



DNA Interpretation Test No. 18-589 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 36 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 and Item 2 were each created using blood collected from two separate male donors. The Item 3 mixture was created by combining three parts of blood from the Item 1 male donor and one part of blood from the Item 2 male donor. The Item 4 mixture was created by combining six parts of blood from the Item 1 male donor, three parts of blood from the Item 2 male donor, and one part of blood from a 3rd party female donor.

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.

Amelogenin and STR Results						
<i>Results compiled by predistribution laboratories and a consensus of participants.</i>						
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	14,15	21,21	10,14	14,16	12,12	11,12
	13,15	13,15	20,22	12,13	11,11	13,15
	11,14	28,32.2	15,17	X,Y	8,10	22,23
	2.2,10	7,8	17,19	7,8	9,9	16,17
	11	21	15	2		
2	18.3,19.3	17,20	10,15	14,17	11,12	7,13
	10,12	15,15	23,23	8,12	11,13	15,18
	14,15	30,31.2	11,15	X,Y	10,11	24,24
	14,15	12,14	20,20	7,9.3	8,11	17,17
	11	17	17	2		
3	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14	17,19,20	7,8,9.3	8,9,11	16,17
	11	17,21	15,17	2		
4	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
	11,14,14.2,15	28,30,31,31.2,32.2	11,15,17†	X,Y	8,10,11,12	21,22,23,24
	2.2,10,14,15	5,7,8,10,12,14	17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11	17,21†	15,17	2		

† Additional alleles may be present depending on laboratory thresholds.

YSTR Results

Results compiled from predistribution laboratories and a consensus of participants.

Item	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
	DYS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS481	DYS533
	DYS549	DYS570	DYS576	DYS635	DYS643	Y GATA H4		
1	15	16,18	13	31	21	11	11	13
	14	11	11	20	15	16	27	11
	12	21	15	21	14	12		
2	14	11,14	13	29	23	11	13	13
	15	12	12	19	16	18	23	12
	13	17	17	23	10	11		
3	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
	14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,13	17,21	15,17	21,23	10,14	11,12		
4	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
	14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,13	17,21	15,17	21,23	10,14	11,12		

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 FSA, 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™, PowerPlex® Y23.

Item 1 was the male victim's reference sample. Item 2 was the male suspect's reference sample. Item 3 was a mixture of samples from two individuals, the male victim and male suspect (3:1 ratio respectively). Item 4 was a mixture of samples from three individuals including the male victim, the male suspect, and a female contributor for whom no reference sample was provided (6:3:1 ratio respectively).

STR Data

Thirty six participants evaluated the provided STR data. Of these, 13 reported examining the GlobalFiler™ data, seven reported PowerPlex® Fusion 6C, six reported PowerPlex® Fusion 5C and four reported using Investigator® 24plex. Two participants reported using STR data from all four kits and three participants reported using a combination of 2-3 kits. One participant did not report which amplification kit they used for their evaluation. All participants that reported data were concordant for reference Item 1 except for one participant that reported "22,10" at Penta D whereas the consensus was "2,2,10". All participants that reported data were concordant for reference Item 2.

For Item 3, only four participants attempted the deconvolution of this mixture. Therefore, no consensus was met for major or minor profiles. A consensus was achieved for Item 3, where participants reported all components of the mixture corresponding with their interpretation guidelines and/or were consistent with the consensus.

For Item 4, only one participant attempted the deconvolution of this mixture. Allelic results per loci were more variable for this item, mostly due to variations in analytical thresholds and what amplification kit was utilized for interpretation. When using their indicated interpretation guidelines and amplification kit data, one participant reported an inconsistent result in comparison to the consensus data at D1S1656.

YSTR Data

Twenty two participants reported YSTR results. Nine participants reported examining the YFiler™ data, eight reported examining the Powerplex® Y23 data, and four participants reported examining both YSTR amplification data sets. One participant did not report which amplification kit they used for their evaluation.

For known Item 1, all participants reported allelic responses that were concordant with the consensus.

For known Item 2, all participants reported allelic responses that were concordant with the consensus with the exception of one participant at a single locus. This participant reported "(8),11" for DYS391 whereas the consensus was "11".

For questioned Item 3, most participants reported allelic responses that were concordant with the consensus with the exception of three loci where there was some variation. At DYS389-II, one participant reported "29,30,31" where the consensus was "29,31". At DYS392, three participants reported "11,12,13" where the consensus was "11,13". At DYS458, two participants reported "16,17,18" where the consensus was "16,18". These variations were all due to differences in interpretation guidelines and the amplification kit used between participants.

For questioned Item 4, all respondents reported results that were concordant with the consensus except for one participant. At DYS389-II, DYS392, and DYS438 this participant reported an additional allele.

Conclusions

For Item 3, all participants reported two (or at least two) contributors. When comparing the Item 3 mixture profile with the two reference profiles, Item 1 (victim) and Item 2 (suspect), all 36 participants reported that both items were included as components of the mixture.

For Item 4, 31 participants reported that three (or at least three) individuals contributed to the mixture. Four participants reported that at least two individuals contributed to the mixture and one reported that three participants contributed according to GlobalFiler data and two participants contributed according to Yfiler data. Twenty four participants included both Item 1 (victim) and Item 2 (suspect) as components of the mixture and 12 reported "Inconclusive/Uninterpretable".

Interpretation Guidelines

TABLE 1

WebCode	Analytical Threshold (rfu)	Peak Height Ratio (%)	Stochastic Threshold (rfu)
2B9MM2	120 rfu	60% PHR above 750 rfu and 35% PHR below 750 rfu	400 rfu
2F3JCR	Empirical color-specific run-specific. For these runs it made no difference.		
2NVUK3	120	≥750RFU = 60%; <750RFU = 35%	400
3KFLXN	190 rfu	50%	1160 rfu
67PQBM	40RFU (PPF5C, PPF6C, GF, Y23, YF)	NA (Probabilistic Genotyping)	NA (Probabilistic Genotyping), NA for Y-STRs
68JETH	75, 50	70%, 60%	200, 150
6JUR9X	150 RFU	70%	600 RFU
8M4PTP	[Participant did not provide interpretation guidelines]		
9ADA6G	75 rfu	60%	100 rfu
9W7NGG	50 RFU	>70%	70 RFU
9YB7R9	75	60	230
AUEP3J	75 rfu	60%	100 rfu
B9WY6E	190	50	1160
BLYQLD	75 rfu	60%	100 rfu
CYNMMB	75 rfu	60%	100 rfu
DW9TX4	75 rfu Fusion and PPY	60% Fusion and 50% PPY	100 Fusion and 75 PPY
E8TBDE	75 rfu	60%	100 rfu
EKFHBF	50_rfu	60%	300_rfu_PP_Fusion_5C,200_rfu_PP23
JX4EE9	75 rfu	60%	400 rfu
NKHVKE	120 rfu	60% PHR above 750 rfu and 35% PHR below 750 rfu	400 rfu
Q2YDT6	GlobalFiler 75rfus, PPY23 50rfus	GlobalFiler 60%, PPY23 none	GlobalFiler 100rfus, PPY23 200rfus @ DYS385
QDUN2C	120	≥750rfu=60%;<750=35%	400
R3UJM6	N/A	N/A	N/A
RNMG2P	75	60	230
TD8ZU2	STR_B:40, G:69, Y:39, R:64, P:58. YSTR_B:57, G:99, Y:140, R:171	60%	132 RFU
TN7VTW	[Participant did not provide interpretation guidelines]		

TABLE 1

WebCode	Analytical Threshold (rfu)	Peak Height Ratio (%)	Stochastic Threshold (rfu)
UU938Z	Used CTS analytical thresholds for GlobalFiler and yFiler	Used CTS peak height ratios for GlobalFiler and yFiler	Used CTS stochastic thresholds for GlobalFiler and yFiler
UZEXQZ	[Participant did not provide interpretation guidelines]		
WVXCXV	GlobalFiler 75 rfu, PPY 23 50 RFUs	GlobalFiler 60%, PPY23 None	Globalfiler 100 RFUs, PPY23 200 RFUs for DYS385 only
WWRZDU	75	60	100
WYU2C6	70RFU	STRmix is used for analysis.	600RFU for manual interp. STRmix is used for analysis.
XVDTQQ	75 rfu	60%	100 rfu
Z7HQM	190 rfu	50%	1160 rfu
Z7LFRM	75 rfu	STR 60%, YSTR 50%	STR 100 rfu, YSTR 75 rfu
Z9Q36R	175	60	650
ZNKRZN	190 rfu	50	1160 rfu

STR & Amelogenin Results

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

2B9MM2	Investigator® 24plex (HID Format)					
	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
			17,19	7,8	9	16,17
	11					
2F3JCR	GlobalFiler™ (HID Format)					
	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
			17,19	7,8	9	16,17
	11			2		
2NVUK3	Investigator® 24plex (HID Format)					
	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
			17,19	7,8	9	16,17
	11					
3KFLXN	PowerPlex® Fusion 5C (FSA Format)					
	14,15	21,21	10,14	14,16	12,12	11,12
	13,15	13,15	20,22	12,13	11,11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
	2,2,10	7,8	Not tested	7,8	9,9	16,17
	11	Not tested	Not tested	Not tested		
67PQBM	GlobalFiler™, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (FSA Format), (PDF Format), (HID Format)					
	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
	2,2,10	7,8	17,19	7,8	9	16,17
	11	21	15	2		
68JETH	PowerPlex® Fusion 6C (HID Format)					
	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
	2,2,10	7,8	17,19	7,8	9	16,17
	11	21	15			

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

6JUR9X	GlobalFiler™					
	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
			17,19	7,8	9	16,17
	11			2		
8M4PTP	GlobalFiler™, PowerPlex® Fusion 6C (PDF Format)					
	14,15	21,21	10,14	14,16	12,12	11,12
	13,15	13,15	20,22	12,13	11,11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
	2.2,10	7,8	17,19	7,8	9,9	16,17
	11	21	15	2		
9ADA6G	GlobalFiler™ (PDF Format)					
	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
	-	-	17,19	7,8	9	16,17
	11	-	-	2		
9W7NGG	(PDF Format)					
	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
	2.2,10	7,8	17,19	7,8	9	16,17
	11	21	15			
9YB7R9	PowerPlex® Fusion 6C (PDF Format)					
	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
	2.2,10	7,8	17,19	7,8	9	16,17
	11	21	15			
AUEP3J	GlobalFiler™ (PDF Format)					
	14,15	21,21	10,14	14,16	12,12	11,12
	13,15	13,15	20,22	12,13	11,11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
			17,19	7,8	9,9	16,17
	11			2		
B9WY6E	PowerPlex® Fusion 5C (FSA Format)					
	14,15	21,21	10,14	14,16	12,12	11,12
	13,15	13,15	20,22	12,13	11,11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
	2.2,10	7,8		7,8	9,9	16,17
	11					

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

BLYQLD GlobalFiler™ (PDF Format)

	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
	-	-	17,19	7,8	9	16,17
	11	-	-	2		

CYNMMB PowerPlex® Fusion 6C (PDF Format)

	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
	2.2,10	7,8	17,19	7,8	9	16,17
	11	21	15			

DW9TX4 PowerPlex® Fusion 6C (PDF Format)

	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
	2.2,10	7,8	17,19	7,8	9	16,17
	11	21	15			

E8TBDE GlobalFiler™ (PDF Format)

	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
			17,19	7,8	9	16,17
	11			2		

EKFHBF PowerPlex® Fusion 5C (PDF Format)

	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
	2.2,10	7,8		7,8	9	16,17
	11					

JX4EE9 GlobalFiler™ (PDF Format)

	14,15	21,21	10,14	14,16	12,12	11,12
	13,15	13,15	20,22	12,13	11,11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
			17,19	7,8	9,9	16,17
	11			2		

NKHVKE Investigator® 24plex (HID Format)

	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
			17,19	7,8	9	16,17
	11					

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

Q2YDT6 GlobalFiler™ (PDF Format)

	14,15	21,21	10,14	14,16	12,12	11,12
	13,15	13,15	20,22	12,13	11,11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
			17,19	7,8	9,9	16,17
	11			2		

QDUN2C Investigator® 24plex (HID Format)

	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
			17,19	7,8	9	16,17
	11					

R3UJM6 GlobalFiler™ (FSA Format)

	14,15	21,21	10,14	14,16	12,12	11,12
	13,15	13,15	20,22	12,13	11,11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
			17,19	7,8	9,9	16,17
	11			2		

RNMG2P PowerPlex® Fusion 6C (PDF Format)

	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
	2.2,10	7,8	17,19	7,8	9	16,17
	11	21	15			

TD8ZU2 PowerPlex® Fusion 6C

	14,15	21,21	10,14	14,16	12,12	11,12
	13,15	13,15	20,22	12,13	11,11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
	2.2,10	7,8	17,19	7,8	9,9	16,17
	11	21	15			

TN7VTW GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (FSA Format), (PDF Format)

	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
	2.2,10	7,8	17,19	7,8	9	16,17
	11	21	15			

UU938Z GlobalFiler™ (PDF Format)

	14,15	21,21	10,14	14,16	12,12	11,12
	13,15	13,15	20,22	12,13	11,11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
	N/A	N/A	17,19	7,8	9,9	16,17
	11	N/A	N/A	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

UZEXQZ GlobalFiler™, PowerPlex® Fusion 6C (PDF Format)

	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
	2.2,10	7,8	17,19	7,8	9	16,17
	11	21	15	2		

WVXCVX GlobalFiler™ (PDF Format)

	14,15	21,21	10,14	14,16	12,12	11,12
	13,15	13,15	20,22	12,13	11,11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
			17,19	7,8	9,9	16,17
	11			2		

WWRZDU GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (PDF Format)

	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
	2.2,10	7,8	17,19	7,8	9	16,17
	11	21	15	2		

WYU2C6 PowerPlex® Fusion 6C (HID Format)

	14,15	21,21	10,14	14,16	12,12	11,12
	13,15	13,15	20,22	12,13	11,11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
	2.2,10	7,8	17,19	7,8	9,9	16,17
	11	21	15			

XVDTQQ GlobalFiler™ (PDF Format)

	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
			17,19	7,8	9	16,17
	11			2		

Z7HMQQ PowerPlex® Fusion 5C (FSA Format)

	14,15	21,21	10,14	14,16	12,12	11,12
	13,15	13,15	20,22	12,13	11,11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
	22,10	7,8	NT	7,8	9,9	16,17
	11	NT	NT	NT		

Z7LFRM PowerPlex® Fusion 5C (PDF Format)

	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
	2.2,10	7,8		7,8	9	16,17
	11					

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

Z9Q36R	GlobalFiler™ (PDF Format)					
	14,15	21,21	10,14	14,16	12,12	11,12
	13,15	13,15	20,22	12,13	11,11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
			17,19	7,8	9,9	16,17
	11			2		

ZNKRZN	PowerPlex® Fusion 5C (FSA Format)					
	14,15	21,21	10,14	14,16	12,12	11,12
	13,15	13,15	20,22	12,13	11,11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
	2.2,10	7,8		7,8	9,9	16,17
	11					

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

2B9MM2 Investigator® 24plex (HID Format)

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24
			20	7,9.3	8,11	17
	11					

2F3JCR GlobalFiler™ (HID Format)

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24
			20	7,9.3	8,11	17
	11			2		

2NVUK3 Investigator® 24plex (HID Format)

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24
			20	7,9.3	8,11	17
	11					

3KFLXN PowerPlex® Fusion 5C (FSA Format)

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15,15	23,23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24,24
	14,15	12,14	Not tested	7,9.3	8,11	17,17
	11	Not tested	Not tested	Not tested		

67PQBM GlobalFiler™, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (FSA Format), (PDF Format), (HID Format)

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24
	14,15	12,14	20	7,9.3	8,11	17
	11	17	17	2		

68JETH PowerPlex® Fusion 6C (HID Format)

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24
	14,15	12,14	20	7,9.3	8,11	17
	11	17	17			

6JUR9X GlobalFiler™

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24
			20	7,9.3	8,11	17
	11			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

8M4PTP GlobalFiler™, PowerPlex® Fusion 6C (PDF Format)

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15,15	23,23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24,24
	14,15	12,14	20,20	7,9.3	8,11	17,17
	11	17	17	2		

9ADA6G GlobalFiler™ (PDF Format)

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24
	-	-	20	7,9.3	8,11	17
	11	-	-	2		

9W7NGG (PDF Format)

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24
	14,15	12,14	20	7,9.3	8,11	17
	11	17	17			

9YB7R9 PowerPlex® Fusion 6C (PDF Format)

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24
	14,15	12,14	20	7,9.3	8,11	17
	11	17	17			

AUEP3J GlobalFiler™ (PDF Format)

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15,15	23,23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24,24
			20,20	7,9.3	8,11	17,17
	11			2		

B9WY6E PowerPlex® Fusion 5C (FSA Format)

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15,15	23,23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24,24
	14,15	12,14		7,9.3	8,11	17,17
	11					

BLYQLD GlobalFiler™ (PDF Format)

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24
	-	-	20	7,9.3	8,11	17
	11	-	-	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

CYNMMB PowerPlex® Fusion 6C (PDF Format)

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24
	14,15	12,14	20	7,9.3	8,11	17
	11	17	17			

DW9TX4 PowerPlex® Fusion 6C (PDF Format)

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24
	14,15	12,14	20	7,9.3	8,11	17
	11	17	17			

E8TBDE GlobalFiler™ (PDF Format)

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24
			20	7,9.3	8,11	17
	11			2		

EKHFHF PowerPlex® Fusion 5C (PDF Format)

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24
	14,15	12,14		7,9.3	8,11	17
	11					

JX4EE9 GlobalFiler™ (PDF Format)

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15,15	23,23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24,24
			20,20	7,9.3	8,11	17,17
	11			2		

NKHVKE Investigator® 24plex (HID Format)

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24
			20	7,9.3	8,11	17
	11					

Q2YDT6 GlobalFiler™ (PDF Format)

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15,15	23,23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24,24
			20,20	7,9.3	8,11	17,17
	11			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

QDUN2C Investigator® 24plex (HID Format)

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24
			20	7,9.3	8,11	17
	11					

R3UJM6 GlobalFiler™ (FSA Format)

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15,15	23,23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24,24
			20,20	7,9.3	8,11	17,17
	11			2		

RNMG2P PowerPlex® Fusion 6C (PDF Format)

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24
	14,15	12,14	20	7,9.3	8,11	17
	11	17	17			

TD8ZU2 PowerPlex® Fusion 6C

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15,15	23,23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24,24
	14,15	12,14	20,20	7,9.3	8,11	17,17
	11	17	17			

TN7VTW GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (FSA Format), (PDF Format)

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24
	14,15	12,14	20	7,9.3	8,11	17
	11	17	17			

UU938Z GlobalFiler™ (PDF Format)

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15,15	23,23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24,24
	N/A	N/A	20,20	7,9.3	8,11	17,17
	11	N/A	N/A	2		

UZEXQZ GlobalFiler™, PowerPlex® Fusion 6C (PDF Format)

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24
	14,15	12,14	20	7,9.3	8,11	17
	11	17	17	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 2 - STR Results

WVXCXV GlobalFiler™ (PDF Format)

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15,15	23,23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24,24
			20,20	7,9.3	8,11	17,17
	11			2		

WWRZDU GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (PDF Format)

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24
	14,15	12,14	20	7,9.3	8,11	17
	11	17	17	2		

WYU2C6 PowerPlex® Fusion 6C (HID Format)

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15,15	23,23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24,24
	14,15	12,14	20,20	7,9.3	8,11	17,17
	11	17	17			

XVDTQQ GlobalFiler™ (PDF Format)

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24
			20	7,9.3	8,11	17
	11			2		

Z7HMQQ PowerPlex® Fusion 5C (FSA Format)

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15,15	23,23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24,24
	14,15	12,14	NT	7,9.3	8,11	17,17
	11	NT	NT	NT		

Z7LFRM PowerPlex® Fusion 5C (PDF Format)

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24
	14,15	12,14		7,9.3	8,11	17
	11					

Z9Q36R GlobalFiler™ (PDF Format)

	18,3,19,3	17,20	10,15	14,17	11,12	7,13
	10,12	15,15	23,23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24,24
			20,20	7,9.3	8,11	17,17
	11			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 2 - STR Results

ZNKRZN	PowerPlex® Fusion 5C (FSA Format)					
	18.3,19.3	17,20	10,15	14,17	11,12	7,13
	10,12	15,15	23,23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24,24
	14,15	12,14		7,9.3	8,11	17,17
	11					

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

2B9MM2 Investigator® 24plex (HID Format)

	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
			17,19,20	7,8,9.3	8,9,11	16,17
	11					

2F3JCR GlobalFiler™ (HID Format)

	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
			17,19,20	7,8,9.3	8,9,11	16,17
	11			2		

2NVUK3 Investigator® 24plex (HID Format)

	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
			17,19,20	7,8,9.3	8,9,11	16,17
	11					

3KFLXN PowerPlex® Fusion 5C (FSA Format)

	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14	Not tested	7,8,9.3	8,9,11	16,17
	11	Not tested	Not tested	Not tested		
	18.3,19.3	17,20	10,15	14,17	11,12	7,13
	10,12	15,15	23,23	8,12	11,13	15,18
3major	14,15	30,31.2	11,15	X,Y	10,11	24,24
	14,15	12,14		7,9.3	8,11	17,17
	11					
	14,15	21,21	14,inconclusive	16,inconclusive	12,inconclusiv	11,12
	13,15	13,inconclusive	20,22	13,inconclusive	11,11	13,inconclusive
3minor	11,14	28,32.2	17,inconclusive	X,Y	8,inconclusive	22,23
	2.2,10	7,8		8,inconclusive	9,inconclusive	16,inconclusive
	11					

67PQBM GlobalFiler™, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (FSA Format), (PDF Format), (HID Format)

	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14	17,19,20	7,8,9.3	8,9,11	16,17
	11	17,21	15,17	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

68JETH PowerPlex® Fusion 6C (HID Format)

	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14	17,19,20	7,8,9.3	8,9,11	16,17
	11	17,21	15,17			

6JUR9X GlobalFiler™

	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
			17,19,20	7,8,9.3	8,9,11	16,17
	11			2		

8M4PTP GlobalFiler™, PowerPlex® Fusion 6C (PDF Format)

	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14	17,19,20	7,8,9.3	8,9,11	16,17
	11	17,21	15,17	2		

9ADA6G GlobalFiler™ (PDF Format)

	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	-	-	17,19,20	7,8,9.3	8,9,11	16,17
	11	-	-	2		

9W7NGG (PDF Format)

	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14	17,19,20	7,8,9.3	8,9,11	16,17
	11	17,21	15,17			

9YB7R9 PowerPlex® Fusion 6C (PDF Format)

	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14	17,19,20	7,8,9.3	8,9,11	16,17
	11	17,21	15,17			

AUPE3J GlobalFiler™ (PDF Format)

	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
			17,19,20	7,8,9.3	8,9,11	16,17
	11			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

B9WY6E PowerPlex® Fusion 5C (FSA Format)

	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14		7,8,9.3	8,9,11	16,17
	11					
	18.3,19.3	17,20	10,15	14,17	11,12	7,13
	10,12	15,15	23,23	8,12	11,13	15,18
3major	14,15	30,31.2	11,15	X,Y	10,11	24,24
	14,15	12,14		7,9.3	8,11	17,17
	11					
	14,15	21,21	14,inc.	14,16	12,12	11,12
	13,15	13,inc.	20,22	12,13	11,inc.	13,inc.
3minor	11,14	28,32.2	15,17	X,Y	8,inc.	22,23
	2.2,10	7,8		8,inc.	9,inc.	16,inc.
	inc.					

BLYQLD GlobalFiler™ (PDF Format)

	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	-	-	17,19,20	7,8,9.3	8,9,11	16,17
	11	-	-	2		

CYNMMB PowerPlex® Fusion 6C (PDF Format)

	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14	17,19,20	7,8,9.3	8,9,11	16,17
	11	17,21	15,17			

DW9TX4 PowerPlex® Fusion 6C (PDF Format), (HID Format)

	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14	17,19,20	7,8,9.3	8,9,11	16,17
	11	17,21	15,17			

E8TBDE GlobalFiler™ (PDF Format)

	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
			17,19,20	7,8,9.3	8,9,11	16,17
	11			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

EKFHBF PowerPlex® Fusion 5C (PDF Format)

	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14		7,8,9.3	8,9,11	16,17
	11					

JX4EE9 GlobalFiler™ (PDF Format)

	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
			17,19,20	7,8,9.3	8,9,11	16,17
	11			2		

NKHVKE Investigator® 24plex (HID Format)

	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
			17,19,20	7,8,9.3	8,9,11	16,17
	11					

Q2YDT6 GlobalFiler™ (PDF Format)

	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
			17,19,20	7,8,9.3	8,9,11	16,17
	11			2		

QDUN2C Investigator® 24plex (HID Format)

	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
			17,19,20	7,8,9.3	8,9,11	16,17
	11					

R3UJM6 GlobalFiler™ (FSA Format)

	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
			17,19,20	7,8,9.3	8,9,11	16,17
	11			2		

RNMG2P PowerPlex® Fusion 6C (PDF Format)

	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14	17,19,20	7,8,9.3	8,9,11	16,17
	11	17,21	15,17			

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

TD8ZU2	PowerPlex® Fusion 6C					
	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14	17,19,20	7,8,9.3	8,9,11	16,17
	11	17,21	15,17			
TN7VTW	GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (FSA Format), (PDF Format)					
	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14	17,19,20	7,8,9.3	8,9,11	16,17
	11	17,21	15,17			
UU938Z	GlobalFiler™ (PDF Format)					
	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	N/A	N/A	17,19,20	7,8,9.3	8,9,11	16,17
	11	N/A	N/A	2		
UZEXQZ	GlobalFiler™, PowerPlex® Fusion 6C (PDF Format)					
	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14	17,19,20	7,8,9.3	8,9,11	16,17
	11	17,21	15,17	2		
WVXCVX	GlobalFiler™ (PDF Format)					
	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
			17,19,20	7,8,9.3	8,9,11	16,17
	11			2		
WWRZDU	GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (PDF Format)					
	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14	17,19,20	7,8,9.3	8,9,11	16,17
	11	17,21	15,17	2		
WYU2C6	PowerPlex® Fusion 6C (HID Format)					
	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14	17,19,20	7,8,9.3	8,9,11	16,17
	11	17,21	15,17			

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 3 - STR Results

XVDTQQ GlobalFiler™ (PDF Format)

	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
			17,19,20	7,8,9.3	8,9,11	16,17
	11			2		

Z7HMQQ PowerPlex® Fusion 5C (FSA Format)

	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14	NT	7,8,9.3	8,9,11	16,17
	11	NT	NT	NT		
	18.3,19.3	17,20	10,15	14,17	11,12	7,13
	10,12	15,15	23,23	8,12	11,13	15,18
3major	14,15	30,31.2	11,15	X,Y	10,11	24,24
	14,15	12,14		7,9.3	8,11	17,17
	11					
	14,15	21,21	14,inc	16,inc	12,inc	11,12
	13,15	13,inc	20,22	13,inc	11,inc	13,inc
3minor	11,inc	28,32.2	17,inc	X,X or X,Y	8,inc	22,23
	2.2,10	7,8		8,inc	9,inc	16,inc
	inc					

Z7LFRM PowerPlex® Fusion 5C (PDF Format)

	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14		7,8,9.3	8,9,11	16,17
	11					

Z9Q36R GlobalFiler™ (PDF Format)

	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
			17,19,20	7,8,9.3	8,9,11	16,17
	11			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 3 - STR Results

ZNKRZN PowerPlex® Fusion 5C (FSA Format)

	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14		7,8,9.3	8,9,11	16,17
	11					
	18.3,19.3	17,20	10,15	14,17	11,12	7,13
	10,12	15,15	23,23	8,12	11,13	15,18
3major	14,15	30,31.2	11,15	X,Y	10,11	24,24
	14,15	12,14		7,9.3	8,11	17,17
	11					
	14,15	21,21	10,14	14,16	12,inc	11,12
	13,15	13,inc	20,22	12,13	11,inc	13,15
3minor	11,14	28,32.2	15,17	X,Y	8,10	22,23
	2.2,10	7,8		8,inc	9,inc	16,inc
	11					

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

2B9MM2 Investigator® 24plex (HID Format)

	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,17	X,Y	8,10,11	21,22,23,24
			17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11					

2F3JCR GlobalFiler™ (HID Format)

	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,16,17	X,Y	8,10,11,12	21,22,23,24
			17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11			2		

2NVUK3 Investigator® 24plex (HID Format)

	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,17	X,Y	8,10,11	21,22,23,24
			17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11					

3KFLXN PowerPlex® Fusion 5C (FSA Format)

	15,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	12	11,13	13,15,18
4	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14	Not tested	7,8,9.3	8,9	16,17
	11	Not tested	Not tested	Not tested		

67PQBM GlobalFiler™, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (FSA Format), (PDF Format), (HID Format)

	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,17	X,Y	8,10,11,12	21,22,23,24
	2.2,10,14,15	5,7,8,10,12,14	17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11	17,21	15,17	2		

68JETH PowerPlex® Fusion 6C (HID Format)

	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,16,17	X,Y	8,10,11,12	21,22,23,24
	2.2,10,14,15	5,7,8,10,12,14	17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11	17,21	15,17			

6JUR9X GlobalFiler™

	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,16,17	X,Y	8,10,11,12	21,22,23,24
			17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11			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

8M4PTP GlobalFiler™, PowerPlex® Fusion 6C (PDF Format)

	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,16,17	X,Y	8,10,11,12	21,22,23,24
	2.2,10,14,15	5,7,8,10,12,14	17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11	17,21	15,17	2		

9ADA6G GlobalFiler™ (PDF Format)

	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,16,17	X,Y	8,10,11,12	21,22,23,24
	-	-	17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11	-	-	2		

9W7NGG (PDF Format)

	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2		X,Y		21,22,23,24
	2.2,10,14,15	5,7,8,10,12,14	17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11	17,21	15,17			

9YB7R9 PowerPlex® Fusion 6C (PDF Format)

	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,16,17	X,Y	8,10,11,12	21,22,23,24
	2.2,10,14,15	5,7,8,10,12,14	17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11	17,20,21	15,17			

AUPE3J GlobalFiler™ (PDF Format)

	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,16,17	X,Y	8,10,11,12	21,22,23,24
			17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11			2		

B9WY6E PowerPlex® Fusion 5C (FSA Format)

	15,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	12	11,13	13,15,18
4	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14		7,8,9.3	8,9	16,17
	11					

BLYQLD GlobalFiler™ (PDF Format)

	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,16,17	X,Y	8,10,11,12	21,22,23,24
	-	-	17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11	-	-	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

CYNMMB PowerPlex® Fusion 6C (PDF Format)

	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,17	X,Y	8,10,11,12	21,22,23,24
	2.2,10,14,15	5,7,8,10,12,14	17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11	17,21	15,17			

DW9TX4 PowerPlex® Fusion 6C (PDF Format), (HID Format)

	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,16,17	X,Y	8,10,11,12	21,22,23,24
	2.2,10,14,15	5,7,8,10,12,14	17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11	17,20,21	15,17			

E8TBDE GlobalFiler™ (PDF Format)

	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,16,17	X,Y	8,10,11,12	21,22,23,24
			17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11			2		

EKFHBF PowerPlex® Fusion 5C (PDF Format)

	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11,12	21,22,23,24
	2.2,10,14,15	5,7,8,10,12,14		6,7,8,9,9.3	8,9,11	16,17
	11					

JX4EE9 GlobalFiler™ (PDF Format)

	14,15,16,17,18.3,	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,16,17	X,Y	8,10,11,12	21,22,23,24
			17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11			2		

19.3

4major

NKHVKE Investigator® 24plex (HID Format)

	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,17	X,Y	8,10,11	21,22,23,24
			17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11					

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

Q2YDT6 GlobalFiler™ (PDF Format)

	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,16,17	X,Y	8,10,11,12	21,22,23,24
			17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11			2		

QDUN2C Investigator® 24plex (HID Format)

	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,17	X,Y	8,10,11	21,22,23,24
			17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11					

R3UJM6 GlobalFiler™ (FSA Format)

	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,16,17	X,Y	8,10,11,12	21,22,23,24
			17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11			2		

RNMG2P PowerPlex® Fusion 6C (PDF Format)

	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,16,17	X,Y	8,10,11,12	21,22,23,24
	2.2,10,14,15	5,7,8,10,12,14	17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11	17,20,21	15,17			

TD8ZU2 PowerPlex® Fusion 6C (HID Format)

	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,16,17	X,Y	8,10,11,12	21,22,23,24
	2.2,10,14,15	5,7,8,10,12,14	17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11	17,21	15,17			

TN7VTW GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (FSA Format), (PDF Format)

	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2		X,Y	8,10,11,12	21,22,23,24
	2.2,10,14,15	5,7,8,10,12,14	17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11	17,21	15,17			

UU938Z GlobalFiler™ (PDF Format)

	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,16,17	X,Y	8,10,11,12	21,22,23,24
	N/A	N/A	17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11	N/A	N/A	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

UZEXQZ GlobalFiler™, PowerPlex® Fusion 6C (PDF Format)

	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,16,17	X,Y	8,10,11,12	21,22,23,24
	2.2,10,14,15	5,7,8,10,12,14	17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11	17,21	15,17	2		

WVXCVX GlobalFiler™ (PDF Format)

	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,16,17	X,Y	8,10,11,12	21,22,23,24
			17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11			2		

WWRZDU GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (PDF Format)

	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,16,17	X,Y	8,10,11,12	21,22,23,24
	2.2,10,14,15	5,7,8,10,12,14	17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11	17,21	15,17	2		

WYU2C6 PowerPlex® Fusion 6C (HID Format)

	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,16,17	X,Y	8,10,11,12	21,22,23,24
	2.2,10,14,15	5,7,8,10,12,14	17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11	17,20,21	15,17			

XVDTQQ GlobalFiler™ (PDF Format)

	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,16,17	X,Y	8,10,11,12	21,22,23,24
			17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11			2		

Z7HMQM PowerPlex® Fusion 5C (FSA Format)

	15,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	12	11,13	13,15,18
4	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14	NT	7,8,9.3	8,9	16,17
	11	NT	NT	NT		

Z7LFRM PowerPlex® Fusion 5C (PDF Format)

	14,15,16,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,14,15	13,15	20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11,12	21,22,23,24
	2.2,10,14,15	5,7,8,10,12,14		6,7,8,9.3	8,9,11	16,17
	11					

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 4 - STR Results

Z9Q36R GlobalFiler™ (PDF Format)

	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,16,17	X,Y	8,10,11,12	21,22,23,24
			17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11			2		

ZNKRZN PowerPlex® Fusion 5C (FSA Format)

	15,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	12	11,13	13,15,18
4	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14		7,8,9.3	8,9	16,17
	11					

YSTR Results

TABLE 3

WebCode	Amplification Kits (File Format)	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
		DYS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS481	DYS533
Item		DYS549	DYS570	DYS576	DYS635	DYS643	Y GATA H4		
Item 1 - YSTR Results									
2F3JCR	PowerPlex® Y23 (FSA Format)	15	16,18	13	31	21	11	11	13
1		14	11	11	20	15	16	27	11
		12	21	15	21	14	12		
67PQBM	Yfiler® (FSA Format), (PDF Format), (HID Format)	15	16,18	13	31	21	11	11	13
1		14	11	11	20	15	16	27	11
		12	21	15	21	14	12		
68JETH	PowerPlex® Y23 (HID Format)	15	16,18	13	31	21	11	11	13
1		14	11	11	20	15	16	27	11
		12	21	15	21	14	12		
8M4PTP	Yfiler®, PowerPlex® Y23 (PDF Format)	15	16,18	13	31	21	11	11	13
1		14	11	11	20	15	16	27	11
		12	21	15	21	14	12		
9ADA6G	Yfiler® (PDF Format)	15	16,18	13	31	21	11	11	13
1		14	11	11	20	15	16	-	-
		-	-	-	21	-	12		
9W7NGG	(PDF Format)	15	16,18	13	31	21	11	11	13
1		14	11	11	20	15	16		
			21	15	21		12		
AUEP3J	Yfiler® (PDF Format)	15	16,18	13	31	21	11	11	13
1		14	11	11	20	15	16		
					21		12		
BLYQLD	Yfiler® (PDF Format)	15	16,18	13	31	21	11	11	13
1		14	11	11	20	15	16	-	-
		-	-	-	21	-	12		
DW9TX4	PowerPlex® Y23 (PDF Format)	15	16,18	13	31	21	11	11	13
1		14	11	11	20	15	16	27	11
		12	21	15	21	14	12		

TABLE 3

WebCode	Amplification Kits (File Format)							
	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
Item	DYS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS481	DYS533
	DYS549	DYS570	DYS576	DYS635	DYS643	Y GATA H4		

Item 1 - YSTR Results

E8TBDE	Yfiler® (PDF Format)	15	16,18	13	31	21	11	11	13
		14	11	11	20	15	16		
					21		12		
EKFHBF	PowerPlex® Y23 (PDF Format)	15	16,18	13	31	21	11	11	13
		14	11	11	20	15	16	27	11
		12	21	15	21	14	12		
JX4EE9	Yfiler® (PDF Format)	15	16,18	13	31	21	11	11	13
		14	11	11	20	15	16		
					21		12		
Q2YDT6	PowerPlex® Y23 (PDF Format)	15	16,18	13	31	21	11	11	13
		14	11	11	20	15	16	27	11
		12	21	15	21	14	12		
R3UJM6	Yfiler® (FSA Format)	15	16,18	13	31	21	11	11	13
		14	11	11	20	15	16		
					21		12		
TD8ZU2	PowerPlex® Y23 (HID Format)	15	16,18	13	31	21	11	11	13
		14	11	11	20	15	16	27	11
		12	21	15	21	14	12		
TN7VTW	Yfiler®, PowerPlex® Y23 (FSA Format), (PDF Format)	15	16,18	13	31	21		11	13
		14	11	11	20	15	16	27	11
		12			21	14	12		
UU938Z	Yfiler® (PDF Format)	15	16,18	13	31	21	11	11	13
		14	11	11	20	15	16	N/A	N/A
		N/A	N/A	N/A	21	N/A	12		
UZEXQZ	Yfiler®, PowerPlex® Y23 (FSA Format), (PDF Format)	15	16,18	13	31	21	11	11	13
		14	11	11	20	15	16	27	11
		12	21	15	21	14	12		

TABLE 3

WebCode	Amplification Kits (File Format)							
	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
Item	DYS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS481	DYS533
	DYS549	DYS570	DYS576	DYS635	DYS643	Y GATA H4		

Item 1 - YSTR Results

WVXCVX	PowerPlex® Y23 (PDF Format)	15	16,18	13	31	21	11	11	13
	1	14	11	11	20	15	16	27	11
		12	21	15	21	14	12		
WWRZDU	Yfiler®, PowerPlex® Y23 (PDF Format)	15	16,18	13	31	21	11	11	13
	1	14	11	11	20	15	16	27	11
		12	21	15	21	14	12		
XVDTQQ	Yfiler® (PDF Format)	15	16,18	13	31	21	11	11	13
	1	14	11	11	20	15	16		
					21		12		
Z7LFRM	PowerPlex® Y23 (PDF Format)	15	16,18	13	31	21	11	11	13
	1	14	11	11	20	15	16	27	11
		12	21	15	21	14	12		

TABLE 3

WebCode	Amplification Kits (File Format)							
	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
Item	DYS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS481	DYS533
	DYS549	DYS570	DYS576	DYS635	DYS643	Y GATA H4		

Item 2 - YSTR Results

2F3JCR	PowerPlex® Y23 (FSA Format)							
	14	11,14	13	29	23	11	13	13
2	15	12	12	19	16	18	23	12
	13	17	17	23	10	11		
67PQBM	Yfiler®, PowerPlex® Y23 (FSA Format), (PDF Format), (HID Format)							
	14	11,14	13	29	23	11	13	13
2	15	12	12	19	16	18	23	12
	13	17	17	23	10	11		
68JETH	PowerPlex® Y23 (HID Format)							
	14	11,14	13	29	23	11	13	13
2	15	12	12	19	16	18	23	12
	13	17	17	23	10	11		
8M4PTP	Yfiler®, PowerPlex® Y23 (PDF Format)							
	14	11,14	13	29	23	11	13	13
2	15	12	12	19	16	18	23	12
	13	17	17	23	10	11		
9ADA6G	Yfiler® (PDF Format)							
	14	11,14	13	29	23	11	13	13
2	15	12	12	19	16	18	-	-
	-	-	-	23	-	11		
9W7NGG	(PDF Format)							
	14	11,14	13	29	23	11	13	13
2	15	12	12	19	16	18		
		17	17	23		11		
AUEP3J	Yfiler® (PDF Format)							
	14	11,14	13	29	23	11	13	13
2	15	12	12	19	16	18		
				23		11		
BLYQLD	Yfiler® (PDF Format)							
	14	11,14	13	29	23	11	13	13
2	15	12	12	19	16	18	-	-
	-	-	-	23	-	11		
DW9TX4	PowerPlex® Y23							
	14	11,14	13	29	23	11	13	13
2	15	12	12	19	16	18	23	12
	13	17	17	23	10	11		

TABLE 3

WebCode	Amplification Kits (File Format)							
	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
Item	DYS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS481	DYS533
	DYS549	DYS570	DYS576	DYS635	DYS643	Y GATA H4		

Item 2 - YSTR Results

E8TBDE	Yfiler® (PDF Format)	14	11,14	13	29	23	11	13	13
		15	12	12	19	16	18		
					23		11		
EKFHBF	PowerPlex® Y23 (PDF Format)	14	11,14	13	29	23	11	13	13
		15	12	12	19	16	18	23	12
		13	17	17	23	10	11		
JX4EE9	Yfiler®	14	11,14	13	29	23	(8),11	13	13
		15	12	12	19	16	18		
					23		11		
Q2YDT6	PowerPlex® Y23 (PDF Format)	14	11,14	13	29	23	11	13	13
		15	12	12	19	16	18	23	12
		13	17	17	23	10	11		
R3UJM6	Yfiler® (FSA Format)	14	11,14	13	29	23	11	13	13
		15	12	12	19	16	18		
					23		11		
TD8ZU2	PowerPlex® Y23 (HID Format)	14	11,14	13	29	23	11	13	13
		15	12	12	19	16	18	23	12
		13	17	17	23	10	11		
TN7VTW	Yfiler®, PowerPlex® Y23 (FSA Format), (PDF Format)	14	11,14	13	29	23		13	13
		15	12	12	19	16	18	23	12
		13			23	10	11		
UU938Z	Yfiler® (PDF Format)	14	11,14	13	29	23	11	13	13
		15	12	12	19	16	18	N/A	N/A
		N/A	N/A	N/A	23	N/A	11		
UZEXQZ	Yfiler®, PowerPlex® Y23 (FSA Format), (PDF Format)	14	11,14	13	29	23	11	13	13
		15	12	12	19	16	18	23	12
		13	17	17	23	10	11		

TABLE 3

WebCode	Amplification Kits (File Format)							
	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
Item	DYS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS481	DYS533
	DYS549	DYS570	DYS576	DYS635	DYS643	Y GATA H4		

Item 2 - YSTR Results

WVXCVX	PowerPlex® Y23 (PDF Format)	14	11,14	13	29	23	11	13	13
		15	12	12	19	16	18	23	12
		13	17	17	23	10	11		
WWRZDU	Yfiler®, PowerPlex® Y23 (PDF Format)	14	11,14	13	29	23	11	13	13
		15	12	12	19	16	18	23	12
		13	17	17	23	10	11		
XVDTQQ	Yfiler® (PDF Format)	14	11,14	13	29	23	11	13	13
		15	12	12	19	16	18		
					23		11		
Z7LFRM	PowerPlex® Y23 (PDF Format)	14	11,14	13	29	23	11	13	13
		15	12	12	19	16	18	23	12
		13	17	17	23	10	11		

TABLE 3

WebCode	Amplification Kits (File Format)							
	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
Item	DYS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS481	DYS533
	DYS549	DYS570	DYS576	DYS635	DYS643	Y GATA H4		

Item 3 - YSTR Results

2F3JCR	PowerPlex® Y23 (FSA Format)							
	14,15	11,14,16,18	13	29,30,31	21,23	11	11,12,13	13
3	14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,13	17,21	15,17	21,23	10,14	11,12		
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
3major	14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,13	17,21	15,17	21,23	10,14	11,12		
				30			12	
3minor								
67PQBM	Yfiler®, PowerPlex® Y23 (FSA Format), (PDF Format), (HID Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
3	14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,13	17,21	15,17	21,23	10,14	11,12		
68JETH	PowerPlex® Y23 (HID Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
3	14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,13	17,21	15,17	21,23	10,14	11,12		
8M4PTP	Yfiler®, PowerPlex® Y23 (PDF Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
3	14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,13	17,21	15,17	21,23	10,14	11,12		
9ADA6G	Yfiler® (PDF Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
3	14,15	11,12	11,12	19,20	15,16	16,18	-	-
	-	-	-	21,23	-	11,12		
9W7NGG	(PDF Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
3	14,15	11,12	11,12	19,20	15,16	16,18		
		17,21	15,17	21,23		11,12		
AUEP3J	Yfiler® (PDF Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,12,13	13
3	14,15	11,12	11,12	19,20	15,16	16,17,18		
				21,23		11,12		
BLYQLD	Yfiler® (PDF Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
3	14,15	11,12	11,12	19,20	15,16	16,18	-	-
	-	-	-	21,23	-	11,12		

TABLE 3

WebCode	Amplification Kits (File Format)							
	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
Item	DYS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS481	DYS533
	DYS549	DYS570	DYS576	DYS635	DYS643	Y GATA H4		

Item 3 - YSTR Results

DW9TX4	PowerPlex® Y23 (FSA Format), (PDF Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
3	14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,13	17,21	15,17	21,23	10,14	11,12		
E8TBDE	Yfiler® (PDF Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,12,13	13
3	14,15	11,12	11,12	19,20	15,16	16,17,18		
				21,23		11,12		
EKFHBF	PowerPlex® Y23 (PDF Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
3	14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,13	17,21	15,17	21,23	10,14	11,12		
JX4EE9	Yfiler®							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
3	14,15	11,12	11,12	19,20	15,16	16,18		
				21,23		11,12		
Q2YDT6	PowerPlex® Y23 (PDF Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
3	14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,13	17,21	15,17	21,23	10,14	11,12		
R3UJM6	Yfiler® (FSA Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
3	14,15	11,12	11,12	19,20	15,16	16,18		
				21,23		11,12		
TD8ZU2	PowerPlex® Y23 (HID Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
3	14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,13	17,21	15,17	21,23	10,14	11,12		
TN7VTW	Yfiler®, PowerPlex® Y23 (FSA Format), (PDF Format)							
	14,15	11,14,16,18	13	29,31	21,23		11,13	13
3	14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,13			21,23	10,14	11,12		
UU938Z	Yfiler® (PDF Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
3	14,15	11,12	11,12	19,20	15,16	16,18	N/A	N/A
	N/A	N/A	N/A	21,23	N/A	11,12		

TABLE 3

WebCode	Amplification Kits (File Format)							
	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
Item	DYS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS481	DYS533
	DYS549	DYS570	DYS576	DYS635	DYS643	Y GATA H4		

Item 3 - YSTR Results

UZEXQZ	Yfiler®, PowerPlex® Y23 (FSA Format), (PDF Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
3	14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,13	17,21	15,17	21,23	10,14	11,12		
WXCXV	PowerPlex® Y23 (PDF Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
3	14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,13	17,21	15,17	21,23	10,14	11,12		
WWRZDU	Yfiler®, PowerPlex® Y23 (PDF Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
3	14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,13	17,21	15,17	21,23	10,14	11,12		
XVDTQQ	Yfiler® (PDF Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
3	14,15	11,12	11,12	19,20	15,16	16,18		
				21,23		11,12		
Z7LFRM	PowerPlex® Y23 (PDF Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
3	14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,13	17,21	15,17	21,23	10,14	11,12		

TABLE 3

WebCode	Amplification Kits (File Format)							
	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
Item	DYS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS481	DYS533
	DYS549	DYS570	DYS576	DYS635	DYS643	Y GATA H4		

Item 4 - YSTR Results

2F3JCR	PowerPlex® Y23 (FSA Format)							
	14,15	11,14,16,18	13	29,30,31	21,23	11	11,12,13	13
4	14,15	10,11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,13	17,21	15,17	21,23	10,14	11,12		
4major	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
	14,15	10,11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,13	17,21	15,17	21,23	10,14	11,12		
4minor	30						12	
67PQBM	Yfiler®, PowerPlex® Y23 (FSA Format), (PDF Format), (HID Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4	14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,13	17,21	15,17	21,23	10,14	11,12		
68JETH	PowerPlex® Y23 (HID Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4	14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,13	17,21	15,17	21,23	10,14	11,12		
8M4PTP	Yfiler®, PowerPlex® Y23 (PDF Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4	14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,13	17,21	15,17	21,23	10,14	11,12		
9ADA6G	Yfiler® (PDF Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4	14,15	11,12	11,12	19,20	15,16	16,18	-	-
	-	-	-	21,23	-	11,12		
9W7NGG	(PDF Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4	14,15	11,12	11,12	19,20	15,16	16,18		
		17,21	15,17	21,23		11,12		
AUEP3J	Yfiler® (PDF Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4	14,15	11,12	11,12	19,20	15,16	16,18		
				21,23		11,12		
BLYQLD	Yfiler® (PDF Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4	14,15	11,12	11,12	19,20	15,16	16,18	-	-
	-	-	-	21,23	-	11,12		

TABLE 3

WebCode	Amplification Kits (File Format)							
	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
Item	DYS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS481	DYS533
	DYS549	DYS570	DYS576	DYS635	DYS643	Y GATA H4		

Item 4 - YSTR Results

DW9TX4	PowerPlex® Y23 (FSA Format), (PDF Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4	14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,13	17,21	15,17	21,23	10,14	11,12		
E8TBDE	Yfiler® (PDF Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4	14,15	11,12	11,12	19,20	15,16	16,18		
				21,23		11,12		
EKFHBF	PowerPlex® Y23 (PDF Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4	14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,13	17,21	15,17	21,23	10,14	11,12		
JX4EE9	Yfiler®							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4	14,15	11,12	11,12	19,20	15,16	16,18		
				21,23		11,12		
Q2YDT6	PowerPlex® Y23 (PDF Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4	14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,13	17,21	15,17	21,23	10,14	11,12		
R3UJM6	Yfiler® (FSA Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4	14,15	11,12	11,12	19,20	15,16	16,18		
				21,23		11,12		
TD8ZU2	PowerPlex® Y23 (HID Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4	14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,13	17,21	15,17	21,23	10,14	11,12		
TN7VTW	Yfiler®, PowerPlex® Y23 (FSA Format), (PDF Format)							
	14,15	11,14,16,18	13	29,31	21,23		11,13	13
4	14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,13			21,23	10,14	11,12		
UU938Z	Yfiler® (PDF Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4	14,15	11,12	11,12	19,20	15,16	16,18	N/A	N/A
	N/A	N/A	N/A	21,23	N/A	11,12		

TABLE 3

WebCode	Amplification Kits (File Format)							
	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
Item	DYS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS481	DYS533
	DYS549	DYS570	DYS576	DYS635	DYS643	Y GATA H4		

Item 4 - YSTR Results

UZEXQZ	Yfiler®, PowerPlex® Y23 (FSA Format), (PDF Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4	14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,13	17,21	15,17	21,23	10,14	11,12		
WXCXV	PowerPlex® Y23 (PDF Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4	14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,13	17,21	15,17	21,23	10,14	11,12		
WWRZDU	Yfiler®, PowerPlex® Y23 (PDF Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4	14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,13	17,21	15,17	21,23	10,14	11,12		
XVDTQQ	Yfiler® (PDF Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4	14,15	11,12	11,12	19,20	15,16	16,18		
				21,23		11,12		
Z7LFRM	PowerPlex® Y23 (PDF Format)							
	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4	14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,13	17,21	15,17	21,23	10,14	11,12		

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	<u>Item 3 Conclusion</u>			<u>Item 4 Conclusion</u>		
	<u># of Contributors</u>	<u>Item 1</u>	<u>Item 2</u>	<u># of Contributors</u>	<u>Item 1</u>	<u>Item 2</u>
2B9MM2	2	Included	Included	≥ 3	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable
2F3JCR	overt 2	Included	Included	overt 3	Included	Included
2NVUK3	2	Included	Included	≥3	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable
3KFLXN	2	Included	Included	at least 2	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable
67PQBM	2	Included	Included	3	Included	Included
68JETH	2	Included	Included	3	Included	Included
6JUR9X	Two	Included	Included	Three or more	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable
8M4PTP	2	Included	Included	3	Included	Included
9ADA6G	AT LEAST 2	Included	Included	AT LEAST 3	Included	Included
9W7NGG	2	Included	Included	3	Included	Included
9YB7R9	2	Included	Included	3	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable
AUEP3J	2	Included	Included	AT LEAST 3	Included	Included
B9WY6E	2	Included	Included	at least 2	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable
BLYQLD	at least 2	Included	Included	at least 3	Included	Included
CYNMMB	2	Included	Included	3	Included	Included
DW9TX4	At least 2	Included	Included	At least 3	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable
E8TBDE	2	Included	Included	3	Included	Included
EKFHBF	2	Included	Included	3	Included	Included
JX4EE9	2	Included	Included	3 (globalfiler), 2 (Yfiler)	Included	Included
NKHVKE	2	Included	Included	≥3	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable

TABLE 4

WebCode	Item 3 Conclusion			Item 4 Conclusion		
	# of Contributors	Item 1	Item 2	# of Contributors	Item 1	Item 2
Q2YDT6	at least 2	Included	Included	at least 3	Included	Included
QDUN2C	2	Included	Included	≥3	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable
R3UJM6	2	Included	Included	3	Included	Included
RNMG2P	2	Included	Included	3	Included	Included
TD8ZU2	2	Included	Included	3	Included	Included
TN7VTW	2	Included	Included	3	Included	Included
UU938Z	2	Included	Included	≥3	Included	Included
UZEXQZ	at least 2	Included	Included	at least 3	Included	Included
WVXCVX	2	Included	Included	3	Included	Included
WWRZDU	2	Included	Included	3	Included	Included
WYU2C6	2	Included	Included	3	Included	Included
XVDTQQ	at least 2	Included	Included	at least 3	Included	Included
Z7HQM6	2	Included	Included	At least 2	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable
Z7LFRM	At least two	Included	Included	At least three	Included	Included
Z9Q36R	at least two	Included	Included	at least three	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable
ZNKRZN	2	Included	Included	at least 2	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable

Conclusions Response Summary

Participants reporting conclusions: **36**

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	
	Item 1	Item 2	Item 1	Item 2
Included	36	36	24	24
Excluded	0	0	0	0
Inconclusive	0	0	12	12
No Response	0	0	0	0
Total	36	36	36	36

Statistical Analysis for Item 3

TABLE 5

WebCode	Item 3 Methods & Results
2B9MM2	<p>Method(s): Combined Probability of Exclusion/Inclusion</p> <p>Stats Analysis: 1 in 25.68 trillion from the US Caucasian population 1 in 199.6 trillion from the US African American population 1 in 30.82 trillion from the US Hispanic population</p>
2F3JCR	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: Autosomal: Depending on assumptions, support for presence of V is $\sim 10^{14}$-10^{23}. Depending on assumptions, support for presence of S is $\sim 10^{13}$-10^{19}. Y: For the "major" mixed profile, the proportion of the population that could contribute is at least 1/1700</p>
2NVUK3	<p>Method(s): Combined Probability of Exclusion/Inclusion</p> <p>Stats Analysis: The estimated portion* of the population that cannot be excluded from Item 3: 1 in 25.68 trillion from the US Caucasian population; 1 in 199.6 trillion from the US African American population; 1 in 30.82 trillion from the US Hispanic population</p>
3KFLXN	<p>Method(s): Random Match Probability</p> <p>Stats Analysis: A mixture of DNA profiles was identified in Item 3 that has been interpreted as a mixture of 2 people. Assuming this is a mixture of the suspect (Item 2) and one additional contributor, a male DNA profile was identified from which the victim (Item 1) cannot be excluded (is included). The expected frequency of occurrence for this profile was calculated for the African American, Caucasian, and Hispanic population groups and was found to be more common than approximately 1 in 240 quintillion unrelated individuals.</p>
67PQBM	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: Item 1 and 2 Conclusion: Under the assumption that the VICTIM and the SUSPECT are contributors to this mixture, 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.</p>
68JETH	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: The observed mixture profile is approximately 7.89×10^{21} times more likely to occur under the scenario that it is a mixture of DNA from the suspect and the victim, as opposed to the scenario that it originated from a mixture of DNA from the suspect, and an unrelated unknown individual, in the African American population.</p> <p>The observed mixture profile is approximately 1.86×10^{25} times more likely to occur under the scenario that it is a mixture of DNA from the suspect and the victim, as opposed to the scenario that it originated from a mixture of DNA from the suspect, and an unrelated unknown individual, in the Caucasian population.</p> <p>The observed mixture profile is approximately 4.87×10^{24} times more likely to occur under the scenario that it is a mixture of DNA from the suspect and the victim, as opposed to the scenario that it originated from a mixture of DNA from the suspect, and an unrelated unknown individual, in the Hispanic population.</p>
6JUR9X	<p>Method(s): Combined Probability of Exclusion/Inclusion</p> <p>Stats Analysis: The results identified from Item 3 are consistent with a mixture from two contributors. The Item 1, male victim and the Item 2, male suspect cannot be excluded as possible contributors to this mixture of DNA. Using 21 of 21 loci, the probabilities of selecting an unrelated individual at random who cannot be excluded as one of the possible sources of the DNA profile obtained from the item are approximately: 1 in 20.6 Trillion CPI; >99.9% CPE in the Caucasian population; 1 in 257 Trillion CPI; >99.9% CPE in the African American population; 1 in 56.8 Trillion CPI; >99.9% CPE in the Hispanic population</p>

TABLE 5

WebCode	Item 3 Methods & Results
8M4PTP	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: The DNA profile of the trace found on the suspect's shirt (Item 3) has been compared with the profile of the victim (Item 1) and the suspect (Item 2). Based on the information available, the presence of the DNA from the suspect is not contested. For victim, the results of the comparison were assessed given the propositions that (a) The DNA originates from the victim and the suspect; (b) The DNA originates from the suspect and an unknown person. The DNA results are in the order of $1E+27$ times more probable if the first proposition (a) is true than if the alternative (b) is true.</p>
9ADA6G	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: A mixed DNA profile of at least two individuals was developed from Item 3. The DNA profile obtained from reference sample Item 1 and Item 2 are consistent with being contributors to this mixed DNA profile. The mixed DNA profile are 2.1×10^{exp27}, 5.3×10^{exp27} and 1.2×10^{exp27} times more likely if they originated from Item 1 and Item 2 rather than if they originated from Item 1 and one unknown individual as calculated based on the [Location-specific] population databases respectively.</p>
9W7NGG	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: LR.total Autosomal: $2,6441E+51$. LR.total Y chromosome: 16.921</p>
9YB7R9	<p>Method(s): Combined Probability of Exclusion/Inclusion</p> <p>Stats Analysis: Cauc: 1 in 4 quadrillion ($4E15$) African Amer: 1 in 8 quadrillion ($8E15$)</p>
AUEP3J	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: Please note that we couldn't include THO1 locus in the calculation because of the LR mix Studio 2.1.3 software which is still under training in our lab and the calculation is done for this test only and is not used yet in our daily reports. Two hypothesis were evaluated. Hypothesis 1: $H_p = \text{suspect}(S) + \text{victim}(V)$; $H_d = 2 \text{ unknowns (unrelated)}$; probability of dropout $P(D) = 0$ for S, V and defense unknowns and probability of drop-in is 0.05; $LR = 1E38$. Hypothesis 2: $H_p = S + V$; $H_d = S + 1 \text{ unknown (unrelated)}$, probability of dropout $P(D) = 0$ for S, V and defense unknowns, and probability of drop-in is 0; $LR = 9.45E22$</p>
B9WY6E	<p>Method(s): Random Match Probability</p> <p>Stats Analysis: A mixture of human DNA profiles was identified in Item 3 which was interpreted as a mixture of two people. Assuming this is a mixture of Suspect and one additional contributor, a DNA profile was identified from which Victim cannot be excluded (is included). The expected frequency of occurrence for this DNA profile was calculated for the African-American, Caucasian and Hispanic population groups and was found to be no more common than approximately 1 in 1.1 sextillion unrelated individuals.</p>
BLYQLD	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: A mixed DNA profile from at least two individuals was developed from Item 3. The DNA profile obtained from reference samples ITEM 1 and ITEM 2 are consistent with being the contributors to this mixed DNA profile. The mixed DNA profile are 2.1×10^{exp27}, 5.3×10^{exp27} and 1.2×10^{exp27} times more likely if they originated from ITEM 1 and ITEM 2 rather than if they originated from ITEM 1 and ONE UNKNOWN individual as calculated based on the [Location-specific] population databases respectively.</p>
CYNMMB	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: For LR calculations following hypothesis were formed: 1) H_p: DNA comes from suspect and victim 2) H_d: DNA comes from suspect and 1 unknown person. Drop-out probability 0,1 was used. Drop-in probability 0,05 was used. Theta value 0,01 was used. Rare allele frequency 0,0083 was assigned to rare alleles. $LR = 4,2E+27$</p>

TABLE 5

WebCode	Item 3 Methods & Results
DW9TX4	<p>Method(s): Random Match Probability</p> <p>Stats Analysis: The DNA profile obtained from Item 3 is a mixture of DNA from at least two individuals. Assuming this is a mixture of DNA from the suspect and one other individual, the victim cannot be excluded as a possible contributor to the additional DNA profile. This additional DNA profile is expected to occur in approximately 1 in 28.5 nonillion in the Caucasian population, in approximately 1 in 24.09 septillion in the African American population and in approximately 1 in 2.89 nonillion in the Hispanic population among unrelated individuals. The following loci were not included in the statistical calculations for this sample: D3S1358, D10S1248, vWA, D5S818, D22S1045</p>
E8TBDE	<p>Method(s): Combined Probability of Exclusion/Inclusion</p> <p>Stats Analysis: Assuming at least 2 contributors, the probability of randomly selecting an unrelated individual who would be included as a contributor to the DNA mixture profile is 1 in greater than 7 billion (approximate population of world).</p>
EKFHBF	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: LR=2,5E016_Hp_(item1+1unknown_person)_Hd_(2unknown_persons)_ LR=2,4E015_Hp_(item2+1unknown_person)_Hd_(2unknown_persons)</p>
JX4EE9	<p>Method(s): NONE</p> <p>Stats Analysis: I am a forensic DNA consultant who works with defense attorneys. I review the bench notes, SOP manuals, qualifications of the analyst, contamination issues, corrective action reports and unexpected results report. I review the case data sheets to determine if the results are accurately interpreted and the data was correctly entered into the statistical software. I reach a conclusion about the quality of the data, the thoroughness of the evidence screening and the final determination as to who contributed any of the DNA. I do not perform any separate statistical analysis.</p>
NKHVKE	<p>Method(s): Combined Probability of Exclusion/Inclusion</p> <p>Stats Analysis: The estimated portion* of the population that cannot be excluded from the mixed DNA profile: 1 in 25.68 trillion from the US Caucasian population; 1 in 199.6 trillion from the US African American population; 1 in 30.82 trillion from the US Hispanic population</p>
Q2YDT6	<p>Method(s): [Participant did not report a Method]</p> <p>Stats Analysis: No statistical analysis performed. For databasing purposes only.</p>
QDUN2C	<p>Method(s): Combined Probability of Exclusion/Inclusion</p> <p>Stats Analysis: The estimated portion* of the population that cannot be excluded from Item 3: 1 in 25.68 trillion from the US Caucasian population; 1 in 199.6 trillion from the US African American population; 1 in 30.82 trillion from the US Hispanic population</p>
R3UJM6	<p>Method(s): Combined Probability of Exclusion/Inclusion</p> <p>Stats Analysis: CPI = 4.80×10^{-14}</p>
RNMG2P	<p>Method(s): Combined Probability of Exclusion/Inclusion</p> <p>Stats Analysis: African American Population Probability - 1 in 8,945,000,000,000,000. Caucasian Population Probability - 1 in 4,924,000,000,000,000</p>
TD8ZU2	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: two hypotheses were firstly formulated: 1) ITEM 1 + 1 UNKNOWN vs. 2 UNKNOWN: LR= 2,8E14 (drop out estimated 15%). 2) ITEM 2 + 1 UNKNOWN vs. 2 UNKNOWN: LR= 1,8E13 (drop out estimated 15%). So a last hypothesis of contribution to the ITEM 3 from both ITEM 1 and ITEM 2 was evaluated: 3) ITEM 1 + ITEM 2 vs. 2 UNKNOWN: LR= 5,9E35 (drop out estimated 14%)</p>

TABLE 5

WebCode	Item 3 Methods & Results
TN7VTW	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: Is 6.380.405.965.271.420.000.000.000.000.000 times more likely the finding if the mixture comes from the victim and the suspect than if it comes from the victim and an individual taken at random in the reference population.</p>
UU938Z	<p>Method(s): N/A</p> <p>Stats Analysis: I am a forensic consultant that reviews DNA case files that are 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 do not calculate population statistics as part of my case reviews. I accept that the population calculations are correct. N/A = Not Applicable</p>
UZEXQZ	<p>Method(s): Combined Probability of Exclusion/Inclusion, YSTR-Mixture Counting Method</p> <p>Stats Analysis: The Fusion 6C DNA profile from item #3 (DNA profile found on suspect's shirt) is consistent with being a mixture of at least two individuals. The victim (Item #1) and suspect (Item #2) are included as potential contributors to the Fusion 6C DNA profile from item #3. The Yfiler DNA profile from item #3 (DNA profile found on suspect's shirt) is consistent with being a mixture of at least two males. The victim (Item #1) and suspect (Item #2) are included as potential contributors to the Yfiler DNA profile from item #3. The expected frequency of male individuals who could be included as a contributor to the Fusion 6C DNA profile and the Yfiler YSTR DNA profile from item #3 is less than 1 in 7 billion in the African American, Caucasian, and Hispanic populations. (Ceiling statistic).</p>
WXCVX	<p>Method(s): [Participant did not report a Method]</p> <p>Stats Analysis: No statistical analysis performed. For databasing purposes only</p>
WWRZDU	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: Victim and suspect cannot be excluded as a contributors of the cell mix found in this evidence (Item 3 -T shirt). Is 2,64414735166266E51 times more probable this finding if the origin cell mix comes from the victim and the suspect than two unknown individuals in the reference population.</p>
WYU2C6	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: The DNA typing profile obtained from the suspect's shirt (item 3) is of mixed origin consistent with having originated from 2 individuals. The victim is included as a possible contributor. Assuming 2 contributors and the suspect as one of those contributors, it is 16 octillion times more likely that the observed DNA profile occurred as a result of a mixture of the suspect and victim than if it originated from the suspect and one unrelated individual selected at random from the U.S. population.</p>
XVDTQQ	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: A mixed DNA profile from at least two individuals was developed from ITEM 3. The DNA profile obtained from reference samples ITEM 1 and ITEM 2 are consistent with being the contributors to this mixed DNA profile. The mixed DNA profile are $2.1 \times 10^{\text{exp}27}$, $5.3 \times 10^{\text{exp}27}$ and $1.2 \times 10^{\text{exp}27}$ times more likely if they originated from ITEM 1 and ITEM 2 rather than if they originated from ITEM 1 and ONE UNKNOWN individual as calculated based on the [Location-specific] population databases respectively.</p>
Z7HMQQ	<p>Method(s): Random Match Probability</p> <p>Stats Analysis: A mixture of human DNA profiles was identified in Item 3 that was interpreted as a mixture of two people. Assuming this profile is a mixture of the suspect and one other individual, a DNA profile was identified from which the victim (Item 1) cannot be excluded (is included). The expected frequency of occurrence for this profile was calculated for the African American, Caucasian, and Hispanic population groups and was found to be no more common than approximately 1 in 2.0 quintillion unrelated individuals.</p>

TABLE 5

WebCode	Item 3 Methods & Results
Z7LFRM	Method(s): [Participant did not report a Method]
Z9Q36R	Method(s): Random Match Probability Stats Analysis: 8.02633×10^{-23}
ZNKRZN	Method(s): Random Match Probability Stats Analysis: A mixture of human DNA profiles was identified in Item 3 that has been interpreted as a mixture of two people. Assuming this is a mixture of the suspect and one other individual, a male DNA profile was identified from which the victim cannot be excluded (is included). The expected frequency of occurrence for this profile was calculated for the African American, Caucasian, and Hispanic population groups and was found to be no more common than approximately 1 in 960 sextillion unrelated individuals.

Statistical Analysis for Item 4

TABLE 6

WebCode	Item 4 Methods & Results
2F3JCR	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: Auto: Depending on assumptions, support for the presence the V is $\sim 10^7$-10^{11}. Depending on assumptions, support for the presence the S is $\sim 10^{10}$-10^{13}. Y: For the "major" mixed profile, the proportion of the population that could contribute is at least 1/1700</p>
67PQBM	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: Item 1 and 2 Conclusion: Under the assumption that the VICTIM, the SUSPECT and one UNKNOWN person are contributors to this mixture, 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 three unrelated persons selected at random from the general population are contributors to this mixed-source sample.</p>
68JETH	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: The observed mixture profile is approximately 8.44×10^{11} times more likely to occur under the scenario that it is a mixture of DNA from the suspect, the victim, and an unknown, as opposed to the scenario that it originated from a mixture of DNA from the suspect and two unrelated unknown individuals, in the African American population.</p> <p>The observed mixture profile is approximately 5.31×10^{14} times more likely to occur under the scenario that it is a mixture of DNA from the suspect, the victim, and an unknown, as opposed to the scenario that it originated from a mixture of DNA from suspect and two unrelated unknown individuals, in the Caucasian population.</p> <p>The observed mixture profile is approximately 2.44×10^{14} times more likely to occur under the scenario that it is a mixture of DNA from the suspect, the victim, and an unknown, as opposed to the scenario that it originated from a mixture of DNA from suspect and two unrelated unknown individuals, in the Hispanic population.</p>
8M4PTP	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: The DNA profile of the trace found on the suspect's knife (Item 4) has been compared with the profile of the victim (Item 1) and the suspect (Item 2). Based on the information available, the presence of the DNA from the suspect is not contested. For victim, the results of the comparison were assessed given the propositions that (a) The DNA originates from the victim, the suspect and an unknown person; (b) The DNA originates from the suspect and two unknown persons. The DNA results are in the order of $1E+14$ times more probable if the first proposition (a) is true than if the alternative (b) is true.</p>
9ADA6G	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: A mixed DNA profile of at least three individuals were developed from Item 4. The DNA profile obtained from reference sample, Item 1 and Item 2 are consistent with being the contributors to this mixed DNA profile. The mixed DNA profile are 3.0×10^{15}, 7.7×10^{15} and 1.5×10^{15} times more likely if they originated from Item 1, Item 2 and one unknown individual rather than if they originated from Item 1 and two unknown individual as calculated based on the [Location-specific] population databases respectively.</p>
9W7NGG	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: LR.total Autosomal: $1,73462E+29$. LR.total Y chromosome: 16.921</p>

TABLE 6

WebCode	Item 4 Methods & Results
AUEP3J	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: Please note that we couldn't include THO1 locus in the calculation because of the LR mix Studio 2.1.3 software which is still under training in our lab and the calculation is done for this test only and is not used yet in our daily reports. Two hypothesis were evaluated. Hypothesis 1: Hp= suspect(S)+victim(V)+ 1 unknown; Hd= 3 unknowns (unrelated). P(D)= 0 for V and S and estimated P(D) for defense unknowns and prosecution unknown after sensitivity analysis is 0.24 and probability of drop-in is 0.05 LR= 1E24. Hypothesis 2: Hp= S + V + 1 unknown; Hd= S + 2 unknowns (unrelated), probability of dropout P(D)=0 for S, V and defense and prosecution unknowns, and probability of drop-in is 0.05 LR= 1.4E12</p>
BLYQLD	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: A mixed DNA profile from at least three individuals was developed from Item 4. The DNA profile obtained from reference samples ITEM 1 and ITEM 2 are consistent with being the contributors to this mixed DNA profile. The mixed DNA profile are 3.0×10^{15}, 7.7×10^{15} and 1.5×10^{15} times more likely if they originated from ITEM 1, ITEM 2 and ONE UNKNOWN individual rather than if they originated from ITEM 1 and TWO UNKNOWN individuals as calculated based on the [Location-specific] population databases respectively.</p>
CYNMMB	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: For LR calculations following hypothesis were formed: 1) Hp: DNA comes from suspect and victim and 1 unknown person. 2) Hd: DNA comes from suspect and 2 unknowns. Drop-out probability 0,1 was used. Drop-in probability 0,05 was used. Theta value 0,01 was used. Rare allele frequency 0,0083 was assigned to rare alleles. LR= 1,6E+ 15</p>
E8TBDE	<p>Method(s): Combined Probability of Exclusion/Inclusion</p> <p>Stats Analysis: Assuming at least 3 contributors, the probability of randomly selecting an unrelated individual who would be included as a contributor to the DNA mixture profile is 1 in greater than 7 billion (approximate population of world).</p>
EKFHBF	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: LR= $1,4E011_{Hp}(\text{item1}+2\text{unkonown_persons})_{Hd}(3\text{unkonown_persons})$ LR= $2,2E010_{Hp}(\text{item2}+2\text{unkonown_persons})_{Hd}(3\text{unkonown_persons})$</p>
JX4EE9	<p>Method(s): NONE</p> <p>Stats Analysis: I am a forensic DNA consultant who works with defense attorneys. I review the bench notes, SOP manuals, qualifications of the analyst, contamination issues, corrective action reports and unexpected results report. I review the case data sheets to determine if the results are accurately interpreted and the data was correctly entered into the statistical software. I reach a conclusion about the quality of the data, the thoroughness of the evidence screening and the final determination as to who contributed any of the DNA. I do not perform any separate statistical analysis.</p>
Q2YDT6	<p>Method(s): [Participant did not report a Method]</p> <p>Stats Analysis: No statistical analysis performed. For databasing purposes only.</p>
R3UJM6	<p>Method(s): Combined Probability of Exclusion/Inclusion</p> <p>Stats Analysis: CPI = 3.37×10^{-8}</p>
RNMG2P	<p>Method(s): Combined Probability of Exclusion/Inclusion</p> <p>Stats Analysis: African American Population Probability - 1 in 54,380,000. Caucasian Population Probability - 1 in 50,790,000</p>

TABLE 6

WebCode	Item 4 Methods & Results
TD8ZU2	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: two hypotheses were firstly formulated: 1) ITEM 1 + 2 UNKNOWN vs. 3 UNKNOWN: LR= 1,8E9 (default drop out 10%). 2) ITEM 2 + 2 UNKNOWN vs. 3 UNKNOWN: LR= 1,9E8 (default drop out 10%). So a last hypothesis of contribution to the ITEM 3 from both ITEM 1 and ITEM 2 together with a female was evaluated: 3) ITEM 1 + ITEM 2 + 1 UNKNOWN vs. 3 UNKNOWN: LR= 4,47E319 (default drop out 10%)</p>
TN7VTW	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: Is 106.861.030.970.052.000 times more likely, if the mixture comes from the victim, the suspect and at least one unknown individual, than if it comes from the victim and at least two unknown individuals taken at random in the reference population.</p>
UU938Z	<p>Method(s): N/A</p> <p>Stats Analysis: I am a forensic consultant that reviews DNA case files that are 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 do not calculate population statistics as part of my case reviews. I accept that the population calculations are correct. N/A = Not Applicable</p>
UZEXQZ	<p>Method(s): Combined Probability of Exclusion/Inclusion, YSTR - Mixture Counting Method</p> <p>Stats Analysis: The Fusion C6 DNA profile from item #4 (DNA profile found on suspect's knife) is consistent with being a mixture of at least three individuals. The victim (Item #1) and suspect (Item #2) are included as potential contributors to the Fusion 6C DNA profile from item #4. The Yfiler DNA profile from item #4 (DNA profile found on suspect's knife) is consistent with being a mixture of at least two males. The victim (Item #1) and suspect (Item #2) are included as potential contributors to the Yfiler DNA profile from item #4. The expected frequency of male individuals who could be included as a contributor to the Fusion 6C DNA profile and the Yfiler YSTR DNA profile from item #4 is approximately 1 in 63.8 million in the African American population, approximately 1 in 4.1 million in the Caucasian population, and approximately 1 in 33.6 million in the Hispanic population.</p>
WVXCXV	<p>Method(s): [Participant did not report a Method]</p> <p>Stats Analysis: No statistical analysis performed. For databasing purposes only</p>
WWRZDU	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: The Victim, suspect and an unknown individual cannot be excluded as a contributors of the cell mix found in this evidence (Item 4 - Knife). Is 6,63316223497595E31 times more probable this finding if the origin cell mix comes from the victim, the suspect and an unknown individual than three unknown individuals in the reference population.</p>
WYU2C6	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: The DNA typing profile obtained from the suspect's knife (item 4) is of mixed origin consistent with having originated from 3 individuals. The victim is included as a possible contributor. Assuming 3 contributors and the suspect as one of those contributors, it is 3.6 octillion times more likely that the observed DNA profile occurred as a result of a mixture of the suspect, victim and one unknown contributor than if it originated from the suspect and two unrelated individuals selected at random from the U.S. population.</p>
XVDTQQ	<p>Method(s): Likelihood Ratio</p> <p>Stats Analysis: A mixed DNA profile from at least three individuals was developed from Item 4. The DNA profile obtained from reference samples ITEM 1 and ITEM 2 are consistent with being the contributors to this mixed DNA profile. The mixed DNA profile are 3.0×10^{exp15}, 7.7×10^{exp15}, 1.5×10^{exp15} times more likely if they originated from ITEM 1, ITEM 2 and ONE UNKNOWN individuals rather than if they originated from from ITEM 1 and TWO UNKNOWN individuals as calculated based on the [Location-specific] population databases respectively.</p>

Databases Used

TABLE 7

WebCode	Databases Used
2B9MM2	<p>Item 3: Statistical calculations were generated using eDNA version 3.2.0.0 2017-03-13 and the NIST Databases for the US Caucasian, African American, and Hispanic populations. Statistical calculations were not performed on the Amelogenin or DYS391 loci.</p> <p>Item 4: [No databases were reported by this participant for this item.]</p>
2F3JCR	<p>Item 3: auto: NIST revised Y: USYSTR</p> <p>Item 4: NIST revised USYSTR</p>
2NVUK3	<p>Item 3: *Statistical calculations were generated using eDNA software version eDNA 3.2.0.0 2017-03-13 and the NIST Databases for the US Caucasian, African American, and Hispanic populations.</p> <p>Item 4: [No databases were reported by this participant for this item.]</p>
3KFLXN	<p>Item 3: FBI Expanded Database</p> <p>Item 4: [No databases were reported by this participant for this item.]</p>
67PQBM	<p>Item 3: Revised-NIST-1036-Allele Frequencies, ABI ID Database + Promega PP Fusion</p> <p>Item 4: Revised-NIST-1036-Allele Frequencies, ABI ID Database + Promega PP Fusion</p>
68JETH	<p>Item 3: Statistical calculations are based on allele frequency data for the relevant populations as presented by LabRetriever. A theta value of 0.01 was incorporated to account for differences due to population substructure, and a P(DO) was also used to account for any alleles that might have dropped out. Statistical calculation for Y-STR haplotypes are based on the US Y-STR Database for the relevant populations.</p> <p>Item 4: Statistical calculations are based on allele frequency data for the relevant populations as presented by LabRetriever. A theta value of 0.01 was incorporated to account for differences due to population substructure, and a P(DO) was also used to account for any alleles that might have dropped out. Statistical calculation for Y-STR haplotypes are based on the US Y-STR Database for the relevant populations.</p>
6JUR9X	<p>Item 3: National Institute of Standards and Technology (NIST) population databases</p> <p>Item 4: [No databases were reported by this participant for this item.]</p>
8M4PTP	<p>Item 3: [Nationality] population database</p> <p>Item 4: [Nationality] population database</p>
9ADA6G	<p>Item 3: Based on [Location-specific] population databases.</p> <p>Item 4: Based on [Location-specific] population databases.</p>
9W7NGG	<p>Item 3: Luque, J. A. Brenner C. H., http://www.dna-view.com/ Forensic Mathematics. Tully and Cols, For. Sci. Int. 124(2001)83-91, https://yhrd.org/search Release 52.</p> <p>Item 4: Luque, J. A. Brenner C. H., http://www.dna-view.com/ Forensic Mathematics. Tully and Cols, For. Sci. Int. 124(2001)83-91, https://yhrd.org/search Release 52.</p>
9YB7R9	<p>Item 3: Popstats\popdata\FBI\Expanded FBI STR 2015\Expanded FBI STR 2015</p> <p>Item 4: [No databases were reported by this participant for this item.]</p>
AUEP3J	<p>Item 3: FBI Caucasian population allele frequencies</p> <p>Item 4: FBI Caucasian population allele frequencies</p>
B9WY6E	<p>Item 3: FBI's population database</p> <p>Item 4: [No databases were reported by this participant for this item.]</p>

TABLE 7

WebCode	Databases Used
BLYQLD	Item 3: [Location-specific] population databases. Item 4: [Location-specific] population databases.
CYNMMB	Item 3: [Nationality] population database was used Item 4: [Nationality] population database was used.
DW9TX4	Item 3: NIST Revised July 2017 Item 4: [No databases were reported by this participant for this item.]
E8TBDE	Item 3: FBI expanded Database Item 4: FBI expanded database
EKFHBF	Item 3: U.S._population_data_for_29_autosomal_STR_loci.Forensic_Sci.Int.Genet. Item 4: U.S._population_data_for_29_autosomal_STR_loci.Forensic_Sci.Int.Genet.
NKHVKE	Item 3: *NOTE: Exclusion/Inclusion statements and statistical calculations were generated using eDNA software version 3.2.0.0 2017-03-13 and the NIST Databases for the US Caucasian, African American, and Hispanic populations. Item 4: [No databases were reported by this participant for this item.]
QDUN2C	Item 3: *Statistical calculations were generated using eDNA software version eDNA 3.2.0.0 2017-03-13 and the NIST Databases for the US Caucasian, African American, and Hispanic populations. Item 4: [No databases were reported by this participant for this item.]
R3UJM6	Item 3: NIST 1036 Revised U.S. population Dataset July 2017 (US Caucasian) [https://strbase.nist.gov/NISTpop.htm] Item 4: NIST 1036 Revised U.S. Population Dataset July 2017 (US Caucasian) [https://strbase.nist.gov/NISTpop.htm]
RNMG2P	Item 3: Expanded FBI STR 2015 Item 4: Expanded FBI STR 2015
TD8ZU2	Item 3: Caucasian NIST database Item 4: Caucasian NIST database
TN7VTW	Item 3: [Location-identifying databases listed by participant] Item 4: [Location-identifying databases listed by participant]
UZEXQZ	Item 3: Autosomal: CT DNA Database Frequencies YSTR: National YSTR Database (http://www.usystrdatabase.org) - MSP YSTR Mixture Tool Item 4: Autosomal: CT DNA Database Frequencies YSTR: National YSTR Database (http://www.usystrdatabase.org) - MSP YSTR Mixture Tool
WXXCVX	Item 3: No statistical analysis performed. For databasing purposes only Item 4: No statistical analysis performed. For databasing purposes only
WWRZDU	Item 3: [Location-identifying databases listed by participant]. Software used to calculate LR was Genética Forense Final 3.0.01 [Website]. Item 4: [Location-identifying databases listed by participant]. Software used to calculate LR was Genética Forense Final 3.0.01 [Website]
WYU2C6	Item 3: FBI Extended BLK, CAU, SWH Item 4: FBI Extended BLK, CAU, SWH

TABLE 7

WebCode	Databases Used
XVDTQQ	Item 3: [Location-specific] population databases. Item 4: [Location-specific] population databases.
Z7HQQM	Item 3: 2015 Expanded FBI STR Population Data. Item 4: [No databases were reported by this participant for this item.]
Z9Q36R	Item 3: STRidER STRs for identity ENFSI Reference database: https://strider.online/ Item 4: [No databases were reported by this participant for this item.]
ZNKRZN	Item 3: The [Laboratory] uses the allele frequencies from the 2015 Expanded FBI STR Population Data that has been compiled by the FBI Laboratory for the African American, Caucasian, Southeastern Hispanic and Southwestern Hispanic populations. Item 4: [No databases were reported by this participant for this item.]

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
8M4PTP	PowerPlex ESI 17 Fast, AmpFISTR NGM, NGM Detect
9YB7R9	Promega Fusion6C
AUEP3J	kits utilized: IdentifilerPlus (IDP), NGMSE, Minifiler, Yfiler. Future kits: Globalfiler, Qiagen24plex, ArgusX
CYNMMB	Powerplex ESI 17 Fast, Powerplex Fusion 6C, NGM, NGM Select Express, Yfiler Plus
E8TBDE	GlobalFiler, YFiler
Q2YDT6	GlobalFiler, YFiler Plus, PowerPlex Y23
TD8ZU2	PowerPlex Y23, PowerPlex Fusion, PowerPlex Fusion 6C, PowerPlex ESI System, PowerPlex ESX System, GlobalFiler, Yfiler, NGMSelect, Minifiler, Qiagen 24Plex QS, Argus X-12
WVXCVX	GlobalFiler, PowerPlex Y23, YFiler Plus
WWRZDU	PowerPlex 21, PowerPlex Fusion 5C and 6C, PowerPlex CS7, PowerPlex ESX17, Global Filer, Verifiler, PowerPlex Y23.
WYU2C6	PowerPlex Fusion 6C and PowerPlex Y23

Additional Comments

TABLE 9

WebCode	Additional Comments
2B9MM2	N/A = not applicable
2F3JCR	The two low level alleles detected in the Y-profiles of both Items 3 and 4 are ambiguous. The heights and positions open the possibility that they could be stutter or double stutter. However, without further work, the possibility of a 3rd contributor cannot be rejected. They were not included in the statistic for the "major" apparently 2 person mixture. The autosomal statistics were calculated using a variety of assumptions, either assuming the suspect on the items found in his car, or using now assumptions. Thus the range or results. Although I would normally use a run-specific, color-specific, empirical threshold, these peaks were all so high it just didn't matter.
3KFLXN	Item 3 "major" profile represents the assumed profile of the suspect. The "minor" profile represents the deduced male profile. Inconclusive= Any possible sister allele
6JUR9X	Item 4, D1S1656 results: 14,15,16,17,18.3,19.3
9W7NGG	The allelic frequencies used for the statistical analyzes correspond to the [Location-identifying databases listed by participant]. Item 4: The autosomal systems CSFPO and D22S1045 were not considered for the analysis taking into account the reproducibility. Item 3 and item 4: The DYS481, DYS549, DYS533 and DYS643 systems on the Y chromosome were not considered for analysis, taking into account the reproducibility.
B9WY6E	For Item 3--"3 major" represents the alleles of the assumed DNA profile, "3 minor" represents the alleles of the deduced DNA profile. Please note "inc." indicates inconclusive.
EKFHBF	Laboratory_Specific_Interpretation_Guidelines_for_ABI_3130XL
JX4EE9	Item #1: Victim's blood sample = clean profile, no anomalies Item #2: Suspect's blood sample = Off ladder allele at D18S51, an 8 allele at DYS391 and an OMR between DYS438 and DYS448. None of these anomalies are seen on the data sheets for Items 3 and 4. They do not interfere with any interpretations of the Q-sample data. Item #3: Suspect's shirt shows alleles from only 2 persons. This profile is consistent with a mixture of DNA from the victim and the suspect both on GlobalFiler and YFiler. YFiler shows alleles called at DYS458 and DYS392 that are consistent with stutter alleles. Stutter alleles are also seen at other loci on the expanded datasheets. Item #4: GlobalFiler shows a 3 person profile. YFiler shows a 2 person profile. The 3rd person on GlobalFiler is most likely a female. The YFiler e-gram is very clean. Stutter alleles are seen on the expanded e-grams for both.
Q2YDT6	Item 4: Trace contributor not suitable for comparison. Interpretation performed on 2 main contributors.
UU938Z	The pdf files for GlobalFiler are printed with an analytical threshold of 75rfu. This is a problem for those of us that do not have the ability to reanalyze the fsa files at thresholds less than 75rfu. It is possible that there is important information below 75rfu that we are unable to evaluate. In addition, 75rfu is a rather conservative analytical threshold for GlobalFiler. Many forensic laboratories use 50rfu as the analytical threshold for GlobalFiler and some even lower at 25rfu. For future tests you should provide pdf files that have been made with a lower analytical threshold.
WYU2C6	The AT, PHR and ST are used for manual analysis of profiles but PHR and ST are not applicable for STRmix analysis. For Item 4 at DYS570, allele 20 was included in the table as it is above our manual stutter threshold but has been interpreted as enhanced stutter by this analyst.
Z7HQMQ	NT=Not Tested. inc=inconclusive. Item 3-Major represents assumed profile of suspect and minor represents deduced profile consistent with victim.

TABLE 9

WebCode	Additional Comments
Z7LFRM	The reference samples were overloaded. The Item #3 results are consistent with an approximately 60:40 mixture of the (V) & (S). As there is no clear major donor, and CPI/CPE is no longer considered reliable, a LR should be provided for the STRs from this sample. I am unable to calculate the appropriate LR as I have no access to PG software. The Item #4 results are consistent with a mixture of at least three donors including the (V) & (S). As there is no clear major donor, a LR should be provided for the STRs from this sample. The YSTR results for both Item #3 & Item #4 indicate the presence of at least two male donors including the (V) & (S). As there is no clear major donor for either item, no haplotype statistics can be calculated.
Z9Q36R	Item 3: The subject (item 2) is an assumed contributor.
ZNKRZN	Raw data was analyzed using Genemapper ID-X version 2.0. inc = inconclusive. For Item 3: 3 Major = Assumed profile of male suspect (Item 2), 3 Minor = Deduced male profile consistent with victim (Item 1)

-End of Report-
(Appendix may follow)

Appendix: Data Sheet

Collaborative Testing Services ~ Forensic Testing Program

Test No. 18-589: DNA Interpretation

DATA MUST BE RECEIVED BY December 3, 2018 TO BE INCLUDED IN THE REPORT

Participant Code:

WebCode:

Accreditation Release Statement

CTS submits external proficiency test data directly to ASCLD/LAB, ANAB, and 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 on the last page must be completed and submitted.)
- This participant's data is **NOT** intended for submission to ASCLD/LAB, ANAB or A2LA.

Scenario:

Police are investigating a stabbing involving a male walking home from a bar. The victim managed to run away from his attacker to safety. The victim was examined and samples were collected for DNA analysis. The victim's friends described a man that got into a heated argument with the victim at the bar. Upon investigation, a male suspect was identified and arrested.

Known samples from the male victim (Item 1) and the male suspect (Item 2) are provided. A shirt (Item 3) and a knife (Item 4) both found in the suspect's car were submitted to the Serology unit which identified the presence of blood on both items. The DNA unit performed extractions on both samples and has completely consumed all evidence. They have provided you with DNA profiles obtained from the items. You are requested to evaluate the DNA profiles using your laboratory specific analysis guidelines and report your results.

FSA, HID and PDF file formats are provided for use in this test, choose any or all formats for evaluation.

Items Submitted (Sample Pack INT2):

- Item 1: DNA profile from reference sample (Male Victim)
- Item 2: DNA profile from reference sample (Male Suspect)
- Item 3: DNA profile found on the suspect's shirt
- Item 4: DNA profile found on the suspect's knife

Please return all pages of this data sheet.

Page 1 of 12

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.

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): 50 rfu

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

DNA Reporting Instructions:

Report the allelic results for each Item in the appropriate response boxes.

Report alleles in numerical order, separated by a comma.

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 row of boxes labeled with only the Item number.

Please Note: Samples were completely consumed during extraction.

Example	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D7S820
3	14,15,16			6,10,11		
Major		12,13	12		14	8,11
Minor		14,15	12,17		18,19	12,13

Part I: DNA ANALYSIS

STR & Amelogenin Results for Known Item 1

STR Amplification Kit Used: Please indicate the electropherogram(s) reviewed for this test.

GlobalFiler™
 PowerPlex® Fusion 6C
 FSA format
 HID format
 PDF format

ITEM	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D7S820
1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ITEM	D8S1179	D10S1248	D12S391	D13S317	D16S539	D18S51
1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ITEM	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO	FGA
1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ITEM	Penta D	Penta E	SE33	TH01	TPOX	vWA
1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ITEM	DYS391	DYS570	DYS576	Y Indel
1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

YSTR Results for Known Item 1

YSTR Amplification Kit Used: Please indicate the electropherogram(s) reviewed for this test.

YFiler®
 GlobalFiler™
 FSA format
 HID format
 PowerPlex® Y23
 PowerPlex® Fusion 6C
 PDF format

ITEM	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ITEM	DYS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS481	DYS533
1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ITEM	DYS549	DYS570	DYS576	DYS635	DYS643	Y GATA H4
1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please return all pages of this data sheet.

Part I: DNA ANALYSIS (continued)

STR & Amelogenin Results for Known Item 2

STR Amplification Kit Used: Please indicate the electropherogram(s) reviewed for this test.

GlobalFiler™
 PowerPlex® Fusion 6C
 FSA format
 HID format
 PDF format

ITEM	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D7S820
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ITEM	D8S1179	D10S1248	D12S391	D13S317	D16S539	D18S51
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ITEM	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO	FGA
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ITEM	Penta D	Penta E	SE33	TH01	TPOX	vWA
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ITEM	DYS391	DYS570	DYS576	Y Indel
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

YSTR Results for Known Item 2

YSTR Amplification Kit Used: Please indicate the electropherogram(s) reviewed for this test.

YFiler®
 GlobalFiler™
 FSA format
 HID format
 PowerPlex® Y23
 PowerPlex® Fusion 6C
 PDF format

ITEM	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ITEM	DYS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS481	DYS533
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ITEM	DYS549	DYS570	DYS576	DYS635	DYS643	Y GATA H4
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please return all pages of this data sheet.

Part I: DNA ANALYSIS (continued)

STR & Amelogenin Results for Questioned Item 3

STR Amplification Kit Used: Please indicate the electropherogram(s) reviewed for this test.					
<input type="checkbox"/> GlobalFiler™	<input type="checkbox"/> PowerPlex® Fusion 6C	<input type="checkbox"/> FSA format	<input type="checkbox"/> HID format	<input type="checkbox"/> PDF format	

ITEM	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D7S820
3	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

major	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
minor	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

ITEM	D8S1179	D10S1248	D12S391	D13S317	D16S539	D18S51
3	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

major	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
minor	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

ITEM	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO	FGA
3	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

major	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
minor	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

ITEM	Penta D	Penta E	SE33	TH01	TPOX	vWA
3	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

major	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
minor	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

ITEM	DYS391	DYS570	DYS576	Y Indel
3	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

major	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
minor	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Please return all pages of this data sheet.

Part I: DNA ANALYSIS (continued)

YSTR Results for Questioned Item 3

YSTR Amplification Kit Used: Please indicate the electropherogram(s) reviewed for this test.							
<input type="checkbox"/> YFiler®	<input type="checkbox"/> GlobalFiler™	<input type="checkbox"/> FSA format	<input type="checkbox"/> HID format				
<input type="checkbox"/> PowerPlex® Y23	<input type="checkbox"/> PowerPlex® Fusion 6C	<input type="checkbox"/> PDF format					

	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
ITEM								
3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
major	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
minor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ITEM	DYS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS481	DYS533
3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
major	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
minor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ITEM	DYS549	DYS570	DYS576	DYS635	DYS643	Y GATA H4		
3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
major	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
minor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Please return all pages of this data sheet.

Part I: DNA ANALYSIS (continued)

STR & Amelogenin Results for Questioned Item 4

STR Amplification Kit Used: Please indicate the electropherogram(s) reviewed for this test.					
<input type="checkbox"/> GlobalFiler™	<input type="checkbox"/> PowerPlex® Fusion 6C	<input type="checkbox"/> FSA format	<input type="checkbox"/> HID format	<input type="checkbox"/> PDF format	

	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D7S820
ITEM						
4	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
major	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
minor	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

	D8S1179	D10S1248	D12S391	D13S317	D16S539	D18S51
ITEM						
4	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
major	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
minor	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO	FGA
ITEM						
4	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
major	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
minor	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

	Penta D	Penta E	SE33	TH01	TPOX	vWA
ITEM						
4	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
major	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
minor	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

	DYS391	DYS570	DYS576	Y Indel
ITEM				
4	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
major	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
minor	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Please return all pages of this data sheet.

Part I: DNA ANALYSIS (continued)

YSTR Results for Questioned Item 4

YSTR Amplification Kit Used: Please indicate the electropherogram(s) reviewed for this test.							
<input type="checkbox"/> Yfiler®	<input type="checkbox"/> GlobalFiler™	<input type="checkbox"/> FSA format	<input type="checkbox"/> HID format				
<input type="checkbox"/> PowerPlex® Y23	<input type="checkbox"/> PowerPlex® Fusion 6C	<input type="checkbox"/> PDF format					

ITEM	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
major	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
minor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ITEM	DYS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS481	DYS533
4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
major	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
minor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ITEM	DYS549	DYS570	DYS576	DYS635	DYS643	Y GATA H4		
4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
major	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
minor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Please return all pages of this data sheet.

Part II: ADDITIONAL COMMENTS

Comments regarding any part of this test.

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.

<p><u>Return Instructions:</u> Data must be received via online data entry, fax (please include a cover sheet), or mail by <i>December 03, 2018</i> to be included in the report. Emailed data sheets are not accepted.</p>	<p>Participant Code:</p> <p>ONLINE DATA ENTRY: www.cts-portal.com</p> <p>FAX: +1-571-434-1937</p> <p>MAIL: Collaborative Testing Services, Inc. P.O. Box 650820 Sterling, VA 20165-0820 USA</p>
<p>QUESTIONS?</p> <p>TEL: +1-571-434-1925 (8 am - 4:30 pm EST)</p> <p>EMAIL: forensics@cts-interlab.com www.ctsforensics.com</p>	

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. **18-589: DNA Interpretation**

This release page must be completed and received by **December 3, 2018** to have this participant's submitted data included in the reports forwarded to the respective Accreditation Bodies.

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. _____

A2LA Certificate No. _____

Step 2: Complete the Laboratory Identifying Information in its entirety

Signature and Title _____

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.

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