,X	12,12	20,25
			14,16	9,9	8,11	16,19
	No Results			No Results		
L226RF	GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 6C (PDF Format)					
	15,17	19,25	11	17,18	11,13	8,10
	11,13	14	18,22	12,13	11	14,15
1	12,13	29,30	11,16	X	12	20,25
	9,11	10,15	14,16	9	8,11	16,19
MZPQXE	GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (PDF Format), (HID Format)					
	15,17	19,25	11,11	17,18	11,13	8,10
	11,13	14,14	18,22	12,13	11,11	14,15
1	12,13	29,30	11,16	X,X	12,12	20,25
	9,11	10,15	14,16	9,9	8,11	16,19

TABLE 2

WebCode	Amplification Kits (File Format)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D7S820
Item	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

NG7Q9P	PowerPlex® Fusion 6C					
	15,17	19,25	11	17,18	11,13	8,10
	11,13	14	18,22	12,13	11	14,15
1	12,13	29,30	11,16	X	12	20,25
	9,11	10,15	14,16	9	8,11	16,19
<hr/>						
PWGC66	GlobalFiler™ (HID Format)					
	15,17	19,25	11	17,18	11,13	8,10
	11,13	14	18,22	12,13	11	14,15
1	12,13	29,30	11,16	X,X	12	20,25
			14,16	9	8,11	16,19
	NM			NM		
<hr/>						
TJJEV3	GlobalFiler™ (HID Format)					
	15,17	19,25	11	17,18	11,13	8,10
	11,13	14	18,22	12,13	11	14,15
1	12,13	29,30	11,16	X,X	12	20,25
			14,16	9	8,11	16,19
	NM			NM		
<hr/>						
VMQKJ8	GlobalFiler™ (PDF Format), (HID Format)					
	15,17	19,25	11,11	17,18	11,13	8,10
	11,13	14,14	18,22	12,13	11,11	14,15
1	12,13	29,30	11,16	X,X	12,12	20,25
			14,16	9,9	8,11	16,19
	neg.			neg.		
<hr/>						
ZMXK86	GlobalFiler™ (HID Format)					
	15,17	19,25	11	17,18	11,13	8,10
	11,13	14	18,22	12,13	11	14,15
1	12,13	29,30	11,16	X	12	20,25
			14,16	9	8,11	16,19

TABLE 2

WebCode	Amplification Kits (File Format)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D7S820
Item	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

4JKR62	GlobalFiler™ (PDF Format)					
	12,12	17,18	11,15	16,17	12,14	8,8
	10,13	14,16	22,22	8,12	11,13	12,24
2	14,14	28,28	11,14	X,Y	11,12	20,24
			18,25.2	9.3,9.3	8,8	17,19
	10			2		
7CEWYY	GlobalFiler™ (PDF Format)					
	12,12	17,18	11,15	16,17	12,14	8,8
	10,13	14,16	22,22	8,12	11,13	12,24
2	14,14	28,28	11,14	X,Y	11,12	20,24
			18,25.2	9.3,9.3	8,8	17,19
	10			2		
8CUDUR	GlobalFiler™ (PDF Format)					
	12,12	17,18	11,15	16,17	12,14	8,8
	10,13	14,16	22,22	8,12	11,13	12,24
2	14,14	28,28	11,14	X,Y	11,12	20,24
			18,25.2	9.3,9.3	8,8	17,19
	10			2		
8FRWWP	(HID Format)					
	12	17,18	11,15	16,17	12,14	8
	10,13	14,16	22	8,12	11,13	12,24
2	14	28	11,14	X,Y	11,12	20,24
	9,10	12		9.3	8	17,19
	10					
8QVUF7	Investigator® 24plex (HID Format)					
	12	17,18	11,15	16,17	12,14	8
	10,13	14,16	22	8,12	11,13	12,24
2	14	28	11,14	X,Y	11,12	20,24
			18,25.2	9.3	8	17,19
	10					
94XZ8W	GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (PDF Format), (HID Format)					
	12	17,18	11,15	16,17	12,14	8
	10,13	14,16	22	8,12	11,13	12,24
2	14	28	11,14	X,Y	11,12	20,24
	9,10	12	18,25.2	9.3	8	17,19
	10	17	15	2		
98XB4W	GlobalFiler™ (PDF Format)					
	12	17,18	11,15	16,17	12,14	8
	10,13	14,16	22	8,12	11,13	12,24
2	14	28	11,14	X,Y	11,12	20,24
			18,25.2	9.3	8	17,19
	10			2		

TABLE 2

WebCode	Amplification Kits (File Format)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D7S820
Item	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

A3Z9EM	GlobalFiler™					
	12,12	17,18	11,15	16,17	12,14	8,8
	10,13	14,16	22,22	8,12	11,13	12,24
2	14,14	28,28	11,14	X,Y	11,12	20,24
			18,25.2	9.3,9.3	8,8	17,19
	10,R			2,R		
AK2W7L	GlobalFiler™ (PDF Format)					
	12	17,18	11,15	16,17	12,14	8
	10,13	14,16	22	8,12	11,13	12,24
2	14	28	11,14	X,Y	11,12	20,24
			18,25.2	9.3	8	17,19
	10			2		
B6HQ8R	GlobalFiler™ (PDF Format)					
	12,12	17,18	11,15	16,17	12,14	8,8
	10,13	14,16	22,22	8,12	11,13	12,24
2	14,14	28,28	11,14	X,Y	11,12	20,24
	N/A	N/A	18,25.2	9.3,9.3	8,8	17,19
	10	N/A	N/A	2		
D42F8Q	GlobalFiler™					
	12,12	17,18	11,15	16,17	12,14	8,8
	10,13	14,16	22,22	8,12	11,13	12,24
2	14,14	28,28	11,14	X,Y	11,12	20,24
			18,25.2	9.3,9.3	8,8	17,19
	10			2		
EBB4GH	PowerPlex® Fusion 6C					
	12	17,18	11,15	16,17	12,14	8
	10,13	14,16	22	8,12	11,13	12,24
2	14	28	11,14	X,Y	11,12	20,24
	9,10	12	18,25.2	9.3	8	17,19
	10	17	15			
EUQDLP	GlobalFiler™ (HID Format)					
	12,12	17,18	11,15	16,17	12,14	8,8
	10,13	14,16	22,22	8,12	11,13	12,24
2	14,14	28,28	11,14	X,Y	11,12	20,24
	-	-	18,25.2	9.3,9.3	8,8	17,19
	10	-	-	2		
FAD9BL	GlobalFiler™					
	12	17,18	11,15	16,17	12,14	8
	10,13	14,16	22	8,12	11,13	12,24
2	14	28	11,14	X,Y	11,12	20,24
			18,25.2	9.3	8	17,19
	10			2		

TABLE 2

WebCode	Amplification Kits (File Format)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D7S820
Item	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

FB6ABG	GlobalFiler™ (HID Format)					
	12,12	17,18	11,15	16,17	12,14	8,8
	10,13	14,16	22,22	8,12	11,13	12,24
2	14,14	28,28	11,14	X,Y	11,12	20,24
			18,25.2	9.3,9.3	8,8	17,19
	10			2		
K9Q2FE	PowerPlex® Fusion 6C (HID Format)					
	12,12	17,18	11,15	16,17	12,14	8,8
	10,13	14,16	22,22	8,12	11,13	12,24
2	14,14	28,28	11,14	X,Y	11,12	20,24
	9,10	12,12	18,25.2	9.3,9.3	8,8	17,19
	10	17	15			
KEU67C	GlobalFiler™ (PDF Format)					
	12,12	17,18	11,15	16,17	12,14	8,8
	10,13	14,16	22,22	8,12	11,13	12,24
2	14,14	28,28	11,14	X,Y	11,12	20,24
			18,25.2	9.3,9.3	8,8	17,19
	10			2		
KV284K	GlobalFiler™ (PDF Format)					
	12,12	17,18	11,15	16,17	12,14	8,8
	10,13	14,16	22,22	8,12	11,13	12,24
2	14,14	28,28	11,14	X,Y	11,12	20,24
			18,25.2	9.3,9.3	8,8	17,19
	10			2		
L226RF	GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 6C (PDF Format)					
	12	17,18	11,15	16,17	12,14	8
	10,13	14,16	22	8,12	11,13	12,24
2	14	28	11,14	X,Y	11,12	20,24
	9,10	12	18,25.2	9.3	8	17,19
	10	17	15	2		
MZPQXE	GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (PDF Format), (HID Format)					
	12,12	17,18	11,15	16,17	12,14	8,8
	10,13	14,16	22,22	8,12	11,13	12,24
2	14,14	28,28	11,14	X,Y	11,12	20,24
	9,10	12,12	18,25.2	9.3,9.3	8,8	17,19
	10	17	15	2		
NG7Q9P	PowerPlex® Fusion 6C					
	12	17,18	11,15	16,17	12,14	9
	10,13	14,16	22	8,12	11,13	12,24
2	14	28	11,14	X,Y	11,12	20,24
	9,10	12	18,25.2	9.3	8	17,19
	10	17	15			

TABLE 2

WebCode	Amplification Kits (File Format)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D7S820
Item	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		

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PWGC66	GlobalFiler™ (HID Format)					
	12	17,18	11,15	16,17	12,14	8
	10,13	14,16	22	8,12	11,13	12,24
2	14	28	11,14	X,Y	11,12	20,24
			18,25.2	9.3	8	17,19
	10			2		
TJJEV3	GlobalFiler™ (HID Format)					
	12	17,18	11,15	16,17	12,14	8
	10,13	14,16	22	8,12	11,13	12,24
2	14	28	11,14	X,Y	11,12	20,24
			18,25.2	9.3	8	17,19
	10			2		
VMQKJ8	GlobalFiler™ (PDF Format), (HID Format)					
	12,12	17,18	11,15	16,17	12,14	8,8
	10,13	14,16	22,22	8,12	11,13	12,24
2	14,14	28,28	11,14	X,Y	11,12	20,24
			18,25.2	9.3,9.3	8,8	17,19
	10			2		
ZMXK86	GlobalFiler™ (HID Format)					
	12	17,18	11,15	16,17	12,14	8
	10,13	14,16	22	8,12	11,13	12,24
2	14	28	11,14	X,Y	11,12	20,24
			18,25.2	9.3	8	17,19
	10			2		

TABLE 2

WebCode	Amplification Kits (File Format)		D2S441	D3S1358	D5S818	D7S820
	D1S1656	D2S1338				
Item	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

4JKR62	GlobalFiler™ (PDF Format)					
	15,15.3,(17)	(19),20,25	11,11.3	16,(17),18	(11),12,(13)	(8),10,11
	(11),13	13,14,15	18,20,(22)	12,(13)	11,12	(14),(15),19,22
3	(12),13	(29),30,32.2	11,16	X,(Y)	11,(12)	(20),21,24.2,(25)
			(14),(16),29.2	7,(9),9.3	8,(11)	14,16,(19)
	10			2		
	15,15.3	20,25	11,11.3	16,18	12,12	10,11
	13,13	13,15	18,20	12,12	11,12	19,22
3major	13,13	30,32.2	11,16	X,Y	11,11	21,24.2
			29.2,29.2	7,9.3	8,8	14,16
	10			2		
7CEWYY	GlobalFiler™ (PDF Format)					
	15,15.3,(17)	(19),20,25	11,11.3	16,(17),18	(11),12,(13)	(8),10,11
	(11),13	13,14,15	18,20,(22)	12,(13)	11,12	(14),(15),19,22
3	(12),13	(29),30,32.2	11,16	X,(Y)	11,(12)	(20),21,24.2,(25)
			(14),(16),29.2	7,(9),9.3	8,(11)	14,16,(19)
	10			2		
	15,15.3	20,25	11,11.3	16,18	12,12	10,11
	13,13	13,15	18,20	12,12	11,12	19,22
3major	13,13	30,32.2	11,16	X,Y	11,11	21,24.2
			29.2,29.2	7,9.3	8,8	14,16
	10			2		
8CUDUR	GlobalFiler™ (PDF Format)					
	15,15.3,(17)	(19),20,25	11,11.3	16,(17),18	(11),12,(13)	(8),10,11
	(11),13	13,14,15	18,20,(22)	12,(13)	11,12	(14),(15),19,22
3	(12),13	(29),30,32.2	11,16	X,(Y)	11,(12)	(20),21,24.2,(25)
			(14),(16),29.2	7,(9),9.3	8,(11)	14,16,(19)
	10			2		
	15,15.3	20,25	11,11.3	16,18	12,12	10,11
	13,13	13,15	18,20	12,12	11,12	19,22
3major	13,13	30,32.2	11,16	X,Y	11,11	21,24.2
			29.2,29.2	7,9.3	8,8	14,16
	10			2		
8FRWWP	(HID Format)					
	15,15.3,17	19,20,25	11,11.3	16,17,18	11,12,13	8,10,11
	11,13	13,14,15	18,20,22	12,13	11,12	14,15,19,22
3	12,13	29,30,32.2	11,16	X,Y	11,12	20,21,24.2,25
	9,11,12,14	10,12,15,18		7,9,9.3	8,11	14,16,19
	10					

TABLE 2

WebCode	Amplification Kits (File Format)		D2S441	D3S1358	D5S818	D7S820
	D1S1656	D2S1338				
Item	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

8QVUF7	Investigator® 24plex (HID Format)					
	15,15.3,17	19,20,25	11,11.3	16,17,18	11,12,13	8,10,11
	11,13	13,14,15	18,20,22	12,13	11,12	14,15,19,22
3	12,13	29,30,32.2	11,16	X,Y	11,12	20,21,24.2,25
			14,16,29.2	7,9,9.3	8,11	14,16,19
	10					
	15,15.3	20,25			12	10,11
	13		18,20	12		19,22
3major	13	30,32.2	11,16	X,Y	11	21,24.2
			29.2		8	14,16
	10					
94XZ8W	GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (PDF Format), (HID Format)					
	15,15.3,17	19,20,25	11,11.3	16,17,18	11,12,13	8,10,11
	11,13	13,14,15	18,20,22	12,13	11,12	14,15,19,22
3	12,13	29,30,32.2	11,16	X,Y	11,12	20,21,24.2,25
	9,11,12,14	10,12,15,18	14,16,29.2	7,9,9.3	8,11	14,16,19
	10	16	16	2		
98XB4W	GlobalFiler™ (PDF Format)					
	15,15.3,17	19,20,25	11,11.3	16,17,18	11,12,13	8,10,11
	11,13	13,14,15	18,20,22	12,13	11,12	14,15,19,22
3	12,13	29,30,32.2	11,16	X,Y	11,12	20,21,24.2,25
			14,16,29.2	7,9,9.3	8,11	14,16,19
	10			2		
	15,15.3	20,25	11,11.3	16,18	12	10,11
	13		18,20	12	11,12	19,22
3major	13	30,32.2	11,16	X,Y	11	21,24.2
			29.2	7,9.3	8	14,16
	10			2		
A3Z9EM	GlobalFiler™					
	15,15.3,17	19,20,25	11,11.3	16,17,18	11,12,13	8,10,11
	11,13	13,14,15	18,20,22	12,13	11,12	14,15,19,22
3	12,13	29,30,32.2	11,16	X,Y	11,12	20,21,24.2,25
			14,16,29.2	7,9,9.3	8,11	14,16,19
	10,R			2,R		
AK2W7L	GlobalFiler™ (PDF Format)					
	15,15.3,17	19,20,25	11,11.3	16,17,18	11,12,13	8,10,11
	11,13	13,14,15	18,20,22	12,13	11,12	14,15,19,22
3	12,13	29,30,32.2	11,16	X,Y	11,12	20,21,24.2,25
			14,16,29.2	7,9,9.3	8,11	14,16,19
	10			2		

TABLE 2

WebCode	Amplification Kits (File Format)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D7S820
Item	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

B6HQ8R	GlobalFiler™ (PDF Format)					
	15,15.3,17	19,20,25	11,11.3	16,17,18	11,12,13	8,10,11
	11,13	13,14,15	18,20,22	12,13	11,12	14,15,19,22
3	12,13	29,30,32.2	11,16	X,Y	11,12	20,21,24.2,25
	N/A	N/A	14,16,29.2	7,9,9.3	8,11	14,16,19
	10	N/A	N/A	2		
D42F8Q	GlobalFiler™					
	15,15.3,17	19,20,25	11,11.3	16,17,18	11,12,13	8,10,11
	11,13	13,14,15	18,20,22	12,13	11,12	14,15,19,22
3	12,13	29,30,32.2	11,16	X,Y	11,12	20,21,24.2,25
			14,16,29.2	7,9,9.3	8,11	14,16,19
	10			2		
	15,15.3	20,25	11,11.3	16,18	12,12	10,11
	13,13	13,15	18,20	12,12	11,12	19,22
3major	13,13	30,32.2	11,16	X,Y	11,11	21,24.2
			29.2,29.2	7,9.3	8,8	14,16
	10			2		
	15,17	19,25	11,11	17,18	11,13	8,10
	11,13	14,14	18,22	12,13	11,11	14,15
3minor	12,13	29,30	11,16	X,X	12,12	20,25
			14,16	9,9	8,11	16,19
EBB4GH	PowerPlex® Fusion 6C					
	15,15.3,17	19,20,25	11,11.3	16,17,18	11,12,13	8,10,11
	11,13	13,14,15	18,20,22	12,13	11,12	14,15,19,22
3	12,13	29,30,32.2	11,16	X,Y	11,12	20,21,24.2,25
	9,11,12,14	10,12,15,18	14,16,29.2	7,9,9.3	8,11	14,16,19
	10	16	16			
			11,11.3			
	13		18,20		11,12	19,22
3major			11,16			21,24.2
	12,14	12,18			8	14,16
	11		22			14,15
3minor						20,25
	9,11	10,15			11	19

TABLE 2

WebCode	Amplification Kits (File Format)		D2S441	D3S1358	D5S818	D7S820
	D1S1656	D2S1338				
Item	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

EUQDLP	GlobalFiler™ (HID Format)						
	15,15.3,17	19,20,25	11,11.3	16,17,18	11,12,13	8,10,11	
	11,13	13,14,15	18,20,22	12,13	11,12	14,15,19,22	
	3	12,13	29,30,32.2	11,16	X,Y	11,12	20,21,24.2,25
	-	-	14,16,29.2	7,9,9.3	8,11	14,16,19	
	10	-	-	2			
FAD9BL	GlobalFiler™						
	15,15.3,17	19,20,25	11,11.3	16,17,18	11,12,13	8,10,11	
	11,13	13,14,15	18,20,22	12,13	11,12	14,15,19,22	
	3	12,13	29,30,32.2	11,16	X,Y	11,12	20,21,24.2,25
			14,16,29.2	7,9,9.3	8,11	14,16,19	
	10			2			
FB6ABG	GlobalFiler™ (HID Format)						
	15,15.3,17	19,20,25	11,11.3	16,17,18	11,12,13	8,10,11	
	11,13	13,14,15	18,20,22	12,13	11,12	14,15,19,22	
	3	12,13	29,30,32.2	11,16	X,Y	11,12	20,21,24.2,25
			14,16,29.2	7,9,9.3	8,11	14,16,19	
	10			2			
K9Q2FE	PowerPlex® Fusion 6C (HID Format)						
	15,15.3,17	19,20,25	11,11.3	16,17,18	11,12,13	8,10,11	
	11,13	13,14,15	18,20,22	12,13	11,12	14,15,19,22	
	3	9.2,12,13	29,30,32.2	11,16	X,Y	11,12	20,21,24.2,25
		9,11,12,14	10,12,15,18	14,16,29.2	7,9,9.3	8,11	14,16,19
	10	16	16				
KEU67C	GlobalFiler™ (PDF Format)						
	15,15.3	20,25	11,11.3	16,18	12,12	10,11	
	13,13	13,15	18,20	12,12	11,12	19,22	
	3major	13,13	30,32.2	11,16	X,Y	11,11	21,24.2
			29.2,29.2	7,9.3	8,8	14,16	
		10			2		
		15,17	19,25	11,11	17,18	11,13	8,10
		11,13	14,14	18,22	12,13	11,11	14,15
	3minor	12,13	29,30	11,16	X,X	12,12	20,25
				14,16	9,9	8,11	16,19

TABLE 2

WebCode	Amplification Kits (File Format)		D2S441	D3S1358	D5S818	D7S820
	D1S1656	D2S1338				
Item	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

KV284K	GlobalFiler™ (PDF Format)					
	15,15.3,(17)	(19),20,25	11,11.3	16,(17),18	(11),12,(13)	(8),10,11
	(11),13	13,14,15	18,20,(22)	12,(13)	11,12	(14),(15),19,22
3	(12),13	(29),30,32.2	11,16	X,(Y)	11,(12)	(20),21,24.2,(25)
			(14),(16),29.2	7,(9),9.3	8,(11)	14,16,(19)
	10			2		
	15,15.3	20,25	11,11.3	16,18	12,12	10,11
	13,13	13,15	18,20	12,12	11,12	19,22
3major	13,13	30,32.2	11,16	X,Y	11,11	21,24.2
			29.2,29.2	7,9.3	8,8	14,16
	10			2		
L226RF	GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 6C (PDF Format)					
	15,15.3,17	19,20,25	11,11.3	16,17,18	11,12,13	8,10,11
	11,13	13,14,15	18,20,22	12,13	11,12	14,15,19,22
3	12,13	29,30,32.2	11,16	X,Y	11,12	20,21,24.2,25
	9,11,12,14	10,12,15,18	14,16,29.2	7,9,9.3	8,11	14,16,19
	10	16	16	2		
MZPQXE	GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (PDF Format), (HID Format)					
	15,15.3,17	19,20,25	11,11.3	16,17,18	11,12,13	8,10,11
	11,13	13,14,15	18,20,22	12,13	11,12	14,15,19,22
3	12,13	29,30,32.2	11,16	X,Y	11,12	20,21,24.2,25
	9,11,12,14	10,12,15,18	14,16,29.2	7,9,9.3	8,11	14,16,19
	10	16	16	2		
NG7Q9P	PowerPlex® Fusion 6C					
	15,15.3,17	19,20,25	11,11.3	16,17,18	11,12,13	8,10,11
	11,13	13,14,15	18,20,22	12,13	11,12	14,15,19,22
3	12,13	29,30,32.2	11,16	X,Y	11,12	20,21,24.2,25
	9,11,12,14	10,12,15,18	14,16,29.2	7,9,9.3	8,11	14,16,19
	10	16	16			
			11,11.3			
	13		18,20			19,22
3major			11,16			21,24.2
	12,14	12,18				14,16
	11		22			14,15
3minor						20,25
	9,11	10,15				19

TABLE 2

WebCode	Amplification Kits (File Format)		D2S441	D3S1358	D5S818	D7S820
	D1S1656	D2S1338				
Item	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

PWGC66	GlobalFiler™ (HID Format)					
	15,15.3,17	19,20,25	11,11.3	16,17,18	11,12,13	8,10,11
	11,13	13,14,15	18,20,22	12,13	11,12	14,15,19,22
3	12,13	29,30,32.2	11,16	X,Y	11,12	20,21,24.2,25
			14,16,29.2	7,9,9.3	8,11	14,16,19
	10			2		
TJJEV3	GlobalFiler™ (HID Format)					
	15,15.3,17	19,20,25	11,11.3	16,17,18	11,12,13	8,10,11
	11,13	13,14,15	18,20,22	12,13	11,12	14,15,19,22
3	12,13	29,30,32.2	11,16	X,Y	11,12	20,21,24.2,25
			14,16,29.2	7,9,9.3	8,11	14,16,19
	10			2		
VMQKJ8	GlobalFiler™ (PDF Format), (HID Format)					
	15,15.3	20,25	11,11.3	16,18	12,12	10,11
	13,13	13,15	18,20	12,12	11,12	19,22
3major	13,13	30,32.2	11,16	X,Y	11,11	21,24.2
			29.2,29.2	7,9.3	8,8	14,16
	10			2		
	15,17	19,25	11,11	17,18	11,13	8,10
	11,13	14,14	18,22	12,13	11,11	14,15
3minor	12,13	29,30	11,16	X,X	12,12	20,25
			14,16	9,9	8,11	16,19
ZMXK86	GlobalFiler™ (HID Format)					
	15,15.3,17	19,20,25	11,11.3	16,17,18	11,12,13	8,10,11
	11,13	13,14,15	18,20,22	12,13	11,12	14,15,19,22
3	12,13	29,30,32.2	11,16	X,Y	11,12	20,21,24.2,25
			14,16,29.2	7,9,9.3	8,11	14,16,19
	10			2		

TABLE 2

WebCode	Amplification Kits (File Format)		D25441	D3S1358	D5S818	D7S820
	D1S1656	D2S1338				
Item	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						
4JKR62	GlobalFiler™ (PDF Format)					
	12,15,15.3	17,18,20,25	11,(11.3),(15)	16,(17),18	12,(13),(14)	8,10,11
	(10),13	13,14,15,16	18,20,22	(8),12	11,12,(13)	12,19,22,(23),24,(25)
4	13,(14)	28,30,(32.2)	11,(14),(16)	X,Y	11,(12)	20,21,24,24.2
			(18),(25.2),29.2	(7),9.3	8,8	14,16,17,19
	10			2		
	12,15,15.3	17,18,20,25	11,11.3,15	16,17,18	12,14	8,10,11
	10,13	13,14,15,16	18,20,22	8,12	11,12,13	12,19,22,24
4major	13,14	28,30,32.2	11,14,16	X,Y	11,12	20,21,24,24.2
			18,25.2,29.2	7,9.3	8,8	14,16,17,19
	10			2		
7CEWYY	GlobalFiler™ (PDF Format)					
	12,15,15.3	17,18,20,25	11,(11.3),(15)	16,(17),18	12,(13),(14)	8,10,11
	(10),13	13,14,15,16	18,20,22	(8),12	11,12,(13)	12,19,22,(23),24,(25)
4	13,(14)	28,30,(32.2)	11,(14),(16)	X,Y	11,(12)	20,21,24,24.2
			(18),(25.2),29.2	(7),9.3	8,8	14,16,17,19
	10			2		
	12,15,15.3	17,18,20,25	11,11.3,15	16,17,18	12,14	8,10,11
	10,13	13,14,15,16	18,20,22	8,12	11,12,13	12,19,22,24
4major	13,14	28,30,32.2	11,14,16	X,Y	11,12	20,21,24,24.2
			18,25.2,29.2	7,9.3	8,8	14,16,17,19
	10			2		
8CUDUR	GlobalFiler™ (PDF Format)					
	12,15,15.3	17,18,20,25	11,(11.3),(15)	16,(17),18	12,(13),(14)	8,10,11
	(10),13	13,14,15,16	18,20,22	(8),12	11,12,(13)	12,19,22,(23),24,(25)
4	13,(14)	28,30,(32.2)	11,(14),(16)	X,Y	11,(12)	20,21,24,24.2
			(18),(25.2),29.2	(7),9.3	8,8	14,16,17,19
	10			2		
	12,15,15.3	17,18,20,25	11,11.3,15	16,17,18	12,14	8,10,11
	10,13	13,14,15,16	18,20,22	8,12	11,12,13	12,19,22,24
4major	13,14	28,30,32.2	11,14,16	X,Y	11,12	20,21,24,24.2
			18,25.2,29.2	7,9.3	8,8	14,16,17,19
	10			2		
8FRWWP	(HID Format)					
	12,15,15.3	17,18,20,25	11,11.3,15	16,17,18	12,14	8,10,11
	10,13	13,14,15,16	18,20,22	8,12	9.3,11,12,13	12,19,22,24
4	13,14	28,30,32.2	11,14,16	X,Y	11,12	20,21,24,24.2
	9,10,12,14	12,18		7,9.3	8	14,16,17,19
	10					

TABLE 2

WebCode	Amplification Kits (File Format)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D7S820
Item	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

8QVUF7	Investigator® 24plex (HID Format)					
	12,15,15.3	17,18,20,25	11,11.3,15	16,17,18	12,14	8,10,11
	10,13	13,14,15,16	18,20,22	8,12	11,12,13	12,19,22,24
4	13,14	28,30,32.2	11,14,16	X,Y	11,12	20,21,24,24.2
			18,25.2,29.2	7,9.3	8	14,16,17,19
	10					
	15,15.3	20,25	11,11.3	16,18	12	10,11
	13	13,15	18,20	12	11,12	19,22
4major	13	30,32.2	11,16	X,Y	11	21,24.2
			29.2	7,9.3	8	14,16
	10					
94XZ8W	GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (PDF Format), (HID Format)					
	12,15,15.3	17,18,20,25	11,11.3,15	16,17,18	12,14	8,10,11
	10,13	13,14,15,16	18,20,22	8,12	11,12,13	12,19,22,24
4	13,14	28,30,32.2	11,14,16	X,Y	11,12	20,21,24,24.2
	9,10,12,14	12,18	18,25.2,29.2	7,9.3	8	14,16,17,19
	10	16,17	15,16	2		
98XB4W	GlobalFiler™ (PDF Format)					
	12,15,15.3	17,18,20,25	11,11.3,15	16,17,18	12,14	8,10,11
	10,13	13,14,15,16	18,20,22	8,12	11,12,13	12,19,22,24
4	13,14	28,30,32.2	11,14,16	X,Y	11,12	20,21,24,24.2
			18,25.2,29.2	7,9.3	8	14,16,17,19
	10			2		
A3Z9EM	GlobalFiler™					
	12,15,15.3	17,18,20,25	11,11.3,15	16,17,18	12,13,14	8,10,11
	10,13	13,14,15,16	<17,18,20,22	8,12	11,12,13	12,19,22,23,24,25
4	13,14,16.2	28,30,32.2	11,14,16	X,Y	11,12	20,21,24,24.2
			18,25.2,29.2	7,9.3	8	14,16,17,19
	10,R			2,R		
AK2W7L	GlobalFiler™ (PDF Format)					
	12,15,15.3	17,18,20,25	11,11.3,15	16,17,18	12,14	8,10,11
	10,13	13,14,15,16	18,20,22	8,12	11,12,13	12,19,22,24
4	13,14	28,30,32.2	11,14,16	X,Y	11,12	20,21,24,24.2
			18,25.2,29.2	7,9.3	8	14,16,17,19
	10			2		
B6HQ8R	GlobalFiler™ (PDF Format)					
	12,15,15.3	17,18,20,25	11,11.3,15	16,17,18	INC	8,10,11
	10,13	13,14,15,16	18,20,22	8,12	11,12,13	INC
4	13,14	28,30,32.2	11,14,16	X,Y	11,12	20,21,24,24.2
	N/A	N/A	18,25.2,29.2	7,9.3	8	14,16,17,19
	10	N/A	N/A	2		

TABLE 2

WebCode	Amplification Kits (File Format)		D2S441	D3S1358	D5S818	D7S820
	D1S1656	D2S1338				
Item	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

D42F8Q	GlobalFiler™					
	12,15,15.3	17,18,20,25	11,11.3,15	16,17,18	12,14	8,10,11
	10,13	13,14,15,16	18,20,22	8,12	11,12,13	12,19,22,24
4	13,14	28,30,32.2	11,14,16	X,Y	11,12	20,21,24,24.2
			18,25.2,19.2	7,9.3	8	14,16,17,19
	10			2		
	15,15.3	20,25	11,11.3	16,18	12,12	10,11
	13,13	13,15	18,20	12,12	11,12	19,22
4major	13,13	30.32.2	11,16	X,Y	11,11	21,24.2
			29.2,29.2	7,9.3	8,8	14,16
	10			2		
	12,12	17,18	11,15	16,17	12,14	8,8
	10,13	14,16	22,22	8,12	11,13	12,24
4minor	14,14	28,28	11,14	X,Y	11,12	20,24
			18,25.2	9.3,9.3	8,8	17,19
	10			2		
EBB4GH	PowerPlex® Fusion 6C					
	12,15,15.3	17,18,20,25	11,11.3,15	16,17,18	12,14	8,10,11
	10,13	13,14,15,16	18,20,22	8,12	11,12,13	12,19,22,24
4	13,14	28,30,32.2	11,14,16	X,Y	11,12	20,21,24,24.2
	9,10,12,14	12,18	18,25.2,29.2	7,9.3	8	14,16,17,19
	10	16,17	15,16			
EUQDLP	GlobalFiler™ (HID Format)					
	12,15,15.3	17,18,20,25	11,11.3,15	16,17,18	12,13,14	8,10,11
	10,13	13,14,15,16	18,20,22	8,12	11,12,13	12,19,22,23,24
4	13,14	28,30,32.2	11,14,16	X,Y	11,12	20,21,24,24.2
	-	-	18,25.2,29.2	7,9.3	8,8	14,16,17,19
	10	-	-	2		
FAD9BL	GlobalFiler™					
	12,15,15.3	17,18,20,25	11,11.3,15	16,17,18	12,14	8,10,11
	10,13	13,14,15,16	18,20,22	8,12	11,12,13	12,19,22,24
4major	13,14,16.2	28,30,32.2	11,14,16	X,Y	11,12	20,21,24,24.2
			18,25.2,29.2	7,9.3	8	14,16,17,19
	10			2		
					13	
						23,25
4minor						

TABLE 2

WebCode	Amplification Kits (File Format)					
	D151656	D251338	D25441	D351358	D55818	D75820
Item	D851179	D1051248	D125391	D135317	D165539	D18551
	D195433	D21511	D2251045	Amelogenin	CSF1PO	FGA
	Penta D	Penta E	SE33	TH01	TPOX	vWA
	DYS391	DYS570	DYS576	Y Indel		

Item 4 - STR Results

FB6ABG	GlobalFiler™ (HID Format)					
	12,15,15.3	17,18,20,25	11,11.3,15	16,17,18	12,14	8,10,11
	10,13	13,14,15,16	18,20,22	8,12	11,12,13	12,19,22,24
4	13,14	28,30,32.2	11,14,16	X,Y	11,12	20,21,24,24.2
			18,25.2,29.2	7,9.3	8	14,16,17,19
	10			2		
K9Q2FE	PowerPlex® Fusion 6C (HID Format)					
	12,15,15.3	17,18,20,25	11,11.3,15	16,17,18	12,14	8,10,11
	10,13	13,14,15,16	18,20,22	8,12	11,12,13	12,19,22,24
4	13,14	28,30,32.2	11,14,16	X,Y	11,12	20,21,24,24.2
	9,10,12,14	12,18	18,25.2,29.2	7,9.3	8	14,16,17,19
	10	16,17	15,16			
KEU67C	GlobalFiler™ (PDF Format)					
	12,15,15.3	17,18,20,25	11,11.3,15	16,17,18	12,13,14	8,10,11
	10,13	13,14,15,16	18,20,22	8,12	11,12,13	12,19,22,23,24,25
4	13,14,16.2	28,30,32.2	11,14,16	X,Y	11,12	20,21,24,24.2
			18,25.2,29.2	7,9.3	8	14,16,17,19
	10			2		
KV284K	GlobalFiler™ (PDF Format)					
	12,15,15.3	17,18,20,25	11,(11.3),(15)	16,(17),18	12,(13),(14)	8,10,11
	(10),13	13,14,15,16	18,20,22	(8),12	11,12,(13)	12,19,22,(23),24,(25)
4	13,(14)	28,30,(32.2)	11,(14),(16)	X,Y	11,(12)	20,21,24,24.2
			(18),(25.2),29.2	(7),9.3	8,8	14,16,17,19
	10			2		
	12,15,15.3	17,18,20,25	11,11.3,15	16,17,18	12,14	8,10,11
	10,13	13,14,15,16	18,20,22	8,12	11,12,13	12,19,22,24
4major	13,14	28,30,32.2	11,14,16	X,Y	11,12	20,21,24,24.2
			18,25.2,29.2	7,9.3	8,8	14,16,17,19
	10			2		
L226RF	GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 6C (PDF Format)					
	12,15,15.3	17,18,20,25	11,11.3,15	16,17,18	12,14	8,10,11
	10,13	13,14,15,16	18,20,22	8,12	11,12,13	12,19,22,24
4	13,14	28,30,32.2	11,14,16	X,Y	11,12	20,21,24,24.2
	9,10,12,14	12,18	18,25.2,29.2	7,9.3	8	14,16,17,19
	10	16,17	15,16	2		
MZPQXE	GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (PDF Format), (HID Format)					
	12,15,15.3	17,18,20,25	11,11.3,15	16,17,18	12,14	8,10,11
	10,13	13,14,15,16	18,20,22	8,12	11,12,13	12,19,22,24
4	13,14	28,30,32.2	11,14,16	X,Y	11,12	20,21,24,24.2
	9,10,12,14	12,18	18,25.2,29.2	7,9.3	8	14,16,17,19
	10	16,17	15,16	2		

TABLE 2

WebCode	Amplification Kits (File Format)		D2S441	D3S1358	D5S818	D7S820
	D1S1656	D2S1338				
Item	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

NG7Q9P	PowerPlex® Fusion 6C					
	12,15,15.3	17,18,20,25	11,11.3,15	16,17,18	12,13,14	8,10,11
	10,13	13,14,15,16	18,20,22	8,12	11,12,13	12,19,21,22,23,24
4	13,14	28,30,32.2	11,14,16	X,Y	11,12	20,21,24,24.2
	9,10,12,14	12,18	18,25.2,29.2	7,9.3	8	14,16,17,19
	10	16,17	15,16			
PWGC66	GlobalFiler™ (HID Format)					
	12,15,15.3	17,18,20,25	11,11.3,15	16,17,18	12,14	8,10,11
	10,13	13,14,15,16	18,20,22	8,12	11,12,13	12,19,22,24
4	13,14	28,30,32.2	11,14,16	X,Y	11,12	20,21,24,24.2
			18,25.2,29.2	7,9.3	8	14,16,17,19
	10			2		
TJJEV3	GlobalFiler™ (HID Format)					
	12,15,15.3	17,18,20,25	11,11.3,15	16,17,18	12,14	8,10,11
	10,13	13,14,15,16	18,20,22	8,12	11,12,13	12,19,22,24
4	13,14	28,30,32.2	11,14,16	X,Y	11,12	20,21,24,24.2
			18,25.2,29.2	7,9.3	8	14,16,17,19
	10			2		
VMQKJ8	GlobalFiler™ (PDF Format), (HID Format)					
	12,15,15.3	17,18,20,25	11,11.3,15	16,17,18	12,14	8,10,11
	10,13	13,14,15,16	18,20,22	8,12	11,12,13	12,19,22,24
4	13,14	28,30,32.2	11,14,16	X,Y	11,12	20,21,24,24.2
			18,25.2,29.2	7,9.3	8,8	14,16,17,19
	10			2		
ZMXK86	GlobalFiler™ (HID Format)					
	12,15,15.3	17,18,20,25	11,11.3,15	16,17,18	12,14	8,10,11
	10,13	13,14,15,16	18,20,22	8,12	11,12,13	12,19,22,24
4	13,14	28,30,32.2	11,14,16	X,Y	11,12	20,21,24,24.2
			18,25.2,29.2	7,9.3	8	14,16,17,19
	10			2		

YSTR Results

TABLE 3

WebCode	Amplification Kits (File Format)								
Item	DYF387S	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									
8FRWWP	(HID Format)								
		15	13,17	13	29	23	10	11	12
2	15	9	12	21		16	14		23
		12	13	17	15		21	11	12
94XZ8W	Yfiler™ Plus, PowerPlex® Y23 (PDF Format), (HID Format)								
	37,41	15	13,17	13	29	23	10	11	12
2	15	9	12	21	31	16	14	10	23
	40	12	13	17	15	17	21	11	12
98XB4W	Yfiler™ Plus (PDF Format)								
	37,41	15	13,17	13	29	23	10	11	12
2	15	9	12	21	31	16	14	10	23
	40	12		17	15	17	21		12
A3Z9EM	Yfiler™ Plus (PDF Format)								
	37,41	15	13,17	13	29	23	8,3,10	11	12
2	15	9	12	21	31	16	14	10	23
	40	12		17	15	17	21		12
AK2W7L	Yfiler™ Plus (PDF Format)								
	37,41	15	13,17	13	29	23	10	11	12
2	15	9	12	21	31	16	14	10	23
	40	12		17	15	17	21		12
B6HQ8R	Yfiler™ Plus (PDF Format)								
	37,41	15	13,17	13	29	23	10	11	12
2	15	9	12	21	31	16	14	10	23
	40	12	N/A	17	15	17	21	N/A	12
D42F8Q	Yfiler™ Plus								
	37,41	15	13,17	13	29	23	10	11	12
2	15	9	12	21	31	16	14	10	23
	40	12		17	15	17	21		12
KEU67C	Yfiler™ Plus (PDF Format)								
	37,41	15	13,17	13	29	23	10	11	12
2	15	9	12	21	31	16	14	10	23
	40	12		17	15	17	21		12
L226RF	Yfiler™ Plus, PowerPlex® Y23 (PDF Format)								
	37,41	15	13,17	13	29	23	10	11	12
2	15	9	12	21	31	16	14	10	23
	40	12	13	17	15	17	21	11	12
MZPQXE	Yfiler™ Plus, PowerPlex® Y23 (PDF Format), (HID Format)								
	37,41	15	13,17	13	29	23	10	11	12
2	15	9	12	21	31	16	14	10	23
	40	12	13	17	15	17	21	11	12

TABLE 3

WebCode	Amplification Kits (File Format)								
Item	DYF387S	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

PWGC66	Yfiler™ Plus (PDF Format)								
	37,41	15	13,17	13	29	23	10	11	12
2	15	9	12	21	31	16	14	10	23
	40	12		17	15	17	21		12
TJJEV3	Yfiler™ Plus (PDF Format)								
	37,41	15	13,17	13	29	23	10	11	12
2	15	9	12	21	31	16	14	10	23
	40	12		17	15	17	21		12
VMQKJ8	Yfiler™ Plus (PDF Format), (HID Format)								
	37,41	15	13,17	13	29	23	10	11	12
2	15	9	12	21	31	16	14	10	23
	40	12		17	15	17	21		12
ZMXK86	Yfiler™ Plus (HID Format)								
	37,41	15	13,17	13	29	23	10	11	12
2	15	9	12	21	31	16	14	10	23
	40	12		17	15	17	21		12

TABLE 3

WebCode	Amplification Kits (File Format)								
	DYF387S	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
Item	DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
	DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	YGATAH4
Item 3 - YSTR Results									
8FRWWP	(HID Format)								
		14	13,14	13	31	24	10	11	12
3	16	7	11	19		15	19		23
		12	12	16	16		22	9	13
94XZ8W	Yfiler™ Plus, PowerPlex® Y23 (PDF Format), (HID Format)								
	37,38	14	13,14	13	31	24	10	11	12
3	16	7	11	19	28	15	19	11	23
	40	12	12	16	16	16	22	9	13
98XB4W	Yfiler™ Plus (PDF Format)								
	37,38	14	13,14	13	31	24	10	11	12
3	16	7	11	19	28	15	19	11	23
	40	12		16	16	16	22		13
A3Z9EM	Yfiler™ Plus								
	37,38	14	13,14	13	31	24	10	11	12
3	16	7	11	19	28	15	19	11	23
	40	12		16	16	16	22		13
AK2W7L	Yfiler™ Plus (PDF Format)								
	37,38	14	13,14	13	31	24	10	11	12
3	16	7	11	19	28	15	19	11	23
	40	12		16	16	16	22		13
B6HQ8R	Yfiler™ Plus (PDF Format)								
	37,38	14	13,14	13	31	24	10	11	12
3	16	7	11	19	28	15	19	11	23
	40	12	N/A	16	16	16	22	N/A	13
D42F8Q									
	37,38	14	13,14	13	31	24	10	11	12
3	16	7	11	19	28	15	19	11	23
	40	12		16	16	16	22		13
	37,38	14	13,14	13	31	24	10	11	12
3major	16	7	11	19	28	15	19	11	23
	40	12		16	16	16	22		13
KEU67C	Yfiler™ Plus (PDF Format)								
	37,38	14	13,14	13	31	24	10	11	12
3	16	7	11	19	28	15	19	11	23
	40	12		16	16	16	22		13
L226RF	Yfiler™ Plus, PowerPlex® Y23 (PDF Format)								
	37,38	14	13,14	13	31	24	10	11	12
3	16	7	11	19	28	15	19	11	23
	40	12	12	16	16	16	22	9	13

TABLE 3

WebCode	Amplification Kits (File Format)								
	DYF387S	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
Item	DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
	DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	YGATAH4
Item 3 - YSTR Results									
MZPQXE	Yfiler™ Plus, PowerPlex® Y23 (PDF Format), (HID Format)								
	37,38	14	13,14	13	31	24	10	11	12
3	16	7	11	19	28	15	19	11	23
	40	12	12	16	16	16	22	9	13
PWGC66	Yfiler™ Plus (PDF Format)								
	37,38	14	13,14	13	31	24	10	11	12
3	16	7	11	19	28	15	19	11	23
	40	12		16	16	16	22		13
TJJEV3	Yfiler™ Plus (PDF Format)								
	37,38	14	13,14	13	31	24	10	11	12
3	16	7	11	19	28	15	19	11	23
	40	12		16	16	16	22		13
VMQKJ8	Yfiler™ Plus (PDF Format), (HID Format)								
	37,38	14	13,14	13	31	24	10	11	12
3	16	7	11	19	28	15	19	11	23
	40	12		16	16	16	22		13
ZMXK86	Yfiler™ Plus (HID Format)								
	37,38	14	13,14	13	31	24	10	11	12
3	16	7	11	19	28	15	19	11	23
	40	12		16	16	16	22		13

TABLE 3

WebCode	Amplification Kits (File Format)								
Item	DYF387S	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

8FRWWP	(HID Format)								
		14,15	13,14,17	13	29,31	23,24	10	11	12
4	15,16	7,9	11,12	19,21		15,16	14,19		23
		12	12,13	16,17	15,16		21,22	9,11	12,13
94XZ8W	Yfiler™ Plus, PowerPlex® Y23 (PDF Format), (HID Format)								
	37,38,41	14,15	13,14,17	13	29,31	23,24	10	11	12
4	15,16	7,9	11,12	19,21	28,31	15,16	14,19	10,11	23
	40	12	12,13	16,17	15,16	16,17	21,22	9,11	12,13
98XB4W	Yfiler™ Plus (PDF Format)								
	37,38,41	14,15	13,14,17	13	29,31	23,24	10	11	12
4	15,16	7,9	11,12	19,21	28,31	15,16	14,19	10,11	23
	40	12		16,17	15,16	16,17	21,22		12,13
A3Z9EM	Yfiler™ Plus								
	37,38,41	14,14.2,15	13,14,17	13	29,31	23,24	10	11	12
4	15,16	7,9	11,12	19,21	28,31	15,16	14,19	10,11	23
	40	12		16,17	15,16	16,17	21,22		12,13
AK2W7L	Yfiler™ Plus (PDF Format)								
	37,38,41	14,15	13,14,17	13	29,31	23,24	10	11	12
4	15,16	7,9	11,12	19,21	28,31	15,16	14,19	10,11	23
	40	12		16,17	15,16	16,17	21,22		12,13
B6HQ8R	Yfiler™ Plus (PDF Format)								
	37,38,41	14,15	13,14,17	13	29,31	23,24	10	11	12
4	15,16	7,9	11,12	19,21	28,31	15,16	14,19	10,11	23
	40	12	N/A	16,17	15,16	16,17	21,22	N/A	12,13
D42F8Q	Yfiler™ Plus								
	37,38,41	14,15	13,14,17	13	29,31	23,24	10	11	12
4	15,16	7,9	11,12	19,21	28,31	15,16	14,19	10,11	23
	40	12		16,17	15,16	16,17	21,22		12,13
4major	37,38	14	13,14	13	31	24	10	11	12
	16	7	11	19	28	15	19	11	23
	40	12		16	16	16	22		13
4minor	37,41	15	13,17	13	29	23	10	11	12
	15	9	12	21	31	16	14	10	23
	40	12		17	15	17	21		12
KEU67C	Yfiler™ Plus (PDF Format)								
	37,38,41	14,15	13,14,17	13	29,31	23,24	10	11	12
4	15,16	7,9	11,12	19,21	28,31	15,16	14,19	10,11	23
	40	12		16,17	15,16	16,17	21,22		12,13
L226RF	Yfiler™ Plus, PowerPlex® Y23 (PDF Format)								
	37,38,41	14,15	13,14,17	13	29,31	23,24	10	11	12
4	15,16	7,9	11,12	19,21	28,31	15,16	14,19	10,11	23
	40	12	12,13	16,17	15,16	16,17	21,22	9,11	12,13

TABLE 3

WebCode	Amplification Kits (File Format)								
	DYF387S	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
Item	DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
	DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	YGATAH4
Item 4 - YSTR Results									
MZPQXE	Yfiler™ Plus, PowerPlex® Y23 (PDF Format), (HID Format)								
	37,38,41	14,15	13,14,17	13	29,31	23,24	10	11	12
4	15,16	7,9	11,12	19,21	28,31	15,16	14,19	10,11	23
	40	12	12,13	16,17	15,16	16,17	21,22	9,11	12,13
PWGC66	Yfiler™ Plus (PDF Format)								
	37,38,41	14,15	13,14,17	13	29,31	23,24	10	11	12
4	15,16	7,9	11,12	19,21	28,31	15,16	14,19	10,11	23
	40	12		16,17	15,16	16,17	21,22		12,13
TJJEV3	Yfiler™ Plus (PDF Format)								
	37,38,41	14,15	13,14,17	13	29,31	23,24	10	11	12
4	15,16	7,9	11,12	19,21	28,31	15,16	14,19	10,11	23
	40	12		16,17	15,16	16,17	21,22		12,13
VMQKJ8	Yfiler™ Plus (PDF Format), (HID Format)								
	37,38,41	14,15	13,14,17	13	29,31	23,24	10	11	12
4	15,16	7,9	11,12	19,21	28,31	15,16	14,19	10,11	23
	40	12		16,17	15,16	16,17	21,22		12,13
ZMXK86	Yfiler™ Plus (HID Format)								
	37,38,41	14,15	13,14,17	13	29,31	23,24	10	11	12
4	15,16	7,9	11,12	19,21	28,31	15,16	14,19	10,11	23
	40	12		16,17	15,16	16,17	21,22		12,13

DNA Conclusions

Based on the examination of the DNA profiles provided, could the Victim (Item 1) and/or the Suspect (Item 2) be included as a possible contributor to the questioned Item?

TABLE 4

WebCode	Item 3 Conclusion			Item 4 Conclusion		
	# of Contributors	Item 1	Item 2	# of Contributors	Item 1	Item 2
4JKR62	2	Included	Excluded	greater than or equal to 3	Excluded	Included
7CEWYY	2	Included	Excluded	greater than or equal to 3	Excluded	Included
8CUDUR	2	Included	Excluded	greater than or equal to 3	Excluded	Included
8FRWWP	2	Included	Excluded	2	Excluded	Included
8QVUF7	2	Included	Excluded	2	Excluded	Included
94XZ8W	≥2 Contributors including ≥1 male	Included	Excluded	≥2 Contributors including ≥2 males	Excluded	Included
98XB4W	2	Included	Excluded	2	Excluded	Included
A3Z9EM	2 Contributors	Included	Excluded	2 Contributors	Excluded	Included
AK2W7L	2	Included	Excluded	2	Excluded	Included
B6HQ8R	2	Included	Excluded	2	Excluded	Included
D42F8Q	2	Included	Excluded	2	Excluded	Included
EBB4GH	2	Included	Excluded	2	Excluded	Included
EUQDLP	2	Included	Excluded	3	Excluded	Included
FAD9BL	2	Included	Excluded		Excluded	Included
FB6ABG	2	Included	Excluded	2	Excluded	Included
K9Q2FE	Consistent with 2	Included	Excluded	Consistent with 2	Excluded	Included
KEU67C	2	Included	Excluded	3	Excluded	Included
KV284K	2	Included	Excluded	Greater than or equal to 3	Excluded	Included
L226RF	2	Included	Excluded	2	Excluded	Included
MZPQXE	2	Included	Excluded	2	Excluded	Included

TABLE 4

WebCode	# of Contributors	Item 3 Conclusion		# of Contributors	Item 4 Conclusion	
		Item 1	Item 2		Item 1	Item 2
NG7Q9P	2	Included	Excluded	at least 2, poss 3rd	Excluded	Included
PWGC66	2	Included	Excluded	2	Excluded	Included
TJJEV3	2	Included	Excluded	2	Excluded	Included
VMQKJ8	2	Included	Included	2	Excluded	Included
ZMXK86	2	Included	Excluded	2	Excluded	Included

Conclusions Response Summary				Participants reporting conclusions: 25		
Based on the examination of the DNA profiles provided, could the Victim (Item 1) and/or the Suspect (Item 2) be included as a possible contributor to the questioned Item?						
Responses		Item 3		Item 4		
		<u>Item 1</u>	<u>Item 2</u>	<u>Item 1</u>	<u>Item 2</u>	
	Included	25	1	0	25	
	Excluded	0	24	25	0	
	Inconclusive	0	0	0	0	
No Response	0	0	0	0		
	Total	25	25	25	25	

Statistical Analysis for Item 3

TABLE 5

WebCode	Item 3 Methods & Results
8FRWWP	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: A mixed DNA profile (PowerPlex Fusion 5C) consisting of DNA from at least two contributors was obtained from the stain found on the scissors; item CTS-21-5881-3. The individual represented by the reference sample; item CTS-21-5881-2 (suspect), is excluded as a contributor of the mixed DNA profile obtained from the stain found on the scissors; item CTS-21-5881-3. The individual represented by the reference sample; item CTS-21-5881-1 (victim), cannot be excluded as a contributor of the mixed DNA profile obtained from the stain found on the scissors; item CTS-21-5881-3. The observed mixture profile is approximately 9.55×10^{15} times more likely to occur under the scenario that the DNA profile obtained from the stain found on the scissors, item CTS-21-5881-3, is a mixture of DNA from the victim and an unknown individual, as opposed to the scenario that it originated from a mixture of DNA from two unrelated unknown individuals, in the African American population, 1.17×10^{14} in the Caucasian population, and 7.75×10^{14} in the Hispanic population.</p>
8QVUF7	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: This mixed DNA profile is approximately 218 quadrillion (2.18×10^{17}) times more likely to be observed if the victim (Item 1) and an unknown male are the contributors that if two random, unrelated African Americans are the contributors; approximately 1.07 quadrillion (1.07×10^{15}) times more likely than if two random, unrelated Caucasians are the contributors; and approximately 30.5 quadrillion (3.05×10^{16}) times more likely than if two random unrelated Southwestern Hispanics are the contributors.</p>

TABLE 5

WebCode	Item 3 Methods & Results
94XZ8W	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: Under the assumption that the VICTIM (Item 1) and one unrelated person selected at random from the general population are contributors to the mixture developed from the STAIN ON THE SCISSORS (Item 3), the likelihood of observing the mixed source profile is $\geq 1,000,000$ times greater (actual LR available upon request) than if it is assumed that two unrelated persons selected at random from the general population are contributors to this mixed-source sample.</p>
98XB4W	<p>Method(s): Combined Probability of Exclusion/Inclusion</p> <p>Stats Analysis: The probability of randomly selecting an unrelated individual who would be included as a contributor to the DNA mixture profile developed from the stain on the scissors, utilizing the GlobalFiler loci, is 1 in greater than 7.2 billion (which is approximately the world population) in the Caucasian, African American, and Hispanic populations.</p>
A3Z9EM	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: The DNA profile of Item 3 is at least 5.70028E23 times more likely if it came from Item 1 and an unknown unrelated person than it came from two unrelated members of the Caucasian population. Item 2 is excluded as a possible contributor to DNA profile of Item 3 (LR Total = 0)</p>
AK2W7L	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: The mixed DNA profile are 9.3 quadrillion (9.3e15), 110 quadrillion (110e15) and 580 trillion (580e12) TIMES more likely; IF they originated from the source represented by Item 1 and one unknown individual RATHER THAN; IF they originated from two unknown unrelated individuals as calculated based on the [Location-identifying population databases].</p>
B6HQ8R	<p>Method(s): [Participant did not report a method.]</p> <p>Stats Analysis: Working from the pdf of the electropherogram it is not possible to perform a through evaluation of each locus. I am a forensic consultant that reviews DNA case files submitted to me as evidence. I review the analyst allele calls and evidence to reference sample comparisons so I can understand how the original analyst arrived at their opinions and conclusions. I accept that their population calculations are correct. NSD: No Size Data, INC: Inconclusive, N/A: Not Applicable</p>
D42F8Q	<p>Method(s): Likelihood Ratio</p>
EBB4GH	<p>Method(s): Combined Probability of Exclusion/Inclusion, Random Match Probability</p> <p>Stats Analysis: The probability of selecting an unrelated individual at random having a DNA profile at DNA STR loci Penta E, D18S51, Penta D, and FGA consistent with that of the minor contributor to submission 3 is approximately 1 in 2 million in the Caucasian population and 1 in 20 million in the African-American population. The probability of selecting an unrelated individual at random having DNA typing results at all Fusion 6C loci, except D8S1179, consistent with any contributor to the Item 3 DNA mixture is 1 in 200 trillion (2XE14) in the Caucasian population and 1 in 60 quadrillion (6XE16) in the African American population.</p>
EUQDLP	<p>Method(s): Combined Probability of Exclusion/Inclusion</p> <p>Stats Analysis: CPI= 6.5×10^{-15}, CPE= 99.9999999999993%, No. of possible random contributors= 0</p>
FAD9BL	<p>Method(s): Combined Probability of Exclusion/Inclusion</p> <p>Stats Analysis: The DNA profile from item 3 is consistent with a mixture of two individuals. Victim cannot be excluded. Stats are 1 in 147 billion for African Americans, 1 in 21.5 trillion for Caucasians and 1 in 74.9 trillion for Hispanics. Suspect is excluded.</p>
FB6ABG	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: The evidence is 28 sextillion times more likely if the victim is a contributor to the DNA mixture than if she is not a contributor.</p>

TABLE 5

WebCode	Item 3 Methods & Results
K9Q2FE	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: The DNA profile obtained from the stain on the scissors (Item 3) is of mixed origin consistent with having originated from two individuals, at least one of which is male, and is suitable for comparison. There is very strong support for the inclusion of the victim (Item 1). Assuming two contributors, it is 1.2 octillion times more likely to observe this DNA profile if it originated from the victim and an unknown contributor rather than two unrelated contributors selected at random from the U.S. population. The suspect (Item 2) is excluded as a contributor.</p>
KEU67C	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: H1: the mixture is made up of the victim's (Item 1) genetic profile and the genetic profile of an unknown unrelated person. H2: the mixture is made up of genetic profiles of two unknown unrelated people LR= 2,61E13 (drop-out= 0.1, drop-in= 0.05, Theta= 0.01)</p>
MZPQXE	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: The evidence DNA profile is 1 billion times more likely if victim and an unknown individual are contributing rather than two unknown individuals.</p>
PWGC66	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: The mixed DNA profile are 9.3 quadrillion (9.3e15), 110 quadrillion (110e15) and 570 trillion (570e12) TIMES more likely; IF they originated from the source represented by Item 1 and one unknown individual RATHER THAN; IF they originated from two unknown unrelated individuals as calculated based on the [Location-identifying population databases].</p>
TJJEV3	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: The mixed DNA profile are 9.3 quadrillion (9.3e15), 110 quadrillion (110e15) and 570 trillion (570e12) TIMES more likely; IF they originated from the source represented by "Item 1" and one unknown individual RATHER THAN; IF they originated from two unknown unrelated individuals as calculated based on the [Location-identifying population databases].</p>
VMQKJ8	<p>Method(s): Combined Probability of Exclusion/Inclusion, Likelihood Ratio, Random Match Probability</p> <p>Stats Analysis: GeneMapper ID-X Version 1.6.: Contributor 1 (Major) (theta 0.01) profile frequency = 9.714E-21, RMP = 1 in 1.0294E20. Contributor 2 (Minor) (theta 0.01) profile frequency = 4.801E-19, RMP = 1 in 2.0829E18. CPI/CPE: CPI=1.2824E-10 = 1 in 7.7 Billion U.S. Caucasians; CPE = 99.9999% for U.S. Caucasian. LRMIX Studio Community Edition v. 2.1.5. LR: Hp= Mixture of victim and one unknown unrelated person, Hd= Mixture of two unknown unrelated persons, Theta=0.01, LR=5.69347E13.</p>
ZMXK86	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: The genetic profile obtained from Item 3 is interpreted as a mixture of DNA from two contributors. Item 1 (victim) cannot be excluded as a possible contributor to this mixture. Given this genetic profile, assuming two contributors, it is 220.8 trillion times more likely to observe this genetic profile if Item 1 (Victim) and one unknown individual are contributors than if 2 unknown individual are the contributors.</p>

Statistical Analysis for Item 4

TABLE 6

WebCode

Item 4 Methods & Results

8FRWWP **Method(s):** Likelihood Ratio

Stats Analysis: A mixed DNA profile (PowerPlex Fusion 5C) consisting of DNA from at least two contributors was obtained from the stain found on the glass fragments; item CTS-21-5881-4. The individual represented by the reference sample; item CTS-21-5881-1 (victim), is excluded as a contributor of the mixed DNA profile obtained from the stain found on the glass fragments; item CTS-21-5881-4. The individual represented by the reference sample; item CTS-21-5881-2 (suspect), cannot be excluded as a contributor of the mixed DNA profile obtained from the stain found on the glass fragments; item CTS-21-5881-4. The observed mixture profile is approximately 3.49×10^{18} times more likely to occur under the scenario that the DNA profile obtained from the stain found on the glass fragments, item CTS-21-5881-4, is a mixture of DNA from the suspect and an unknown individual, as opposed to the scenario that it originated from a mixture of DNA from two unrelated unknown individuals, in the African American population, 1.64×10^{14} in the Caucasian population, and 2.09×10^{16} in the Hispanic population.

8QVUF7 **Method(s):** Likelihood Ratio

Stats Analysis: This mixed DNA profile is approximately 475 quintillion (4.75×10^{20}) times more likely to be observed if the suspect (Item 2) and an unknown male are the contributors than if two random, unrelated African Americans are the contributors; approximately 5.91 quadrillion (5.91×10^{15}) times more likely than if two, random, unrelated Caucasians are the contributors; and approximately 24.0 quintillion (2.40×10^{19}) times more likely than if two random, unrelated Southwestern Hispanics are the contributors.

94XZ8W **Method(s):** Likelihood Ratio

Stats Analysis: Under the assumption that the SUSPECT (Item 2) and one unrelated person selected at random from the general population are contributors to the mixture developed from the STAIN ON THE GLASS FRAGMENTS (Item 4), the likelihood of observing this mixed source profile is $\geq 1,000,000$ times greater (actual LR available upon request) than if it is assumed that two unrelated persons selected at random from the general population are contributors to this mixed-source sample.

98XB4W **Method(s):** Combined Probability of Exclusion/Inclusion

Stats Analysis: The probability of randomly selecting an unrelated individual who would be included as a contributor to the DNA mixture profile developed from the glass fragments utilizing the GlobalFiler loci is 1 in greater than 7.2 billion (which is approximately the world population) in the Caucasian, African American, and Hispanic populations.

A3Z9EM **Method(s):** Likelihood Ratio

Stats Analysis: The DNA profile of Item 4 is at least 4069400×10^{17} times more likely if it came from Item 2 and an unknown unrelated person than it came from two unrelated members of the Caucasian population. Item 1 is excluded as a possible contributor to DNA profile of Item 4 (LR Total = 0)

AK2W7L **Method(s):** Likelihood Ratio

Stats Analysis: The mixed DNA profile are 4.4 quintillion (4.4×10^{18}), 430 quintillion (430×10^{18}) and 470 quadrillion (470×10^{15}) TIMES more likely; IF they originated from the source represented by Item 2 and one unknown individual RATHER THAN; IF they originated from two unknown unrelated individuals as calculated based on the [Location-identifying population databases].

B6HQ8R **Method(s):** [Participant did not report a method.]

Stats Analysis: Working from the pdf of the electropherogram it is not possible to perform a through evaluation of each locus. I am a forensic consultant that reviews DNA case files submitted to me as evidence. I review the analyst allele calls and evidence to reference sample comparisons so I can understand how the original analyst arrived at their opinions and conclusions. I accept that their population calculations are correct. NSD: No Size Data, INC: Inconclusive, N/A: Not Applicable

D42F8Q

TABLE 6

WebCode	Item 4 Methods & Results
	Method(s): Likelihood Ratio
EBB4GH	<p data-bbox="305 258 919 300">Method(s): Combined Probability of Exclusion/Inclusion</p> <p data-bbox="305 310 1458 443">Stats Analysis: The probability of selecting an unrelated individual at random having DNA typing results at all Fusion 6C loci consistent with any contributor to the Item 4 DNA mixture is approximately 1 in 2 quadrillion (2XE15) in the Caucasian population and 1 in 6 quintillion (6XE18) in the African American population.</p>
EUQDLP	<p data-bbox="305 453 919 495">Method(s): Combined Probability of Exclusion/Inclusion</p> <p data-bbox="305 506 1458 569">Stats Analysis: CPI= 5.1×10^{-14}, CPE= 99.999999999949%, No. of possible random contributors= 0</p>

TABLE 6

WebCode	Item 4 Methods & Results
FAD9BL	<p>Method(s): Combined Probability of Exclusion/Inclusion</p> <p>Stats Analysis: The DNA profile from item 4 is consistent with a mixture of three individuals. The Suspect cannot be excluded as a contributor to the major cluster. Stats are 1 in 394 billion for African Americans, 1 in 38.4 trillion for Caucasians and 1 in 538 trillion for Hispanics. Victim is excluded as a contributor to the major cluster. No conclusions can be made about the minor contributor.</p>
FB6ABG	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: The evidence is 110 sextillion times more likely if the suspect is a contributor to the DNA mixture than if he is not a contributor.</p>
K9Q2FE	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: The DNA profile obtained from the stain on the glass (Item 4) is of mixed origin consistent with having originated from two male individuals and is suitable for comparison. There is very strong support for the inclusion of the suspect (Item 2) in this mixture. Assuming two contributors, it is 92 octillion times more likely to observe this DNA profile if it originated from the suspect and one unknown contributor rather than two unrelated contributors selected at random from the U.S. population. The victim (Item 1) is excluded as a contributor.</p>
KEU67C	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: H1: the mixture is made up of the suspect's (Item 2) genetic profile and the genetic profile of two unknown unrelated persons. H2: the mixture is made up of genetic profiles of three unknown unrelated people LR= 6,27E12 (drop-out= 0.1, drop-in= 0.05, Theta= 0.01)</p>
MZPQXE	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: The evidence profile is 1 billion times more likely if suspect and an unknown individual are contributing rather than two unknown individuals.</p>
PWGC66	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: The mixed DNA profile are 4.4 quintillion (4.4e18), 430 quintillion (430e18) and 460 quadrillion (460e15) TIMES more likely; IF they originated from the source represented by Item 2 and one unknown individual RATHER THAN; IF they originated from two unknown unrelated individuals as calculated based on the [Location-identifying population databases].</p>
TJJEV3	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: The mixed DNA profile are 4.4 quintillion (4.4e18), 430 quintillion (430e18) and 460 quadrillion (460e15) TIMES more likely; IF they originated from the source represented by "Item 2" and one unknown individual RATHER THAN; IF they originated from two unknown unrelated individuals as calculated based on the [Location-identifying population databases].</p>
VMQKJ8	<p>Method(s): Combined Probability of Exclusion/Inclusion, Likelihood Ratio</p> <p>Stats Analysis: GeneMapper ID-X Version 1.6.: CPI/CPE CPI=2.3857E-13 = 1 in 4.1 Trillion U.S. Caucasians; CPE = 99.9999% for U.S. Caucasian. LRMIX Studio Community Edition v. 2.1.5. LR: Hp= Mixture of suspect and one unknown unrelated person, Hd= Mixture of two unknown unrelated persons, Theta=0.01 LR=2.83738E14.</p>
ZMXK86	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: The genetic profile obtained from Item 4 is interpreted as a mixture of DNA from two contributors. Item 2 (suspect) cannot be excluded as a possible contributor to this mixture. Given this genetic profile, assuming two contributors, it is 372.4 trillion times more likely to observe this genetic profile if Item 2 (suspect) and one unknown individual are contributors than if 2 unknown individual are the contributors.</p>

Databases Used

TABLE 7

WebCode	Databases Used
8QVUF7	Item 3: PopStats Item 4: PopStats
94XZ8W	Item 3: Revised-NIST-1036-Allele Frequencies, ABI ID Database + Promega PP Fusion Item 4: Revised-NIST-1036-Allele Frequencies, ABI ID Database + Promega PP Fusion
98XB4W	Item 3: FBI Expanded Item 4: FBI Expanded
A3Z9EM	Item 3: Caucasian population (FBI) Item 4: Caucasian population (FBI)
AK2W7L	Item 3: [Location-identifying population databases] Item 4: [Location-identifying population databases]
D42F8Q	Item 3: [Country-specific] Population Database Item 4: [Country-specific] Population Database
EBB4GH	Item 3: \\10.64.13.226\CODIS\Popstats\POPDATA\FBI\Expanded FBI STR 2015\Expanded FBI STR 2015 Item 4: \\10.64.13.226\CODIS\Popstats\POPDATA\FBI\Expanded FBI STR 2015\Expanded FBI STR 2015
EUQDLP	Item 3: Allele frequencies obtained from "https://strbase.nist.gov/NISTpop.htm" NIST 1036 Revised U.S. Population Dataset (July 2017, Excel file of 1036 revised Allele Frequencies) Item 4: Allele frequencies obtained from "https://strbase.nist.gov/NISTpop.htm" NIST 1036 Revised U.S. Population Dataset (July 2017, Excel file of 1036 revised Allele Frequencies)
FAD9BL	Item 3: Population Data: NIST 1036 population data. Forensic Science International: Genetics (2017). Item 4: Population Data: NIST 1036 population data. Forensic Science International: Genetics (2017).
FB6ABG	Item 3: FBI extended Item 4: FBI extended
K9Q2FE	Item 3: FBI Extended CAU, AFAM, SWH Item 4: FBI Extended CAU, AFAM, SWH
KEU67C	Item 3: Personal databases Item 4: Personal databases
MZPQXE	Item 3: NIST Item 4: NIST
PWGC66	Item 3: [Location-identifying population databases] Item 4: [Location-identifying population databases]
TJJEV3	Item 3: [Location-identifying population databases] Item 4: [Location-identifying population databases]
VMQKJ8	Item 3: Applied Biosystems GlobalFiler U.S. Caucasian population Item 4: Applied Biosystems GlobalFiler U.S. Caucasian population
ZMXK86	Item 3: NIST Item 4: NIST

Amplification Kit Survey

Please list all PCR amplification kits (Autosomal and YSTR) utilized as well as any future kits yet to be implemented in your laboratory.

TABLE 8

WebCode	Amplification Kit
4JKR62	Globalfiler, PowerPlex Fusion 6C, Investigator 24plex QS, PowerPlex Fusion 5C, Yfiler Plus
7CEWYY	Globalfiler, PowerPlex Fusion 6C, Investigator 24plex QS, PowerPlex Fusion 5C, Yfiler Plus
8CUDUR	Globalfiler, PowerPlex Fusion 6C, Investigator 24plex QS, PowerPlex Fusion 5C, Yfiler Plus
8QVUF7	Investigator Qiagen 24-plex QS
94XZ8W	GlobalFiler, PowerPlex Fusion 5C, PowerPlex Fusion 6C, Investigator 24 Plex, Yfiler Plus, PowerPlex Y23
AK2W7L	(1) Applied Biosystems™ AmpFLSTR™ Identifiler™ Plus PCR Amplification Kit, (2) Applied Biosystems™ AmpFLSTR™ Identifiler™ Direct PCR Amplification Kit, (3) Applied Biosystems™ AmpFLSTR™ Yfiler™ PCR Amplification Kit, (4) Applied Biosystems™ AmpFLSTR™ Minifiler™ PCR Amplification Kit, (5) Applied Biosystems™ GlobalFiler™ PCR Amplification Kit, and (6) Applied Biosystems™ GlobalFiler™ Express PCR Amplification Kit.
EUQDLP	GlobalFiler As of May 2021. This Laboratory does not utilise any YSTR kits.
FB6ABG	Globalfiler, Yfiler
K9Q2FE	Currently using F6C and Y23. There are no plans to add any kits in the near future.
KV284K	Globalfiler, PowerPlex Fusion 6C, Investigator 24 Plex QS, PowerPlex Fusion 5C, YFiler Plus
PWGC66	1. Applied Biosystems Globalfiler PCR Amplification Kit. 2. Applied Biosystems Globalfiler Express PCR Amplification Kit. 3. Applied Biosystems AmpFLSTR Yfiler PCR Amplification Kit. 4. Applied Biosystems AmpFLSTR Minifiler PCR Amplification Kit.
TJJEV3	1. Applied Biosystems Globalfiler PCR Amplification Kit. 2. Applied Biosystems Globalfiler Express PCR Amplification Kit. 3. Applied Biosystems AmpFISTR Yfiler PCR Amplification Kit. 4. Applied Biosystems AmpFISTR Minifiler PCR Amplification Kit.

Additional Comments

TABLE 9

WebCode	Additional Comments
4JKR62	() = minor allele
7CEWYY	() = Minor Allele
8CUDUR	() = Minor Allele
8QVUF7	For Item 3 - Major not determined at TH01, D3S1358, D10S1248, D2S441 or D16S539.
AK2W7L	The statistical evaluations were performed on the DNA.VIEW Statistical Software version 37.42. Note: i) N/A denotes Not Applicable, and ii) NM denotes Non-Male allele.
EUQDLP	The DNA profile obtained from Evidence Item 3 was found to be a mixed DNA profile of at least two contributors. The DNA profile obtained from the Reference Item 1 cannot be excluded as contributor of the mixed DNA profile. The proportion of the U.S. Caucasian population whose individual DNA profiles cannot be excluded as contributors of the mixed DNA profile is 6.5×10^{-15} . The DNA profile obtained from Evidence Item 4 was found to be a mixed DNA profile of at least three contributors. The DNA profile obtained from the Reference Item 2 cannot be excluded as contributor of the mixed DNA profile. The proportion of the U.S. Caucasian population whose individual DNA profiles cannot be excluded as contributors of the mixed DNA profile is 5.1×10^{-14} .
FAD9BL	The suspect known has additional alleles that were interpreted as baseline.
FB6ABG	We use Yfiler NOT Yfiler Plus so I was unable to perform a Y STR analysis. The number of ladders seems excessive. Each ladder had an injection time but no sample did. I was unable to determine which ladders were actually pertinent.
K9Q2FE	Item 2, suspect reference, shows enhanced stutter at D18S51 and alleles 23 and 25 are interpreted as stutter. Item 3, scissors, has an allele 9.2 at D19S433 which is interpreted as drop-in.
KV284K	() = Minor Allele
L226RF	The YSTR result for item 4 is an unresolvable mixture, which is only suitable for exclusionary purposes and was not used in determining the conclusion with respect to item 2. I perform reviews of STR and YSTR data analyses and conclusions; I do not perform laboratory work or calculate statistics at this time.
MZPQXE	The unknown male from item 3 is also included on item 4.
PWGC66	The statistical evaluations were performed on the DNA VIEW Statistical Software version 37.37. NM: non-male allele.
TJJEV3	The statistical evaluations were performed on the DNAVIEW Statistical Software version 37.37. NM: Non-male allele.
VMQKJ8	Item 3, conclusion about Item 1: The forensic findings provide extremely strong support for the proposition that Item 1 (victim) and one unknown unrelated person are possible contributors to the DNA obtained from Item 3, rather than the alternative, that two unknown unrelated persons are possible contributors to the DNA obtained from Item 3. Item 4, conclusion about Item 2: The forensic findings provide extremely strong support for the proposition that Item 2 (suspect) and one unknown unrelated person are possible contributors to the DNA obtained from Item 4, rather than the alternative, that two unknown unrelated persons are possible contributors to the DNA obtained from Item 4.

-End of Report-
(Appendix may follow)

Test No. 21-5881: DNA Interpretation

DATA MUST BE SUBMITTED BY **June 7, 2021, 11:59 p.m.** TO BE INCLUDED IN THE REPORT

Participant Code: U1234A

WebCode: LNYGVE

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:

Two male suspects were reportedly involved in the robbery of a clothing store. The front window of the store was shattered as the two men entered the store. The store's owner, the female victim, was physically assaulted during the incident by the two robbers. The female victim attempted to defend herself with a pair of scissors, inflicting lacerations on her attackers. After the two males robbed the register and exited the store, the female victim called 911 and provided a description to the police officers upon their arrival. A male suspect matching the description of one of the robbers was identified and apprehended. The scissors used by the female victim in self defense contained reddish brown stains and were collected as evidence. Glass fragments from the shattered window also contained reddish brown stains and were collected as evidence. Known samples from the female victim (Item 1) and the male suspect (Item 2) are provided. The reddish brown stains recovered from the scissors and from the glass fragments were confirmed as blood by the Serology unit and subsequently submitted for DNA analysis (Item 3 and Item 4, respectively). The DNA unit has completely consumed all evidence and has provided you with the DNA profiles obtained from the items. You are requested to evaluate the DNA profiles using your laboratory-specific guidelines and report your results.

Items Submitted (Sample Pack INT1):

Item 1: DNA profile from reference sample (Female Victim - Caucasian)

Item 2: DNA profile from reference sample (Male Suspect - Caucasian)

Item 3: DNA profile found from the stain on the scissors

Item 4: DNA profile found from the stain on the glass fragments

To verify a complete and accurate download, the hash value for the downloaded .ZIP file is as follows:

21-5881 Data for Participants.zip MD5 hash value: 9131beadc82756a31d2a46d5077f7d90

21-5881 Data for Participants.zip SHA1 hash value: cfc347ff65780097bed850a88da91492a35f3ef6

Part I: DNA ANALYSIS INSTRUCTIONS

- Use your laboratory's Interpretation guidelines for evaluation of this test.
- Please report Laboratory Specific Interpretation Guidelines below per amplification kit.
- If interpretation guidelines are not reported, the consensus information will be utilized in the review of results.

Analytical Threshold:

Peak Height Ratio (%):

Stochastic Threshold (Peak Amplitude):

If you do not have Interpretation guidelines, please use the following guidelines and report these values above:

For STR Analysis: Analytical Threshold: 75 rfu, Peak Height Ratio: 60%, Stochastic Threshold (Peak Amplitude): 100 rfu

For YSTR Analysis: Analytical Threshold: 75 rfu, Peak Height Ratio: 50%, Stochastic Threshold (Peak Amplitude): 75 rfu

- Report the allelic results for each Item in the appropriate response boxes.
- If major and minor contributor(s) can be distinguished and your laboratory normally reports this distinction, report the results of the major profile and the minor profile in the appropriately labeled boxes; otherwise, list the alleles in numerical order in the remaining row of boxes labeled with the Item number.
- Please Note: Samples were completely consumed during extraction.

Part I: DNA ANALYSIS (continued)

Item 3 DNA Analysis Questions

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

2) Choose the conclusion statement that best describes the results of the analysis for Item 3 based on comparisons with the Known Items (If the wording below differs from the normal wording of your conclusions, adapt these conclusions as best you can and use your preferred wording in the Additional Comments section.):

Item 1 Conclusion

- Item 1 (victim) is included (cannot be excluded) as a possible contributor to the DNA obtained from Item 3.
- Item 1 (victim) is excluded as a possible contributor to the DNA obtained from Item 3.
- The DNA typing results for Item 3 in comparison with Item 1 are inconclusive/uninterpretable.

Item 2 Conclusion

- Item 2 (suspect) is included (cannot be excluded) as a possible contributor to the DNA obtained from Item 3.
- Item 2 (suspect) is excluded as a possible contributor to the DNA obtained from Item 3.
- The DNA typing results for Item 3 in comparison with Item 2 are inconclusive/uninterpretable.

3) 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:

Combined Probability of Exclusion/Inclusions (CPE/CPI)

Likelihood Ratio (LR)

Random Match Probability (RMP)

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.

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

Part I: DNA ANALYSIS (continued)

Item 4 DNA Analysis Questions

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

2) Choose the conclusion statement that best describes the results of the analysis for Item 4 based on comparisons with the Known Items (If the wording below differs from the normal wording of your conclusions, adapt these conclusions as best you can and use your preferred wording in the Additional Comments section.):

Item 1 Conclusion

- Item 1 (victim) is included (cannot be excluded) as a possible contributor to the DNA obtained from Item 4.
- Item 1 (victim) is excluded as a possible contributor to the DNA obtained from Item 4.
- The DNA typing results for Item 4 in comparison with Item 1 are inconclusive/uninterpretable.

Item 2 Conclusion

- Item 2 (suspect) is included (cannot be excluded) as a possible contributor to the DNA obtained from Item 4.
- Item 2 (suspect) is excluded as a possible contributor to the DNA obtained from Item 4.
- The DNA typing results for Item 4 in comparison with Item 2 are inconclusive/uninterpretable.

3) 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:

Combined Probability of Exclusion/Inclusions (CPE/CPI)

Likelihood Ratio (LR)

Random Match Probability (RMP)

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.

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

Part II: ADDITIONAL COMMENTS

Comments regarding any part of this Test.

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.

Part III: AMPLIFICATION KIT SURVEY (optional)

To accommodate your laboratory's future needs, please list all PCR amplification kits (Autosomal and YSTR) utilized as well as any future kits to be implemented in your laboratory.

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)