Collaborative Testing Services, Inc
FORENSIC TESTING PROGRAM

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DNA Interpretation Test No. 20-5882
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 55 participants and are compiled into the following tables:

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

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

Manufacturer's Information

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

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

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

Amelogenin and STR Results

Results compiled by predistribution laboratories and a consensus of participants.

Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D7S820
	D8S1179	D10S1248	D12S391	D13S317	D16S539	D18S51
	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO	FGA
	Penta D	Penta E	SE33	TH01	TPOX	vWA
	DYS391	DYS570	DYS576	Y Indel		
1	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11,11	10,12	13,13
	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17	19,28.2	6,8	9,11	15,19
	10	20	16	2		
2	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
	14,14.2	28,28	10,16	X,Y	9,11	20,21
	10,13	12,12	19†	6,6	8,8	15,18
	11	13	21	2		
3	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
	14,14.2,15,15.2†	28,29	10,12,16,17	X,Y	9,11	20,21,22
	2.2,10,11,13	9,12,15	19,27.2†	6,7,8	6,8,10	14,15,18
	10,11	13,21	17,21	2		
3major	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
	14,14.2	28,28	10,16	X,Y	9,11	20,21
	10,13	12,12	19†	6,6	8,8	15,18
	11	*	*	2		
3minor	14,15	19,20	14,15	16,17	11	8,9
	13	13	18,20	8,10	8,13	13,19
	15,15.2	29	12,17	X,Y	9,11	22
	2.2,11	9,15	27.2	7,8	6,10	14
	10	*	*	2		
4	13,14,15,16,18.3	17,19,20,23,24,26†	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13†	13,15,17,19
	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18†	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17	19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10	19,20,21	16,17	2		

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

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

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	14	14,19	12	28	26	10	11	13
	14	11	11	19	15	17	26	13
	13	20	16	24	11	11		
2	14	11,13	13	29	24	11	13	13
	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
3	13,14	11,13,16,18	13	29,30	24	10,11	11,13	13
	14,15	10,12	12	19,20	16,18	18	21,22	12
	12	13,21	17,21	21,23	8,12	12		
3major	14	11,13	13	29	24	11	13	13
	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
3minor	13	16,18	13	30	24	10	11	13
	14	10	12	20	18	18	22	12
	12	21	17	21	12	12		
4	13,14	15,16,17,18	12,13	28,30	22,24,26	10	11	13
	14	10,11	11,12	19,20	15,18†	17,18	22,23,26	12,13
	10,12,13	19,20,21	16,17	21,23,24	11,12,14	11,12		

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

Summary Comments

This test was designed to allow participants to assess their proficiency in evaluating electropherograms (EPGs) and interpreting data. Each participant received electropherograms (in 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 including the male suspect and a 3rd party male contributor for whom no reference sample was provided (5:2 ratio respectively). Item 4 was a mixture of samples from three individuals including the male victim as well as 3rd and 4th party male contributors, both of whom no reference sample was provided (2:5:2 ratio respectively).

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

STR Data
Fifty-five participants evaluated the provided STR data. The most frequently reported amplification kit utilized was GlobalFiler™. For both reference Items 1 and 2, all participants reported data that were concordant with the consensus.

For questioned Item 3, 35 participants attempted the deconvolution of this mixture, 34 of which reported both a major and minor profile. A consensus was formed for both major and minor profiles. Consistent results were reported by 25 participants. Of the 10 remaining participants, seven reported inconsistent results by providing multiple combinations of alleles. A consensus was achieved for the full Item 3 profile (unseparated), with the exception of an additional allele being reported at D19S433 by one participant, at vWA by another participant, and at SE33 by twelve participants. All participants reported results in line with the consensus for the full Item 3 profile (unseparated) except for two participants.

For questioned Item 4, four participants attempted the deconvolution of this mixture, one of which reported both a major and a minor profile. However, due to the lack of reported data, no consensus was formed for major or minor profiles. A consensus was achieved for the full Item 4 profile (unseparated), with some participants reporting an additional allele at D2S1338, D16S539 or D22S1045 when utilizing differing analytical thresholds and/or amplification kits for interpretation. All participants reported results in line with the consensus except for three participants. Two participants reported an additional allele of "19" at D12S391. One participant reported an additional allele of "5" at TH01.

YSTR Data
Thirty-seven participants reported YSTR results.

For reference Items 1 and 2, all participants reported allelic responses that were concordant with the consensus.

For questioned Item 3, 17 participants attempted the deconvolution of this mixture,16 of which reported both a major and minor profile. A consensus was formed for both major and minor profiles. All but one participant reported results in line with the consensus. For the full Item 3 profile (unseparated), all participants reported results that were concordant with the consensus except for one participant who reported "13" at DYS570 whereas the consensus was "13,21".

For questioned Item 4, three participants attempted the deconvolution of this mixture, however due to

Summary Comments, continued

lack of reported data, no consensus was formed for major and minor profiles. For the full Item 4 profile (unseparated), all participants reported results that were concordant with the consensus except for four participants who reported inconsistent results at one locus each.

Conclusions

For Item 3, 53 participants reported two (or at least two) contributors and two participants did not report for number of contributors. When comparing the Item 3 mixture profile with the Item 1 (victim) reference profile, 53 participants reported that the victim was excluded as a component of the mixture and two reported inconclusive/uninterpretable. When comparing the Item 3 mixture profile with the Item 2 (suspect) reference profile, all 55 participants reported that the suspect was included as a component of the mixture.

For Item 4, 52 participants reported that three (or at least three) individuals contributed to the mixture, one participant reported "at least 4 contributors", and two did not report a response for number of contributors. When comparing the Item 4 mixture profile with the Item 1 (victim) reference profile, 38 participants reported that the victim was included as a component of the mixture and 17 reported inconclusive/uninterpretable. When comparing the Item 4 mixture profile with the Item 2 (suspect) reference profile, 39 participants reported that the suspect was excluded as a component of the mixture and 16 reported inconclusive/uninterpretable.

Interpretation Guidelines

TABLE 1

WebCode	Analytical Threshold (rfu)	Peak Height Ratio (%)	Stochastic Threshold (rfu)
2T672T	75 rfu	60 %	100 rfu
3TY97N	190	50	1160
4TRT2L	125rfu	60%	600rfu
74Z4QN	[Participant did not provide interpretation guidelines]		
7DB6CN	[Participant did not provide interpretation guidelines]		
7P4RHJ	150 RFU	70%	600 RFU
9BC4ZG	190	50%	1160
9TGBFJ	190 rfu	50%	1160 rfu
9WUX6G	75 rfu, 75 rfu	60%, 50%	
A6WXHN	50	60	200
CG832G	[Participant did not provide interpretation guidelines]		
CHNYUG	STR = 60rfu, YSTR = 60rfu	STR = 50%, Y-STR = 50%	STR - 100rfu, Y-STR - 75rfu
CZMB3H	[Participant did not provide interpretation guidelines]		
D748HC	For STR Analysis: 75 rfu and for YSTR Analysis: 75 rfu	For STR Analysis: 60% and for YSTR Analysis: 50%	For STR Analysis: 100 rfu and for YSTR Analysis: 75 rfu
DA832E	75	60	100
DHY2J8	75	60	100
DQ9469	GF - 160 rfu ; PPy23 - 100 rfu	GF/ppy23 - 60%	GF - 630 rfu; PPy23 - 600 rfu
DQRT2E	75, Y-STR-50	70%, Y-STR-60%	200, Y-STR-150
F7FRW7	STR: 73B,115G,68Y,111R,82P. YSTR: 62B,81G,76Y,66R	60%	FUSION6C: 721 rfu.
FBG4HG	125	60	600
FDTJCH	125rfu	60%	600rfu
GJLXVB	75 rfu	STR 60%; YSTR 50%	STR 100 rfu; YSTR 75 rfu
GZL8E9	190	50	1160
HP6NUC	75 rfu	60%	100 rfu
JQAVBA	75	60	100
K7KVK6	190	50	1160
KBCZD9	75 rfu	60%	100 rfu
KUNPQ7	125 B; 150 G,Y; 175 P; 225 R,O	none	none
KY3CG6	GF: 75rfu, YF: 75rfu	GF: 60%, YF: 50%	GF: 100rfu, YF: 75rfu
LCM3Y8	120	60	360
MUUYCB	[Participant did not provide interpretation guidelines]		
N9DY22	190	50%	1160

TABLE 1

WebCode	Analytical Threshold (rfu)	Peak Height Ratio (%)	Stochastic Threshold (rfu)
P764V4	STR: 75, YSTR:75	STR: 60, YSTR:50	STR: 100, YSTR:75
P9W2A3	Dye channel-specific (Blue:345rfu; Green:125rfu; Yellow:240rfu; Red:155rfu; Purple:130rfu)	Locus-specific: minimum PHR% ranging between 61% and 81%	Dye channel-specific (Blue:820rfu; Green:430rfu; Yellow:735rfu; Red:650rfu; Purple:500rfu)
PQCBB3	GF AT 50; Y23 120 all dyes except Red 180	GF N/A (PG used); Y-23 50%	GF N/A (PG used); Y23 880 at DYS385
QX63V2	60 RFU	PHR% > 60%	606 RFU
RGZVGZ	75	60	230
RKEH8X	150	60	700
RXKMFY	225	50	100
T3E37X	Blue 150; Green 125; Yellow 115; Red 125; Purple 85	50	Blue 670; Green 560; Yellow 515; Red 560; Purple 380
T3YJL2	75 rfu	60	100 rfu
T7RPVW	STR = 75 RFU, YSTR = 75 RFU	STR = 60%, YSTR = 50%	STR = 100 RFU, YSTR = 75 RFU
T86DFW	190 RFU	50%	1160
TMKBKX	190	50%	1160
TQKLGX	190	50	1160
TZPJGU	[Participant did not provide interpretation guidelines]		
VRM4RX	75	60	100
VZYHAU	75	60	100
WGMTWW	200 RFU	70%	800 RFU
WQNFNT	75	60	100
X7LRWW	75 rfu	60%	100 rfu
ZGPYGL	100RFU	60%	300RFU
ZKPADL	75	60	100
ZRPKRR	70 RFU	STRmix is used for analysis	STRmix is used for analysis
ZW48HP	[Participant did not provide interpretation guidelines]		

STR & Amelogenin Results

TABLE 2

WebCode	Amplification Kits (File Format) D1S1656	D2S1338	D2S441	D3S1358	D5S818	D7S820
	D8S1179	D10S1248	D12S391	D13S317	D16S539	D18S51
Item	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO	FGA
	Penta D	Penta E	SE33	TH01	TPOX	vWA
	DYS391	DYS570	DYS576	Y Indel		
Item 1 - STR Results						
2T672T	GlobalFiler™, PowerPlex® Fusion 5C					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11	10,12	13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17	19,28.2	6,8	9,11	15,19
	10			2		
3TY97N	PowerPlex® Fusion 5C (HID Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11,11	10,12	13,13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17	not tested	6,8	9,11	15,19
	10	not tested	not tested	not tested		
4TRT2L	GlobalFiler™ (PDF Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11,11	10,12	13,13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	Not Tested	Not Tested	19,28.2	6,8	9,11	15,19
	10	Not Tested	Not Tested	2		
74Z4QN	GlobalFiler™, PowerPlex® Fusion 5C (FSA Format), (PDF Format), (HID Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11	10,12	13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17	19,28.2	6,8	9,11	15,19
	10			2		
7DB6CN	GlobalFiler™, PowerPlex® Fusion 5C (FSA Format), (PDF Format), (HID Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11	10,12	13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17	19,28.2	6,8	9,11	15,19
	10			2		
7P4RHJ	GlobalFiler™					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11	10,12	13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
			19,28.2	6,8	9,11	15,19
	10			2		

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

Item 1 - STR Results

9BC4ZG	PowerPlex® Fusion 5C (FSA Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11,11	10,12	13,13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17		6,8	9,11	15,19
	10					
9TGBFJ	PowerPlex® Fusion 5C					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11,11	10,12	13,13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17		6,8	9,11	15,19
	10					
9WUX6G	PowerPlex® Fusion 6C (HID Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11	10,12	13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17	19,28.2	6,8	9,11	15,19
	10	20	16			
A6WXHN	PowerPlex® Fusion 5C (FSA Format), (PDF Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11	10,12	13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17		6,8	9,11	15,19
	10					
CG832G	GlobalFiler™, PowerPlex® Fusion 5C (PDF Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11	10,12	13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17	19,28.2	6,8	9,11	15,19
	10	20	16	2		
CHNYUG	GlobalFiler™ (PDF Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11,11	10,12	13,13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
			19,28.2	6,8	9,11	15,19
	10			2		
CZMB3H	GlobalFiler™, PowerPlex® Fusion 5C					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11	10,12	13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17	19,28.2	6,8	9,11	15,19
	10			2		

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

Item 1 - STR Results

D748HC	GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (FSA Format), (HID Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11	10,12	13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17	19,28.2	6,8	9,11	15,19
	10	20	16	2		
DA832E	GlobalFiler™, PowerPlex® Fusion 6C					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11,11	10,12	13,13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17	19,28.2	6,8	9,11	15,19
	10	20	16	2		
DHY2J8	PowerPlex® Fusion 6C (PDF Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11	10,12	13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17	19,28.2	6,8	9,11	15,19
	10	20	16			
DQ9469	GlobalFiler™ (PDF Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11	10,12	13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
			19,28.2	6,8	9,11	15,19
	10			2		
DQRT2E	PowerPlex® Fusion 6C (HID Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11	10,12	13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17	19,28.2	6,8	9,11	15,19
	10	20	16			
F7FRW7	PowerPlex® Fusion 6C (HID Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11	10,12	13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17	19,28.2	6,8	9,11	15,19
	10	20	16			
FBG4HG	GlobalFiler™ (PDF Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11,11	10,12	13,13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
			19,28.2	6,8	9,11	15,19
	10			2		

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

Item 1 - STR Results

FDTJCH	GlobalFiler™ (PDF Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11,11	10,12	13,13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
			19,28.2	6,8	9,11	15,19
	10			2		
GJLXVB	PowerPlex® Fusion 5C (PDF Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11	10,12	13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17		6,8	9,11	15,19
	10					
GZL8E9	PowerPlex® Fusion 5C (FSA Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11,11	10,12	13,13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17		6,8	9,11	15,19
	10					
HP6NUC	GlobalFiler™, PowerPlex® Fusion 5C					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11,11	10,12	13,13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17	19,28.2	6,8	9,11	15,19
	10			2		
JQAVBA	GlobalFiler™ (PDF Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11	10,12	13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
			19,28.2	6,8	9,11	15,19
	10			2		
K7KVK6	PowerPlex® Fusion 5C (FSA Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11,11	10,12	13,13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17	not tested	6,8	9,11	15,19
	10	not tested	not tested	not tested		
KBCZD9	GlobalFiler™, PowerPlex® Fusion 5C					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11	10,12	13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17	19,28.2	6,8	9,11	15,19
	10			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		

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KUNPQ7	GlobalFiler™ (HID Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11,11	10,12	13,13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
			19,28.2	6,8	9,11	15,19
	10			2		
KY3CG6	GlobalFiler™ (PDF Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11,11	10,12	13,13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	N/A	N/A	19,28.2	6,8	9,11	15,19
	10	N/A	N/A	2		
LCM3Y8	GlobalFiler™ (HID Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11	10,12	13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
			19,28.2	6,8	9,11	15,19
	10			2		
MUUYCB	GlobalFiler™, PowerPlex® Fusion 6C (PDF Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11	10,12	13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17	19,28.2	6,8	9,11	15,19
	10	20	16	2		
N9DY22	PowerPlex® Fusion 5C					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11,11	10,12	13,13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17		6,8	9,11	15,19
	10					
P764V4	GlobalFiler™, PowerPlex® Fusion 5C (PDF Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11	10,12	13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17	19,28.2	6,8	9,11	15,19
	10	20	16	2		
P9W2A3	PowerPlex® Fusion 6C (HID Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11	10,12	13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17	19,28.2	6,8	9,11	15,19
	10	20	16			

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		

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PQCBB3 GlobalFiler™ (HID Format)

	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11	10,12	13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
			19,28.2	6,8	9,11	15,19
	10			2		

QX63V2 GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (PDF Format)

	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11,11	10,12	13,13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17	19,28.2	6,8	9,11	15,19
	10	20	16	2		

RGZVGZ PowerPlex® Fusion 6C

	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11	10,12	13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17	19,28.2	6,8	9,11	15,19
	10	20	16			

RKEH8X GlobalFiler™ (PDF Format)

	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11,11	10,12	13,13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
			19,28.2	6,8	9,11	15,19
	10			2		

RXKMFY (PDF Format)

	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11,11	10,12	13,13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
			19,28.2	6,8	9,11	15,19
	10			2		

T3E37X GlobalFiler™

	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11	10,12	13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
			19,28.2	6,8	9,11	15,19
	10			2		

T3YJL2 (PDF Format)

	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11,11	10,12	13,13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17	19,28.2	6,8	9,11	15,19
	10	20	16	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		

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T7RPVW	GlobalFiler™ (PDF Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11,11	10,12	13,13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
			19,28.2	6,8	9,11	15,19
	10			2		
T86DFW	PowerPlex® Fusion 5C (FSA Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11,11	10,12	13,13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17	NT	6,8	9,11	15,19
	10	NT	NT	NT		
TMKBKX	PowerPlex® Fusion 5C					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11,11	10,12	13,13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17		6,8	9,11	15,19
	10					
TQKLGX	PowerPlex® Fusion 5C (FSA Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11,11	10,12	13,13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17		6,8	9,11	15,19
	10					
TZPJGU	GlobalFiler™, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (FSA Format), (PDF Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11,11	10,12	13,13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17	19,28.2	6,8	9,11	15,19
	10	20	16	2		
VRM4RX	GlobalFiler™ (HID Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11,11	10,12	13,13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
			19,28.2	6,8	9,11	15,19
	10			2		
VZYHAU	GlobalFiler™, PowerPlex® Fusion 6C (PDF Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11	10,12	13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17	19,28.2	6,8	9,11	15,19
	10	20	16	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		

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WGMTWW	GlobalFiler™ (HID Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11,11	10,12	13,13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	-	-	19,28.2	6,8	9,11	15,19
	10	-	-	2		
WQNFNT	GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (FSA Format), (PDF Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11	10,12	13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17	19,28.2	6,8	9,11	15,19
	10	20	16			
X7LRWW	GlobalFiler™ (PDF Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11	10,12	13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
			19,28.2	6,8	9,11	15,19
	10			2		
ZGPYGL	GlobalFiler™ (PDF Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11	10,12	13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
			19,28.2	6,8	9,11	15,19
	10			2		
ZKPADL	PowerPlex® Fusion 6C (PDF Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11	10,12	13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17	19,28.2	6,8	9,11	15,19
	10	20	16			
ZRPKRR	PowerPlex® Fusion 6C (HID Format)					
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11,11	10,12	13,13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17	19,28.2	6,8	9,11	15,19
	10	20	16			

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		

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ZW48HP GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (FSA Format), (PDF Format), (HID Format)

	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11	10,12	13
1	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17	19,28.2	6,8	9,11	15,19
	10	20	16	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		

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2T672T	GlobalFiler™, PowerPlex® Fusion 5C					
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28	10,16	X,Y	9,11	20,21
	10,13	12	19	6	8	15,18
	11			2		
3TY97N	PowerPlex® Fusion 5C					
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28,inconclusive	10,16	X,Y	9,11	20,21
	10,13	12,12	not tested	6,inconclusive	8,8	15,18
	11	not tested	not tested	not tested		
4TRT2L	GlobalFiler™ (PDF Format)					
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28,28	10,16	X,Y	9,11	20,21
	Not Tested	Not Tested	19,19	6,6	8,8	15,18
	11	Not Tested	Not Tested	2		
74Z4QN	GlobalFiler™, PowerPlex® Fusion 5C (FSA Format), (PDF Format), (HID Format)					
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28	10,16	X,Y	9,11	20,21
	10,13	12		6	8	15,18
	11			2		
7DB6CN	GlobalFiler™, PowerPlex® Fusion 5C (FSA Format), (PDF Format), (HID Format)					
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28	10,16	X,Y	9,11	20,21
	10,13	12		6	8	15,18
	11			2		
7P4RHJ	GlobalFiler™					
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28	10,16	X,Y	9,11	20,21
			19	6	8	15,18
	11			2		
9BC4ZG	PowerPlex® Fusion 5C (FSA Format)					
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28,inc.	10,16	X,Y	9,11	20,21
	10,13	12,12		6,inc.	8,8	15,18
	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		

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9TGBFJ	PowerPlex® Fusion 5C					
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28,inc.	10,16	X,Y	9,11	20,21
	10,13	12,12		6,inc.	8,8	15,18
	11					
9WUX6G	PowerPlex® Fusion 6C (HID Format)					
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28	10,16	X,Y	9,11	20,21
	10,13	12	18,19	6	8	15,18
	11	13	21			
A6WXHN	PowerPlex® Fusion 5C (FSA Format), (PDF Format)					
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28	10,16	X,Y	9,11	20,21
	10,13	12		6	8	15,18
	11					
CG832G	GlobalFiler™, PowerPlex® Fusion 5C (PDF Format)					
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28	10,16	X,Y	9,11	20,21
	10,13	12	19	6	8	15,18
	11	13	21	2		
CHNYUG	GlobalFiler™ (PDF Format)					
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28,28	10,16	X,Y	9,11	20,21
			19,19	6,6	8,8	15,18
	11			2		
CZMB3H	GlobalFiler™, PowerPlex® Fusion 5C					
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28	10,16	X,Y	9,11	20,21
	10,13	12		6	8	15,18
	11			2		
D748HC	GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (FSA Format), (HID Format)					
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28	10,16	X,Y	9,11	20,21
	10,13	12	18,19	6	8	15,18
	11	13	21	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		

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DA832E	GlobalFiler™, PowerPlex® Fusion 6C (PDF Format)					
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28,28	10,16	X,Y	9,11	20,21
	10,13	12,12	18,19	6,6	8,8	15,18
	11	13	21	2		
DHY2J8	PowerPlex® Fusion 6C (PDF Format)					
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28	10,16	X,Y	9,11	20,21
	10,13	12	18,19	6	8	15,18
	11	13	21			
DQ9469	GlobalFiler™ (PDF Format)					
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28	10,16	X,Y	9,11	20,21
			19	6	8	15,18
	11			2		
DQRT2E	PowerPlex® Fusion 6C (HID Format)					
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28	10,16	X,Y	9,11	20,21
	10,13	12	18,19	6	8	15,18
	11	13	21			
F7FRW7	PowerPlex® Fusion 6C (HID Format)					
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28	10,16	X,Y	9,11	20,21
	10,13	12	18,19	6	8	15,18
	11	13	21			
FBG4HG	GlobalFiler™ (PDF Format)					
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28,28	10,16	X,Y	9,11	20,21
			19,19	6,6	8,8	15,18
	11			2		
FDTJCH	GlobalFiler™ (PDF Format)					
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28,28	10,16	X,Y	9,11	20,21
			19,19	6,6	8,8	15,18
	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

GJLXVB	PowerPlex® Fusion 5C (PDF Format)					
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28	10,16	X,Y	9,11	20,21
	10,13	12		6	8	15,18
	11					
GZL8E9	PowerPlex® Fusion 5C (FSA Format)					
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28,INC	10,16	X,Y	9,11	20,21
	10,13	12,12		6,INC	8,8	15,18
	11					
HP6NUC	GlobalFiler™, PowerPlex® Fusion 5C					
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28,28	10,16	X,Y	9,11	20,21
	10,13	12,12		6,6	8,8	15,18
	11			2		
JQAVBA	GlobalFiler™ (PDF Format)					
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28	10,16	X,Y	9,11	20,21
			19	6	8	15,18
	11			2		
K7KVK6	PowerPlex® Fusion 5C (FSA Format)					
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28,inconclusive	10,16	X,Y	9,11	20,21
	10,13	12,12	not tested	6,inconclusive	8,8	15,18
	11	not tested	not tested	not tested		
KBCZD9	GlobalFiler™, PowerPlex® Fusion 5C					
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28	10,16	X,Y	9,11	20,21
	10,13	12	19	6	8	15,18
	11			2		
KUNPQ7	GlobalFiler™ (HID Format)					
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28,28	10,16	X,Y	9,11	20,21
			19,19	6,6	8,8	15,18
	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

KY3CG6	GlobalFiler™ (PDF Format)					
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28,28	10,16	X,Y	9,11	20,21
	N/A	N/A	19,19	6,6	8,8	15,18
	11	N/A	N/A	2		
LCM3Y8	GlobalFiler™ (HID Format)					
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28	10,16	X,Y	9,11	20,21
			19	6	8	15,18
	11			2		
MUUYCB	GlobalFiler™, PowerPlex® Fusion 6C (PDF Format)					
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28	10,16	X,Y	9,11	20,21
	10,13	12	18,19	6	8	15,18
	11	13	21	2		
N9DY22	PowerPlex® Fusion 5C					
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28,28	10,16	X,Y	9,11	20,21
	10,13	12,12		6,6	8,8	15,18
	11					
P764V4	GlobalFiler™, PowerPlex® Fusion 5C (PDF Format)					
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28	10,16	X,Y	9,11	20,21
	10,13	12	19	6	8	15,18
	11	13	21	2		
P9W2A3	PowerPlex® Fusion 6C (HID Format)					
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28	10,16	X,Y	9,11	20,21
	10,13	12	18,19	6	8	15,18
	11	13	21			
PQCBB3	GlobalFiler™ (HID Format)					
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28	10,16	X,Y	9,11	20,21
			19	6	8	15,18
	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

QX63V2 GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (PDF Format)

	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28,28	10,16	X,Y	9,11	20,21
	10,13	12,12	18,19	6,6	8,8	15,18
	11	13	21	2		

RGZVGZ PowerPlex® Fusion 6C

	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28	10,16	X,Y	9,11	20,21
	10,13	12	18,19	6	8	15,18
	11	13	21			

RKEH8X GlobalFiler™ (PDF Format)

	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28,28	10,16	X,Y	9,11	20,21
			19,19	6,6	8,8	15,18
	11			2		

RXKMFY (PDF Format)

	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28,28	10,16	X,Y	9,11	20,21
			19,19	6,6	8,8	15,18
	11			2		

T3E37X GlobalFiler™

	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28	10,16	X,Y	9,11	20,21
			19	6	8	15,18
	11			2		

T3YJL2 (PDF Format)

	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28,28	10,16	X,Y	9,11	20,21
	10,13	12,12	19,19	6,6	8,8	15,18
	11	13	21	2		

T7RPVW GlobalFiler™ (PDF Format)

	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28,28	10,16	X,Y	9,11	20,21
			19	6,6	8,8	15,18
	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

T86DFW	PowerPlex® Fusion 5C (FSA Format)					
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28,inc	10,16	X,Y	9,11	20,21
	10,13	12,12	NT	6,inc	8,8	15,18
	11	NT	NT	NT		
TMKBKX	PowerPlex® Fusion 5C					
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28,28	10,16	X,Y	9,11	20,21
	10,13	12,12		6,6	8,8	15,18
	11					
TQKLGX	PowerPlex® Fusion 5C (FSA Format)					
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28,28	10,16	X,Y	9,11	20,21
	10,13	12,12		6,6	8,8	15,18
	11					
TZPJGU	GlobalFiler™, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (FSA Format), (PDF Format)					
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28,28	10,16	X,Y	9,11	20,21
	10,13	12,12	18,19	6,6	8,8	15,18
	11	13	21	2		
VRM4RX	GlobalFiler™ (HID Format)					
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28,28	10,16	X,Y	9,11	20,21
			19,19	6,6	8,8	15,18
	11			2		
VZYHAU	GlobalFiler™, PowerPlex® Fusion 6C (PDF Format)					
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28	10,16	X,Y	9,11	20,21
	10,13	12	18,19	6	8	15,18
	11	13	21	2		
WGMTWW	GlobalFiler™ (HID Format)					
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28,28	10,16	X,Y	9,11	20,21
	-	-	19,19	6,6	8,8	15,18
	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

WQNFNT	GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (FSA Format), (PDF Format)					
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28	10,16	X,Y	9,11	20,21
	10,13	12	18,19	6	8	15,18
	11	13	21			
X7LRWW	GlobalFiler™ (PDF Format)					
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28	10,16	X,Y	9,11	20,21
			19	6	8	15,18
	11			2		
ZGPYGL	GlobalFiler™ (PDF Format)					
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28	10,16	X,Y	9,11	20,21
			19	6	8	15,18
	11			2		
ZKPADL	PowerPlex® Fusion 6C (PDF Format)					
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28	10,16	X,Y	9,11	20,21
	10,13	12	18,19	6	8	15,18
	11	13	21			
ZRPKRR	PowerPlex® Fusion 6C (HID Format)					
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28,28	10,16	X,Y	9,11	20,21
	10,13	12,12	18,19	6,6	8,8	15,18
	11	13	21			
ZW48HP	GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (FSA Format), (PDF Format), (HID Format)					
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
2	14,14.2	28	10,16	X,Y	9,11	20,21
	10,13	12	18,19	6	8	15,18
	11	13	21	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

2T672T	GlobalFiler™, PowerPlex® Fusion 5C					
	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
	2.2,10,11,13	9,12,15	19,27.2	6,7,8	6,8,10	14,15,18
	10,11			2		
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
3major	14,14.2	28	10,16	X,Y	9,11	20,21
	10,13	12	19	6	8	15,18
	11			2		
	14,15	19,20	14,15	16,17	11	8,9
			18,20	8,10	8,13	13,19
3minor	15,15.2		12,17	X,Y	9,11	
	2.2,11	9,15		7,8	6,10	14
	10			2		
3TY97N	PowerPlex® Fusion 5C (FSA Format)					
	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
	2.2,10,11,13	9,12,15	not tested	6,7,8	6,8,10	14,15,18
	10,11	not tested	not tested	not tested		
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
3major	14,14.2	28,28	10,16	X,Y	9,11	20,21
	10,13	12,12	not tested	6,6	8,8	15,18
	11	not tested	not tested	not tested		
	14,15	19,20	14,15	16,17	11,12/ 11, inconclusive	8,9
	12,13/12,14/ 13, inconclusive	13,13/ 12,13/ 13,14	18,20	8,10	8,13	13,19
3minor	15,15.2	28,29	12,17	X,Y	9,11	20,22/21,22/22, inconclusive
	2.2,11	9,15	not tested	7,8	6,10	14,inconclusive
	10	not tested	not tested	not tested		

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

4TRT2L	GlobalFiler™ (PDF Format)					
	(14),(15),16	17,(19),(20),25	10,13,(14),(15)	16,17	11,(12)	(8),(9),10,11
	12,(13),14	12,(13),14	(18),19,19.1,(20)	(8),(10),11,12	(8),11,12,(13)	(13),15,16,(19)
3	14,14.2,(15),(15.2)	28,(29)	10,(12),16,(17)	X,Y	9,11	20,21,(22)
	Not Tested	Not Tested	19,(27.2)	6,(7),(8)	(6),8,(10)	14,15,18
	(10),11	Not Tested	Not Tested	2		
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
3major	14,14.2	28,28	10,16	X,Y	9,11	20,21
			19,19	6,6	8,8	Inc
	11			2		
	14,15	19,20	14,15	Inc	Inc	8,9
	13,---	13,---	18,20	8,10	8,13	13,19
3minor	15,15.2	29,---	12,17	X,Y	Inc	22,---
			27.2,---	7,8	6,10	Inc
	10			Inconclusive		
74Z4QN	GlobalFiler™, PowerPlex® Fusion 5C (FSA Format), (PDF Format), (HID Format)					
	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
	2.2,10,11,13	9,12,15		6,7,8	6,8,10	14,15,18
	10,11			2		
	16	17,25	10,13	16,17		10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
3major	14,14.2	28	10,16	X,Y	9,11	20,21
	10,13	12		6	8	
	11			2		
	14,15	19,20	14,15	16,17		8,9
			18,20	8,10	8,13	13,19
3minor	15,15.2	28,29	12,17	X,Y	9,11	
	2.2,11	9,15		7,8	6,10	
	10			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

7DB6CN	GlobalFiler™, PowerPlex® Fusion 5C (FSA Format), (PDF Format), (HID Format)					
	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
	2.2,10,11,13	9,12,15		6,7,8	6,8,10	14,15,18
	10,11			2		
	16	17,25	10,13	16,17		10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
3major	14,14.2	28	10,16	X,Y	9,11	20,21
	10,13	12		6	8	
	11			2		
	14,15	19,20	14,15	16,17		8,9
			18,20	8,10	8,13	13,19
3minor	15,15.2	28,29	12,17	X,Y	9,11	
	2.2,11	9,15		7,8	6,10	
	10			2		
7P4RHJ	GlobalFiler™					
	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
			19,27.2	6,7,8	6,8,10	14,15,18
	10,11			2		
	16,16	17,25	10,13	16,17	ND	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
3major	14,14.2	28,28	10,16	X,Y	9,11	20,21
			19,19	6,6	8,8	ND
	11			2		
	14,15	19,20	14,15	ND	ND	8,9
	13+	13+	18,20	8,10	8,13	13,19
3minor	15,15.2	28,29	12,17	X,Y	ND	22+
			27.2+	7,8	6,10	ND
	10			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

9BC4ZG PowerPlex® Fusion 5C (FSA Format)

	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
	2.2,10,11,13	9,12,15		6,7,8	6,8,10	14,15,18
	10,11					
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
3major	14,14.2	28,28	10,16	X,Y	9,11	20,21
	10,13	12,12		6,6	8,8	15,18
	11					
	14,15	19,20	14,15	16,17	11,12	8,9
	13,inc.	13,inc.	18,20	8,10	8,13	13,19
3minor	15,15.2	29,inc.	12,17	X,Y	9,11	22,inc.
	2.2,11	9,15		7,8	6,10	14,14
	10					

9TGBFJ PowerPlex® Fusion 5C

	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
	2.2,10,11,13	9,12,15		6,7,8	6,8,10	14,15,18
	10,11					
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
3major	14,14.2	28,28	10,16	X,Y	9,11	20,21
	10,13	12,12		6,6	8,8	14,15,14,18,15,18
	11					

9WUX6G PowerPlex® Fusion 6C (HID Format)

	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
	2.2,10,11,13	9,12,15	18,19,27.2	6,7,8	6,8,10	14,15,18
	10,11	13,21	17,21			

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

A6WXHN PowerPlex® Fusion 5C (FSA Format), (PDF Format)

	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
	2.2,10,11,13	9,12,15		6,7,8	6,8,10	14,15,18
	10,11					
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
3major	14,14.2	28	10,16	X,Y	9,11	20,21
	10,13	12		6	8	15,18
	11					
	14,15	19,20	14,15			8,9
	13	13	18,20	8,10	8,13	13,19
3minor	15,15.2	29	12,17			22
	2.2,11	9,15		7,8	6,10	14
	10					

CG832G GlobalFiler™, PowerPlex® Fusion 5C (PDF Format)

	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
	2.2,10,11,13	9,12,15	19,27.2	6,7,8	6,8,10	14,15,18
	10,11	13,21	17,21	2		
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,9.1	11,12	11,12	15,16
3major	14,14.2	28	10,16	X,Y	9,11	20,21
	10,13	12	19	6	8	15,18
	11	13	21	2		
	14,15	19,20	14,15	16,17	11	8,9
	13,14	13,14	18,20	8,10	8,13	13,19
3minor	15,15.2	28,29	12,17	X,Y	9,11	21,22
	2.2,11	9,15	19,27.2	7,8	6,10	14
	10	21	17	2		

CHNYUG GlobalFiler™ (PDF Format)

	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
			19,27.2	6,7,8	6,8,10	14,15,18
	10,11			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

CZMB3H GlobalFiler™, PowerPlex® Fusion 5C

	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
	2.2,10,11,13	9,12,15		6,7,8	6,8,10	14,15,18
	10,11			2		
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
3major	14,14.2	28	10,16	X,Y	9,11	20,21
	10,13	12		6	8	15,18
	11			2		
	14,15	19,20	14,15	16,17	11	8,9
			18,20	8,10	8,13	13,19
3minor	15,15.2		12,17	X,Y	9,11	
	2.2,11	9,15		7,8	6,10	14
	10			2		

D748HC GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (FSA Format), (HID Format)

	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
	2.2,10,11,13	9,12,15	18,19,27.2	6,7,8	6,8,10	14,15,18
	10,11	13,21	17,21	2		

DA832E GlobalFiler™, PowerPlex® Fusion 6C (PDF Format)

					11,12	
3						
						14,15,18
	16,16	17,25	10,13	16,17		10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
3major	14,14.2	28,28	10,16	X,Y	9,11	20,21
	10,13	12,12	18,19	6,6	8,8	
	11	13	21	2		
	14,15	19,20	14,15			8,9
	13	13	18,20	8,10	8,13	13,19
3minor	15,15.2	29	12,17			22
	2.2,11	9,15	27.2	7,8	6,10	
	10	21	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

DHY2J8 PowerPlex® Fusion 6C (PDF Format)

	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
	2.2,10,11,13	9,12,15	18,19,27.2	6,7,8	6,8,10	14,15,18
	10,11	13,21	17,21			
		17,25	10,13			10,11
			19,19.1	11,12	11,12	15,16
3major	14,14.2	28	10,16			20,21
	10,13	12	18,19	6	8	
		19,20	14,15			8,9
			18,20	8,10	8,13	13,19
3minor	15,15.2	29	12,17			22
	2.2,11	9,15	27.2	7,8	6,10	

DQ9469 GlobalFiler™ (PDF Format)

		17,19,20,25			11,12	8,9,10,11
				8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2		10,12,16,17			
			19,27.2			14,15,18
	16		10,13	16,17		
	12,14	12,14	19,19.1			
3major		28		X,Y	9,11	20,21
				6	8	
	11			2		
	14,15		14,15			
	13	13	18,20			
3minor		29				22
				7,8	6,10	
	10					

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

DQRT2E PowerPlex® Fusion 6C (HID Format)

				16,17		
	12,13,14					
3					9,11	20,21,22
			18,19,27.2			14,15,18
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
3major	14,14.2	28	10,16	X,Y	9,11	20,21
	10,13	12	18,19	6	8	
	11	13	21			
	14,15	19,20	14,15		11	8,9
		13,14	18,20	8,10	8,13	13,19
3minor	15,15.2	28,29	12,17	X,Y		
	2.2,11	9,15		7,8	6,10	
	10	21	17			

F7FRW7 PowerPlex® Fusion 6C (HID Format)

	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	12,14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
	2.2,10,11,13	9,12,15	18,19,27.2	6,7,8	6,8,10	14,15,18
	10,11	13,21	17,21			

FBG4HG GlobalFiler™ (PDF Format)

	(14),(15),16	17,(19),(20),25	10,13,(14),(15)	16,17	11,(12)	(8),(9),10,11
	12,(13),14	12,(13),14	(18),19,19.1,(20)	(8),(10),11,12	(8),11,12,(13)	(13),15,16,(19)
3	14,14.2,(15),(15.2)	28,(29)	10,(12),16,(17)	X,Y	9,11	20,21,(22)
			19,(27.2)	6,(7),(8)	(6),8,(10)	14,15,18
	(10),11			2		
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
3major	14,14.2	28,28	10,16	X,Y	9,11	20,21
			19,19	6,6	8,8	Inc
	11			2		
	14,15	19,20	14,15	Inc	Inc	8,9
	13,---	13,---	18,20	8,10	8,13	13,19
3minor	15,15.2	29,---	12,17	X,Y	Inc	22,---
			27.2,---	7,8	6,10	Inc
	10			Inconclusive		

Item 3 - STR Results

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		
FDTJCH	GlobalFiler™ (PDF Format)					
	(14),(15),16	17,(19),(20),25	10,13,(14),(15)	16,17	11,(12)	(8),(9),10,11
	12,(13),14	12,(13),14	(18),19,19.1,(20)	(8),(10),11,12	(8),11,12,(13)	(13),15,16,(19)
3	14,14.2,(15),(15.2)	28,(29)	10,(12),16,(17)	X,Y	9,11	20,21,(22)
			19,(27.2)	6,(7),(8)	(6),8,(10)	14,15,18
	(10),11			2		
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
3major	14,14.2	28,28	10,16	X,Y	9,11	20,21
			19,19	6,6	8,8	Inc
	11			2		
	14,15	19,20	14,15	Inc	Inc	8,9
	13,---	13,---	18,20	8,10	8,13	13,19
3minor	15,15.2	29,---	12,17	X,Y	Inc	22,---
			27.2,---	7,8	6,10	Inc
	10			Inconclusive		
GJLXVB	PowerPlex® Fusion 5C (PDF Format)					
	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
	2.2,OL,10,11,13	9,12,15		6,7,8	6,8,10	14,15,17,18
	10,11					
GZL8E9	PowerPlex® Fusion 5C (FSA Format)					
	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
	2.2,10,11,13	9,12,15		6,7,8	6,8,10	14,15,18
	10,11					
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
3major	14,14.2	28,28	10,16	X,Y	9,11	20,21
	10,13	12,12		6,6	8,8	14, INC, 15, INC, 18, INC
	11					
	14,15	19,20	14,15	16,17,16,16 ,17,17	11,11,11,12	8,9
	13,INC	13,INC	18,20	8,10	8,13	13,19
3minor	15,15.2	29,INC	12,17	X,Y	9,9,9,11,11,11	22,INC
	2.2,11	9,15		7,8	6,10	14, INC, 15, INC, 18, INC
	10					

Item 3 - STR Results

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		
HP6NUC	GlobalFiler™, PowerPlex® Fusion 5C					
	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
	2.2,10,11,13	9,12,15	19,27.2	6,7,8	6,8,10	14,15,18
	10,11			2		
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
3major	14,14.2	28,28	10,16	X,Y	9,11	20,21
	10,13	12,12		6,6	8,8	15,18
	11			2		
	14,15	19,20	14,15	16,17	11,11	8,9
	13,14	13,14	18,20	8,10	8,13	13,19
3minor	15,15.2	28,29	12,17	X,Y	9,11	21,22
	2.2,11	9,15	19,27.2	7,8	6,10	14,14
	10			2		
JQAVBA	GlobalFiler™ (PDF Format)					
	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
			19,27.2	6,7,8	6,8,10	14,15,18
	10,11			2		
K7KVK6	PowerPlex® Fusion 5C (FSA Format)					
	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
	2.2,10,11,13	9,12,15	not tested	6,7,8	6,8,10	14,15,18
	10,11	not tested	not tested	not tested		
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
3major	14,14.2	28,28	10,16	X,Y	9,11	20,21
	10,13	12,12		6,6	8,8	14,inc. 15,inc. 18,inc.
	11					
	14,15	19,20	14,15	16,inc. 17,inc.	not detected	8,9
	13,inconclusive	13,inconclusive	18,20	8,10	8,13	13,19
3minor	15,15.2	29,inconclusive	12,17	X,Y	not detected	22,inconclusive
	2.2,11	9,15		7,8	6,10	14,inc. 15,inc. 18,inc.
	10					

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

KBCZD9 GlobalFiler™, PowerPlex® Fusion 5C

	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
	2.2,10,11,13	9,12,15	19,27.2	6,7,8	6,8,10	14,15,18
	10,11			2		
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
3major	14,14.2	28	10,16	X,Y	9,11	20,21
	10,13	12	19	6	8	15,18
	11			2		
	14,15	19,20	14,15	16,17	11	8,9
			18,20	8,10	8,13	13,19
3minor	15,15.2		12,17	X,Y	9,11	
	2.2,11	9,15		7,8	6,10	14
	10			2		

KUNPQ7 GlobalFiler™ (HID Format)

	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
			19,27.2	6,7,8	6,8,10	14,15,18
	10,11			2		

KY3CG6 GlobalFiler™ (PDF Format)

	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
	N/A	N/A	19,27.2	6,7,8	6,8,10	14,15,18
	10,11	N/A	N/A	2		

LCM3Y8 GlobalFiler™ (HID Format)

	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
			19,27.2	6,7,8	6,8,10	14,15,18
	10,11			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

MUUYCB GlobalFiler™, PowerPlex® Fusion 6C

					11,12	
3						
						14,15,18
	16	17,25	10,13	16,17		10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
3major	14,14.2	28	10,16	X,Y	9,11	20,21
	10,13	12	18,19	6	8	
	11	13	21	2		
	14,15	19,20	14,15			8,9
	13+	13+	18,20	8,10	8,13	13,19
3minor	15,15.2	29+	12,17			22+
	2.2,11	9,15	27.2+	7,8	6,10	
	10	21	17	OL=1.2		

N9DY22 PowerPlex® Fusion 5C

	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
	2.2,10,11,13	9,12,15		6,7,8	6,8,10	14,15,18
	10,11					
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
3major	14,14.2	28,28	10,16	X,Y	9,11	20,21
	10,13	12,12		6,6	8,8	(14,15) (14,18) (15,18)
	11					
	14,15	19,20	14,15	16,17	(11,11)(11,12)	8,9
	13,inc	13,inc	18,20	8,10	8,13	13,19
3minor	15,15.2	29,inc	12,17	X,Y	9,11	22,inc
	2.2,11	9,15		7,8	6,10	(14,inc) (15,inc) (18,inc)
	10					

Item 3 - STR Results

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		
P764V4	GlobalFiler™, PowerPlex® Fusion 5C (PDF Format)					
	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
	2.2,10,11,13	9,12,15	19,27.2	6,7,8	6,8,10	14,15,18
	10,11	13,21	17,21	2		
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
3major	14,14.2	28	10,16	X,Y	9,11	20,21
	10,13	12	19	6	8	15,18
	11	13	21	2		
	14,15	19,20	14,15	16,17	11	8,9
	13,14	13,14	18,20	8,10	8,13	13,19
3minor	15,15.2	28,29	12,17	X,Y	9,11	21,22
	2.2,11	9,15	19,27.2	7,8	6,10	14,14
	10	21	17	2		
P9W2A3	PowerPlex® Fusion 6C (HID Format)					
	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
	2.2,10,11,13	9,12,15	18,19,27.2	6,7,8	6,8,10	14,15,18
	10,11	13,21	17,21			
PQCBB3	GlobalFiler™ (HID Format)					
	14,15,16,17	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
			19,27.2	3,6,7,8	6,8,10	14,15,18
	10,11			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

QX63V2 GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (PDF Format)

	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
	2.2,10,11,13	9,12,15	18,19,27.2	6,7,8	6,8,10	14,15,18
	10,11	13,21	17,21	2		
	16	17,25	10,13	16,17	//	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
3major	14,14.2	28	10,16	X,Y	9,11	20,21
	10,13	12	18,19	6	8	15,18
	11	13	21	2		
	14,15	19,20	14,15	//	//	8,9
	13	13	18,20	8,10	8,13	13,19
3minor	15,15.2	29	12,17	//	//	22
	2.2,11	9,15	27.2	7,8	6,10	14
	10	21	17	//		

RGZVGZ PowerPlex® Fusion 6C

	14,15,16					
	12,13,14	12,13,14				
3						
						14,15,18
		17,25	10,13	16,17	11,12	10,11
			19,19.1	11,12	11,12	15,16
3major	14,14.2	28	10,16	X,Y	9,11	20,21
	10,13	12	18,19	6	8	
	11	13	21			
		19,20	14,15			8,9
			18,20	8,10	8,13	13,19
3minor	15,15.2	29	12,17			22
	2.2,11	9,15	27.2	7,8	6,10	
	10	21	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

RKEH8X GlobalFiler™ (PDF Format)

	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
			19,27.2	6,7,8	6,8,10	14,15,18
	10,11			2		
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
3major	14,14.2	28,28	10,16	X,Y	9,11	20,21
			19,19	6,6	8,8	15,18
	11			2		
	14,15	19,20	14,15		11,11	8,9
	13,14	13,13	18,20	8,10	8,13	13,19
3minor	15,15.2	29,29	12,17	X,Y		21,22
			27.2,27.2	7,8	6,10	14,14
	10			2		

RXKMFY (PDF Format)

	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
			19,27.2	6,7,8	6,8,10	14,15,18
	10,11			2		
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
3major	14,14.2	28,28	10,16	X,Y	9,11	20,21
			19,19	6,6	8,8	NR,NR
	11			2		
	14,15	19,20	14,15	NR,NR	NR,NR	8,9
	13,NR	13,NR	18,20	8,10	8,13	13,19
3minor	15,15.2	29,NR	12,17	X,NR	NR,NR	22,NR
			27.2,NR	7,8	6,10	NR,NR
	10			NR		

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

T3E37X GlobalFiler™

	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
			19,27.2	6,7,8	6,8,10	14,15,18
	10,11			2		
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
3major	14,14.2	28	10,16	X,Y	9,11	20,21
			19	6	8	15,18
	11			2		
	14,15	19,20	14,15	16,17	11	8,9
	13,14	13,14	18,20	8,10	8,13	13,19
3minor	15,15.2	28,29	12,17		9,11	21,22
				7,8	6,10	14

T3YJL2 (PDF Format)

	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
	2.2,10,11,13	9,12,15	19,27.2	6,7,8	6,8,10	14,15,18
	10,11	13,21	17,21	2		
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
3major	14,14.2	28,28	10,16	X,Y	9,11	20,21
	10,13	12,12	19,19	6,6	8,8	15,18
	11	13	21	2		
	14,15	19,20	14,15	16,17	11,11	8,9
	13,14	13,14	18,20	8,10	8,13	13,19
3minor	15,15.2	28,29	12,17	X,Y	9,11	21,22
	2.2,11	9,15	19,27.2	7,8	6,10	14,14
	10	21	17	2		

T7RPVW GlobalFiler™ (PDF Format)

	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
			19,27.2	6,7,8	6,8,10	14,15,18
	10,11			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

T86DFW	PowerPlex® Fusion 5C (FSA Format)					
	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
	2.2,10,11,13	9,12,15	NT	6,7,8	6,8,10	14,15,18
	10,11	NT	NT	NT		
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
3major	14,14.2	28,28	10,16	X,Y	9,11	20,21
	10,13	12,12	NT	6,6	8,8	14, INC-15, INC-18, INC
	11	NT	NT	NT		
	14,15	19,20	14,15	ND	ND	8,9
	13,INC	13,INC	18,20	8,10	8,13	13,19
3minor	15,15.2	29,INC	12,17	ND	ND	22,INC
	2.2,11	9,15	NT	7,8	6,10	14, INC-15, INC-18, INC
	10	NT	NT	NT		
TMKBKX	PowerPlex® Fusion 5C					
	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
	2.2,10,11,13	9,12,15		6,7,8	6,8,10	14,15,18
	10,11					
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
3major	14,14.2	28,28	10,16	X,Y	9,11	20,21
	10,13	12,12		6,6	8,8	(14,inc) (15,inc) (18,inc)
	11					
	14,15	19,20	14,15	ND	ND	8,9
	13,inc	13,inc	18,20	8,10	8,13	13,19
3minor	15,15.2	29,inc	12,17	X,Y	ND	22,inc
	2.2,11	9,15		7,8	6,10	(14,inc) (15,inc) (18,inc)
	10					

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

TQKLGX	PowerPlex® Fusion 5C (FSA Format)					
	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
	2.2,10,11,13	9,12,15		6,7,8	6,8,10	14,15,18
	10,11					
	16,16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
3major	14,14.2	28,28	10,16	X,Y	9,11	20,21
	10,13	12,12		6,6	8,8	14,inc./ 15,inc./ 18,inc.
	11					
	14,15	19,20	14,15	16,16/ 16,17/ 17,17	11,11/11,12	8,9
	13,inc.	13,inc.	18,20	8,10	8,13	13,19
3minor	15,15.2	29,inc.	12,17	X,Y	9,9/ 9,11/ 11,11	22,inc.
	2.2,11	9,15		7,8	6,10	14,inc./ 15,inc./ 18,inc.
	10					
TZPJGU	GlobalFiler™, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (FSA Format), (PDF Format)					
	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
	2.2,10,11,13	9,12,15	18,19,27.2	6,7,8	6,8,10	14,15,18
	10,11	13,21	17,21	2		
VRM4RX	GlobalFiler™ (HID Format)					
	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
			19,27.2	6,7,8	6,8,10	14,15,18
	10,11			2		
VZYHAU	GlobalFiler™, PowerPlex® Fusion 6C (PDF Format)					
	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
	2.2,10,11,13	9,12,15	18,19,27.2	6,7,8	6,8,10	14,15,18
	10,11	13,21	17,21	2		
WGMTWW	GlobalFiler™ (HID Format)					
	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
	-	-	19,27.2	6,7,8	6,8,10	14,15,18
	10,11	-	-	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

WQNFNT	GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (FSA Format), (PDF Format)					
	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
	2.2,10,11,13	9,12,15	18,19,27.2	6,7,8	6,8,10	14,15,18
	10,11	13,21	17,21			
X7LRWW	GlobalFiler™ (PDF Format)					
	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
			19,27.2	6,7,8	6,8,10	14,15,18
	10,11			2		
ZGPYGL	GlobalFiler™ (PDF Format)					
	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
			19,27.2	6,7,8	6,8,10	14,15,18
	10,11			2		
	16	17,25	10,13			10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
3major	14,14.2	28	10,16			20,21
			19	6	8	
	11					
	14,15	19,20	14,15			8,9
	13	13	18,20	8,10	8,13	13,19
3minor	15,15.2	29	12,17			22
			27.2	7,8	6,10	
	10					
ZKPADL	PowerPlex® Fusion 6C (PDF Format)					
	16	17,25	10,13	16,17	11,12	10,11
	12,14	12,14	19,19.1	11,12	11,12	15,16
3major	14,14.2	28	10,16		9,11	20,21
	10,13	12	18,19	6	8	
	14,15	19,20	14,15			8,9
	13	13	18,20	8,10	8,13	13,19
3minor	15,15.2	29	12,17			22
	2.2,11	9,15	27.2	7,8	6,10	

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

ZRPKRR	PowerPlex® Fusion 6C (HID Format)					
	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
	2.2,10,11,13	9,12,15	18,19,27.2	6,7,8	6,8,10	14,15,18
	10,11	13,21	17,21			

ZW48HP	GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (FSA Format), (PDF Format), (HID Format)					
	14,15,16	17,19,20,25	10,13,14,15	16,17	11,12	8,9,10,11
	12,13,14	12,13,14	18,19,19.1,20	8,10,11,12	8,11,12,13	13,15,16,19
3	14,14.2,15,15.2	28,29	10,12,16,17	X,Y	9,11	20,21,22
	2.2,10,11,13	9,12,15	18,19,27.2	6,7,8	6,8,10	14,15,18
	10,11	13,21	17,21	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 4 - STR Results

2T672T GlobalFiler™, PowerPlex® Fusion 5C

	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17	19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10			2		

3TY97N PowerPlex® Fusion 5C (FSA Format)

	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17	not tested	6,7,8	6,8,9,10,11	14,15,18,19
	10	not tested	not tested	not tested		

4TRT2L GlobalFiler™ (PDF Format)

	(13),14,15,(16),(18.3)	(17),19,20,(23),(24),(26)	(11),12,(12.3),14,15	(14),(15),16,17	(10),11,(12)	8,9,(10),(12)
	(12),13,14,(15)	(12),13,14,(15),16	18,(18.3),20,(21),(23)	8,10,11,(12)	8,(10),(11),(12),13	13,(15),(17),(19)
4	(14),(14.2),15,15.2	28,29,30,(31.2)	12,15,17,(18)	X,Y	(7),9,(10),11,(12),(13)	(21),22,(24),(29)
	Not Tested	Not Tested	19,27.2,28.2	(6),7,8	6,(8),(9),10,(11)	14,(15),(18),(19)
	10	Not Tested	Not Tested	2		

74Z4QN GlobalFiler™, PowerPlex® Fusion 5C (FSA Format), (PDF Format), (HID Format)

	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,19,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17	19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10			2		

7DB6CN GlobalFiler™, PowerPlex® Fusion 5C (FSA Format), (PDF Format), (HID Format)

	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,19,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17	19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10			2		

7P4RHJ GlobalFiler™

	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
			19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10			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 4 - STR Results

9BC4ZG	PowerPlex® Fusion 5C (FSA Format)					
	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17		6,7,8	6,8,9,10,11	14,15,18,19
	10					
9TGBFJ	PowerPlex® Fusion 5C					
	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17		6,7,8	6,8,9,10,11	14,15,18,19
	10					
9WUX6G	PowerPlex® Fusion 6C (HID Format)					
	13,14,15,16,18.3	17,19,20,23,24,25, 26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,16,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17	19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10	19,20,21	16,17			
A6WXHN	PowerPlex® Fusion 5C (FSA Format), (PDF Format)					
	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17		6,7,8	6,8,9,10,11	14,15,18,19
	10					
	14,15	19,20	14,15	16,17	11	8,9
	13	13,14	18,20	8,10	8,13	13,19
4major	15,15.2	28,29,30	12,15,17	X,Y	9,11	21,22
	2.2,11	9,15		7,8	6	14
	10					
	[13],16,[18.3]	17,23,24,26	11,12,[12.3]	14,15	10,12	[10],12
	[12],14,[15]	[12],[15],16	18.3,21,[23]	11,[12]	10,11,12	15,17
4minor	14,14.2	31.2	18		7,10,12,[13]	24,29
	5,8,9,[13]	[11],[12],13,17		6	8,9,10,[11]	[15],18,[19]

Item 4 - STR Results

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		
CG832G	GlobalFiler™, PowerPlex® Fusion 5C (PDF Format)					
	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17	19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10	19,20,21	16,17	2		
	14,15	19,20	14,15	16,17	11	8,9
	13,14	13,14	18,20	8,10	8,13	13,19
4major	15,15.2	28,29	12,17	X,Y	9,11	21,22
	2.2,11	9,15	19,27.2	7,8	6,10	14
	10	21	17	2		
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11	10,12	13,13
4minor	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17	19,28.2	6,8	9,11	15,19
	10	20	16	2		
CHNYUG	GlobalFiler™ (PDF Format)					
	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
			19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10			2		
CZMB3H	GlobalFiler™, PowerPlex® Fusion 5C					
	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17	19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10			2		
D748HC	GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (FSA Format), (HID Format)					
	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17	19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10	19,20,21	16,17	2		
DA832E	GlobalFiler™, PowerPlex® Fusion 6C (PDF Format)					
	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17	19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10	19,20,21	16,17	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 4 - STR Results

DHY2J8 PowerPlex® Fusion 6C (PDF Format)

	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,16,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17	19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10	19,20,21	16,17			

DQ9469 GlobalFiler™ (PDF Format)

	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
			19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10			2		

DQRT2E PowerPlex® Fusion 6C (HID Format)

	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,16,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17	19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10	19,20,21	16,17			

F7FRW7 PowerPlex® Fusion 6C (HID Format)

	13,14,15,16,18.3	17,19,20,23,24,25,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,16,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17	19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10	19,20,21	16,17			

FBG4HG GlobalFiler™ (PDF Format)

	(13),14,15,(16),(18.3)	(17),19,20,(23),(24),(26)	(11),12,(12.3),14,15	(14),(15),16,17	(10),11,(12)	8,9,(10),(12)
	(12),13,14,(15)	(12),13,14,(15),16	18,(18.3),20,(21),(23)	8,10,11,(12)	8,(10),(11),(12),13	13,(15),(17),(19)
4	(14),(14.2),15,15.2	28,29,30,(31.2)	12,15,17,(18)	X,Y	(7),9,(10),11,(12),(13)	(21),22,(24),(29)
			19,27.2,28.2	(6),7,8	6,(8),(9),10,(11)	14,(15),(18),(19)
	10			2		

FDTJCH GlobalFiler™ (PDF Format)

	(13),14,15,(16),(18.3)	(17),19,20,(23),(24),(26)	(11),12,(12.3),14,15	(14),(15),16,17	(10),11,(12)	8,9,(10),(12)
	(12),13,14,(15)	(12),13,14,(15),16	18,(18.3),20,(21),(23)	8,10,11,(12)	8,(10),(11),(12),13	13,(15),(17),(19)
4	(14),(14.2),15,15.2	28,29,30,(31.2)	12,15,17,(18)	X,Y	(7),9,(10),11,(12),(13)	(21),22,(24),(29)
			19,27.2,28.2	(6),7,8	6,(8),(9),10,(11)	14,(15),(18),(19)
	10			2		

Item 4 - STR Results

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		
GJLXVB	PowerPlex® Fusion 5C (PDF Format)					
	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	7,8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17		6,7,8	6,8,9,10,11	14,15,18,19
	10					
GZL8E9	PowerPlex® Fusion 5C (FSA Format)					
	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17		6,7,8	6,8,9,10,11	14,15,18,19
	10					
HP6NUC	GlobalFiler™, PowerPlex® Fusion 5C					
	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17	19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10			2		
JQAVBA	GlobalFiler™ (PDF Format)					
	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
			19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10			2		
K7KVK6	PowerPlex® Fusion 5C (FSA Format)					
	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17	not tested	6,7,8	6,8,9,10,11	14,15,18,19
	10	not tested	not tested	not tested		
KBCZD9	GlobalFiler™, PowerPlex® Fusion 5C					
	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17	19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10			2		
KUNPQ7	GlobalFiler™ (HID Format)					
	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
			19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10			2		

Item 4 - STR Results

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		
KY3CG6	GlobalFiler™ (PDF Format)					
	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	N/A	N/A	19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10	N/A	N/A	2		
LCM3Y8	GlobalFiler™ (HID Format)					
	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
			19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10			2		
MUUYCB	GlobalFiler™, PowerPlex® Fusion 6C (PDF Format)					
	13,14,15,16,18.3	17,19,20,23,24,25, 26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,16,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17	19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10	19,20,21	16,17	OL=1.2,2		
N9DY22	PowerPlex® Fusion 5C					
	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	7,8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17		6,7,8	6,8,9,10,11	14,15,18,19
	10					
P764V4	GlobalFiler™, PowerPlex® Fusion 5C (PDF Format)					
	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17	19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10	19,20,21	16,17	2		
P9W2A3	PowerPlex® Fusion 6C (HID Format)					
	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,16,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17	19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10	19,20,21	16,17			

Item 4 - STR Results

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		
PQCBB3	GlobalFiler™ (HID Format)					
	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
			19,27.2,28.2	5,6,7,8	6,8,9,10,11	14,15,18,19
	10			2		
QX63V2	GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (PDF Format)					
	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17	19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10	19,20,21	16,17	2		
RGZVGZ	PowerPlex® Fusion 6C					
	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17	19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10	19,20,21	16,17			
RKEH8X	GlobalFiler™ (PDF Format)					
	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
			19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10			2		
RXKMFY	(PDF Format)					
	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
			19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10			2		
	14,15	19,20	14,15	16,17	11,NR	8,NR
	NR,NR	13,14	18,20	NR,NR	8,13	13,NR
4major	15,15.2	NR,NR	NR,NR	X,Y	9,11	21,22
			NR,NR	7,8	6,10	14,NR
	10			2		
T3E37X	GlobalFiler™					
	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
			19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10			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 4 - STR Results

T3YJL2 (PDF Format)

	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17	19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10	19,20,21	16,17	2		
	14,15	19,20	14,15	16,17	11,11	8,9
	13,14	13,14	18,20	8,10	8,13	13,19
4major	15,15.2	28,29	12,17	X,Y	9,11	21,22
	2.2,11	9,15	19,27.2	7,8	6,10	14,14
	10	21	17	2		
	13,16	23,24	11,12	15,17	11,12	8,10
	12,15	12,16	20,21	11,11	10,12	13,13
4minor	14,15.2	30,31.2	15,18	X,Y	10,13	22,29
	5,8	13,17	19,28.2	6,8	9,11	15,19
	10	20	16	2		

T7RPVW GlobalFiler™ (PDF Format)

	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
			19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10			2		

T86DFW PowerPlex® Fusion 5C (FSA Format)

	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17	NT	6,7,8	6,8,9,10,11	14,15,18,19
	10	NT	NT	NT		

TMKBKX PowerPlex® Fusion 5C

	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21	8,10,11,12	7,8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17		6,7,8	6,8,9,10,11	14,15,18,19
	10					

TQKLGX PowerPlex® Fusion 5C (FSA Format)

	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17		6,7,8	6,8,9,10,11	14,15,18,19
	10					

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

TZPJGU	GlobalFiler™, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (FSA Format), (PDF Format)					
	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17	19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10	19,20,21	16,17	2		
VRM4RX	GlobalFiler™ (HID Format)					
	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
			19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10			2		
VZYHAU	GlobalFiler™, PowerPlex® Fusion 6C (PDF Format)					
	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17	19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10	19,20,21	16,17	2		
WGMTWW	GlobalFiler™ (HID Format)					
	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	-	-	19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10	-	-	2		
WQNFNT	GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (FSA Format), (PDF Format)					
	13,14,15,16,18.3	17,19,20,23,24,25, 26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17	19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10	19,20,21	16,17			
X7LRWW	GlobalFiler™ (PDF Format)					
	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
			19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10			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 4 - STR Results

ZGPYGL GlobalFiler™ (PDF Format)

	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
			19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10			2		

ZKPADL PowerPlex® Fusion 6C (PDF Format)

	13,14,15,16,18.3	17,19,20,23,24,25, 26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,16,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17	19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10	19,20,21	16,17			

ZRPKRR PowerPlex® Fusion 6C (HID Format)

	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17	19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10	19,20,21	16,17			

ZW48HP GlobalFiler™, Investigator® 24plex, PowerPlex® Fusion 5C, PowerPlex® Fusion 6C (FSA Format), (PDF Format), (HID Format)

	13,14,15,16,18.3	17,19,20,23,24,26	11,12,12.3,14,15	14,15,16,17	10,11,12	8,9,10,12
	12,13,14,15	12,13,14,15,16	18,18.3,20,21,23	8,10,11,12	8,10,11,12,13	13,15,17,19
4	14,14.2,15,15.2	28,29,30,31.2	12,15,17,18	X,Y	7,9,10,11,12,13	21,22,24,29
	2.2,5,8,9,11,13	9,11,12,13,15,17	19,27.2,28.2	6,7,8	6,8,9,10,11	14,15,18,19
	10	19,20,21	16,17	2		

YSTR Results

TABLE 3

WebCode / Item	Amplification Kits (File Format)							
	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		
Item 1 - YSTR Results								
2T672T	PowerPlex® Y23							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17	26	13
	13	20	16	24	11	11		
3TY97N	PowerPlex® Y23 (FSA Format)							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17	26	13
	13	20	16	24	11	11		
74Z4QN	Yfiler®, PowerPlex® Y23 (FSA Format), (PDF Format), (HID Format)							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17	26	13
	13	20	16	24	11	11		
7DB6CN	Yfiler®, PowerPlex® Y23 (FSA Format), (PDF Format), (HID Format)							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17	26	13
	13	20	16	24	11	11		
9BC4ZG	PowerPlex® Y23 (FSA Format)							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17	26	13
	13	20	16	24	11	11		
9WUX6G	PowerPlex® Y23 (FSA Format)							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17	26	13
	13	20	16	24	11	11		
A6WXHN	PowerPlex® Y23 (FSA Format), (PDF Format)							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17	26	13
	13	20	16	24	11	11		
CG832G	PowerPlex® Y23 (PDF Format)							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17	26	13
	13	20	16	24	11	11		
CHNYUG	PowerPlex® Y23 (PDF Format)							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17	26	13
	13	20	16	24	11	11		

TABLE 3

WebCode / Item	Amplification Kits (File Format)							
	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		
Item 1 - YSTR Results								
CZMB3H	PowerPlex® Y23							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17	26	13
	13	20	16	24	11	11		
D748HC	Yfiler®, PowerPlex® Y23 (FSA Format)							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17	26	13
	13	20	16	24	11	11		
DA832E	(PDF Format)							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17	26	13
	13	20	16	24	11	11		
DQ9469	PowerPlex® Y23 (PDF Format)							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17	26	13
	13	20	16	24	11	11		
DQRT2E	PowerPlex® Y23 (HID Format)							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17	26	13
	13	20	16	24	11	11		
F7FRW7	PowerPlex® Y23 (FSA Format)							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17	26	13
	13	20	16	24	11	11		
GJLXVB	PowerPlex® Y23 (PDF Format)							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17	26	13
	13	20	16	24	11	11		
HP6NUC	PowerPlex® Y23							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17	26	13
	13	20	16	24	11	11		
JQAVBA	Yfiler® (PDF Format)							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17		
				24		11		
KBCZD9	PowerPlex® Y23							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17	26	13
	13	20	16	24	11	11		

TABLE 3

WebCode / Item	Amplification Kits (File Format)							
	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		
Item 1 - YSTR Results								
KUNPQ7	Yfiler® (PDF Format)							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17		
				24		11		
KY3CG6	Yfiler® (PDF Format)							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17	N/A	N/A
	N/A	N/A	N/A	24	N/A	11		
LCM3Y8	Yfiler® (FSA Format)							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17		
				24		11		
MUUYCB	Yfiler®, PowerPlex® Y23 (PDF Format)							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17	26	13
	13	20	16	24	11	11		
P764V4	PowerPlex® Y23 (PDF Format)							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17	26	13
	13	20	16	24	11	11		
P9W2A3	Yfiler® (PDF Format)							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17		
				24		11		
PQCBB3	PowerPlex® Y23 (FSA Format)							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17	26	13
	13	20	16	24	11	11		
QX63V2	Yfiler®, PowerPlex® Y23 (PDF Format)							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17	26	13
	13	20	16	24	11	11		
T3YJL2	(PDF Format)							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17	26	13
	13	20	16	24	11	11		
T7RPVW	Yfiler® (PDF Format)							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17		
				24		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 1 - YSTR Results								
TZPJGU	Yfiler®, PowerPlex® Y23 (FSA Format), (PDF Format)							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17	26	13
	13	20	16	24	11	11		
VRM4RX	Yfiler® (PDF Format)							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17		
				24		11		
VZYHAU	PowerPlex® Y23 (PDF Format)							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17	26	13
	13	20	16	24	11	11		
WQNFNT	Yfiler®, PowerPlex® Y23 (FSA Format), (PDF Format)							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17	26	13
	13	20	16	24	11	11		
X7LRWW	Yfiler® (PDF Format)							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17		
				24		11		
ZGPYGL	PowerPlex® Y23 (PDF Format)							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17	26	13
	13	20	16	24	11	11		
ZKPADL	PowerPlex® Y23 (PDF Format)							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17	26	13
	13	20	16	24	11	11		
ZW48HP	Yfiler®, PowerPlex® Y23 (FSA Format), (PDF Format)							
	14	14,19	12	28	26	10	11	13
1	14	11	11	19	15	17	26	13
	13	20	16	24	11	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								
2T672T	PowerPlex® Y23							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
3TY97N	PowerPlex® Y23 (FSA Format)							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
74Z4QN	Yfiler®, PowerPlex® Y23 (FSA Format), (PDF Format), (HID Format)							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
7DB6CN	Yfiler®, PowerPlex® Y23 (FSA Format), (PDF Format), (HID Format)							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
9BC4ZG	PowerPlex® Y23 (FSA Format)							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
9WUX6G	PowerPlex® Y23 (FSA Format)							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
A6WXHN	PowerPlex® Y23 (FSA Format), (PDF Format)							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
CG832G	PowerPlex® Y23 (PDF Format)							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
CHNYUG	PowerPlex® Y23 (PDF Format)							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
CZMB3H	PowerPlex® Y23							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18	21	12
	12	13	21	23	8	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								
D748HC	Yfiler®, PowerPlex® Y23 (FSA Format)							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
DA832E	PowerPlex® Y23 (PDF Format)							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
DQ9469	PowerPlex® Y23 (PDF Format)							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
DQRT2E	PowerPlex® Y23 (HID Format)							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
F7FRW7	PowerPlex® Y23 (FSA Format)							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
GJLXVB	PowerPlex® Y23 (PDF Format)							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
HP6NUC	PowerPlex® Y23 (PDF Format)							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
JQAVBA	Yfiler® (PDF Format)							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18		
				23		12		
KBCZD9	PowerPlex® Y23							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
KUNPQ7	Yfiler® (PDF Format)							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18		
				23		12		

TABLE 3

Item 2 - YSTR Results

WebCode / Item	Amplification Kits (File Format)							
	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		
KY3CG6	Yfiler® (PDF Format)							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18	N/A	N/A
	N/A	N/A	N/A	23	N/A	12		
LCM3Y8	Yfiler® (FSA Format)							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18		
				23		12		
MUUYCB	Yfiler®, PowerPlex® Y23 (PDF Format)							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
P764V4	PowerPlex® Y23 (PDF Format)							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
P9W2A3	Yfiler® (PDF Format)							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18		
				23		12		
PQCBB3	PowerPlex® Y23 (FSA Format)							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
QX63V2	Yfiler®, PowerPlex® Y23 (PDF Format)							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
T3YJL2	(PDF Format)							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
T7RPVW	Yfiler® (PDF Format)							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18		
				23		12		
TZPJGU	Yfiler®, PowerPlex® Y23 (FSA Format), (PDF Format)							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18	21	12
	12	13	21	23	8	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								
VRM4RX	Yfiler® (PDF Format)							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18		
				23		12		
VZYHAU	PowerPlex® Y23 (PDF Format)							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
WQNFNT	Yfiler®, PowerPlex® Y23 (FSA Format), (PDF Format)							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
X7LRWW	Yfiler® (PDF Format)							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18		
				23		12		
ZGPYGL	PowerPlex® Y23 (PDF Format)							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
ZKPADL	PowerPlex® Y23 (PDF Format)							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
ZW48HP	Yfiler®, PowerPlex® Y23 (FSA Format), (PDF Format)							
	14	11,13	13	29	24	11	13	13
2	15	12	12	19	16	18	21	12
	12	13	21	23	8	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								
2T672T	PowerPlex® Y23							
	13,14	11,13,16,18	13	29,30	24	10,11	11,13	13
3	14,15	10,12	12	19,20	16,18	18	21,22	12
	12	13,21	17,21	21,23	8,12	12		
	14	11,13	13	29	24	11	13	13
3major	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
	13	16,18	13	30	24	10	11	13
3minor	14	10	12	20	18	18	22	12
	12	21	17	21	12	12		
3TY97N	PowerPlex® Y23 (FSA Format)							
	13,14	11,13,16,18	13	29,30	24	10,11	11,13	13
3	14,15	10,12	12	19,20	16,18	18	21,22	12
	12	13,21	17,21	21,23	8,12	12		
	14	11,13	13	29	24	11	13	13
3major	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
	13	16,18	13	30	24	10	11	13
3minor	14	10	12	20	18	18	22	12
	12	21	17	21	12	12 or inconclusive		
74Z4QN	Yfiler®, PowerPlex® Y23 (FSA Format), (PDF Format), (HID Format)							
	13,14	11,13,16,18	13	29,30	24	10,11	11,13	13
3	14,15	10,12	12	19,20	16,18	18	21,22	12
	12	13,21	17,21	21,23	8,12	12		
	14	11,13	13	29	24	11	13	13
3major	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
	13	16,18	13	30	24	10	11	13
3minor	14	10	12	20	18	18	22	12
	12	21	17	21	12	12		
7DB6CN	Yfiler®, PowerPlex® Y23 (FSA Format), (PDF Format), (HID Format)							
	13,14	11,13,16,18	13	29,30	24	10,11	11,13	13
3	14,15	10,12	12	19,20	16,18	18	21,22	12
	12	13,21	17,21	21,23	8,12	12		
	14	11,13	13	29	24	11	13	13
3major	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
	13	16,18	13	30	24	10	11	13
3minor	14	10	12	20	18	18	22	12
	12	21	17	21	12	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								
9BC4ZG	PowerPlex® Y23 (FSA Format)							
	13,14	11,13,16,18	13	29,30	24	10,11	11,13	13
3	14,15	10,12	12	19,20	16,18	18	21,22	12
	12	13,21	17,21	21,23	8,12	12		
	14	11,13	13	29	24	11	13	13
3major	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
	13	16,18	13	30	24	10	11	13
3minor	14	10	12	20	18	18	22	12
	12	21	17	21	12	ND		
9WUX6G	PowerPlex® Y23 (FSA Format)							
	14	11,13	13	29	24	11	13	13
3major	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
	13	16,18		30		10	11	
3minor	14	10		20	18		22	
		21	17	21	12			
A6WXHN	PowerPlex® Y23 (FSA Format), (PDF Format)							
	13,14	11,13,16,18	13	29,30	24	10,11	11,13	13
3	14,15	10,12	12	19,20	16,18	18	21,22	12
	12	13,21	17,21	21,23	8,12	12		
	14	11,13	13	29		11	13	13
3major	15	12		19	16	18	21	12
	12	13	21	23	8	12		
	13	16,18		30		10	11	
3minor	14	10		20	18		22	
		21	17	21	12			
CG832G	(PDF Format)							
	13,14	11,13,16,18	13	29,30	24	10,11	11,13	13
3	14,15	10,12	12	19,20	16,18	18	21,22	12
	12	13,21	17,21	21,23	8,12	12		
	14	11,13	13	29	24	11	13	13
3major	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
	13	16,18	13	30	24	10	11	13
3minor	14	10	12	20	18	18	22	12
	12	21	17	21	12	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								
CHNYUG	PowerPlex® Y23 (PDF Format)							
	14	11,13	13	29	24	11	13	13
3major	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
	13	16,18		30		10	11	
3minor	14	10		20	18		22	
		21	17	21	12			
CZMB3H	PowerPlex® Y23							
	13,14	11,13,16,18	13	29,30	24	10,11	11,13	13
3	14,15	10,12	12	19,20	16,18	18	21,22	12
	12	13,21	17,21	21,23	8,12	12		
	14	11,13	13	29	24	11	13	13
3major	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
	13	16,18	13	30	24	10	11	13
3minor	14	10	12	20	18	18	22	12
	12	21	17	21	12	12		
D748HC	Yfiler®, PowerPlex® Y23 (FSA Format)							
	13,14	11,13,16,18	13	29,30	24	10,11	11,13	13
3	14,15	10,12	12	19,20	16,18	18	21,22	12
	12	13,21	17,21	21,23	8,12	12		
DA832E	PowerPlex® Y23							
			13		24			13
3			12			18		12
	12					12		
	14	11,13		29		11	13	
3major	15	12		19	16		21	
		13	21	23	8			
	13	16,18		30		10	11	
3minor	14	10		20	18		22	
		21	17	21	12			
DQ9469	PowerPlex® Y23 (PDF Format)							
	13,14	11,13,16,18	13	29,30	24	10,11	11,13	13
3	14,15	10,12	12	19,20	16,18	18	21,22	12
	12	13,21	17,21	21,23	8,12	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								
DQRT2E	PowerPlex® Y23 (HID Format)							
	14	11,13	13	29	24	11	13	13
3major	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
	13	16,18	13	30	24	10	11	13
3minor	14	10	12	20	18	18	22	12
	12	21	17	21	12	12		
F7FRW7	PowerPlex® Y23 (FSA Format)							
	13,14	11,13,16,18	13	29,30	24	10,11	11,13	13
3	14,15	10,12	12	19,20	16,18	18	21,22	12
	12	13	17,21	21,23	8,12	12		
GJLXVB	PowerPlex® Y23 (PDF Format)							
	13,14	11,13,16,18	13	29,30	24	10,11	11,13	13
3	14,15	10,12	12	19,20	16,18	18	21,22	12
	12	13,21	17,21	21,23	8,12	12		
	14	11,13	13	29	24	11	13	13
3major	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
	13	16,18		30		10	11	
3minor	14	10		20	18		22	
		21	17	21	12			
HP6NUC	PowerPlex® Y23							
	13,14	11,13,16,18	13	29,30	24	10,11	11,13	13
3	14,15	10,12	12	19,20	16,18	18	21,22	12
	12	13,21	17,21	21,23	8,12	12		
	14	11,13	13	29	24	11	13	13
3major	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
	13	16,18	13	30	24	10	11	13
3minor	14	10	12	20	18	18	22	12
	12	21	17	21	12	12		
JQAVBA	Yfiler® (PDF Format)							
	13,14	11,13,16,18	13	29,30	24	10,11	11,13	13
3	14,15	10,12	12	19,20	16,18	18		
				21,23		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								
KBCZD9	PowerPlex® Y23							
	13,14	11,13,16,18	13	29,30	24	10,11	11,13	13
3	14,15	10,12	12	19,20	16,18	18	21,22	12
	12	13,21	17,21	21,23	8,12	12		
	14	11,13	13	29	24	11	13	13
3major	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
	13	16,18	13	30	24	10	11	13
3minor	14	10	12	20	18	18	22	12
	12	21	17	21	12	12		
KUNPQ7	Yfiler® (PDF Format)							
	13,14	11,13,16,18	13	29,30	24	10,11	11,13	13
3	14,15	10,12	12	19,20	16,18	18		
				21,23		12		
	14		13	29	24	11	13	13
3major	15	12	12	19	16	18		
				23		12		
KY3CG6	Yfiler® (PDF Format)							
	13,14	11,13,16,18	13	29,30	24	10,11	11,13	13
3	14,15	10,12	12	19,20	16,18	18	N/A	N/A
	N/A	N/A	N/A	21,23	N/A	12		
LCM3Y8	Yfiler® (FSA Format)							
	13,14	11,13,16,18	13	29,30	24	10,11	11,13	13
3	14,15	10,12	12	19,20	16,18	18		
				21,23		12		
MUUYCB	Yfiler®, PowerPlex® Y23 (PDF Format)							
	13,14	11,13,16,18	13	29,30	24	10,11	11,13	13
3	14,15	10,12	12	19,20	16,18	18	21,22	12
	12	13,21	17,21	21,23	8,12	12		
P764V4	PowerPlex® Y23 (PDF Format)							
	13,14	11,13,16,18	13	29,30	24	10,11	11,13	13
3	14,15	10,12	12	19,20	16,18	18	21,22	12
	12	13,21	17,21	21,23	8,12	12		
	14	11,13	13	29	24	11	13	13
3major	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
	13	16,18	13	30	24	10	11	13
3minor	14	10	12	20	18	18	22	12
	12	21	17	21	12	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								
P9W2A3	Yfiler® (PDF Format)							
	13,14	11,13,16,18	13	29,30	24	10,11	11,13	13
3	14,15	10,12	12	19,20	16,18	18		
				21,23		12		
PQCBB3	PowerPlex® Y23 (FSA Format)							
	14	11,13	13	29	24	11	13	13
3major	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
	13	16,18		30		10	11	
3minor	14	10		20	18		22	
		21	17	21	12			
QX63V2	Yfiler®, PowerPlex® Y23 (PDF Format)							
	13,14	11,13,16,18	13	29,30	24	10,11	11,13	13
3	14,15	10,12	12	19,20	16,18	18	21,22	12
	12	13,21	17,21	21,23	8,12	12		
	14	11,13	13	29	24	11	13	13
3major	15	12	12	19	16	18	21	12
	12	13	21	21	8	12		
	13	16,18	//	30	//	10	11	//
3minor	14	10	//	20	18	//	22	//
	//	21	17	23	12	//		
T3YJL2	(PDF Format)							
	13,14	11,13,16,18	13	29,30	24	10,11	11,13	13
3	14,15	10,12	12	19,20	16,18	18	21,22	12
	12	13,21	17,21	21,23	8,12	12		
	14	11,13	13	29	24	11	13	13
3major	15	12	12	19	16	18	21	12
	12	13	21	23	8	12		
	13	16,18	13	30	24	10	11	13
3minor	14	10	12	20	18	18	22	12
	12	21	17	21	12	12		
T7RPVW	Yfiler® (PDF Format)							
	13,14	11,13,16,18	13	29,30	24	10,11	11,13	13
3	14,15	10,12	12	19,20	16,18	18		
				21,23		12		
TZPJGU	Yfiler®, PowerPlex® Y23 (FSA Format), (PDF Format)							
	13,14	11,13,16,18	13	29,30	24	10,11	11,13	13
3	14,15	10,12	12	19,20	16,18	18	21,22	12
	12	13,21	17,21	21,23	8,12	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								
VRM4RX	Yfiler® (PDF Format)							
	14	11,13	13	29	24	11	13	13
3major	15	12	12	19	16	18		
				23		12		
	13	16,18		30		10	11	
3minor	14	10		20	18			
				21				
VZYHAU	PowerPlex® Y23 (PDF Format)							
	13,14	11,13,16,18	13	29,30	24	10,11	11,13	13
3	14,15	10,12	12	19,20	16,18	18	21,22	12
	12	13,21	17,21	21,23	8,12	12		
WQNFNT	Yfiler®, PowerPlex® Y23 (FSA Format), (PDF Format)							
	13,14	11,13,16,18	13	29,30	24	10,11	11,13	13
3	14,15	10,12	12	19,20	16,18	18	21,22	12
	12	13,21	17,21	21,23	8,12	12		
X7LRWW	Yfiler® (PDF Format)							
	13,14	11,13,16,18	13	29,30	24	10,11	11,13	13
3	14,15	10,12	12	19,20	16,18	18		
				21,23		12		
ZGPYGL	PowerPlex® Y23 (PDF Format)							
	13,14	11,13,16,18	13	29,30	24	10,11	11,13	13
3	14,15	10,12	12	19,20	16,18	18	21,22	12
	12	13,21	17,21	21,23	8,12	12		
	14	11,13		29		11	13	
3major	15	12		19	16		21	
		13	21	23	8			
	13	16,18		30		10	11	
3minor	14	10		20	18		22	
		21	17	21	12			
ZKPADL	PowerPlex® Y23 (PDF Format)							
	13,14	11,13,16,18	13	29,30	24	10,11	11,13	13
3	14,15	10,12	12	19,20	16,18	18	21,22	12
	12	13,21	17,21	21,23	8,12	12		
ZW48HP	Yfiler®, PowerPlex® Y23 (FSA Format), (PDF Format)							
	13,14	11,13,16,18	13	29,30	24	10,11	11,13	13
3	14,15	10,12	12	19,20	16,18	18	21,22	12
	12	13,21	17,21	21,23	8,12	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								
2T672T	PowerPlex® Y23							
	13,14	14,15,16,17,18,19	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,18	17,18	22,23,26	12,13
	10,12,13	19,20,21	16,17	21,23,24	11,12,14	11,12		
3TY97N	PowerPlex® Y23 (FSA Format)							
	13,14	14,15,16,17,18,19	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,18	17,18	22,23,26	12,13
	10,12,13	19,20,21	16,17	21,23,24	11,12,14	11,12		
74Z4QN	Yfiler®, PowerPlex® Y23 (FSA Format), (PDF Format), (HID Format)							
	13,14	14,15,16,17,18,19	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,18	17,18	22,23,26	12,13
	10,12,13	19,20,21	16,17	21,23,24	11,12,14	11,12		
7DB6CN	Yfiler®, PowerPlex® Y23 (FSA Format), (PDF Format), (HID Format)							
	13,14	14,15,16,17,18,19	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,18	17,18	22,23,26	12,13
	10,12,13	19,20,21	16,17	21,23,24	11,12,14	11,12		
9BC4ZG	PowerPlex® Y23 (FSA Format)							
	13,14	14,15,16,17,18,19	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,18	17,18	22,23,26	12,13
	10,12,13	19,20,21	16,17	21,23,24	11,12,14	11,12		
9WUX6G	PowerPlex® Y23 (FSA Format)							
	13,14	14,15,16,17,18,19	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,18	17,18	22,23,26	12,13
	10,12,13	19,20,21	16,17	21,23,24	11,12,14	11,12		
A6WXHN	PowerPlex® Y23 (FSA Format), (PDF Format)							
	13,14	14,15,16,17,18,19	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,18	17,18	22,23,26	12,13
	10,12,13	19,20,21	16,17	21,23,24	11,12,14	11,12		
	13,14	16,18	13	30	24	10	11	13
4major	14	10,11	12	20	15,18	18	22	12
	12	21	16,17	21	12	11,12		
		14,15,17,19	12	28	22,26			
4minor			11	19		17	23,26	13
	10,13	19,20		23,24	11,14			

TABLE 3

Item 4 - YSTR Results

WebCode / Item	Amplification Kits (File Format)							
	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		
CG832G	PowerPlex® Y23 (PDF Format)							
	13,14	14,15,16,17,18,19	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,18	17,18	22,23,26	12,13
	10,12,13	19,20,21	16,17	21,23,24	11,12,14	11,12		
	13	16,18	13	30	24	10	11	13
4major	14	10	12	20	18	18	22	12
	12	21	17	21	12	12		
	14	14,19	12	28	26	10	11	13
4minor	14	11	11	19	15	17	26	13
	13	20	16	24	11	11		
CHNYUG	PowerPlex® Y23 (PDF Format)							
	13,14	14,15,16,17,18,19	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,18	17,18	22,23,26	12,13
	10,12,13	19,20,21	16,17	21,23,24	11,12,14	11,12		
CZMB3H	PowerPlex® Y23							
	13,14	14,15,16,17,18,19	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,18	17,18	22,23,26	12,13
	10,12,13	19,20,21	16,17	21,23,24	11,12,14	11,12		
D748HC	Yfiler®, PowerPlex® Y23 (FSA Format)							
	13,14	14,15,16,17,18,19	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,18	17,18	22,23,26	12,13
	10,12,13	19,20,21	16,17	21,23,24	11,12,14	11,12		
DA832E	PowerPlex® Y23 (PDF Format)							
	13,14	14,15,16,17,18,19	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,18	17,18	22,23,26	12,13
	10,12,13	19,20,21	16,17	21,23,24	11,12,14	11,12		
DQ9469	PowerPlex® Y23 (PDF Format)							
	13,14	14,15,16,17,18,19	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,18	17,18	22,23,26	12,13
	10,12,13	19,20,21	14,16,17	21,23,24	11,12,14	11,12		
DQRT2E	PowerPlex® Y23 (HID Format)							
	13,14	14,15,16,17,18,19	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,18	17,18	22,23,26	12,13
	10,12,13	19,20,21	16,17	21,23,24	11,12,14	11,12		
F7FRW7	PowerPlex® Y23 (FSA Format)							
	13,14	14,15,16,17,18,19	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,18	17,18	22,23,26	12,13
	10,12,13	19,20,21	16,17	21,23,24	11,12,14	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								
GJLXVB	PowerPlex® Y23 (PDF Format)							
	13,14	14,15,16,17,18,19	12,13	28,30	24,26	10	11	13
4	14	10,11	11,12	19,20	15,18	17,18	22,23,26	12,13
	10,12,13	19,20,21	16,17	21,23,14	11,12,14	11,12		
HP6NUC	PowerPlex® Y23							
	13,14	14,15,16,17,18,19	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,18	17,18	22,23,26	12,13
	10,12,13	19,20,21	16,17	21,23,24	11,12,14	11,12		
JQAVBA	Yfiler® (PDF Format)							
	13,14	14,15,16,17,18,19	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,18	17,18		
				21,23,24		11,12		
KBCZD9	PowerPlex® Y23							
	13,14	14,15,16,17,18,19	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,18	17,18	22,23,26	12,13
	10,12,13	19,20,21	16,17	21,23,24	11,12,14	11,12		
KUNPQ7	Yfiler® (PDF Format)							
	13,14	14,15,16,17,18,19	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,17,18	17,18		
				21,23,24		11,12		
KY3CG6	Yfiler® (PDF Format)							
	13,14	14,15,16,17,18,19	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,17,18	17,18	N/A	N/A
	N/A	N/A	N/A	21,23,24	N/A	11,12		
LCM3Y8	Yfiler® (FSA Format)							
	13,14	14,15,16,17,18,19	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,18	17,18		
				21,23,24		11,12		
MUUYCB	Yfiler®, PowerPlex® Y23 (PDF Format)							
	13,14	14,15,16,17,18,19	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,17,18	17,18	22,23,26	12,13
	10,12,13	19,20,21	16,17	21,23,24	11,12,14	11,12		
P764V4	PowerPlex® Y23 (PDF Format)							
	13,14	14,15,16,17,18,19	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,18	17,18	22,23,26	12,13
	10,12,13	19,20,21	16,17	21,23,24	11,12,14	11,12		
P9W2A3	Yfiler® (PDF Format)							
	13,14	14,15,16,17,18,19	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,18	17,18		
				21,23,24		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								
PQCBB3	PowerPlex® Y23 (FSA Format)							
	13,14	14,15,16,17,18,19	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,18	17,18	22,23,26	12,13
	10,12,13	19,20,21	16,17	21,23,24	11,12,14	11,12		
QX63V2	Yfiler®, PowerPlex® Y23 (PDF Format)							
	13,14	14,15,16,17	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,18	17,18	22,23,26	12,13
	10,12,13	19,20,21	16,17	21,23,24	11,12,14	11,12		
T3YJL2	(PDF Format)							
	13,14	14,15,16,17,18,19	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,18	17,18	22,23,26	12,13
	10,12,13	19,20,21	16,17	21,23,24	11,12,14	11,12		
	13	16,18	13	30	24	10	11	13
4major	14	10	12	20	18	18	22	12
	12	21	17	21	12	12		
	14	14,19	12	28	26	10	11	13
4minor	14	11	11	19	15	17	26	13
	13	20	16	24	11	11		
T7RPVW	Yfiler® (PDF Format)							
	13,14	14,15,16,17,18,19	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,17,18	17,18		
				21,23,24		11,12		
TZPJGU	Yfiler®, PowerPlex® Y23 (FSA Format), (PDF Format)							
	13,14	14,15,16,17,18,19	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,18	17,18	22,23,26	12,13
	10,12,13	19,20,21	16,17	21,23,24	11,12,14	11,12		
VRM4RX	Yfiler® (PDF Format)							
	13,14	14,15,16,17,18,19	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,17,18	17,18		
				21,23,24		11,12		
VZYHAU	PowerPlex® Y23 (PDF Format)							
	13,14	14,15,16,17,18,19	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,18	17,18	22,23,26	12,13
	10,12,13	19,20,21	16,17	21,23,24	11,12,14	11,12		
WQNFNT	Yfiler®, PowerPlex® Y23 (FSA Format), (PDF Format)							
	13,14	14,15,16,17,18,19	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,18	17,18	22,23,26	12,13
	10,12,13	19,20,21	16,17	21,23,24	11,12,14	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								
X7LRWW	Yfiler® (PDF Format)							
	13,14	14,15,16,17,18,19	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,18	17,18		
				21,23,24		11,12		
ZGPYGL	PowerPlex® Y23 (PDF Format)							
	13,14	14,15,16,17,18,19	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,18	17,18	22,23,26	12,13
	10,12,13	19,20,21	16,17	21,23,24	11,12,14	11,12		
ZKPADL	PowerPlex® Y23 (PDF Format)							
	13,14	14,15,16,17,18,19	12,13	28,30	24,26	10	11	13
4	14	10,11	11,12	19,20	15,18	17,18	22,23,26	12,13
	10,12,13	19,20,21	16,17	21,23,24	11,12,14	11,12,14		
ZW48HP	Yfiler®, PowerPlex® Y23 (FSA Format), (PDF Format)							
	13,14	14,15,16,17,18,19	12,13	28,30	22,24,26	10	11	13
4	14	10,11	11,12	19,20	15,18	17,18	22,23,26	12,13
	10,12,13	19,20,21	16,17	21,23,24	11,12,14	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

	Item 3 Conclusion			Item 4 Conclusion		
WebCode	# of Contributors	Item 1	Item 2	# of Contributors	Item 1	Item 2
2T672T	2	Excluded	Included	3	Included	Excluded
3TY97N	2	Excluded	Included	@ least 3	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable
4TRT2L	2	Excluded	Included	greater than or equal to 3	Included	Excluded
74Z4QN	2	Excluded	Included	3	Included	Excluded
7DB6CN	2	Excluded	Included	3	Included	Excluded
7P4RHJ	Two	Excluded	Included	Three	Included	Excluded
9BC4ZG	Fusion 5C: 2, Y23: 2	Excluded	Included	Fusion & Y23 at least 3	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable
9TGBFJ	At least 2 people	Inconclusive / Uninterpretable	Included	At least 3 people	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable
9WUX6G	2	Excluded	Included	3	Included	Excluded
A6WXHN	2	Excluded	Included	3	Included	Excluded
CG832G	2	Excluded	Included	3	Included	Excluded
CHNYUG	2	Excluded	Included	3	Included	Excluded
CZMB3H	2	Excluded	Included	3	Included	Excluded
D748HC	2	Excluded	Included	3	Included	Excluded
DA832E	2	Excluded	Included	3	Included	Excluded
DHY2J8	2	Excluded	Included	3	Included	Excluded
DQ9469	at least 2	Excluded	Included	at least 3	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable
DQRT2E	2	Excluded	Included	3	Included	Excluded
F7FRW7	2	Excluded	Included	3	Included	Excluded
FBG4HG	2	Excluded	Included	> or = 3	Included	Excluded
FDTJCH	2	Excluded	Included	greater than or equal to 3	Included	Excluded
GJLXVB	At least two	Excluded	Included	At least three	Included	Inconclusive / Uninterpretable
GZL8E9	2	Excluded	Included	atleast 3	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable
HP6NUC	2	Excluded	Included	3	Included	Excluded

TABLE 4

	Item 3 Conclusion			Item 4 Conclusion		
WebCode	# of Contributors	Item 1	Item 2	# of Contributors	Item 1	Item 2
JQAVBA	2	Excluded	Included	3	Inconclusive / Uninterpretable	Excluded
K7KVK6	2	Excluded	Included	at least 3	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable
KBCZD9	2	Excluded	Included	3	Included	Excluded
KUNPQ7	2	Excluded	Included	3	Included	Excluded
KY3CG6	2	Excluded	Included	3 or more	Included	Excluded
LCM3Y8	2	Excluded	Included	3	Inconclusive / Uninterpretable	Excluded
MUUYCB	at least 2	Excluded	Included	at least 3	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable
N9DY22	2	Excluded	Included	@least 3	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable
P764V4		Excluded	Included		Included	Excluded
P9W2A3	2	Excluded	Included	3	Included	Excluded
PQCBB3	2	Excluded	Included	3	Included	Excluded
QX63V2	2	Excluded	Included	3	Included	Excluded
RGZVGZ	2	Excluded	Included	3	Included	Excluded
RKEH8X	2	Excluded	Included	at least 3	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable
RXKMFY	2	Excluded	Included	3	Included	Excluded
T3E37X	2	Excluded	Included	3	Included	Excluded
T3YJL2	2	Excluded	Included	3	Included	Excluded
T7RPVW	at least 2 donors	Inconclusive / Uninterpretable	Included	at least 3 donors	Included	Inconclusive / Uninterpretable
T86DFW	2	Excluded	Included	at least 3	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable
TMKBKX		Excluded	Included		Inconclusive / Uninterpretable	Inconclusive / Uninterpretable
TQKLGX	2	Excluded	Included	at least 3	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable
TZPJGU	at least 2 individuals	Excluded	Included	at least three individuals	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable
VRM4RX	2	Excluded	Included	3	Included	Excluded
VZYHAU	2	Excluded	Included	3	Included	Excluded
WGMTWW	2	Excluded	Included	3	Included	Excluded
WQNFNT	2	Excluded	Included	3	Included	Excluded

TABLE 4

WebCode	Item 3 Conclusion # of Contributors	Item 3 Conclusion Item 1	Item 3 Conclusion Item 2	Item 4 Conclusion # of Contributors	Item 4 Conclusion Item 1	Item 4 Conclusion Item 2
X7LRWW	2	Excluded	Included	3	Inconclusive / Uninterpretable	Excluded
ZGPYGL	2	Excluded	Included	3	Included	Excluded
ZKPADL	at least 2 contributors	Excluded	Included	at least 4 contributors	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable
ZRPKRR	Consistent with 2	Excluded	Included	Consistent with 3	Included	Excluded
ZW48HP	≥2 Contributors	Excluded	Included	≥3 Contributors	Included	Excluded

Conclusions Response Summary

Participants reporting conclusions: 55

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?

		Item 3		Item 4	
		Item 1	Item 2	Item 1	Item 2
Responses	Included	**0**	**55**	**38**	**0**
	Excluded	**53**	**0**	**0**	**39**
	Inconclusive	**2**	**0**	**17**	**16**
	No Response	**0**	**0**	**0**	**0**
	Total	**55**	**55**	**55**	**55**

Statistical Analysis for Item 3

TABLE 5

WebCode	Item 3 Methods & Results
2T672T	**Method(s)**: Likelihood Ratio
3TY97N	**Method(s)**: Random Match Probability **Stats Analysis:** Autosomal: A mixture of human DNA profiles were identified in Item 3 that has been interpreted as a mixture of two people. A major DNA profile was identified in which the suspect cannot be excluded (is included). The expected frequency of occurrence for this profile was calculated for the African American, Caucasian, and Hispanic population and found to be no more common than approximately 1 in 150 octillion. YSTR: A mixture of human Y-STR haplotypes were identified in Item 3 that has been interpreted as a mixture of two people. A major Y-STR haplotype was identified in Item 3 in which the suspect cannot be excluded (is included). With a 95% upper confidence limit, this haplotype would be expected to occur in approximately 1 in 2300 unrelated African American males, 1 in 2800 unrelated Caucasians and 1 in 570 unrelated Hispanic males. A minor Y-STR haplotype was identified in Item 3 in which the victim is excluded.
74Z4QN	**Method(s)**: Combined Probability of Exclusion/Inclusion
7DB6CN	**Method(s)**: Combined Probability of Exclusion/Inclusion
7P4RHJ	**Method(s)**: Random Match Probability **Stats Analysis:** • 1 in 39.08 Octillion for Caucasians • 1 in 1.189 Octillion for African Americans • 1 in 7.206 Octillion for Hispanics
9BC4ZG	**Method(s)**: Random Match Probability **Stats Analysis:** Item 3 Fusion 5C: a mixture of human DNA profiles was identified in Item 3 at 23 loci that was interpreted as a mixture of two people. A major male DNA profile was identified at 23 loci from which the suspect (Item 2) cannot be excluded (is included). The frequency of occurrence of this profile was calculated for the African American, Caucasian and Hispanic population groups and was found to be approximately 1 in 22 octillion unrelated individuals at 21 loci. A minor male DNA profile was identified at 23 loci from which the victim (Item 1) and suspect (Item 2) are excluded. Item 3 PPY23: a mixture of Y-STR DNA haplotypes was identified at 23 loci which was interpreted as a mixture of two males. A major Y-STR DNA haplotype was identified at 23 loci from which the suspect (Item 2) cannot be excluded (is included). This haplotype was searched against a known database and would be expected to occur in approximately 1 in 1000 African American, 1 in 1200 Caucasian and 1 in 1000 Hispanic unrelated individuals with a 95% confidence limit at 23 loci.
9TGBFJ	**Method(s)**: Random Match Probability **Stats Analysis:** Caucasian 1 in 9.8E27 (9.8 Octillion); Black 1 in 8.2E28 (82 Octillion); SE Hispanic 1 in 1.1E28 (11 Octillion); SW Hispanic 1 in 1.5E28 (15 Octillion)
9WUX6G	**Method(s)**: Likelihood Ratio **Stats Analysis:** The genetic profile obtained from Item 3 is interpreted as a mixture of DNA from 2 contributors. Item 2 (suspect) cannot be excluded as a possible contributor to this mixture. Given this genetic profile, assuming two contributors, it is 10.9 trillion times more likely to observe this genetic profile if Item 2 (suspect) and one unknown individual are contributors than if 2 unknown individuals are the contributors.
A6WXHN	**Method(s)**: Likelihood Ratio **Stats Analysis:** Hp (sample contains DNA from one know person (Item 2) and one unknown person)/Hd (sample contains DNA from 2 unknown person) LR(3)=Hp/Hd=1,00829*e+15 (for n=1036); LR(3) =Hp/Hd=8,83*e+15 (for Hispanic n=236)

TABLE 5

WebCode	Item 3 Methods & Results
CHNYUG	**Method(s)**: Likelihood Ratio **Stats Analysis:** Calculated as suspect + 1 unknown individual vs 2 unknown individuals. Calculation assumes all individuals are unrelated. Likelihood ratio of > 1,000,000,000 in favour of Hp (victim + 1 unknown individual) rather than Hd (2 unknown individuals). Y-STR result would potentially be suitable for statistical evaluation, however given autosomal result not undertaken.
CZMB3H	**Method(s)**: Likelihood Ratio
D748HC	**Method(s)**: Likelihood Ratio **Stats Analysis:** LR: 57,362,452,495,203,400.
DA832E	**Method(s)**: Likelihood Ratio
DQ9469	**Method(s)**: Random Match Probability **Stats Analysis:** STR Major Component - The estimated frequency (11 loci)of the genetic profile from the major component of the above sample is rarer that 1 in 330 billion. (Athabaskan- 399 Quadrillion; Inupiat - 108 Quintillion; Yupik - 56 Quintillion; Caucasian - 48 Quadrillion; and African American - 177 Quadrillion) Y-STR Major Component - Only suitable for exclusions because there are less than 16 loci that can be separated in the mixture. Not suitable for stats. Neither STR or Y-STR minor components suitable for stats.
DQRT2E	**Method(s)**: Random Match Probability **Stats Analysis:** A mixed DNA profile (PowerPlex™ Fusion 6C) consisting of DNA from at least two contributors was obtained from the stain found on the victim's pocket knife; item CTS-20-5882-3. A major male contributor and a minor male contributor were obtained from CTS-20-5882-3 at all loci excluding vWA, D3S1358 (for the minor), CSF1PO (for the minor), D8S1179 (for the minor), SE33 (for the minor), and FGA (for the minor). The DNA profile for the major contributor of CTS-20-5882-3 is consistent with the DNA profile of CTS-20-5882-2. Therefore, the individual represented by the reference sample, item CTS-20-5882-2 (suspect), cannot be excluded as a contributor of the DNA profile obtained from the stain found on the victim's pocket knife, item CTS-20-5882-3 at all loci excluding vWA. The probability of selecting a random unrelated individual having a DNA profile identical to CTS-20-5882-2 at the loci observed is 1 in 4.28xE31 for African Americans, 1 in 4.18xE31 for Caucasian Americans, 1 in 4.25xE31 for Hispanic Americans, and 1 in 5.03xE32 for Asian Americans. The DNA profile for the minor contributor of CTS-20-5882-3 is not consistent with the DNA profile of CTS-20-5882-1. Therefore, the individual represented by the reference sample, item CTS-20-5882-1 (victim), is excluded as a contributor of the DNA profile obtained from the stain found on the victim's pocket knife; item CTS-20-5882-3.
F7FRW7	**Method(s)**: Likelihood Ratio **Stats Analysis:** Looking at epg, we can exlude the victim as contributor to the Item 3, but we can not exclude the suspect. So, one hypothesis was formulated: Hp vs. Hd = item 2 + 1 unknown vs. 2 unknown. LR=396704.19 (drop out 0.1)
GZL8E9	**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. A major male DNA profile was identified from which the suspect cannot be excluded (is included). The expected frequency of occurrence for this profile was calculated at 21 loci for the African American, Caucasian and Hispanic population groups and was found to be no more common than approximately 1 in 1.3 Octillion unrelated individuals. A minor male DNA profile was identified from which the victim can be excluded.

TABLE 5

WebCode	Item 3 Methods & Results
JQAVBA	**Method(s)**: Likelihood Ratio **Stats Analysis:** A mixed DNA profile from two (2) contributors was developed from "Item 3". The DNA profile obtained from "Item 2" is consistent with being one of the contributor to this mixed DNA profile whereas the DNA profile obtained from "Item 1" is excluded from being the contributor. The mixed DNA profile are 41 quadrillion (41 x 10e15), 160 quadrillion (160 x 10e15),350 quadrillion (350 x 10e15) TIMES more likely; IF they originated from "Item 2" (Male Suspect) and one unknown RATHER THAN; IF they originated from two unknowns unrelated individual as calculated based on [Location-identifying population databases].
K7KVK6	**Method(s)**: Random Match Probability **Stats Analysis:** Number of contributors: 2. Major male: 23 STR Loci. Cannot be excluded (is included): Item 2 (suspect). Statistical frequency: 1 in 1.3E27 (1.3 octillion) at 20 STR Loci. Item 1 is excluded. Minor male: 21 STR Loci Item 1 and 2 are excluded.
KBCZD9	**Method(s)**: Likelihood Ratio
KUNPQ7	**Method(s)**: Likelihood Ratio **Stats Analysis:** The evidence is 50 septillion times more likely if Suspect is a contributor to the DNA mixture than if he is not a contributor.
KY3CG6	**Method(s)**: N/A **Stats Analysis:** Working from the pdf of the electropherogram it is not possible to perform a through evaluation of each locus. I am a forensic consultant that reviews DNA case files submitted to me as evidence. I review the analyst allele calls and evidence to reference sample comparisons so I can understand how the original analyst arrived at their opinions and conclusions. I accept that their population calculations are correct. NSD: No Size Data, INC: Inconclusive, N/A: Not Applicable
LCM3Y8	**Method(s)**: Likelihood Ratio **Stats Analysis:** A mixed DNA profile of two (2) contributors was developed from "Item 3". The DNA profile obtained from "Item 2" is consistent with being one of the contributor to this mixed DNA profile whereas the "Item 1" is excluded from being the contributor. The mixed DNA profile are 41 quadrillion (41 x 10e15), 160 quadrillion (160e15) and 350 quadrillion (350e15) TIMES more likely; IF they originated from "Item 2" (Male Suspect) and one unknown RATHER THAN; IF they originated from two unknowns unrelated individual as calculated based on the [Location-identifying population databases].
N9DY22	**Method(s)**: Random Match Probability **Stats Analysis:** 1 in 6.2E30 unrelated individuals
P9W2A3	**Method(s)**: Likelihood Ratio **Stats Analysis:** A mixed DNA profile consistent with having originated from 2 individuals was obtained from Item 3. The Suspect is included as one of the possible sources of the DNA mixture. It is approximately 1.88 nonillion (10^30) times more likely that the observed profile occurred as a result of a mixture of the Suspect and an unknown individual than if it originated from two unrelated individuals selected at random from the local [Ethnicity] population.
PQCBB3	**Method(s)**: PG LR **Stats Analysis:** Y-STR: Suspect (Item 2) consistent with Major
QX63V2	**Method(s)**: Likelihood Ratio

TABLE 5

WebCode	Item 3 Methods & Results
RGZVGZ	**Method(s)**: Random Match Probability **Stats Analysis:** The major contributor DNA profile from Submission 3 is consistent with the DNA of Submission 2 with a smaller amount of DNA from an unknown individual (Unknown #1). The probability of selecting an unrelated individual at random having DNA alleles at STR loci D3S1358, D2S441, D13S317, Penta E, D16S539, D18S51, D2S1338, CSF1PO, Penta D, TH01, D21S11, D7S820, D5S818, TPOX, D12S391, D19S433, SE33, D22S1045, and FGA consistent with that of the major contributor is 1 in 600 septillion (6E26) in the Caucasian population and 1 in 3 octillion (3E27) in the African American population. DNA STR loci D1S1656, D10S1248, vWA, and D8S1179 were not used in the statistical calculation of the rarity of the major contributor profile.
RKEH8X	**Method(s)**: Random Match Probability **Stats Analysis:** 1 in 3.86340 x 10^29 for the African American population; 1 in 1.74609 x 10^26 for the Caucasian population; 1 in 2.62581 x 10^30 for the Hispanic population; 1 in 4.65757 x 10^29 for the Asian population.
RXKMFY	**Method(s)**: [Participant did not report a method.] **Stats Analysis:** LR not calculated.
T3E37X	**Method(s)**: Likelihood Ratio **Stats Analysis:** The mixture of DNA is 4.67 x E27 times more likely if it had originated from the suspect and an unknown, unrelated individual than if it had originated from two unknown, unrelated individuals. This is support that the suspect can be included as a contributor to the mixture of DNA.
T7RPVW	**Method(s)**: None **Stats Analysis:** I perform case file reviews of previously examined evidence by forensic DNA laboratories. I cross check the data entered into the statistical analysis software by the originating laboratory. I do not perform a separate statistical analysis.
T86DFW	**Method(s)**: Random Match Probability **Stats Analysis:** Statistical frequency: 1 in 8.4E29 at 23 loci. Statistics are calculated for the African-American, Caucasian, and Hispanic population groups: the most common frequency is reported as random match probability.
TMKBKX	**Method(s)**: Random Match Probability **Stats Analysis:** 3 Major: 8.4 E+30
TQKLGX	**Method(s)**: Random Match Probability **Stats Analysis:** Item: 3 - Stain from knife: Number of contributors: 2. Major Male: 23 STR loci: Cannot be excluded (is included): Suspect, Statistical Frequency: 1 in 8.4E+29 (840 octillion) at 23 STR loci, Excluded: Victim. Minor Male: 23 STR loci: Excluded: Suspect, Victim.
TZPJGU	**Method(s)**: Likelihood Ratio, YSTR mixture calculation (YHRD.org) **Stats Analysis:** The results demonstrate that the autosomal DNA profile from item #3 (stain on victim's pocket knife) is a mixture of at least two individuals. Item #1 (male victim) is excluded as a contributor to the autosomal DNA profile from item #3. Item #2 (male suspect) is included as a contributor to the autosomal DNA profile from item #3. Probabilistic genotyping will be performed upon request. The results demonstrate that the YSTR DNA profile from item #3 (stain on victim's pocket knife) is a mixture of at least two males. Item #1 (male victim) is excluded as a contributor to the YSTR DNA profile from item #3. Item #2 (male suspect) is included as a contributor to the YSTR DNA profile from item #3. Given the evidentiary mixture haplotype, the likelihood of the donorship of the suspect is approximately 2701 times more likely than the non-donorship. This calculation is based on 261122 haplotypes (Yfiler) in the worldwide database.

TABLE 5

WebCode	Item 3 Methods & Results
VRM4RX	**Method(s)**: Likelihood Ratio **Stats Analysis:** The DNA profile is 100 billion times more likely if it originates from the suspect and an unknown individual than two unknown, unrelated individual chosen from the American population.
VZYHAU	**Method(s)**: Likelihood Ratio **Stats Analysis:** 378.592.186.468.343.000
WGMTWW	**Method(s)**: Combined Probability of Exclusion/Inclusion **Stats Analysis:** CPI = 2 x 10^-13
WQNFNT	**Method(s)**: Likelihood Ratio **Stats Analysis:** 57.362.452.495.203.400
X7LRWW	**Method(s)**: Likelihood Ratio **Stats Analysis:** The mixed DNA profile are 46 quadrillion (46 x 10e15), 69 quadrillion (69 x 10e15) and 5.4 quintillion (5.4 x 10e18) TIMES more likely; IF they originated from the Male suspect (Item 2) and one unknown unrelated individual RATHER THAN; IF they originated from two unknown unrelated individuals as calculated based on the [Location-identifying population databases].
ZGPYGL	**Method(s)**: Likelihood Ratio **Stats Analysis:** LR=4,4E012_Hp_(suspect+1_unknown_person)_vs._Hd_(2_unknown_persons)
ZKPADL	**Method(s)**: Likelihood Ratio
ZRPKRR	**Method(s)**: Likelihood Ratio **Stats Analysis:** The DNA profile obtained from the stain on the victim's pocket knife (Item 3) is of mixed origin consistent with having originated from two individuals and is suitable for comparison. There is very strong support for the inclusion of the suspect (Item 2). Assuming two contributors, it is 5.9 nonillion times more likely to observe this DNA profile if it originated from the suspect and an unknown contributor rather than two unrelated contributors selected at random from the U.S. population. The victim (Item 1) is excluded as a contributor.
ZW48HP	**Method(s)**: Likelihood Ratio **Stats Analysis:** Number of contributors to the DNA profile for statistical analysis: 2 Statistical Method Method(s) Used: Likelihood Ratio Databases Used: Revised-NIST-1036-Allele Frequencies, ABI ID Database + Promega PP Fusion Statistical Results: Item 1 and 2 Conclusion: • Under the assumption that two unrelated persons selected at random from the general population are contributors to this mixed-source sample, the likelihood of observing this mixed source profile is ≥1,000,000 times greater (actual LR available upon request) than if it is assumed that the VICTIM (Item 1) and one unrelated person selected at random from the general population are contributors to this mixture. • Under the assumption that the SUSPECT (Item 2) and one unrelated person selected at random from the general population are contributors to this mixture, the likelihood of observing this mixed source profile is ≥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.

Statistical Analysis for Item 4

TABLE 6

WebCode	Item 4 Methods & Results
2T672T	**Method(s)**: [Participant did not report a method.] **Stats Analysis**: statistical analysis not applied
74Z4QN	**Method(s)**: Combined Probability of Exclusion/Inclusion
7DB6CN	**Method(s)**: Combined Probability of Exclusion/Inclusion
7P4RHJ	**Method(s)**: Combined Probability of Exclusion/Inclusion **Stats Analysis**: 1 in 168.3 Million CPI; >99.9% CPE in the Caucasian population. 1 in 220.5 Million CPI; >99.9% CPE in the African American population. 1 in 222.8 Million CPI; >99.9% CPE in the Hispanic population
9WUX6G	**Method(s)**: Likelihood Ratio **Stats Analysis**: The genetic profile obtained from Item 4 is interpreted as a mixture of DNA from 3 contributors. Item 1 (victim) cannot be excluded as a possible contributor to this mixture. Given this genetic profile, assuming three contributors, it is 12.4 billion times more likely to observe this genetic profile if Item 1 (victim) and two unknown individuals are contributors than if 3 unknown individuals are the contributors.
A6WXHN	**Method(s)**: Likelihood Ratio **Stats Analysis**: Hp (sample contains DNA from one know person (Item 1) and two unknown person)/Hd (sample contains DNA from 3 unknown person) LR(4)=Hp/Hd=1,397*e+13 (for n=1036); LR(4) =Hp/Hd=2,57516*e+12 (for AfAm, n=342)
CHNYUG	**Method(s)**: Likelihood Ratio **Stats Analysis**: Calculated as Victim + 2 unknown individuals vs 3 unknown individuals. Calculation assumes all individuals are unrelated. likelihood ratio of 20,000,000 in favour of Hp (victim + 2 unknown individuals) rather than Hd (three unknown individuals). Y-STR result would likely be suitable for further subjective interpretation, however given autosomal result not undertaken. likeLTD used
CZMB3H	**Method(s)**: [Participant did not report a method.] **Stats Analysis**: Statistical analysis not appiled
D748HC	**Method(s)**: Likelihood Ratio **Stats Analysis**: LR: 908,963,716,548,050,000.
DA832E	**Method(s)**: Likelihood Ratio
DQ9469	**Method(s)**: [Participant did not report a method.] **Stats Analysis**: No stats for this profile. STR Mixture is considered indistinguishable and not suitable for comparison with any reference samples. Because there appears to be more than two male contributors and I am unable to major/minor at least 16 loci, the Y-STR mixture can not be separated. Therefore, not suitable for comparison with any reference samples.

TABLE 6

WebCode	Item 4 Methods & Results
DQRT2E	**Method(s)**: Likelihood Ratio **Stats Analysis**: A mixed DNA profile (PowerPlex™ Fusion 6C) consisting of DNA from at least three contributors was obtained from the stain found on the suspect's sweatshirt; item CTS-20-5882-4. The individual represented by the reference sample, item CTS-20-5882-2 (suspect), is excluded as a contributor of the mixed DNA profile obtained from the stain found on the suspect's sweatshirt; item CTS-20-5882-4. The individual represented by the reference sample, item CTS-20-5882-1 (victim), cannot be excluded as a contributor of the mixed DNA profile obtained from the stain found on the suspect's sweatshirt; item CTS-20-5882-4. The observed mixture profile is approximately 3.30xE11 times more likely to occur under the scenario that the DNA profile obtained from the stain found on the suspect's sweatshirt, item CTS-20-5882-4, is a mixture of DNA from the victim, and two unknown individuals, as opposed to the scenario that it originated from a mixture of DNA from three unrelated unknown individuals, in the African American population, 8.70xE12 in the Caucasian population, and 3.99xE12 in the Hispanic population.
F7FRW7	**Method(s)**: Likelihood Ratio **Stats Analysis**: Looking at epg, we can exlude the suspect as contributor to the Item 4, but we can not exclude the victim. So, one hypothesis eas formulated: Hp vs. Hd = item 1 + 2 unknown vs. 3 unknown. LR=3.6e09 (drop out 0.1)
KBCZD9	**Method(s)**: [Participant did not report a method.] **Stats Analysis**: statistical analysis not applied
KUNPQ7	**Method(s)**: Likelihood Ratio **Stats Analysis**: The evidence is 53 quadrillion times more likely if Victim is a contributor to the DNA mixture than if he is not a contributor.
KY3CG6	**Method(s)**: [Participant did not report a method.] **Stats Analysis**: Working from the pdf of the electropherogram it is not possible to perform a through evaluation of each locus. Therefore I am erring on the conservative side and retaining the 17 allele as a contribution from a contributor to the DNA mixture profile that was obtained from item #4 at DYS456. 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 accept that the population calculations are correct. NSD: No Size Data, INC: Inconclusive, N/A: Not Applicable
P9W2A3	**Method(s)**: Likelihood Ratio **Stats Analysis**: A mixed DNA profile consistent with having originated from 3 individuals was obtained from Item 4. The Victim is included as one of the possible sources of the DNA mixture. It is approximately 601 sextillion (10^21) times more likely that the observed profile occurred as a result of a mixture of the Victim and two unknown individuals than if it originated from three unrelated individuals selected at random from the local [Ethnicity] population.
PQCBB3	**Method(s)**: PG LR **Stats Analysis**: Y-STR Inconclusive. No interpretation due to 3-person mixture
QX63V2	**Method(s)**: Likelihood Ratio
RGZVGZ	**Method(s)**: Combined Probability of Exclusion/Inclusion **Stats Analysis**: The DNA typing results detected in submission 4 are consistent with a mixture of DNA from at least 3 contributors. The victim, submission 1, cannot be excluded as a possible contributor to this mixture. The probability of selecting an unrelated individual at random having DNA alleles at all autosomal Fusion 6C loci consistent with any contributor to this mixture is approximately 1 in 2 billion in both the Caucasian and African American populations.

TABLE 6

WebCode	Item 4 Methods & Results
RXKMFY	**Method(s)**: [Participant did not report a method.] **Stats Analysis**: LR not calculated.
T3E37X	**Method(s)**: Likelihood Ratio **Stats Analysis**: The mixture of DNA is 1.08 x E17 times more likely if it had originated from the victim and two unknown, unrelated individuals than if it had originated from three unknown, unrelated individuals. This is support that the victim can be included as a contributor to the mixture of DNA.
T7RPVW	**Method(s)**: [Participant did not report a method.] **Stats Analysis**: I perform case file reviews of previously examined evidence by forensic DNA laboratories. I cross check the data entered into the statistical analysis software by the originating laboratory. I do not perform a separate statistical analysis. Note: The use of the STRMix software may allow a deconvolution of the suspect's profile from this mixture.
TQKLGX	**Method(s)**: [Participant did not report a method.] **Stats Analysis**: Item: 4 - Stain from sweatshirt. Number of contributors: At least 3. Profile inconclusive.
TZPJGU	**Method(s)**: [Participant did not report a method.] **Stats Analysis**: The autosomal and YSTR results demonstrate that the DNA profiles from item #4 (stain on suspect's sweatshirt) are mixtures of at least three individuals. Due to the complexity of the autosomal and YSTR mixture profiles, the results are not suitable for direct comparisons. Probabilistic genotyping for the autosomal DNA profiles can be performed upon request.
VRM4RX	**Method(s)**: Likelihood Ratio **Stats Analysis**: The DNA profile is 26 billion times more likely if it originates from the victim and two unknown individuals than it if originates from three unknown, unrelated individuals chosen at random from the American population
VZYHAU	**Method(s)**: Likelihood Ratio **Stats Analysis**: 912.383.980.015.953.000
WGMTWW	**Method(s)**: Combined Probability of Exclusion/Inclusion **Stats Analysis**: CPI = 4.4 x 10^-9
WQNFNT	**Method(s)**: Likelihood Ratio **Stats Analysis**: 908.932.238.241.618.000
ZGPYGL	**Method(s)**: Likelihood Ratio **Stats Analysis**: LR=6,7E009_Hp_(VICTIM+2_unknown_persons)_vs._Hd_(3_unknown_persons)
ZRPKRR	**Method(s)**: Likelihood Ratio **Stats Analysis**: The DNA profile obtained from the stain on the suspect's sweatshirt (Item 4) is of mixed origin consistent with having originated from three individuals and is suitable for comparison. There is very strong support for the inclusion of the victim (Item 1) in this mixture. Assuming three contributors, it is 680 sextillion times more likely to observe this DNA profile if it originated from the victim and two unknown contributors rather than three unrelated contributors selected at random from the U.S. population. The suspect (Item 2) is excluded as a contributor.

TABLE 6

WebCode	Item 4 Methods & Results
ZW48HP	**Method(s)**: Likelihood Ratio **Stats Analysis**: Number of contributors to the DNA profile for statistical analysis: 3 Statistical Method(s) Used: Likelihood Ratio Databases Used: Revised-NIST-1036-Allele Frequencies, ABI ID Database + Promega PP Fusion Statistical Results: Item 1 and 2 Conclusion: • Under the assumption that the VICTIM (Item 1) and and two unrelated persons selected at random from the general population are contributors to this mixture, the likelihood of observing this mixed source profile is ≥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. • Under the assumption that three unrelated persons selected at random from the general population are contributors to this mixed-source sample, the likelihood of observing this mixed source profile is ≥1,000,000 times greater (actual LR available upon request) than if it is assumed that the SUSPECT (Item 2) and two unrelated persons selected at random from the general population are contributors to this mixture.

Databases Used

TABLE 7

WebCode	Databases Used
3TY97N	Item 3: Autosomal: FBI Expanded Database Y-STRx: YHRD Database Item 4: [No databases were reported by this participant for this item.]
7P4RHJ	Item 3: NIST Population Database Item 4: [No databases were reported by this participant for this item.]
9BC4ZG	Item 3: Items 3 Fusion 5C: 2015 Expanded FBI STR Population Data, PPY23: YHRD counting method w/ 95% confidence limit Item 4: [No databases were reported by this participant for this item.]
9WUX6G	Item 3: NIST Item 4: NIST
A6WXHN	Item 3: NIST 1036 Revised U.S. Population Dataset (July 2017) (n=1036; AfAm, n=342, Cauc n=361, Hispanic n=236, Asian, n=97) Item 4: NIST 1036 Revised U.S. Population Dataset (July 2017) (n=1036; AfAm, n=342, Cauc n=361, Hispanic n=236, Asian, n=97)
CHNYUG	Item 3: [Country-specific databases]. These are standard [Country] Government Databases. No specific Hispanic database available. Therefore the above databases were each considered and the most conservative figure quoted. Item 4: [Country-specific databases]
D748HC	Item 3: [Country-specific references] Item 4: [Country-specific references]
DQ9469	Item 3: FBI Popstats program Item 4: [No databases were reported by this participant for this item.]
DQRT2E	Item 3: Promega Item 4: [No databases were reported by this participant for this item.]
F7FRW7	Item 3: Hispanic population data from: Corrigendum to 'U.S. Population Data for 29 Autosomal STR Loci' [Forensic Sci. Int. Genet. 7 (2013) e82–e83] Carolyn R. Steffen, Michael D. Coble, Katherine B. Gettings, Peter M. Vallone https://doi.org/10.1016/j.fsigen.2017.08.011 Item 4: AfroAmerican population data from: Corrigendum to 'U.S. Population Data for 29 Autosomal STR Loci' [Forensic Sci. Int. Genet. 7 (2013) e82–e83] Carolyn R. Steffen, Michael D. Coble, Katherine B. Gettings, Peter M. Vallone https://doi.org/10.1016/j.fsigen.2017.08.011
GZL8E9	Item 3: FBI database Item 4: [No databases were reported by this participant for this item.]
JQAVBA	Item 3: [Location-identifying population databases] Item 4: [No databases were reported by this participant for this item.]
K7KVK6	Item 3: FBI Expanded database Item 4: [No databases were reported by this participant for this item.]
KUNPQ7	Item 3: FBI extended Item 4: FBI extended
LCM3Y8	Item 3: [Location-identifying population databases] Item 4: [No databases were reported by this participant for this item.]

TABLE 7

WebCode	Databases Used
MUUYCB	Item 3: I am a Forensic DNA consultant and I do not have a database to calculate stats Item 4: I am a Forensic DNA consultant and I do not have a database to calculate stats
N9DY22	Item 3: Amended FBI Item 4: [No databases were reported by this participant for this item.]
P9W2A3	Item 3: [Country-specific database] Item 4: [Country-specific database]
PQCBB3	Item 3: NIST General 2017 and Y-HRD Item 4: NIST General 2017
QX63V2	Item 3: LRmix Studio version 2.1.5-Community Edition-distribution\caucasian poulation frequences Item 4: LRmix Studio version 2.1.5-Community Edition-distribution\caucasian poulation frequences
RGZVGZ	Item 3: \\10.64.13.226\CODIS\Popstats\POPDATA\FBI\Expanded FBI STR 2015\Expanded FBI STR 2015 Item 4: \\10.64.13.226\CODIS\Popstats\POPDATA\FBI\Expanded FBI STR 2015\Expanded FBI STR 2015
RKEH8X	Item 3: Allele frequencies were obtained from NIST 1036 Revised US Population Database (July 2017) located at https://strbase.nist.gov/NISTpop.htm. Item 4: [No databases were reported by this participant for this item.]
T3E37X	Item 3: STR statistics represent the most conservative of the Caucasian, African American, Southeast Hispanic, and Southwest Hispanic population groups from the 2015 FBI Population Data for the Expanded CODIS Core STR Loci. All data can be found in the case file and/or provided upon request. Unknown individuals refer to unrelated individuals selected at random in the population. Item 4: STR statistics represent the most conservative of the Caucasian, African American, Southeast Hispanic, and Southwest Hispanic population groups from the 2015 FBI Population Data for the Expanded CODIS Core STR Loci. All data can be found in the case file and/or provided upon request. Unknown individuals refer to unrelated individuals selected at random in the population.
T86DFW	Item 3: 2015 Expanded FBI STR Population data. Item 4: [No databases were reported by this participant for this item.]
TMKBKX	Item 3: 3 Major: FBI Caucasian Item 4: [No databases were reported by this participant for this item.]
TQKLGX	Item 3: FBI population database Item 4: [No databases were reported by this participant for this item.]
TZPJGU	Item 3: YHRD.org worldwide database Item 4: [No databases were reported by this participant for this item.]
VRM4RX	Item 3: NIST 1036 U.S. population dataset Item 4: NIST 1036 U.S. population dataset
VZYHAU	Item 3: [Country-specific references] Item 4: [Country-specific references]
WGMTWW	Item 3: 1036 Revised Allele Frequency Popstats (July-19-2017) - Hispanic Item 4: 1036 Revised Allele Frequency PopStats (July-19-2017) - (African American)
WQNFNT	Item 3: [Country-specific references] Item 4: [Country-specific references]

TABLE 7

WebCode	Databases Used
X7LRWW	Item 3: [Location-identifying population databases] Item 4: [No databases were reported by this participant for this item.]
ZGPYGL	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.
ZKPADL	Item 3: NIST 1036 US POPULATION DATASET Item 4: [No databases were reported by this participant for this item.]
ZRPKRR	Item 3: FBI Extended CAU, AFAM, SWH Item 4: FBI Extended CAU, AFAM, SWH
ZW48HP	Item 3: Revised-NIST-1036-Allele Frequencies, ABI ID Database + Promega PP Fusion Item 4: Revised-NIST-1036-Allele Frequencies, ABI ID Database + Promega PP Fusion

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
CHNYUG	NGMSElect ESI-17 PPY-23
DA832E	NGM Detect, NGM Select, Powerplex ESI
F7FRW7	PowerPlex Y23, PowerPlex ESI, PowerPlex ESX, PowerPlex Fusion, PowerPlex Fusion 6C, Argus X-12, Investigator 24plex QS Kit, AmpFLSTR™ NGM Select, AmpFLSTR™ MiniFiler, GlobalFiler™ PCR Amplification Kit, AmpFLSTR™ Yfiler, AmpFLSTR™ Yfiler Plus,
JQAVBA	Globalfiler Casework Amplification Kit. Globalfiler Express Amplification Kit. Yfiler PCR Amplification Kit.
LCM3Y8	Globalfiler Casework Amplification Kit. Globalfiler Express Amplification Kit. Yfiler PCR Amplification Kit.
N9DY22	Fusion 5C
QX63V2	AMPFLSTR NGM SELECT PCR AMPLIFICATION KIT, Yfiler PLUS PCR, GlobalFiler™ PCR Amplification Kit, AmpFISTR MiniFiler Kit PCR Reagents, PCR-Based DNA Profiling Standard, PowerPlex® ESX 17 Fast System
VZYHAU	PowerplexESX17, Powerplex CS7, Powerplex 21, Verifiler Plus.
WQNFNT	Powerplex 21, Powerplex Fusion 5C, Powerplex CS7, Globalfiler, Powerplex Y23, YFiler Plus, Verifiler plus.
X7LRWW	(1) Applied Biosystems™ AmpFLSTR™ Identifiler™ Plus PCR Amplification Kit, (2) Applied Biosystems™ AmpFLSTR™ Identifiler™ Direct PCR Amplification Kit, (3) Applied Biosystems™ AmpFLSTR™ Yfiler™ PCR Amplification Kit, (4) Applied Biosystems™ AmpFLSTR™ Minifiler™ PCR Amplification Kit, (5) Applied Biosystems™ GlobalFiler™ PCR Amplification Kit, (6) Applied Biosystems™ GlobalFiler™ Express PCR Amplification Kit,
ZRPKRR	Currently using F6C and Y23. There are no plans to add any kits in the near future.
ZW48HP	GlobalFiler, PowerPlex Fusion 5C and 6C, PowerPLex Y23 and Yfiler Plus.

Additional Comments

TABLE 9

WebCode	Additional Comments
3TY97N	Please remember to evaluate this test according to [Laboratory] autosomal parameters: analytical threshold=190, stochastic threshold=1160 and peak height ratio=50%. It is important to note that Item 2 (suspect reference standard)has two loci where the allele did not exceed our stochastic threshold and sister allele is deemed inconclusive using [Laboratory] protocols.
4TRT2L	() = Minor Allele, --- = Possible Additional Alleles
7P4RHJ	+ indicates obligate allele, ND indicates No Determination
9BC4ZG	Item 3 (Fusion 5C): A mixture of DNA profiles was identified which was interpreted as a mixture of two people. A major human male profile was identified from which the suspect (Item 2) cannot be excluded (is included). The victim (Item 1) is excluded as a contributor to this profile. A minor human male DNA profile was identified from which the victim (Item 1) and suspect (Item 2) are excluded. Item 2 (Fusion 5C): The suspect standard was interpreted as an allele,inc. at the TH01 and D21S11 loci; these loci were not included in statistical calculations. Item 3 minor interpretation: please note that I am accepting all possible combinations of the observed alleles for the minor at the following loci. All accepted genotype combinations could not fit in the allele table. D3S1358 16,16 / 16,17 / 17,17. CSF1PO 9,9 / 9,11 / 11,11. D5S818 11,11 / 11,12 / 12,12. Item 3 (PPY23): A mixture of human Y-STR DNA haplotypes was identified which was interpreted as a mixture of two males. A major Y-STR DNA haplotype was identified from which the suspect (Item 2)cannot be excluded (is included). The victim (Item 1) is excluded as a contributor. A minor Y-STR DNA haplotype was identified from which the victim (Item 1) and suspect (Item 2) are excluded. Item 4 (Fusion 5C): A mixture of DNA profiles was identified which was interpreted as a mixture of at least three people. This mixture of DNA profiles is potentially incomplete and not suitable for comparisons. Item 4 (PPY23): A mixture of human Y-STR DNA haplotypes was identified which was interpreted as a mixture of at least three males. This mixture of Y-STR DNA haplotypes is not suitable for comparisons.
9TGBFJ	Note. The victim is excluded as a possible source of the major profile in item 3. No comparisons were made to the minor profile(s).
CG832G	GF and FU data of item 2 are different at SE33 locus. The alleles of SE33 is 19-19 in GF, but SE33 is 18-19 in FU6C.
CHNYUG	The calculations only take into account the DNA-17 loci within Globalfiler, as we do not have a validated calculation method for full Globalfiler profiles.
DA832E	Alleles designated at SE33 were noted looking at both GlobalFiler and Fusion 6
FBG4HG	--- = possible additional allele(s), ( ) = Minor allele(s)
FDTJCH	( ) = minor allele, --- = possible additional alleles
GJLXVB	Item 3 results indicate a low copy number sample consistent with a two person mixture of approximately 69:31. Stochastic effects allow for the possibility of a third minor donor so there is no obvious major. I am unable to calculate the appropriate LR for the inclusion of the suspect in this mixture as I have no access to PG software. Assuming two donors the victim is excluded from being a potential donor. If three donors are assumed, comparison to the victim would be inconclusive. Item 4 results are consistent with a mixture of at least three donors including the victim. There are at least two unidentified male donors to this sample. If the suspect is a contributor to this mixture he would be an extremely minor donor with significant allelic drop-out. As there is no clear major donor, I am unable to calculate the appropriate LR for the inclusion of the victim in this mixture.
GZL8E9	For the minor in Item 3-per our [Laboratory] PM, options were provided at the D3, CSF, vWA and D5 loci. These were written with the calls separated by a comma and the choices separated by a comma and a space. This was also done for the major at vWA in Item 3. INC=inconclusive/any possible sister allele. Stats were not calculated at TH01 or D21 due to incomplete information in the suspect's standard at these locations.
HP6NUC	The allelic results of Fusion6C for the victim were used as a supplementary data, and the allelic result

TABLE 9

WebCode	Additional Comments
	for SE33 was 18-19, which differed from the results by using Globalfiler, therefore, SE33 alleles of victim was removed from the report
JQAVBA	The statistical calculation was carried out using DNA View Software and calculated at 21 loci.
K7KVK6	inconclusive (inc.)=any possible sister allele
LCM3Y8	The statistical calculation was carried out using DNA View Software and calculated at 21 loci.
MUUYCB	Globalfiler- Item 2 TH01, 3 allele appears to be an artifact. SE33 location, 18 allele appears to be elevated stutter but looking at Fusion 6C data the 18 allele is real, amp issue? Item 3 and 4, Y Indel location has OL that I would call a 1.2. Item 3 SE33 location, no 18 allele but 18 allele appear in Fusion 6c data, Positive Control Question FGA location, 25 allele appears to be elevated stutter. Fusion 6C-Item 1 D1 location, 10 allele appears to be an artifact. Item 1 D2S1338, OL appears to an artifact and not a true OL. Item 2 Amelogenin, OL appears to be -A. Item 2 SE33, 38 allele appears to be an artifact. Item 3 D19 location has 5 alleles that could indicate a 3rd contributor or artifact. Item 4, D2S1338 is the only location that indicates 4 possible contributor with 7 alleles. Positive Control Knowns SE33, 2 OL appear to be artifacts. Positive Control Question D3, 11 allele appears to be an artifact. OL'S at D3, SE33 and DYS570 appear to be artifacts and not true OL, unable to zoom to determine possible type of artifacts. YFiler-Item 1 DYS390 location, 25 allele appears to be elevated stutter. Positive Control Knowns DYS391 location, appears to be an artifact. Positive Control Question DYS390 location, 23 allele appears to be elevated stutter. PPY23-Item 1 DYS448 location, 18 allele appears to be elevated stutter. DYS389II, 26 allele appears to be an artifact unable to zoom in to determine if it's elevated stutter, pull up or other type of artifact. DYS549 location, OL allele appears to be an artifact and not a true OL, unable to zoom in to determine what type of artifact. Item 2-DYS549 location, OL appears to be an artifact and not a true OL, unable to zoom in to determine what kind of artifact. Positive Control Knowns DYS389II location, 32 allele appears to be elevated stutter. Unable to Zoom in on electronic data so cannot make specific calls as to whether an artifact is pull-up, elevated baseline etc... Y-STR Major contributor must have 4 times DNA of minor to call a major, only on two person mix. Over three contributors is uninterpretable. "+" indicates sister allele may be missing, homozygous or sharing with major. Can only determine one allele for the contributor. I reviewed the PDF Data for Globalfiler, Fusion 6C, Yfiler and PPY23. Wasn't sure if I use the default setting for the allele order. I used Fusion 6c and PPY23 since it had all DNA locations listed except the Y Indel location but included the allele calls from Globalfiler.
T3E37X	For Item 3, the minor alleles were reported only for loci fully deduced by STRmix.
T86DFW	NT=Not Tested, ND=Not Detected, INC=Inconclusive.
TZPJGU	Allele calls may vary slightly between different autosomal and YSTR amplification kits due to kit differences in stutter thresholds, platform detection, amplification cycles, primer binding site mutations, and/or analysis software used.
VZYHAU	There is nor information about line cell of positive controls, therefore we couldn´t confirm allelic assignment
WQNFNT	Dropout Probability: 0.0; Theta correction: 0.0; Probability of dropin: 0.0
X7LRWW	The statistical evaluations were performed on the DNA.VIEW Statistical Software version 37.42.
ZRPKRR	In Item 4, D2S1338 allele 25 is interpreted as a combined plus-minus stutter artifact and D22S1045 allele 16 is interpreted as a combined plus-minus stutter artifact.
ZW48HP	It was noted that allele 18 as the SE33 locus in GlobalFiler showed significantly reduced amplification reative to its sister allele in Item 2 (DNA profile from reference sample (Male Suspect - Hispanic)). This significant imbalance was not seen in any of the other chemistries. This appears, therefore to be consitent with a primer site mutation specific to GlobalFiler. This was taken in to consideration when interpreting these profiles.

-End of Report-
(Appendix may follow)

Collaborative Testing Services ~ Forensic Testing Program

Test No. 20-5882: DNA Interpretation

DATA MUST BE SUBMITTED BY **Dec. 7, 2020, 11:59 p.m.** TO BE INCLUDED IN THE REPORT

Participant Code: U1234A WebCode: NRPLNA

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

Scenario:
A man was reportedly attacked by three other males in a park. The male victim attempted to defend himself using his pocket knife, injuring at least two of his attackers. Once the victim was knocked unconscious, the attackers stole his wallet and fled the scene. Pedestrians called 9-1-1 and the victim was transported to the hospital. Upon investigation, one of the male suspects was identified and apprehended. The other two attackers have not been found. Reddish brown stains were collected from the victim's pocket knife and submitted for analysis. In addition, a gray sweatshirt with reddish brown stains was found and collected from the identified suspect's home and submitted for analysis. Known samples from the male victim (Item 1) and the male suspect (Item 2) are provided. Both the reddish brown stain collected from the knife and the reddish brown stains collected from the sweatshirt found in the suspect's home were confirmed as blood by the Serology unit and subsequently submitted for DNA analysis (Item 3 & Item 4, respectively). The DNA unit has completely consumed all evidence and has provided you with DNA profiles obtained from the items. You are requested to evaluate the DNA profiles using your laboratory-specific 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 - African American)
Item 2: DNA profile from reference sample (Male Suspect - Hispanic)
Item 3: DNA profile found from the stain on the Victim's pocket knife
Item 4: DNA profile found from the stain on the Suspect's sweatshirt

To verify a complete and accurate download, the hash value for the downloaded .ZIP file is as follows:
20-5882_Data for Participants.zip MD5 hash value: b82d9d2c19a985a36c7750566a79b8a6
20-5882_Data for Participants.zip SHA1 hash value: de7b4e5d1b4c9d3c27833efaeef760779a91d6da

Part I: DNA ANALYSIS INSTRUCTIONS

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

Analytical Threshold:	
Peak Height Ratio (%):	
Stochastic Threshold (Peak Amplitude):	

If you do not have Interpretation guidelines, please use the following guidelines and report these values above:
For STR Analysis: Analytical Threshold: 75 rfu, Peak Height Ratio: 60%, Stochastic Threshold (Peak Amplitude): 100 rfu

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

!!! IMPORTANT NOTE !!!

If you opt to analyze the .FSA files for YFiler, please note that you must change your analysis settings for the LIZ GS500 size standard to ignore the 250 bp peak.

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

Part I: DNA ANALYSIS

STR & Amelogenin Results for Known Item 1

- Report alleles in numerical order, separated by a comma.
- Follow your laboratory procedures for reporting homozygotes (i.e. X,X or X) and null responses.

STR Amplification Kit Used For Item 1:

Please indicate the electropherogram(s) reviewed for this test.

☐ GlobalFiler™ ☐ Investigator® 24plex ☐ PowerPlex® Fusion 5C ☐ PowerPlex® Fusion 6C
☐ HID format ☐ PDF format ☐ FSA format

Report the Probabilistic Genotyping Software Used (if applicable):

*Alleles below are sorted in **Default** order.*

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

YSTR Results for Known Item 1

YSTR Amplification Kit Used For Item 1:

Please indicate the electropherogram(s) reviewed for this test.

☐ YFiler™ ☐ PowerPlex® Y23 ☐ FSA format ☐ HID format ☐ PDF format

*Alleles below are sorted in **Default** order.*

ITEM	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
1								
ITEM	**DYS437**	**DYS438**	**DYS439**	**DYS448**	**DYS456**	**DYS458**	**DYS481**	**DYS533**
1								
ITEM	**DYS549**	**DYS570**	**DYS576**	**DYS635**	**DYS643**	**Y GATA H4**		
1								

Part I: DNA ANALYSIS (continued)

STR & Amelogenin Results for Known Item 2

- Report alleles in numerical order, separated by a comma.
- Follow your laboratory procedures for reporting homozygotes (i.e. X,X or X) and null responses.

STR Amplification Kit Used For Item 2:

☐ GlobalFiler™ ☐ Investigator® 24plex ☐ PowerPlex® Fusion 5C ☐ PowerPlex® Fusion 6C

Please indicate the electropherogram(s) reviewed for this test.

☐ HID format ☐ PDF format ☐ FSA format

Report the Probabilistic Genotyping Software Used (if applicable):

*Alleles below are sorted in **Default** order.*

ITEM	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D7S820
2						
ITEM	D8S1179	D10S1248	D12S391	D13S317	D16S539	D18S51
2						
ITEM	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO	FGA
2						
ITEM	Penta D	Penta E	SE33	TH01	TPOX	vWA
2						
ITEM	DYS391	DYS570	DYS576	Y Indel		
2						

YSTR Results for Known Item 2

YSTR Amplification Kit Used For Item 2:

☐ YFiler™ ☐ PowerPlex® Y23

Please indicate the electropherogram(s) reviewed for this test.

☐ FSA format ☐ HID format ☐ PDF format

*Alleles below are sorted in **Default** order.*

ITEM	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
2								
ITEM	DYS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS481	DYS533
2								
ITEM	DYS549	DYS570	DYS576	DYS635	DYS643	Y GATA H4		
2								

Part I: DNA ANALYSIS (continued)

STR & Amelogenin Results for Questioned Item 3

- Report alleles in numerical order, separated by a comma.
- Follow your laboratory procedures for reporting homozygotes (i.e. X,X or X) and null responses.
- For each locus, if a major and minor contributor can be distinguished and your laboratory normally reports this distinction, record the results in the appropriately labeled response boxes.

STR Amplification Kit Used For Item 3:

☐ GlobalFiler™ ☐ Investigator® 24plex

☐ HID format ☐ PDF format

Please indicate the electropherogram(s) reviewed for this test.

☐ PowerPlex® Fusion 5C ☐ PowerPlex® Fusion 6C

☐ FSA format

Report the Probabilistic Genotyping Software Used (if applicable):

*Alleles below are sorted in **Default** order.*

ITEM	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D7S820
3						
3 major						
3 minor						
ITEM	**D8S1179**	**D10S1248**	**D12S391**	**D13S317**	**D16S539**	**D18S51**
3						
3 major						
3 minor						
ITEM	**D19S433**	**D21S11**	**D22S1045**	**Amelogenin**	**CSF1PO**	**FGA**
3						
3 major						
3 minor						
ITEM	**Penta D**	**Penta E**	**SE33**	**TH01**	**TPOX**	**vWA**
3						
3 major						
3 minor						
ITEM	**DYS391**	**DYS570**	**DYS576**	**Y Indel**		
3						
3 major						
3 minor						

YSTR Results for Questioned Item 3

YSTR Amplification Kit Used For Item 3:

☐ YFiler™ ☐ PowerPlex® Y23

Please indicate the electropherogram(s) reviewed for this test.

☐ FSA format ☐ HID format ☐ PDF format

*Alleles below are sorted in **Default** order.*

ITEM	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
3								
3 major								
3 minor								
ITEM	**DYS437**	**DYS438**	**DYS439**	**DYS448**	**DYS456**	**DYS458**	**DYS481**	**DYS533**
3								
3 major								
3 minor								
ITEM	**DYS549**	**DYS570**	**DYS576**	**DYS635**	**DYS643**	**Y GATA H4**		
3								
3 major								
3 minor								

Part I: DNA ANALYSIS (continued)

Item 3 DNA Analysis Questions

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

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

Item 1 Conclusion

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

Item 2 Conclusion

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

3) **Statistical Analysis of Item 3 DNA Typing Results:**

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

- ☐ Combined Probability of Exclusion/Inclusions (CPE/CPI)
- ☐ Likelihood Ratio (LR)
- ☐ Random Match Probability (RMP)
- Other:

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

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

Part I: DNA ANALYSIS (continued)

STR & Amelogenin Results for Questioned Item 4

- Report alleles in numerical order, separated by a comma.
- Follow your laboratory procedures for reporting homozygotes (i.e. X,X or X) and null responses.
- For each locus, if a major and minor contributor can be distinguished and your laboratory normally reports this distinction, record the results in the appropriately labeled response boxes.

STR Amplification Kit Used For Item 4:

☐ GlobalFiler™ ☐ Investigator® 24plex

☐ HID format ☐ PDF format

Please indicate the electropherogram(s) reviewed for this test.

☐ PowerPlex® Fusion 5C ☐ PowerPlex® Fusion 6C

☐ FSA format

Report the Probabilistic Genotyping Software Used (if applicable):

*Alleles below are sorted in **Default** order.*

ITEM	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D7S820
4						
4 major						
4 minor						
ITEM	**D8S1179**	**D10S1248**	**D12S391**	**D13S317**	**D16S539**	**D18S51**
4						
4 major						
4 minor						
ITEM	**D19S433**	**D21S11**	**D22S1045**	**Amelogenin**	**CSF1PO**	**FGA**
4						
4 major						
4 minor						
ITEM	**Penta D**	**Penta E**	**SE33**	**TH01**	**TPOX**	**vWA**
4						
4 major						
4 minor						
ITEM	**DYS391**	**DYS570**	**DYS576**	**Y Indel**		
4						
4 major						
4 minor						

YSTR Results for Questioned Item 4

YSTR Amplification Kit Used For Item 4:

☐ YFiler™ ☐ PowerPlex® Y23

Please indicate the electropherogram(s) reviewed for this test.

☐ FSA format ☐ HID format ☐ PDF format

*Alleles below are sorted in **Default** order.*

ITEM	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
4								
4 major								
4 minor								
ITEM	**DYS437**	**DYS438**	**DYS439**	**DYS448**	**DYS456**	**DYS458**	**DYS481**	**DYS533**
4								
4 major								
4 minor								
ITEM	**DYS549**	**DYS570**	**DYS576**	**DYS635**	**DYS643**	**Y GATA H4**		
4								
4 major								
4 minor								

Part I: DNA ANALYSIS (continued)

Item 4 DNA Analysis Questions

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

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

Item 1 Conclusion

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

Item 2 Conclusion

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

3) **Statistical Analysis of Item 4 DNA Typing Results:**

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

- ☐ Combined Probability of Exclusion/Inclusions (CPE/CPI)
- ☐ Likelihood Ratio (LR)
- ☐ Random Match Probability (RMP)
- Other:

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

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

Part II: ADDITIONAL COMMENTS

Comments regarding any part of this Test.

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

Part III: AMPLIFICATION KIT SURVEY (optional)

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

RELEASE OF DATA TO ACCREDITATION BODIES

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

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

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

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

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

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

A2LA Certificate No.

Step 2: Complete the Laboratory Identifying Information in its entirety

Authorized Contact Person and Title

Laboratory Name

Location (City/State)