

DNA Interpretation Test No. 18-589 Summary Report

Each participant received a sample pack consisting of a digital download packet through the CTS portal containing electropherograms and raw data files which they were requested to evaluate using their existing protocols. Data were returned from 36 participants and are compiled into the following tables:

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Appendix: Data Sheet

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

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

Manufacturer's Information

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

SAMPLE PREPARATION: Item 1 and Item 2 were each created using blood collected from two separate male donors. The Item 3 mixture was created by combining three parts of blood from the Item 1 male donor and one part of blood from the Item 2 male donor. The Item 4 mixture was created by combining six parts of blood from the Item 1 male donor, three parts of blood from the Item 2 male donor.

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.

		Ame	Amelogenin and STR Results					
	Results c	ompiled by predist	ribution laboratories	s and a consensu:	s of participants.			
ltem	D1S1656 D8S1179 D19S433	D251338 D1051248 D21511	D2S441 D12S391 D22S1045	D3S1358 D13S317 Amelogenin	D5S818 D16S539 CSF1PO	D7S820 D18S51 FGA		
	Penta D DYS391	Penta E DYS570	SE33 DYS576	TH01 Y Indel	ТРОХ	vWA		
1	14,15	21,21	10,14	14,16	12,12	11,12		
	13,15	13,15	20,22	12,13	11,11	13,15		
	11,14	28,32.2	15,17	X,Y	8,10	22,23		
I	2.2,10	7,8	17,19	7,8	9,9	16,17		
ı	11	21	15	2				
2	18.3,19.3	17,20	10,15	14,17	11,12	7,13		
	10,12	15,15	23,23	8,12	11,13	15,18		
	14,15	30,31.2	11,15	X,Y	10,11	24,24		
	14,15	12,14	20,20	7,9.3	8,11	17,17		
l	11	17	17	2				
3	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13		
l	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18		
l	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24		
l	2.2,10,14,15	7,8,12,14	17,19,20	7,8,9.3	8,9,11	16,17		
l	11	17,21	15,17	2				
4	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13		
l	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18		
l	11,14,14.2,15	28,30,31,31.2,32.2	11,15,17†	X,Y	8,10,11,12	21,22,23,24		
l	2.2,10,14,15	5,7,8,10,12,14	17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17		
1	11	17,21†	15,17	2				

+ Additional alleles may be present depending on laboratory thresholds.

DNA Interpretation

			YS	STR Results	5			
	Results	compiled from	n predistribut	ion laboratorie	es and a cor	sensus of part	ticipants.	
ltem	DYS19	DY\$385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
	DYS437	DY\$438	DYS439	DYS448	DYS456	DY\$458	DYS481	DY\$533
	DYS549	DYS570	DYS576	DYS635	DYS643	Y GATA H4		
1	15	16,18	13	31	21	11	11	13
	14	11	11	20	15	16	27	11
	12	21	15	21	14	12		
2	14	11,14	13	29	23	11	13	13
	15	12	12	19	16	18	23	12
	13	17	17	23	10	11		
3	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
	14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,13	17,21	15,17	21,23	10,14	11,12		
4	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
	14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,13	17,21	15,17	21,23	10,14	11,12		

Summary Comments

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

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

STR Data

Thirty six participants evaluated the provided STR data. Of these, 13 reported examining the GlobalFiler[™] data, seven reported PowerPlex® Fusion 6C, six reported PowerPlex® Fusion 5C and four reported using Investigator® 24plex. Two participants reported using STR data from all four kits and three participants reported using a combination of 2-3 kits. One participant did not report which amplification kit they used for their evaluation. All participants that reported data were concordant for reference Item 1 except for one participant that reported "22,10" at Penta D whereas the consensus was "2.2,10". All participants that reported data were concordant for reference Item 2.

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

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

YSTR Data

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

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

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

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

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

Conclusions

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

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

Interpretation Guidelines

		TABLE 1	
WebCode	Analytical Threshold (rfu)	Peak Height Ratio (%)	Stochastic Threshold (rfu)
2B9MM2	120 rfu	60% PHR above 750 rfu and 35% PHR below 750 rfu	400 rfu
2F3JCR	Empirical color-specific run-specific. For these runs it made no difference.		
2NVUK3	120	≥750RFU = 60%; <750RFU = 35%	400
3KFLXN	190 rfu	50%	1160 rfu
67PQBM	40RFU (PPF5C, PPF6C, GF, Y23, YF)	NA (Probabilistic Genotyping)	NA (Probabilistic Genotyping), NA for Y-STRs
68JETH	75, 50	70%, 60%	200, 150
6JUR9X	150 RFU	70%	600 RFU
8M4PTP	[Participant di	d not provide interpretation guidel	ines]
9ADA6G	75 rfu	60%	100 rfu
9W7NGG	50 RFU	>70%	70 RFU
9YB7R9	75	60	230
AUEP3J	75 rfu	60%	100 rfu
B9WY6E	190	50	1160
BLYQLD	75 rfu	60%	100 rfu
СҮММВ	75 rfu	60%	100 rfu
DW9TX4	75 rfu Fusion and PPY	60% Fusion and 50% PPY	100 Fusion and 75 PPY
E8TBDE	75 rfu	60%	100 rfu
EKFHBF	50_rfu	60%	300_rfu_PP_Fusion_5C,200_rf u_PPY23
JX4EE9	75 rfu	60%	400 rfu
NKHVKE	120 rfu	60% PHR above 750 rfu and 35% PHR below 750 rfu	400 rfu
Q2YDT6	GlobalFiler 75rfus, PPY23 50rfus	GlobalFiler 60%, PPY23 none	GlobalFiler 100rfus, PPY23 200rfus @ DYS385
QDUN2C	120	≥750rfu=60%;<750=35%	400
R3UJM6	N/A	N/A	N/A
RNMG2P	75	60	230
TD8ZU2	STR_B:40, G:69, Y:39, R:64, P:58. YSTR_B:57, G:99, Y:140, R:171	60%	132 RFU
TN7VTW	[Participant di	d not provide interpretation guidel	ines]

WebCode	Analytical Threshold (rfu)	Peak Height Ratio (%)	Stochastic Threshold (rfu)
UU938Z	Used CTS analytical thresholds for GlobalFiler and yFiler	Used CTS peak height ratios for GlobalFiler and yFiler	Used CTS stochastic thresholds for GlobalFiler and yFiler
UZEXQZ	[Participant di	d not provide interpretation guideli	nes]
WVXCVX	GlobalFiler 75 rfus, PPY 23 50 RFUs	GlobalFiler 60%, PPY23 None	Globalfiler 100 RFUs, PPY23 200 RFUs for DYS385 only
WWRZDU	75	60	100
WYU2C6	70RFU	STRmix is used for analysis.	600RFU for manual interp. STRmix is used for analysis.
XVDTQQ	75 rfu	60%	100 rfu
Z7HQMQ	190 rfu	50%	1160 rfu
Z7LFRM	75 rfu	STR 60%, YSTR 50%	STR 100 rfu, YSTR 75 rfu
Z9Q36R	175	60	650
ZNKRZN	190 rfu	50	1160 rfu

Test 18-589

STR & Amelogenin Results

WohCod	o Amplificati	ion Kits (Filo Format)	II (DEE	-		
webcod	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D7\$820
	D8S1179	D1051248	D12S391	D135317	D16S539	D18\$51
ltem	D195433	D21511	D22S1045	Amelogenin	CSF1PO	FGA
	Penta D	Penta E	SE33	TH01	ΤΡΟΧ	vWA
	DYS391	DYS570	DYS576	Y Indel		
			ltem 1 - STR	Results		
2B9MM2	Investigato	or® 24plex (HID Formo	it)			
	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
			17,19	7,8	9	16,17
	11					
2F3JCR	GlobalFile	r™ (HID Format)				
	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
1	11.14	28.32.2	15.17	X.Y	8.10	22.23
	,		17,19	7,8	9	16,17
	11			2		
	Investigate	r@ 24 play (HID Forma	.+)			
ZINVUKJ	14 15		10.14	1416	10	11 10
	12.15	12.15	20.22	14,10	12	12.15
	13,13	13,15	20,22	12,13	0.10	13,13
1	11,14	28,32.2	15,17	Χ,Υ	8,10	22,23
	11		17,17	/,0	7	10,17
3KFLXN	PowerPlex	® Fusion 5C (FSA Forr	nat)			
_	14,15	21,21	10,14	14,16	12,12	11,12
	13,15	13,15	20,22	12,13	11,11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
	2.2,10	7,8	Not tested	7,8	9,9	16,17
	11	Not tested	Not tested	Not tested		
67PQBM	GlobalFile	r™, PowerPlex® Fusion	5C, PowerPlex® Fus	sion 6C (FSA Format)	, (PDF Format), (HIE	D Format)
	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
	2.2,10	7,8	17,19	7,8	9	16,17
	11	21	15	2		
68JETH	PowerPlex	® Fusion 6C (HID Forr	nat)			
	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
	2.2,10	7,8	17,19	7,8	9	16,17
	11	21	15			

DNA Interp	retation					Test 18-589
WebCode	e Amplificati	on Kits (File Format)	D 00111	5001050	D 2 2 3 3	
	D151656	D251338	D25441	D351358	D55818	D75820
lte m	D105422	D1031246	D125391	0135317	0103539	500
item	D195455	DZISTI Bonta E	DZZ51045	Amelogenin	TROX	
	DVS201	DVS570	DVS576		IFOX	VWA
	015571	013570				
			Ifem I - SIKI	Kesulfs		
JUR9X	GlobalFile	r™				
	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
	11,14	28,32.2	15,17	X,Y	8,10	22,23
			17,19	7,8	9	16,17
	11			2		
	GlobalFile	r™ PowerPlex® Fusion 6	(PDF Format)			
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	14.15	21 21		1416	10.10	11 10
	13 15	12 15	20.22	10 12	11 11	12 15
	13,15	13,15	20,22	12,13	0.10	13,15
	11,14	28,32.2	15,17	Χ,Υ	8,10	22,23
	2.2,10	/,8	17,19	/,8	9,9	16,17
	11	Z I	10	Z		
ADA6G	GlobalFile	r™ (PDF Format)				
	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
ı —	11,14	28,32.2	15,17	X,Y	8,10	22,23
	-	-	17,19	7,8	9	16,17
	11	-	-	2		
9W7NGG	(PDF Forr	mat)				
	14,15	, 21	10,14	14,16	12	11,12
	13.15	13.15	20.22	12.13	11	13.15
	1114	28.32.2	15.17	XY	8 10	22.23
	2210	7.8	17 19	7.8	9	16.17
	11	21	15	,,0	,	10,17
			.)			
YIB/RY	PowerPlex	B Fusion 6C (PDF Form	at)	- / - /		
	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
	11,14	28,32.2	15,17	X,Y	8,10	22,23
	2.2,10	7,8	17,19	7,8	9	16,17
	11	21	15			
AUEP3J	GlobalFile	r™ (PDF Format)				
	14,15	21,21	10,14	14,16	12,12	11,12
	13,15	13,15	20,22	12,13	11,11	13,15
	11,14	28,32.2	15,17	X,Y	8,10	22,23
			17,19	7.8	9,9	16.17
	11		,	2	.,.	/
	PowerDland	R Fusion 50 /FCA Farmer	a+)			
J7 VV [OE			10.14	1 / 1 /	10.10	11.10
	14,10	21,21	10,14	14,10	12,12	10.15
	13,15	13,15	20,22	12,13	11,11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
	2.2,10	/,8		/,8	9,9	16,17
	11					

	retation					Test To-5
WebCode	Amplificatio	on Kits (File Format)				
_	D151656	D251338	D25441	D351358	D55818	D75820
	D051179	D1051246	D125391	D135317	0105539	D16551
rem	D195433	D21511 Bonta E	DZZ51045	Amelogenin	TPOX	rga www.
	DVS201	DVS570	DV\$576	Vindol	IFUX	VWA
	013391	013370				
			Item I - SIR	Kesults		
YQLD	GlobalFiler	-™ (PDF Format)				
	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
	11,14	28,32.2	15,17	X,Y	8,10	22,23
	-	-	17,19	7,8	9	16,17
	11	-	-	2		
YNMMB	PowerPlex®	® Fusion 6C (PDF Form	nat)			
	14.15	21	10.14	14 16	12	11 12
	13.15	13 15	20.22	12.13	11	13.15
	11.14	0,10	15.17	v v	9 10	20.02
	2.2.10	20,32.2	17.10	7.0	0,10	16.17
	11	21	17,17	7,0	7	10,17
		۷ ا	10			
№9TX4	PowerPlex®	Fusion 6C (PDF Form	nat)			
	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
	11,14	28,32.2	15,17	X,Y	8,10	22,23
	2.2,10	7,8	17,19	7,8	9	16,17
	11	21	15			
3TBDE	GlobalFiler	-™ (PDF Format)				
	14.15	21	10.14	14.16	12	11.12
	13.15	13 15	20.22	12.13	11	13.15
	11.14	28 32 2	15.17	× ×	8 10	22.23
	11,14	20,32.2	17 10	7.8	0,10	16.17
	11		17,17	2	/	10,17
				_		
FHBF	PowerPlex®	Fusion 5C (PDF Form	nat)			
	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
	11,14	28,32.2	15,17	X,Y	8,10	22,23
	2.2,10	7,8		7,8	9	16,17
	11					
4EE9	GlobalFiler	·™ (PDF Format)				
	14,15	21,21	10.14	14.16	12,12	11.12
	13,15	13.15	20.22	12.13	, 11.11	13.15
	11 14	28 32 2	15.17	× ×	810	20.03
		20,02.2	17.10	7.8	0.0	16.17
	11		1/,17	2	7,7	10,17
				-		
KHVKE	Investigator	r® 24plex (HID Forma	t)			
KHVKE	Investigator 14,15	r® 24plex (HID Forma 21	t) 10,14	14,16	12	11,12
KHVKE	Investigator 14,15 13,15	r® 24plex (HID Forma 21 13,15	t) 10,14 20,22	14,16 12,13	12 11	11,12 13,15
KHVKE	Investigator 14,15 13,15 11,14	r® 24plex (HID Forma 21 13,15 28,32.2	t) 10,14 20,22 15,17	14,16 12,13 X,Y	12 11 8,10	11,12 13,15 22,23

DNA Inter	pretation					Test 18-58
WebCod	e Amplificati	on Kits (File Format)	D25441	D3\$1358	D55818	D75820
	D151050	D1051248	D125391	D135317	D165539	D18551
ltem 📕	D195433	D21511	D22S1045	Amelogenin	CSF1PO	FGA
	Penta D	Penta E	SE33	TH01	ΤΡΟΧ	vWA
-	DYS391	DYS570	DY\$576	Y Indel		
			ltem 1 - STR	Results		
Q2YDT6	GlobalFile	r™ (PDF Format)				
	14,15	21,21	10,14	14,16	12,12	11,12
	13,15	13,15	20,22	12,13	11,11	13,15
	11.14	28.32.2	15.17	X.Y	8.10	22.23
	,	20/02.2	17,19	7.8	9.9	16.17
	11		.,,.,	2	,,,	,.,
2011020	Investigato	r® 24plex (HID Format)			
	14.15	21 21 21 21 21 21 21 21 21 21 21 21 21 2	10.14	14.16	12	11.12
	13.15	13 15	20.22	12.13	11	13 15
	11 14	28 32 2	15.17	X Y	8 10	22.22
		20,02.2	17 19	7.8		16 17
	11		17,17	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		10,17
23111M6	GlobalFile	r™ (ESA Format)				
(005/010	14 15	21.21	10.14	14 16	12 12	11 12
	13.15	13 15	20.22	12.13	11 11	13 15
	11.14	28.32.2	15.17	× ×	810	22.23
	11,14	20,32.2	17.10	7.8	0,10	16.17
	11		17,17	2	7,7	10,17
	PowerPlay	R Eusion 6C (PDF Form	(at)			
	14 15	21	10.14	14 16	12	11 12
	13.15	13 15	20.22	12.13	11	13.15
	11 14	28 32 2	15.17	× ×	8 10	22.23
	2210	7.8	17 19	7.8	9	16.17
	11	21	15	,,0	,	10,17
[D87U2	PowerPlex	R Fusion 6C				
DOLOZ	14.15	21.21	10.14	14.16	12.12	11.12
	13.15	13.15	20.22	, 12.13	, 11.11	13.15
	11 14	28.32.2	15.17	× Y	8 10	22.23
	2 2.10	7.8	17,19	7.8	9.9	16.17
	11	21	15	,,	.,,	
N7VTW	GlobalEile	r™ Investigator® 24ple	x PowerPlex® Fusic	n 5C PowerPlex® Fu	sion 6C (ESA Form	at) (PDF Format)
	14,15	21	10,14	14,16	12	11,12
	13.15	13.15	20.22	12.13	11	13.15
	11 14	28.32.2	15 17	X Y	8 10	22.23
	2.2.10	7.8	17.19	7.8	_9	16.17
	11	21	15	.,		,.,
JU9387	GlobalFile	r™ (PDF Format)				
20,002	14,15	21,21	10.14	14.16	12,12	11.12
	13.15	13.15	20.22	.12.13	11.11	13.15
	11 14	28 32 2	15.17	x v	810	22.23
	N/A	20,32.2 N/Δ	17.10	7.8	9.0	16.17
	11	N/A	N/A	2	1,1	10,17

DNA Interp	pretation					Test 18-
WebCode	Amplificati	on Kits (File Format)	500	B661616	B = 2010	
	D151656	D251338	D25441	D351358	D55818	D75820
	D651179	D1031240	D125391	D135317	D165539	D16551
em	D195433	DZISTI Donte F	D2251045	Amelogenin	TROX	FGA
	Penia D	Penid E	SE33	Y Indal	IPOX	VWA
	015391	D13570		Tindei		
			Item I - SIR	Kesults		
zexqz	GlobalFile	r™, PowerPlex® Fusion (6C (PDF Format)			
	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
	11,14	28,32.2	15,17	X,Y	8,10	22,23
	2.2,10	7,8	17,19	7,8	9	16,17
	11	21	15	2		
	GlobalEile	r™ (PDE Eormat)				
	1/ 15	01 01	1014	1114	10 10	11 10
	1215	12.15	20.22	10.10	11.11	1215
	13,15	13,15	20,22	12,13		13,15
	11,14	28,32.2	15,1/	X,Y	8,10	22,23
	11		17,19	/,8	9,9	16,17
	11			Ĺ		
wrzdu	GlobalFile	r™, Investigator® 24ple>	, PowerPlex® Fusic	on 5C, PowerPlex® Fu	sion 6C (PDF Form	at)
	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
	11,14	28,32.2	15,17	X,Y	8,10	22,23
	2.2,10	7,8	17,19	7,8	9	16,17
	11	21	15	2		
/YLI2C6	PowerPlex	R Eusion 6C (HID Form	at)			
10200	14 15	21 21	10.14	14 16	12 12	11 12
	13 15	13 15	20.22	12.13	11 11	13.15
	10,10	10,10	20,22	12,15	0.10	10,10
	11,14	20,32.2	15,17	7.0	8,10	22,23
	2.2,10	/,8	17,19	7,8	9,9	10,17
	11	21	15			
/DTQQ	GlobalFile	r™ (PDF Format)				
	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
	11,14	28,32.2	15,17	X,Y	8,10	22,23
			17,19	7,8	9	16,17
	11			2		
	PowerPlex	® Eusion 5C (ESA Form	at)			
	14 15	21 21	, 10.14	14 16	12 12	11 12
	13.15	13.15	20.22	10 10	11 11	_13.15
	10,10		20,22	12,13	0.10	-13,13
	11,14	28,32.2	15,17	λ, Υ	8,10	22,23
	22,10	/,8		7,8 NIT	9,9	16,17
	11	INI	INT	INI		
1LFRM	PowerPlex	Pusion 5C (PDF Form	at)			
	14,15	21	10,14	14,16	12	11,12
	13,15	13,15	20,22	12,13	11	13,15
	11,14	28,32.2	15,17	X,Y	8,10	22,23
	2.2,10	7,8		7,8	9	16,17
	11					

DNA Int	terpretation					Test 18-589
WebCo	ode Amplificati D1S1656 D8S1179	on Kits (File Format) D2S1338 D10S1248	D25441 D125391	D351358 D135317	D5\$818 D16\$539	D75820 D18551
ltem	D195433	D21511	D22S1045	Amelogenin	CSF1PO	FGA
	Penta D	Penta E	SE33	TH01	ΤΡΟΧ	vWA
	DY\$391	DYS570	DYS576	Y Indel		
			ltem 1 - STR	Results		
Z9Q36	R GlobalFile	r™ (PDF Format)				
	14,15	21,21	10,14	14,16	12,12	11,12
- 1	13,15	13,15	20,22	12,13	11,11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
			17,19	7,8	9,9	16,17
	11			2		
ZNKRZ	N PowerPlex	® Fusion 5C (FSA Forr	nat)			
	14,15	21,21	10,14	14,16	12,12	11,12
	13,15	13,15	20,22	12,13	11,11	13,15
1	11,14	28,32.2	15,17	X,Y	8,10	22,23
	2.2,10	7,8		7,8	9,9	16,17
	11					

	relution					Test 10-50;
WebCode	Amplification D1S1656	on Kits (File Format) D2S1338	D2S441	D3\$1358	D5\$818	D7\$820
ltem	D8S1179	D10S1248	D12S391	D135317	D16S539	D18S51
ltem	D195433	D21S11	D22S1045	Amelogenin	CSF1PO	FGA
	Penta D	Penta E SE33 TH01 TPOX	ΤΡΟΧ	v₩A		
	DYS391	DYS570	DYS576	Y Indel		
			ltem 2 - STR	Results		
2B9MM2	Investigator	® 24plex (HID Forme	at)			
	18.3,19.3	17,20	10,15	14,17	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24
			20	7,9.3	8,11	17
	11					
2F3JCR	GlobalFiler	™ (HID Format)				
	18.3,19.3	17,20	10,15	14,17	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24
			20	7,9.3	8,11	17
	11			2		
2NVUK3	Investigator	® 24plex (HID Form	at)			
	18.3,19.3	17,20	, 10,15	14,17	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
,	14.15	30.31.2	11.15	XY	10.11	24
-	11,10	00,01.2	20	7.9.3	8.11	17
	11			.,	-/	
3KFLXN	PowerPlex®	9 Fusion 5C (FSA For	mat)			
	18.3,19.3	17,20	10,15	14,17	11,12	7,13
	10,12	15,15	23,23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24,24
	14,15	12,14	Not tested	7,9.3	8,11	17,17
	11	Not tested	N at tasta d	Not tostad		
			INOT TESTED	INOT lested		
	GlobalFiler	™, PowerPlex® Fusior	1 5C, PowerPlex® Fus	sion 6C (FSA Format),	. (PDF Format), (HID) Format)
	GlobalFiler 18.3,19.3	™, PowerPlex® Fusior 17,20	15C, PowerPlex® Fus	sion 6C (FSA Format), 14,17	PDF Format), (HID) Format) 7,13
	GlobalFiler 18.3,19.3 10,12	™, PowerPlex® Fusior 17,20 15	15C, PowerPlex® Fus 10,15 23	sion 6C (FSA Format), 14,17 8,12	(PDF Format), (HID 11,12 11,13) Format) 7,13 15,18
2	GlobalFiler 18.3,19.3 10,12 14,15	.™, PowerPlex® Fusior 17,20 15 30,31.2	10,15 23 11,15	sion 6C (FSA Format), 14,17 8,12 X,Y	(PDF Format), (HID 11,12 11,13 10,11) Format) 7,13 15,18 24
<u>2</u>	GlobalFiler 18.3,19.3 10,12 14,15 14,15	.™, PowerPlex® Fusior 17,20 15 30,31.2 12,14	10,15 23 11,15 20	sion 6C (FSA Format), 14,17 8,12 X,Y 7,9.3	(PDF Format), (HID 11,12 11,13 10,11 8,11) Format) 7,13 15,18 24 _17
2	GlobalFiler 18.3,19.3 10,12 14,15 14,15 11	. [™] , PowerPlex® Fusion 17,20 15 30,31.2 12,14 17	10,15 10,15 23 11,15 20 17	sion 6C (FSA Format), 14,17 8,12 X,Y 7,9.3 2	(PDF Format), (HID 11,12 11,13 10,11 8,11) Format) 7,13 15,18 24 17
2 58.JETH	GlobalFiler 18.3,19.3 10,12 14,15 14,15 11 PowerPlex(#	 ™, PowerPlex® Fusior 17,20 15 30,31.2 12,14 17 Design 6C. (HID Formation) 	10,15 10,15 23 11,15 20 17 nat)	sion 6C (FSA Format), 14,17 8,12 X,Y 7,9.3 2	(PDF Format), (HID 11,12 11,13 10,11 8,11	D Format) 7,13 15,18 24 17
2 58JETH	GlobalFiler 18.3,19.3 10,12 14,15 14,15 11 PowerPlex@ 18.3,19.3	 ™, PowerPlex® Fusior 17,20 15 30,31.2 12,14 17 Pusion 6C (HID Formation 17,20) 	10,15 10,15 23 11,15 20 17 mat) 10,15	tion 6C (FSA Format), 14,17 8,12 X,Y 7,9.3 2 14,17	(PDF Format), (HID 11,12 11,13 10,11 8,11	7,13 7,13 15,18 24 17 7,13
2 58JETH	GlobalFiler 18.3,19.3 10,12 14,15 14,15 11 PowerPlex 18.3,19.3 10,12	 ™, PowerPlex® Fusion 17,20 15 30,31.2 12,14 17 Pusion 6C (HID Form 17,20 15 	10,15 10,15 23 11,15 20 17 mat) 10,15 23	tion 6C (FSA Format), 14,17 8,12 X,Y 7,9.3 2 14,17 8,12	(PDF Format), (HID 11,12 11,13 10,11 8,11 11,12 11,12	D Format) 7,13 15,18 24 17 7,13
2 58JETH	GlobalFiler 18.3,19.3 10,12 14,15 14,15 11 PowerPlex@ 18.3,19.3 10,12 14,15	 ™, PowerPlex® Fusion 17,20 15 30,31.2 12,14 17 Pusion 6C (HID Form 17,20 15 20,31.2 	10,15 23 11,15 20 17 mat) 10,15 23	tion 6C (FSA Format), 14,17 8,12 X,Y 7,9.3 2 14,17 8,12 X,Y	(PDF Format), (HID 11,12 11,13 10,11 8,11 11,12 11,12 11,13	7,13 7,13 15,18 24 17 7,13 15,18 24
2 58JETH 2	GlobalFiler 18.3,19.3 10,12 14,15 14,15 11 PowerPlex 18.3,19.3 10,12 14,15 14,15 14,15	 ™, PowerPlex® Fusion 17,20 15 30,31.2 12,14 17 Pusion 6C (HID Form 17,20 15 30,31.2 12,14 	10,15 23 11,15 20 17 mat) 10,15 23 11,15 20 17 10,15 23 11,15 20	tion 6C (FSA Format), 14,17 8,12 X,Y 7,9.3 2 14,17 8,12 X,Y 7,9.3	(PDF Format), (HID 11,12 11,13 10,11 8,11 11,12 11,12 11,13 10,11 8,11	D Format) 7,13 15,18 24 17 7,13 15,18 24 17
2 58JETH 2	ClobalFiler 18.3,19.3 10,12 14,15 14,15 11 PowerPlex® 18.3,19.3 10,12 14,15 14,15 14,15 11	 ™, PowerPlex® Fusion 17,20 15 30,31.2 12,14 17 Pusion 6C (HID Form 17,20 15 30,31.2 12,14 12,14 17 	n 5C, PowerPlex® Fus 10,15 23 11,15 20 17 mat) 10,15 23 11,15 20 11,15 23 11,15 23 11,15 23 11,15 23 11,15 23 17 10,15 10,15 17 10,15 10,15 17 10,15 10,15 17 10,15 17 10,15 10,15 17 10,15 10,15 17 10,15 10,15 10,15 17 10,15 10,15 10,15 17 10,15 10,15 10,15 17 10,15 10,15 10,15 10,15 10,15 10,15 11,15 10,15 11,15 10,15 11,15 10,15 11,15 11,15 11,15 11,15 11,15 11,15 11,15 11,15 11,15 11,15 11,15 11,15 11,15 11,15 11,15 11,15 11,15 17 17	tion 6C (FSA Format), 14,17 8,12 X,Y 7,9.3 2 14,17 8,12 X,Y 7,9.3 2	(PDF Format), (HID 11,12 11,13 10,11 8,11 11,12 11,12 11,13 10,11 8,11	D Format) 7,13 15,18 24 17 7,13 7,13 15,18 24 17
2 58JETH 2	ClobalFiler 18.3,19.3 10,12 14,15 14,15 11 PowerPlex 18.3,19.3 10,12 14,15 14,15 14,15 14,15 14,15 14,15 14,15 14,15 14,15 14,15 14,15 14,15 14,15 15 16 16 16 16 16 16 16 16 16 16	 ™, PowerPlex® Fusion 17,20 15 30,31.2 12,14 17 Pusion 6C (HID Form 17,20 15 30,31.2 12,14 17 	10,15 23 11,15 20 17 mat) 10,15 23 11,15 23 11,15 20 11,15 20 11,15 23 11,15 20 17	tion 6C (FSA Format), 14,17 8,12 X,Y 7,9.3 2 14,17 8,12 X,Y 7,9.3 2	(PDF Format), (HID 11,12 11,13 10,11 8,11 11,12 11,13 10,11 8,11	D Format) 7,13 15,18 24 17 7,13 15,18 24 17
2 58JETH 2 5JUR9X	GlobalFiler 18.3,19.3 10,12 14,15 14,15 11 PowerPlex® 18.3,19.3 10,12 14,15 14,15 14,15 14,15 11 GlobalFiler 18.3,19.3	 ™, PowerPlex® Fusion 17,20 15 30,31.2 12,14 17 Pusion 6C (HID Form 17,20 15 30,31.2 12,14 17 	10,15 23 11,15 20 17 mat) 10,15 23 11,15 23 11,15 20 17 10,15 23 11,15 20 17 10,15 23 11,15 20 17 10,15 23 11,15 20 17 10,15 23 11,15 20 17 10,15 23 10,15 20 17 10,15 23 10,15 20 17 10,15 23 10,15 20 17 10,15 23 10,15 20 17 10,15 23 10,15 20 17 10,15 23 10,15 23 10,15 20 17 10,15 23 10,15 23 10,15 20 17 10,15 23 10,15 23 10,15 23 10,15 23 10,15 23 10,15 23 11,15 23 11,15 23 11,15 23 11,15 23 11,15 23 11,15 23 11,15 23 11,15 20 11,15 23 11,15 20 11,15 20 11,15 23 11,15 20 17 10,15 10	ion 6C (FSA Format), 14,17 8,12 X,Y 7,9.3 2 14,17 8,12 X,Y 7,9.3 2	(PDF Format), (HID 11,12 11,13 10,11 8,11 11,12 11,12 11,13 10,11 8,11 11,12	D Format) 7,13 15,18 24 17 7,13 15,18 24 17 7,13
2 58JETH 2 5JUR9X	GlobalFiler 18.3,19.3 10,12 14,15 14,15 11 PowerPlex® 18.3,19.3 10,12 14,15 14,15 14,15 14,15 14,15 11 GlobalFiler 18.3,19.3 10,12	 ™, PowerPlex® Fusion 17,20 15 30,31.2 12,14 17 Pusion 6C (HID Form 17,20 15 30,31.2 12,14 17 	nor rested 1 5C, PowerPlex® Fus 10,15 23 11,15 20 17 mat) 10,15 23 11,15 20 17 10,15 20 17 10,15 20 17	ion 6C (FSA Format), 14,17 8,12 X,Y 7,9.3 2 14,17 8,12 X,Y 7,9.3 14,17 8,12 X,Y 7,9.3	(PDF Format), (HID 11,12 11,13 10,11 8,11 11,12 11,12 11,13 10,11 8,11 11,12 11,12	D Format) 7,13 15,18 24 17 7,13 15,18 24 17 7,13 15,18
2 58JETH 2 5JUR9X	GlobalFiler 18.3,19.3 10,12 14,15 14,15 14,15 18.3,19.3 10,12 14,15 14,15 14,15 14,15 14,15 14,15 14,15 14,15 14,15 11 GlobalFiler 18.3,19.3 10,12 14.15	 ™, PowerPlex® Fusion 17,20 15 30,31.2 12,14 17 Pusion 6C (HID Form 17,20 15 30,31.2 12,14 17 17,20 15 20,21.2 	10,15 23 11,15 20 17 mat) 10,15 23 11,15 20 17 10,15 20 17 10,15 20 17 10,15 20 17	ion 6C (FSA Format), 14,17 8,12 X,Y 7,9.3 2 14,17 8,12 X,Y 7,9.3 14,17 8,12 X,Y 7,9.3	(PDF Format), (HID 11,12 11,13 10,11 8,11 11,12 11,13 10,11 8,11 11,12 11,13 10,11 11,12 11,13	D Format) 7,13 15,18 24 17 7,13 15,18 24 17 7,13 15,18 24 17 7,13
2 58JETH 2 5JUR9X	GlobalFiler 18.3,19.3 10,12 14,15 14,15 11 PowerPlex® 18.3,19.3 10,12 14,15 14,15 14,15 11 GlobalFiler 18.3,19.3 10,12 14,15	 ™, PowerPlex® Fusion 17,20 15 30,31.2 12,14 17 Pusion 6C (HID Form 17,20 15 30,31.2 12,14 17 	10,15 23 11,15 20 17 mat) 10,15 23 11,15 20 17 10,15 23 11,15 20 17 10,15 23 11,15 20 17	ion 6C (FSA Format), 14,17 8,12 X,Y 7,9.3 2 14,17 8,12 X,Y 7,9.3 14,17 8,12 X,Y 7,9.3	(PDF Format), (HID 11,12 11,13 10,11 8,11 11,12 11,12 11,13 10,11 8,11 11,12 11,12 11,13 10,11 8,11	D Format) 7,13 15,18 24 17 7,13 15,18 24 17 7,13 15,18 24 17

DNA Inter	pretation					Test 18-589
WebCod	e Amplificati	on Kits (File Format)				
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D75820
	D851179	D1051248 D21511	D125391	D135317 Amelogenin TH01	D165539	D18551
ltem	D195433		D2251045		CSF1PO	FGA
	Penta D	Penta E	SE33		ΤΡΟΧ	VWA
	DYS391	DYS570	DYS576	Y Indel		
			ltem 2 - STR	Results		
8M4PTP	GlobalFile	r™, PowerPlex® Fusion	6C (PDF Format)			
	18.3,19.3	17,20	10,15	14,17	11,12	7,13
	10,12	15,15	23,23	8,12	11,13	15,18
2	14.15	30.31.2	11.15	X.Y	10.11	24.24
_	14 15	12 14	20.20	793	8 11	17 17
	11	17	17	2	0,11	.,,,,,
9ADA6G	GlobalFile	r™ (PDF Format)				
	18.3,19.3	17,20	10,15	14,17	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24
	-	-	20	7,9.3	8,11	17
	11	-	-	2		
		mat				
///////////////////////////////////////		17.20	10.15	1417	11.10	7 1 2
	10.10	17,20	10,13	14,17	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24
	14,15	12,14	20	7,9.3	8,11	17
		/	17			
9YB7R9	PowerPlex	® Fusion 6C (PDF Forr	nat)			
	18.3,19.3	17,20	10,15	14,17	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
2	14,15	30,31,2	11,15	X.Y	10,11	24
	14.15	12.14	20	7.9.3	8.11	17
	11	17	17	.,	-,	
AUEP3J	GlobalFile	r''''' (PDF Format)				
	18.3,19.3	17,20	10,15	14,17	11,12	7,13
	10,12	15,15	23,23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24,24
			20,20	7,9.3	8,11	17,17
	11			2		
B9WY6E	PowerPlex	® Fusion 5C (FSA Forn	nat)			
	18.3,19.3	17.20	10.15	14,17	11.12	7.13
	10.12	15.15	23.23	8.12	11.13	15.18
2	14.15	30 31 2	11 15	¥ V	10.11	24.24
£	1/ 15	12.14	11,13	7.0.2	8 11	17.17
	14,15	12,14		7,7.0	0,11	17,17
BLYQLD	GlobalFile	r™ (PDF Format)				
	18.3,19.3	17,20	10,15	14,17	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24
	-	-	20	7,9.3	8,11	17
	11	-	-	2		

DNA Interp	pretation					Test 18-589
WebCode	e Amplificati	on Kits (File Format)				
	D1S1656	D251338 D1051248	D25441	D3S1358	D5S818	D75820
	D195433		D125391	D135317	D165539	D18551
Item		D21511	D2251045	Amelogenin	CSFIPO	FGA
	Penia D		DVS576		IPOX	VVVA
	D13391	D15570		r indei		
			Ifem 2 - STR	Results		
СҮМММВ	PowerPlex	B Fusion 6C (PDF Former Pressure 1)	mat)			
	18.3,19.3	17,20	10,15	14,17	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24
	14,15	12,14	20	7,9.3	8,11	17
	11	17	17			
	PowerPley	R Eusion 6C (PDF Eor	mat			
	193103	17.20	10.15	14 17	11.10	7 1 2
	10.12	15	10,15	0 10	11,12	15 10
2	10,12	- 13	20	0,12	10.11	13,10
۷	14,15	30,31.2		Χ,Υ	10,11	24
	14,15	12,14	17	7,7.3	8,11	
	11	17	17			
E8TBDE	GlobalFile	r™ (PDF Format)				
	18.3,19.3	17,20	10,15	14,17	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24
			20	7,9.3	8,11	17
	11			2		
FKFHBF	PowerPlex	R Eusion 5C (PDE Eor	mat)			
	183193	17 20	10.15	14 17	11 12	7 13
	10.12	15	23	812	11.13	15.18
^	14,15	20.21.0	11.15	0,12	10.11	04
2	14,15	10.14	11,15	7.0.2	0,11	17
	14,15	12,14		1,9.0	0,11	17
JX4EE9	GlobalFile	r™ (PDF Format)				
_	18.3,19.3	17,20	10,15	14,17	11,12	7,13
	10,12	15,15	23,23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24,24
			20,20	7,9.3	8,11	17,17
	11			2		
NKHVKE	Investigato	r® 24plex (HID Forma	at)			
	18.3.19.3	17.20	, 10.15	14.17	11.12	7.13
	10.12	15	23	8 1 2	11.13	15.18
n	14.15	30 31 3	11.15	× ×	10.11	24
<u>د</u>	14,13	JU,JI.Z		703	<u>811</u>	_17
	11		20	7,7.0	0,11	17
Q2YDT6	GlobalFile	r™ (PDF Format)				
	18.3,19.3	17,20	10,15	14,17	11,12	7,13
	10,12	15,15	23,23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24,24
			20,20	7,9.3	8,11	17,17
	11			2		

DNA Inter	pretation					Test 18-589
WebCod	e Amplificati	ion Kits (File Format)	D06441	D261259	DEC010	D76900
	D151050	D251338	D125441	D351358	D165539	D75820
ltem	D195433	D21511	D2251045	Amelogenin	CSE1PO	FGA
ileili	Penta D	Penta E	SE33	TH01	трох	vWA
	DYS391	DY\$570	DY\$576	Y Indel		
			Itom 2 STP I	Posults		
				VE20112		
QDUNZC		or® Z4plex (HID Formo				
	18.3,19.3	17,20	10,15	4, /	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24
			20	7,9.3	8,11	17
	11					
R3UJM6	GlobalFile	r™ (FSA Format)				
	18.3,19.3	17,20	10,15	14,17	11,12	7,13
	10,12	15,15	23,23	8,12	11,13	15,18
2	14,15	30,31.2	11.15	X,Y	10,11	24.24
	, -	,	20,20	7,9.3	8,11	17,17
	11		, ,	2		
	D DI /					
RNMG2P	PowerPlex	Fusion oc (PDF For	mat)	1 4 1 7	11.10	7.10
	18.3,19.3	17,20	10,15	4, /	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24
	14,15	12,14	20	7,9.3	8,11	17
		/	/			
TD8ZU2	PowerPlex	® Fusion 6C				
	18.3,19.3	17,20	10,15	14,17	11,12	7,13
	10,12	15,15	23,23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24,24
	14,15	12,14	20,20	7,9.3	8,11	17,17
	11	17	17			
TN7VTW	GlobalEile	r™ Investigator® 24nl	ex PowerPlex® Fusion	5C PowerPlex® Fu	sion 6C (ESA Form	at) (PDE Format)
,	183103	17 20	10.15	14.17	11 12	7 13
	10.12	15	23	8 1 2	11,12	15 18
^	14.15	20 21 2	11.16	0,12 V V	10,13	24
2	14,15	10.14	20	7.0.2	0,11	17
	14,15	12,14	17	7,7.0	0,11	17
		.,	.,			
UU938Z	GlobalFile	r™ (PDF Format)				
_	18.3,19.3	17,20	10,15	14,17	11,12	7,13
	10,12	15,15	23,23	8,12	11,13	15,18
2	14,15	30,31.2	11,15	X,Y	10,11	24,24
	N/A	N/A	20,20	7,9.3	8,11	17,17
	11	N/A	N/A	2		
UZEXQZ	GlobalFile	r™, PowerPlex® Fusior	n 6C (PDF Format)			
-	18.3,19.3	17,20	10,15	14,17	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
2	14.15	30.31.2	11.15	X.Y	10.11	24
_	14.15	12.14	20	7.9.3	8.11	17
	11	17	17	2	-,	

JINA Inter	pretation					Test 18-5
WebCod	e Amplification D1S1656	on Kits (File Format) D2S1338	D2\$441	D3\$1358	D5\$818	D7S820
	D8S1179	D1051248	D125391	D135317	D165539	D18551
em	D195433	D21511	D22S1045	Amelogenin	CSF1PO	FGA
	Penta D	Penta E	SE33	THUI	IPOX	VWA
	D12391	D15570		t Indel		
			Item 2 - STR	Kesults		
VXCVX	GlobalFiler	·™ (PDF Format)				
	18.3,19.3	17,20	10,15	14,17	11,12	7,13
	10,12	15,15	23,23	8,12	11,13	15,18
_	14,15	30,31.2	11,15	X,Y	10,11	24,24
			20,20	7,9.3	8,11	17,17
	11			2		
WRZDI	J GlobalFiler	™, Investigator® 24plex	, PowerPlex® Fusic	on 5C, PowerPlex® Fu	sion 6C (PDF Form	at)
	18.3,19.3	17,20	10,15	14,17	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
	14,15	30,31.2	11,15	X,Y	10,11	24
	14,15	12,14	20	7,9.3	8,11	17
	11	17	17	2		
	PowerPlev	Eusion 6C (HID Forme	nt)			
10200	183103	17.20	10.15	14 17	11.12	7 1 3
	10.12	15.15	23.23	8 12	11,12	15 18
	14.15	20.21.0	23,23	0,12	10.11	13,10
	14,15	10.14	11,15	7.0.2	0,11	24,24
	14,13	12,14	17	7,7.0	0,11	17,17
DIQQ	GlobalFiler	(PDF Format)				
	18.3,19.3	17,20	10,15	4, /	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
	14,15	30,31.2	11,15	X,Y	10,11	24
	11		20	7,9.3	8,11	17
	11			Z		
HQMC	Q PowerPlex®	Fusion 5C (FSA Formed	at)			
	18.3,19.3	17,20	10,15	14,17	11,12	7,13
	10,12	15,15	23,23	8,12	11,13	15,18
	14,15	30,31.2	11,15	X,Y	10,11	24,24
	14,15	12,14	NT	7,9.3	8,11	17,17
	11	NT	NT	NT		
LFRM	PowerPlex®	Fusion 5C (PDF Forma	at)			
	18.3,19.3	17,20	10,15	14,17	11,12	7,13
	10,12	15	23	8,12	11,13	15,18
	14.15	30.31 2	11.15	X.Y	10.11	24
	14,15	12.14	,	7.9.3	8.11	17
	11					
<u>∩24</u> ₽						
JOCK			10.15	1417	11 10	7 1 0
	10.10	17,20	10,15	14,17	11,12	/,13
	10,12	15,15	23,23	8,12	11,13	15,18
	14,15	30,31.2	11,15	X,Y	10,11	24,24
	11		20,20	7,9.3	8,11	1/,1/

DNA I	Interpretation									
Web	Code Amplificati	on Kits (File Format)								
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D7\$820				
	D8S1179	D10S1248	D12S391	D13S317	D16S539	D18\$51				
ltem	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO	FGA				
	Penta D	Penta E	SE33	TH01	ΤΡΟΧ	vWA				
	DYS391	DYS570	DYS576	Y Indel						
			ltem 2 - STR	Results						
ZNKR	ZN PowerPlex®	® Fusion 5C (FSA Form	mat)							
	18.3,19.3	17,20	10,15	14,17	11,12	7,13				
	10,12	15,15	23,23	8,12	11,13	15,18				
2	14,15	30,31.2	11,15	X,Y	10,11	24,24				
	14,15	12,14		7,9.3	8,11	17,17				
	11									

DNA In	terpretation					Test 18-589
WebC	ode Amplificati	on Kits (File Format)				
	D1S1656	D251338	D25441	D3S1358	D5S818	D75820
	D851179	D1051248	D125391	D135317	D165539	D18551
ltem	D195433	D21511	D2251045	Amelogenin	CSF1PO	FGA
	Penia D	Penia E	JEJJ		IPOX	VWA
	D13391	D13570				
			Item 3 - SIR	Kesults		
2B9MN	A2 Investigato	r® 24plex (HID Forma	it)			
_	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
- 1	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
			17,19,20	7,8,9.3	8,9,11	16,17
	11					
2F3JCF	R GlobalFile	r™ (HID Format)				
	14,15,18,3,19,3	17.20.21	10,14,15	14,16,17	11,12	7,11,12,13
	10.12.13.15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11.14.15	28.30.31 2.32 2	11,15,17	X.Y	8.10.11	22.23.24
	,	20/00/01:2/02:2	17.19.20	7.8.9.3	8.9.11	16.17
	11		,,	2	-,,,	,
			.)			
ZNVUK	3 Investigato	r® 24plex (HID Forma	11)			
	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
			17,19,20	7,8,9.3	8,9,11	16,17
	11					
3KFLXN	N PowerPlex®	🖲 Fusion 5C (FSA Form	nat)			
	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14	Not tested	7,8,9.3	8,9,11	16,17
	11	Not tested	Not tested	Not tested		
	18.3,19.3	17,20	10,15	14,17	11,12	7,13
	10,12	15,15	23,23	8,12	11,13	15,18
3major	14,15	30,31.2	11,15	X,Y	10,11	24,24
	14,15	12,14		7,9.3	8,11	17,17
	11					
	14,15	21,21	14,inconclusive	16,inconclusive	12,inconlucisve	11,12
	13,15	13,inconclusive	20,22	13,inconclusive	11,11	13,inconclusive
3minor	11,14	28,32.2	17,inconclusive	X,Y	8, inconclusive	22,23
	2.2,10	7,8		8, inconclusive	9, inconclusive	16, inconclusive
	11					
67PQR	M GlobalFile	. PowerPlex® Fusion	5C. PowerPlex® Fus	ion 6C (ESA Format	. (PDF Format) (HIF	D Format)
571 QD	14.15.18.3.19.3	17 20 21	10 14 15	14 16 17	11 12	7.11.12.13
	10 12 13 15	13.15	20 22 23	8 12 13	11.13	13 15 18
3	11 14 15	28 30 31 2 22 2	11 15 17	V V	8 10 11	22.22.24
3	22101/15	7,9,10,14	17 10 20	7803	8011	16.17
	11	17 21	15.17	2,0,7.5 2	0,7,11	10,17
		17721	10,17	-		

DNA Inte	erpretation					Test 18-589
WebCo	de Amplificati	on Kits (File Format)				
	D1S1656	D251338	D25441	D3S1358	D55818	D75820
	D851179	D1051248	D125391	D135317	D105539	D18551
Item	D 195433	DZISII Bonta E	D2251045	Amelogenin		FGA
	DVS201	DVS570	DVS576	Vindol	IPOX	VWA
	D15591	D15570				
			Item 3 - STR I	Kesults		
68JETH	PowerPlex	® Fusion 6C (HID Form	nat)			
	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14	17,19,20	7,8,9.3	8,9,11	16,17
	11	17,21	15,17			
6JUR9X	GlobalFile	r™				
	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14.15	28,30.31.2.32.2	11.15.17	X.Y	8.10.11	22.23.24
			17,19.20	7,8.9.3	8,9.11	16.17
	11		, ., . <u>-</u>	2		
8111070		r™ PowerDlov@ E	6C (PDE Earman)			
01714711				1/1/17	11 10	7 11 10 10
	14,15,18.3,19.3	17,20,21	10,14,15	14,10,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	/,8,12,14	17,19,20	7,8,9.3	8,9,11	6, /
		17,21	15,17	2		
9ADA60	G GlobalFile	r™ (PDF Format)				
	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	-	-	17,19,20	7,8,9.3	8,9,11	16,17
	11	-	-	2		
9W7NG	G (PDF Forr	mat)				
,	14 15 18 3 19 3	17 20 21	10 14 15	14 16 17	11 12	7 11 12 13
	10 12 13 15	13 15	20.22.23	8 12 13	11.13	13 15 18
3	11 14 15	28 30 31 2 32 2	11 15 17	××	8 10 11	22.23.24
5	2 2 10 14 15	7 8 12 14	17,10,20	7803	8011	16 17
	1]	17,21	15,17	7,0,7.0	0,7,11	10,17
0)/0 700						
978/89	PowerPlex	B Fusion 6C (PDF Form	nat)			
	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14	17,19,20	7,8,9.3	8,9,11	16,17
	11	17,21	15,17			
AUEP3J	GlobalFile	r™ (PDF Format)				
	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
			17,19,20	7,8,9.3	8,9,11	16,17
	11			2		

WebCode Amplification Kits (File Formal) D551170 D25411 D251333 D55135 D75820 D851170 D1051248 D123931 D135317 D165339 D18531 D195433 D21511 D2221043 Ameologenin C5F1P0 FOA Pento D Pento E S533 TH01 TPCX VWA DY3570 DY3576 Y Indel VWA VWA BWY6E RowerRextB Fusion 5C (FSA Format) 14,15,18,3,19,3 17,20,21 10,14,15 14,16,17 11,12 7,11,12,13 3 11,14,15 28,03,12,32.2 11,15,17 X.Y 8,10,11 22,23,24 2,210,14,15 7,8,12,14 7,8,9,23 8,9,11 16,17 11,12 7,13 10,12 15,15 22,23,24 8,12 11,13 15,18 3mior 11,45 12,12 14,16 12,12 11,12 11 11 11 11 11 11 11 11 11 12,12 11,12	DNA In	terpretation					Test 18-589
DISTOR DDS1238 D25139 D25139 D25331 D15539 D18531 D15539 D18531 Item D195433 D21311 D2231045 Amelogenin CSFIPO F6A Penta D Penta E SE33 TH01 TPOX VWA DY331 DY3570 DY3570 Y 10del VWA VWA DY331 DY3570 DY3570 Y 10del VWA VWA DY331 DY3570 DY3570 Y 10del VWA VWA DY3312 D123312 D1317 DY3570 YWA DY3570 YWA DY3312 D1311 DY3570 DY3570 YWA DY3570 DY3572 D131511 D13151	WebC	ode Amplificati	on Kits (File Format)	B 66 6 6 6	Baaaaa	B =6010	
Hem D193433 D21311 D235103 Amelogenin CSFIPO FOA Pente D Pente E \$833 TH01 TPOX WA DYS30 DYS570 PYS576 Y Indol WA BWW6E PowerPlex® Fusion 5C (FSA Format) 11,113 13,15,18 13,15,18 10,12,13,15 13,15 20,22,23 8,12,13 11,13 13,15,18 3 11,14,15 28,30,31,2,32,2 11,15,17 X,Y 8,011 16,17 11 1 7,8,9,3 8,2,11 16,17 11,12 7,13 10,12 15,15 23,23 8,12 11,13 15,18 3mojor 14,15 21,21 14,inc. 14,16 12,12 11,12 11 1 1 1 1 1 1 1 14 15 12,17 X,Y 8,11 17,17 1 14 15,13,319,3 17,20,21 10,14,15 14,16,17 11,12 7,11,12,13 </th <th></th> <th>D151656</th> <th>D251338</th> <th>D25441</th> <th>D351358</th> <th>D55818</th> <th>D75820</th>		D151656	D251338	D25441	D351358	D55818	D75820
Penta D Penta E 5833 Thot TPOX WMA DYS91 DYS72 DYS72 Y Indel WMA Brem 3 - STR Results Hem 3 - STR Results BWV66 PowerPlex® Fusion 5C (FSA Formet) 14,15,18,3,19,3 17,20,21 10,14,15 14,16,17 11,12 7,11,12,13 10,12,13,15 13,15 20,22,23 8,12,13 11,13 13,15,18 3 11,14,15 28,30,31,2,32,2 11,15,17 X,Y 8,10,11 22,23,24 2,2,10,14,15 7,8,12,14 7,8,9,3 8,9,11 16,17 11 1 1 10,12 1,1,13 15,18 3mojor 14,15 30,31,2 11,15 X,Y 10,11 24,24 14,15 21,21 14,inc. 14,16 12,12 11,12 11,12 14,15 21,21 14,inc. 14,16 12,12 11,12 11,12 14,15,13,3,19,3 17,20,21 10,14,15 14,16,17 11,12 7,11,12,13 <	ltem	D195433	D21511	D2251045	Amelogenin	CSF1PO	FGA
DYS391 DYS570 DYS576 Y Indel Hem 3 - STR Results BWYY6E PowerPlax® Fusion 5C (FSA Format) 14,15,18,3,19,3 17,20,21 10,14,15 14,16,17 11,12 7,11,12,13 14,15,18,3,19,3 17,20,21 10,14,15 14,16,17 11,12 7,11,12,13 10,12,13,15 28,30,31,2,32,2 11,15,17 X/Y 8,10,11 22,23,24 11,14 7,20 10,15 14,17 11,12 7,13 10,12 15,15 24,23 8,12 11,13 15,18 3mior 14,15 30,31,2 11,15 X/Y 10,11 24,24 14,15 21,21 14,inc. 14,16 12,12 11,12 13,15 13,inc 20,22 12,13 11,inc. 13,inc. 3mior 11,14 28,32,2 15,17 X/Y 8,inc. 22,23 10,12,13,15 13,inc. 20,22,23 8,12,3 11,13 13,15,18 3 11,1,41,5 28,30,312,32,2 11,5,17 X/Y		Penta D	Penta E	SE33	TH01	TPOX	vWA
Ihem 3 - STR Results B9WY6E PowerPlax® Fusion 5C (FSA Format) 14,15,18,3,19,3 17,20,21 10,14,15 14,16,17 11,12 7,11,12,13 10,12,13,15 13,15 20,22,23 8,12,13 11,13 13,15,18 3 11,14,15 28,30,31,2,32.2 11,15,17 X,Y 8,10,11 22,23,24 2,210,14,15 7,8,12,14 7,8,9,3 6,9,11 16,17 11 1 1 1 1 1 10,12 15,15 23,23 8,12 11,11 15,18 3moior 14,15 30,31.2 11,15 X/Y 10,11 24,24 14,15 12,14 7,9,3 8,11 17,17 11 1		DY\$391	DYS570	DY\$576	Y Indel		
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14,15,18,3,19,3 17,20,21 10,14,15 14,16,17 11,12 7,11,12,13 10,12,13,15 13,15 20,22,23 8,12,13 11,13 13,15,18 3 11,14,15 28,30,31,2,32,2 11,15,17 X,Y 8,10,11 22,23,24 2.2,10,14,15 7,8,12,14 17,19,20 7,89,3 8,9,11 16,17 11 17,21 15,17 11,16,17 11,12 7,11,12,13 DW9TX4 PowerPlex® Fusion 6C (PDF Format), (HID Format) 14,15,18,3,19,3 17,20,21 10,14,15 14,16,17 11,12 7,11,12,13 10,12,13,15 13,15 20,22,23 8,12,13 11,13 13,15,18 3 11,14,15 28,30,31,2,32,2 11,15,17 X,Y 8,10,11 22,23,24 2.2,10,14,15 7,8,12,14 17,19,20 7,8,9,3 8,9,11 16,17 11 17,21 15,17 X,Y 8,10,11 22,23,24 2.2,10,14,15 7,8,12,14 17,19,20 7,8,9,3 8,9,11 16,17 11 17,21 15,17 X,Y 8,10,11 22,23,24 <	CYNM	VB PowerPlex	B Fusion 6C (PDF Form	nat)			
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3 11,14,15 28,30,31,2,32.2 11,15,17 X,Y 8,10,11 22,23,24 2.2,10,14,15 7,8,12,14 17,19,20 7,8,9.3 8,9,11 16,17 11 17,21 15,17 10,14,15 14,16,17 11,12 7,11,12,13 DW9TX4 PowerPlex® Fusion 6C (PDF Format), (HID Format) 14,15,18.3,19.3 17,20,21 10,14,15 14,16,17 11,12 7,11,12,13 3 11,14,15 28,30,31.2,32.2 11,15,17 X,Y 8,10,11 22,23,24 2.2,10,14,15 7,8,12,14 17,19,20 7,8,9.3 8,9,11 16,17 11 17,21 15,17 X,Y 8,10,11 22,23,24 2.2,10,14,15 7,8,12,14 17,19,20 7,8,9.3 8,9,11 16,17 11 17,21 15,17 X,Y 8,10,11 22,23,24 2.2,10,14,15 7,8,12,14 17,19,20 7,8,9.3 8,9,11 16,17 11 17,21 15,17 14,16,17 11,12 7,11,12,13 10,12,13,15 13,15 20,22,23 8,12,13 11,13 13,15,18		10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
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DW9TX4 PowerPlex® Fusion 6C (PDF Format), (HID Format) 14,15,18.3,19.3 17,20,21 10,14,15 14,16,17 11,12 7,11,12,13 3 11,14,15 28,30,31.2,32.2 11,15,17 X,Y 8,10,11 22,23,24 2.2,10,14,15 7,8,12,14 17,19,20 7,8,9.3 8,9,11 16,17 EBTBDE GlobalFiler™ (PDF Format) 14,15,18.3,19.3 17,20,21 10,14,15 14,16,17 11,12 7,11,12,13 I 4,15,18.3,19.3 17,20,21 10,14,15 14,16,17 11,12 7,11,12,13 I 4,15,18.3,19.3 17,20,21 10,14,15 14,16,17 11,12 7,11,12,13 I 14,15,18.3,19.3 17,20,21 10,14,15 14,16,17 11,12 7,11,12,13 3 11,12,13,15 13,15 20,22,23 8,12,13 11,13 13,15,18 3 11,14,15 28,30,31.2,32.2 11,15,17 X,Y 8,10,11 22,23,24 I 1,14,15 28,30,31.2,32.2 11,15,17 X,Y 8,10,11 22,23,24 I 1,12,20 7,89,		2.2,10,14,15	/,8,12,14	17,19,20	7,8,9.3	8,9,11	16,17
DW9TX4 PowerPlex® Fusion 6C (PDF Format), (HID Format) 14,15,18.3,19.3 17,20,21 10,14,15 14,16,17 11,12 7,11,12,13 10,12,13,15 13,15 20,22,23 8,12,13 11,13 13,15,18 3 11,14,15 28,30,31.2,32.2 11,15,17 X,Y 8,10,11 22,23,24 2.2,10,14,15 7,8,12,14 17,19,20 7,8,9.3 8,9,11 16,17 11 17,21 15,17 X,Y 8,10,11 22,23,24 E8TBDE GlobalFiler™ (PDF Format) 14,15,18,3,19.3 17,20,21 10,14,15 14,16,17 11,12 7,11,12,13 3 10,12,13,15 13,15 20,22,23 8,12,13 11,13 13,15,18 3 11,14,15 28,30,31.2,32.2 10,14,15 14,16,17 11,12 7,11,12,13 3 11,12,13,15 13,15 20,22,23 8,12,13 11,13 13,15,18 3 11,14,15 28,30,31.2,32.2 11,15,17 X,Y 8,10,11 22,23,24 11,14,15			17,21	13,17			
14,15,18.3,19.3 17,20,21 10,14,15 14,16,17 11,12 7,11,12,13 10,12,13,15 13,15 20,22,23 8,12,13 11,13 13,15,18 3 11,14,15 28,30,31.2,32.2 11,15,17 X,Y 8,10,11 22,23,24 2.2,10,14,15 7,8,12,14 17,19,20 7,8,9.3 8,9,11 16,17 11 17,21 15,17 14,16,17 11,12 7,11,12,13 E8TBDE GlobalFiler™ (PDF Format) 14,15,18.3,19.3 17,20,21 10,14,15 14,16,17 11,12 7,11,12,13 3 11,14,15 28,30,31.2,32.2 11,15,17 X,Y 8,10,11 22,23,24 3 11,14,15 28,30,31.2,32.2 11,15,17 X,Y 8,10,11 22,23,24 3 11,14,15 28,30,31.2,32.2 11,15,17 X,Y 8,10,11 22,23,24 4 17,19,20 7,8,9,3 8,9,11 16,17	DW9TX	4 PowerPlex®	® Fusion 6C (PDF Form	nat), (HID Format)			
10,12,13,15 13,15 20,22,23 8,12,13 11,13 13,15,18 3 11,14,15 28,30,31.2,32.2 11,15,17 X,Y 8,10,11 22,23,24 2.2,10,14,15 7,8,12,14 17,19,20 7,8,9.3 8,9,11 16,17 11 17,21 15,17 14,16,17 11,12 7,11,12,13 EBTBDE GlobalFiler™ (PDF Format) 14,15,18,3,19.3 17,20,21 10,14,15 14,16,17 11,12 7,11,12,13 3 11,14,15 28,30,31.2,32.2 11,15,17 X,Y 8,10,11 22,23,24 4 14,15,18,3,19.3 17,20,21 10,14,15 14,16,17 11,12 7,11,12,13 3 11,14,15 28,30,31.2,32.2 11,15,17 X,Y 8,10,11 22,23,24 4 17,19,20 7,89,3 8,9,11 16,17		14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
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2.2,10,14,15 7,8,12,14 17,19,20 7,8,9.3 8,9,11 16,17 11 17,21 15,17 15,17 10,12,13,15 17,20,21 10,14,15 14,16,17 11,12 7,11,12,13 10,12,13,15 13,15 20,22,23 8,12,13 11,13 13,15,18 3 11,14,15 28,30,31.2,32.2 11,15,17 X,Y 8,10,11 22,23,24 17,19,20 7,8,9.3 8,9,11 16,17	3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
11 17,21 15,17 E8TBDE GlobalFiler™ (PDF Format) 14,15,18.3,19.3 17,20,21 10,14,15 14,16,17 11,12 7,11,12,13 10,12,13,15 13,15 20,22,23 8,12,13 11,13 13,15,18 3 11,14,15 28,30,31.2,32.2 11,15,17 X,Y 8,10,11 22,23,24 17,19,20 7,8,9,3 8,9,11 16,17		2.2,10,14,15	7,8,12,14	17,19,20	7,8,9.3	8,9,11	16,17
E8TBDE GlobalFiler™ (PDF Format) 14,15,18.3,19.3 17,20,21 10,14,15 14,16,17 11,12 7,11,12,13 10,12,13,15 13,15 20,22,23 8,12,13 11,13 13,15,18 3 11,14,15 28,30,31.2,32.2 11,15,17 X,Y 8,10,11 22,23,24 17,19,20 7,8,9,3 8,9,11 16,17		11	17,21	15,17			
14,15,18.3,19.3 17,20,21 10,14,15 14,16,17 11,12 7,11,12,13 10,12,13,15 13,15 20,22,23 8,12,13 11,13 13,15,18 3 11,14,15 28,30,31.2,32.2 11,15,17 X,Y 8,10,11 22,23,24 17,19,20 7,8,9,3 8,9,11 16,17	E8TBDI	E GlobalFile	r™ (PDF Format)				
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3 11,14,15 28,30,31.2,32.2 11,15,17 X,Y 8,10,11 22,23,24 17,19,20 7.8,9,3 8,9,11 16,17		10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
17.19.20 7.8.9.3 8.9.11 16.17	3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
				17,19,20	7,8,9.3	8,9,11	16,17
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DNA Inte	erpretation					Test 18-58
WebCo	de Amplification	Kits (File Format)				
	D151656	D2S1338	D25441	D351358	D55818	D75820
lt a sea	D195433 Penta D	D1051248 D21511	D125391 D22S1045 SE33	Amelogenin	CSF1PO	D18551
nem				TH01		xWA
	DYS391	DYS570	DYS576	Yindel	II OX	
			Hom 2 STR	Deculto		
				Kesuits		
-KFHBF	PowerPlex® I	Fusion 5C (PDF Forma	t)			
_	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14		7,8,9.3	8,9,11	16,17
	11					
IX4EE9	GlobalFiler™	(PDF Format)				
	14.15.18.3.19.3	17.20.21	10.14.15	14.16.17	11.12	7.11.12.13
	10,12,13,15	13.15	20,22.23	8.12.13	11.13	13.15.18
3	11 14 15	28 30 31 2 32 2	11 15 17	X Y	8 10 11	22 23 24
		20,00,01.2,02.2	17,19,20	7.8.9.3	8,9,11	16.17
	11		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	2	5,7,11	10,17
NKHVKE	Investigator®	24plex (HID Format)				
	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
}	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
			17,19,20	7,8,9.3	8,9,11	16,17
	11					
Q2YDT&	6 GlobalFiler™	(PDF Format)				
	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10.12.13.15	13.15	20.22.23	8,12,13	11,13	13,15,18
3	11 14 15	28.30.31.2.32.2	11 15 17	XY	8 10 11	22 23 24
	11,11,10	20,00,01.2,02.2	17,19,20	7.8.9.3	8.9.11	16.17
	11		,,	2	0,7,7.1	,.,
3DUN3	C Investigator®	24plex (HID Format)				
	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
			17,19,20	7,8,9.3	8,9,11	16,17
	11					
30JM6	GlobalFiler™	(FSA Format)				
	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14.15	28,30,31,2.32 2	11,15.17	X.Y	8.10.11	22.23.24
		-,,>,,>	17,19.20	7.8.9.3	8.9.11	16.17
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kinmG2	P PowerPlex®	Fusion 6C (PDF Forma	t)			_
	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14	17,19,20	7,8,9.3	8,9,11	16,17
	11	17,21	15,17			

DNA Inte	erpretation					Test 18-5
WebCo	de Amplificati	on Kits (File Format)				
	D1S1656	D251338	D25441	D3S1358	D55818	D75820
	D851179	D1051248	D125391	D135317	D105539	D18551
em	D195433	DZISII Bonte E	D2251045	Amelogenin	TROX	FGA
	DVS201	DVS570	DVSEZ	Y Indel	IFOX	VWA
	D122A1	D15570				
			Item 3 - SIR	Kesulfs		
8ZU2	PowerPlex®	® Fusion 6C				
_	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14	17,19,20	7,8,9.3	8,9,11	16,17
	11	17,21	15,17			
7VTV	/ GlobalFile	r™. Investigator® 24plex	. PowerPlex® Fusic	on 5C. PowerPlex® Fu	sion 6C (FSA Form	at), (PDF Format)
	14.15.18.3.19.3	17.20.21	10.14 15	14,16,17	11.12	7.11.12.13
	10 12 13 15	13 15	20 22 23	8 12 13	11.13	13 15 18
	11 14 15	00 20 21 0 20 0	11 15 17	V V	0 10 11	
	11,14,15	20,30,31.2,32.2	17.10.00	۸,1	0,10,11	22,23,24
	2.2,10,14,15	/,8,12,14	17,19,20	7,8,9.3	8,9,11	16,17
	11	17,21	10,17			
J938Z	GlobalFile	r™ (PDF Format)				
_	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	N/A	N/A	17,19,20	7,8,9.3	8,9,11	16,17
	11	N/A	N/A	2		
7FXQ7	7 GlobalEile	r™ PowerPlex® Fusion 6	C (PDF Format)			
	14.15.18 3.19 3	17.20.21	10.14.15	14.16.17	11.12	7.11.12.13
	10 12 13 15	13.15	20.22.23	8 12 13	11.13	13 15 18
	11 14 15	00.00.01.0.00.0	11 15 17	V.V.	0.10.11	00.00.04
	11,14,15	20,30,31.2,32.2	17,10,00	7,000	0,10,11	14 17
	2.2,10.14,15	1,8,12,14	17,19,20	7,8,9.3	8,9,11	10,17
		17,21	13,17	Z		
/XCV)	GlobalFile	r™ (PDF Format)				
_	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
			17,19,20	7,8,9.3	8,9,11	16,17
	11			2		
wrzd	U GlobalFile	r™, Investigator® 24plex	, PowerPlex® Fusic	on 5C, PowerPlex® Fu	sion 6C(PDF Form	nat)
	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	, 7,11,12,13
	10,12,13,15	13.15	20.22.23	8.12.13		13.15.18
	11 1/ 15	28 30 31 2 32 2	11 15 17	X V	8 10 11	22.22.24
	2 2 10 14 15	7 8 10 14	17 10 20	7803	8011	14 17
	2.2,10,14,15	17.21	15.17	7,0,7.3	0,7,11	10,17
	:	· · · · · · · · · · · · · · · · · · ·		<u> </u>		
YU2C	6 PowerPlex®	B Fusion 6C (HID Forma	1†)			
	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14	17,19,20	7,8,9.3	8,9,11	16,17
	11	17,21	15,17			

DNA In	terpretation					Test 18-589
WebC	ode Amplificati D1S1656 D8S1179	on Kits (File Format) D2S1338 D10S1248	D2S441	D3\$1358	D55818 D165539	D75820
ltem	D195433	D21511	D22S1045	Amelogenin	CSF1PO TPOX	FGA
	Penta D	Penta E	SE33	TH01		vWA
	DYS391	DYS570	DY\$576	Y Indel		
			ltem 3 - STR	Results		
XVDTG	Q GlobalFile	r™ (PDF Format)				
	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
			17,19,20	7,8,9.3	8,9,11	16,17
	11			2		
Z7HQI	MQ PowerPlex®	® Fusion 5C (FSA Form	iat)			
	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
- 1	2.2,10,14,15	7,8,12,14	NT	7,8,9.3	8,9,11	16,17
	11	NT	NT	NT		
	18.3,19.3	17,20	10,15	14,17	11,12	7,13
	10,12	15,15	23,23	8,12	11,13	15,18
3major	14,15	30,31.2	11,15	X,Y	10,11	24,24
	14,15	12,14		7,9.3	8,11	17,17
	11					
_	14,15	21,21	14,inc	16,inc	12,inc	11,12
_	13,15	13,inc	20,22	13,inc	11,inc	13,inc
3minor	11,inc	28,32.2	17,inc	X,X or X,Y	8,inc	22,23
	2.2,10	7,8		8,inc	9,inc	16,inc
	inc					
Z7LFRM	A PowerPlex®	® Fusion 5C (PDF Form	nat)			
_	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
_	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14		7,8,9.3	8,9,11	16,17
	11					
Z9Q36	R GlobalFile	r™ (PDF Format)				
	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
			17,19,20	7,8,9.3	8,9,11	16,17
	11			2		

DNA In	terpretation					Test 18-589
WebC	ode Amplificati D1S1656 D8S1179	on Kits (File Format) D2S1338 D10S1248	D2S441 D12S391	D3\$1358 D13\$317	D55818 D165539	D75820 D18551
ltem	D195433	D21511	D22S1045	Amelogenin	CSF1PO	FGA
	Penta D	Penta E	SE33	TH01	ΤΡΟΧ	vWA
	DYS391	DYS570	DYS576	Y Indel		
			ltem 3 - STR	Results		
ZNKRZ	N PowerPlex®	B Fusion 5C (FSA Forme	at)			
	14,15,18.3,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	8,12,13	11,13	13,15,18
3	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14		7,8,9.3	8,9,11	16,17
	11					
_	18.3,19.3	17,20	10,15	14,17	11,12	7,13
- 1	10,12	15,15	23,23	8,12	11,13	15,18
3major	14,15	30,31.2	11,15	X,Y	10,11	24,24
	14,15	12,14		7,9.3	8,11	17,17
	11					
_	14,15	21,21	10,14	14,16	12,inc	11,12
- 1	13,15	13,inc	20,22	12,13	11,inc	13,15
3minor	11,14	28,32.2	15,17	X,Y	8,10	22,23
	2.2,10	7,8		8,inc	9,inc	16,inc
	11					

WebCode Amplification Kits (File Format) D1351358 D2531358 D2581179 D1051248 D125321 D135317 D105333 D21012333 D21012333 D21012333 D21012333 D1051248 D125321 D135317 D105333 D21012333 D21012333 D210111 D25376 Y Indel Immed D Penta D Penta D Penta C STR Results ZB9MM2 Investigator® 24plex (HID Format) 14,15,16,17,18,3,19,3 17,20,21 10,11,14,15 14,16,17 11,12 7,8,10 2 D131016 Results D1320 GlobalFiler** (HID Format) 14,15,16,17,18,3,19,3 17,20,21 10,11,14,15 14,16,17 11,12 7 2 D10,12,14,15 14,16,17 11,12 7,8,10 (HID Format) </th <th>DNA Interpretation</th> <th></th> <th></th> <th></th> <th></th> <th>Test 18-589</th>	DNA Interpretation					Test 18-589
D15165c D251328 D2541 D251328 D2551328 D Item D195433 D21511 D2251045 Amelogenin CSFIPO Penta D Penta E SE33 TH01 TPOX D DY5391 DY5570 DY5577 Y Indel D D D 289MM2 Investigator® 24plex (HID Format) 14,15,16,17,18,3,19,3 17,20,21 10,11,14,15 14,16,17 11,12 7,8,10 10,12,13,14,15 13,15,16 18,20,22,23 8,11,12,13 9,11,12,13 12,15 11 11 17,19,20,22,2,27.2 6,7,8,9,9.3 8,9,11 11 2F3JCR GlobalFiler** (HID Format) 14,15,16,17,18,3,19.3 17,20,21 10,11,14,15 14,16,17 11,12 7,8,10 11 11 2 11,12,13 9,11,12,13 12,12 12,12 12,13 11 11,14,14,2,15 28,30,31,3,12,32.2 11,15,16,17 XY 8,0,0,11 21,2 11,14,14,2,15 28,30,31,3,12,32.2 11,15,16,17 <t< th=""><th>WebCode Amplificatio</th><th>n Kits (File Format)</th><th></th><th></th><th>B=2010</th><th></th></t<>	WebCode Amplificatio	n Kits (File Format)			B =2010	
Dos 11 Diss 13 Diss 13 <thdiss 13<="" th=""> <thdiss 14<="" th=""> <thdi< th=""><th>D1S1656</th><th>D251338</th><th>D25441</th><th>D351358</th><th>D55818</th><th>D75820</th></thdi<></thdiss></thdiss>	D1S1656	D251338	D25441	D351358	D55818	D75820
Item Drsss Drst Drss Drss Penta D Penta E SE33 TH01 TPOX DYS391 DYS570 DYS573 Y Indel Item 4 - STR Results 289MM2 Investigator® 24plex (HID Format) 14,15,16,17,18,3,19,3 17,20,21 10,11,14,15 14,16,17 11,12,13 9,11,12,13 12,12 4 11,14,14,2,15 28,30,31,31,2,32,2 11,15,17 X,Y 8,10,11 21,2 2F3JCR GlobalFiler" (HID Format) 11 11 2 11 2 11 2 11 2 11 12,12,13 9,11,12,13 12,17 3,17,20,21 10,11,14,15 14,16,17 11,12,13 12,17 11 2 11 11 2 11 11 2 11 11 2 11 12,12 11,12,13 12,17 11,12,13 12,17 11,12,13 12,17 11,12,13 12,17 11,12,13 12,17 11,12,13 12,17 11,12 7,8,10 11,12,13 <th>D051179</th> <th>D1031240</th> <th>D125591</th> <th>Amologonin</th> <th>CSE1DO</th> <th>EGA</th>	D051179	D1031240	D125591	Amologonin	CSE1DO	EGA
DYS391 DYS370 DYS376 Y Indet Investigator® 24plex (HID Format) 14,15,16,17,18.3,19.3 17,20,21 10,11,14,15 14,16,17 11,12 7,8,10 14,15,16,17,18.3,19.3 17,20,21 10,11,14,15 14,16,17 11,12,13 9,11,12,13 12,13 11 11,14,14.2,15 28,30,31,31.2,32,2 11,15,17 X,Y 8,10,11 21,7 11 17,19,20,22,2,7,2 6,7,8,9,9,3 8,9,11 11 11 2F3JCR GlobalFiler™ (HID Format) 14,15,16,17,18.3,19.3 17,20,21 10,11,14,15 14,16,17 11,12 7,8,10 10,11,14,15 14,16,17 11,12 7,8,10 11 2 2NVUK3 Investigator® 24plex (HID Format) 14,15,16,17,18.3,19.3 17,20,21 10,11,14,15 14,16,17 11,12 7,8,10 10 12,13,14,15 13,15,16 18,20,22,23 8,11,12,13 9,11,12,13 12,12 11 11,14,15 14,16,17 11,12 <	Penta D	Penta F	SE33	TH01	TPOX	νWΔ
Item 4 - STR Results Item 4 - STR Results 289MM2 Investigator® 24plex (HID Format) 11,12,13,12,13 9,11,12,13 12,12 4 11,14,14,2,15 28,30,31,31,2,32,2 11,15,17 X,Y 8,10,11 21,7 11 11 11 11 27,8,10 3,9,11 11 2FSJCR GlobalFiler™ (HID Format) 14,15,16,17,18,3,19,3 17,20,21 10,11,14,15 14,16,17 11,12 7,8,10 2FSJCR GlobalFiler™ (HID Format) 14,15,16,17,18,3,19,3 17,20,21 10,11,14,15 14,16,17 11,12 7,8,10 2 2NVUK3 Investigator® 24plex (HID Format) 11 2 2 11 2 2 28,10,11,12,13 9,11,12 12,12 11,15,16,17 X,Y 8,10,11 21,2 2 2 2 11,12,13 9,11,12,13 11,12 7,8,10<	DYS391	DYS570	DYS576	Yindel	II OX	VIIA
Investigator® 24plex (HID Format) 14,15,16,17,18,3,19,3 17,20,21 10,11,14,15 14,16,17 11,12 7,8,10 4 11,14,14,2,15 28,30,31,31,2,32.2 11,15,17 X,Y 8,10,11 21,2 11 11 11 11 11 11 7,8,10 11,12,13 9,11,12,13 12,13 2F3JCR GlobalFiler™ (HID Format) 11,14,15 14,16,17 11,12 7,8,10 11 11 11 11 11 7,8,10 11,12,13 12,13 2F3JCR GlobalFiler™ (HID Format) 14,15,16,17,18,3,19,3 17,20,21 10,11,14,15 14,16,17 11,12 7,8,10 2 11 2 11 2 11 11 2 11 2 11,14,15,16,17 11,12 7,8,10 12,12,13 12,13 4 11,14,15,16,17,18,3,19,3 17,20,21 10,11,14,15 14,16,17 11,12 7,8,10 10,12,13,14,15 13,15,16 18,20,22,23	510071	Distro				
2BY/WZ Investigator® 24plex (FID Format) 14,15,16,17,18,3,19.3 17,20,21 10,11,14,15 14,16,17 11,12 7,8,10 4 11,14,14.2,15 28,30,31,31,2,32.2 11,15,17 X,Y 8,10,11 21,2 11 11 11 27,30,22,2,27.2 6,7,8,9,9,3 8,9,11 11 2F3/CR GlobalFiler™ (HID Format) 14,15,16,17,18,3,19.3 17,20,21 10,11,14,15 14,16,17 11,12 7,8,10 10,12,13,14,15 13,15,16 18,20,22,23 8,11,12,13 9,11,12,13 12,15 10,12,13,14,15 13,15,16 18,20,22,23 8,11,12,13 9,11,12,13 12,15 4 11,14,14,2,15 28,30,31,31,2,32.2 11,15,6,17 X,Y 8,10,11,12 21,2 2NVUK3 Investigator® 24plex (HID Format) 1 1 2 11 11 2 2NVUK3 Investigator® 24plex (HID Format) 1 11,12,13 12,12 12,12 12,13 12,13 12,13 4 11,14,15 14,16,17 11,12 7,8,10 12,12 11,12 7,8,10				esons		
14,15,16,17,18,3,19,3 17,20,21 10,11,14,15 14,16,17 11,12,13 9,11,12,13 12,13 4 11,14,14,2,15 28,30,31,31,2,32.2 11,15,17 X,Y 8,10,11 21,2 11 11 11 11 11 11 11 11 11,12,13 9,11,12,13 12,13 2F3JCR GlobalFiler ^{1w} (HID Format) 11,14,15 14,16,17 11,12 7,8,10 11 11 11 11,14,15 14,16,17 11,12 7,8,10 2F3JCR GlobalFiler ^{1w} (HID Format) 11,14,15 14,16,17 11,12 7,8,10 11,14,14,2,15 28,30,31,31,2,32.2 11,15,16,17 X,Y 8,10,11,12 21,2 11 2 11 2 2 11 11 2 11,12,13 12,13 12,13 11 11 11,14,15 14,15,17 X,Y 8,10,11 21,2 12,13 12,13 12,13 12,13 12,13 12,13 12,13 12,13 12,13 12,13 12,13 12,13 12,13 12,13 12,12 <td>2B9MM2 Investigator</td> <td>® 24plex (HID Form</td> <td>at)</td> <td></td> <td></td> <td></td>	2B9MM2 Investigator	® 24plex (HID Form	at)			
I0.12, 13, 14, 15 13, 15, 16 18, 20, 22, 23 8, 11, 12, 13 9, 11, 12, 13 12, 13 4 11, 14, 14, 2, 15 28, 30, 31, 31, 2, 32, 2 11, 15, 17 X, Y 8, 10, 11 21, 2 11 17, 19, 20, 22, 2, 27, 2 6, 7, 8, 9, 9, 3 8, 9, 11 21, 2 11 11 11 7, 8, 10, 11, 2, 13 9, 11, 12, 13 9, 11, 12, 13 2F3JCR GlobalFiler [™] (HID Format) 14, 15, 16, 17, 18, 3, 19, 3 17, 20, 21 10, 11, 14, 15 14, 16, 17 11, 12, 13 9, 11, 12, 13 12, 13 4 11, 14, 14, 2, 15 28, 30, 31, 31, 2, 32, 2 11, 15, 16, 17 X, Y 8, 10, 11, 12 21, 14 11 2 2 11 2 2 11 11 11 11 11 11 11 11 11 11 11 12, 13, 14, 15 13, 15, 16 18, 20, 22, 23 8, 11, 12, 13 9, 11, 12, 13 12, 15 11 11, 14, 14, 14, 15 28, 30, 31, 31, 2, 32, 2 11, 14, 15 14, 16, 17 11, 12 7, 11	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
4 11,14,14.2,15 28,30,31,31.2,32.2 11,15,17 X,Y 8,10,11 21,7 11 17,19,20,22.2,27.2 6,7,8,9,9.3 8,9,11 11 2F3JCR GlobalFiler™ (HD Format) 14,15,16,17,18.3,19.3 17,20,21 10,11,14,15 14,16,17 11,12,13 9,11,12,13 12,17 4 11,14,14.2,15 28,30,31,31.2,32.2 11,15,16,17 X,Y 8,10,11,12 21,7 4 11,14,14.2,15 28,30,31,31.2,32.2 11,15,16,17 X,Y 8,10,11,12 21,7 4 11,14,14.2,15 28,30,31,31.2,32.2 11,15,16 XY 8,9,11 21,7 2NVUK3 Investigator® 24plex (HD Format) 11 2 2 10 2 2 10,11,14,15 14,16,17 11,12 7,8,10 4 11,14,14.2,15 28,30,31,31.2,32.2 11,15,17 XY 8,10,11 21,2 10,12,13,14,15 13,15,16 18,20,22,23 12 11,13 13 3KFLXN PowerPlex® Fusion 5C (FSA Forma	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
17,19,20,22.2,27.2 6,7,8,9,9.3 8,9,11 11 11 11 2F3JCR GlobalFiler™ (HID Format) 11,11,1,15 14,15,16,17,18.3,19.3 17,20,21 10,11,14,15 14,16,17 11,12 7,8,10 10,12,13,14,15 13,15,16 18,20,22,23 8,11,12,13 9,11,12,13 12,13 4 11,14,14,2,15 28,30,31,31,2,32.2 11,15,16,17 X,Y 8,10,11,12 21,2 2NVUK3 Investigator® 24plex (HID Format) 1 2 2 11 2 1 11,12,13 9,11,12,13 12,13 2NVUK3 Investigator® 24plex (HID Format) 14,15,16,17,18,3,19,3 17,20,21 10,11,14,15 14,16,17 11,12 7,8,10 4 11,14,14,2,15 28,30,31,2,32,2 11,15,17 X,Y 8,10,11 21,2 11 11 17,19,20,22,2,27,2 6,7,8,9,9,3 8,9,11 11 3KFLXN PowerPlex® Fusion 5C (FSA Format) 11,14,15 14,16,17 11,12 7,1 10,12,13,14,15 13,15 20,22,23	4 11,14,14.2,15	28,30,31,31.2,32.2	11,15,17	X,Y	8,10,11	21,22,23,24
2F3JCR GlobalFiler [™] (HID Format) 14,15,16,17,18,3,19.3 17,20,21 10,11,14,15 14,16,17 11,12 7,8,10 10,12,13,14,15 13,15,16 18,20,22,23 8,11,12,13 9,11,12,13 12,13 4 11,14,14,2,15 28,30,31,31,2,32,2 11,15,16,17 X,Y 8,10,11,12 21,2 11 2 2 2 11 2 2 2NVUK3 Investigator® 24plex (HID Format) 14,15,16,17,18,3,19.3 17,20,21 10,11,14,15 14,16,17 11,12 7,8,10 10,12,13,14,15 13,15,16 18,20,22,23 8,11,12,13 9,11,12,13 12,12 11 11,14,14,2,15 28,30,31,31,2,32,2 11,15,17 X,Y 8,10,11 21,2 11 11 11 11 11 11 12,2 11,13 13 11 11,14,14,2,15 28,30,31,2,32,2 11,15,17 X,Y 8,10,11 22 11 11 11 11,20,21 10,14,15 14,16,17 11,12	11		17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
2F3Ck GlobalFiler (FIID Format) 14,15,16,17,18,3,19,3 17,20,21 10,11,14,15 14,16,17 11,12 7,8,10 10,12,13,14,15 13,15,16 18,20,22,23 8,11,12,13 9,11,12,13 12,13 11,14,14,2,15 28,30,31,31,2,32.2 11,15,16,17 X,Y 8,10,11,12 21,2 2 17,19,20,22,2,77.2 6,7,8,9,9.3 8,9,11 2 2 11 2 2 2 2NVUK3 Investigator® 24plex (HID Format) 14,15,16,17,18,3,19.3 17,20,21 10,11,14,15 14,16,17 11,12 7,8,10 10,12,13,14,15 13,15,16 18,20,22,23 8,11,12,13 9,11,12,13 12,13 11 10,12,13,14,15 13,15,16 18,20,22,23 8,9,11 21,2 11 11 17,20,21 10,14,15 14,16,17 11,12 7,1 3KFLXN PowerPlex® Fusion 5C (FSA Format) 15,19,3 17,20,21 10,14,15 14,16,17 11,12 7,1 10,12,13,15 13,15 20,22,23 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
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DNA I	nterpretation					Test 18-589
Web	Code Amplificatio	on Kits (File Format)				
	D1\$1656	D2S1338	D2S441	D3S1358	D5S818	D75820
	D8S1179	D1051248	D125391	D135317	D16S539	D18551
ltem	D195433	D21511	D22S1045	Amelogenin	CSF1PO	FGA
	Penta D	Penta E	SE33	TH01	ΤΡΟΧ	VWA
	DYS391	DYS570	DY\$576	Y Indel		
			ltem 4 - STR R	esults		
8M4P	TP GlobalFiler	™, PowerPlex® Fusior	n 6C (PDF Format)			
1	4,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14,2,15	28,30,31,31,2,32,2	11,15,16,17	X.Y	8,10,11,12	21,22,23,24
	2.2.10.14.15	5.7.8.10.12.14	17.19.20.22.2.27.2	6.7.8.9.9.3	8.9.11	16.17
	11	17,21	15,17	2	-,,,	/
	40 ClabalEilan					
9ADA			10 11 14 15	141417	11.10	7 0 10 11 10 10
	4,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,16,17	X,Y	8,10,11,12	21,22,23,24
	-	-	17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
		-	-	Z		
9W7N	IGG (PDF Form	nat)				
1	4,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2		X,Y		21,22,23,24
	2.2,10,14,15	5,7,8,10,12,14	17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11	17,21	15,17			
9YB7R	9 PowerPlex®	Eusion 6C (PDE For	rmat)			
1	4 15 16 17 18 3 19 3	17 20 21	10 11 14 15	14 16 17	11 12	7 8 10 11 12 13
ĺ	10 12 13 14 15	13 15 16	18 20 22 23	8 11 12 13	9 11 12 13	12 13 15 16 18
4	11 14 14 2 15	20 20 21 21 2 22 2	11 15 14 17	V V	9 10 11 10	01 00 02 04
4	2.2.10.14.15	5 7 9 10 12 14	17,10,00,00,00,00,00	479003	9,10,11,12	16 17
	2.2,10,14,13	17 20 21	17,17,20,22.2,27.2	0,7,0,7,7.0	0,7,11	10,17
		17,20,21	10,17			
AUEP3	3J GlobalFiler	™ (PDF Format)				
1	4,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,16,17	X,Y	8,10,11,12	21,22,23,24
			17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11			2		
B9WY	6E PowerPlex®	Fusion 5C (FSA For	mat)			
	15,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	12	11,13	13,15,18
4	11,14,15	28.30.31.2.32.2	11,15,17	X.Y	8,10,11	22.23.24
	2.2,10,14,15	7,8,12,14	, , , ,	7,8,9.3	8,9	16,17
	11				<i>,</i> .	,
ייושנ			10 11 14 15	1/1/17	11 10	7010111010
	4,10,10,17,18.3,19.3	12.15.17	10,11,14,15	14,10,17	0.11.10.10	10 10 15 14 10
	10,12,13,14,15	13,15,16	10,20,22,23	0,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,16,1/	X,Y	8,10,11,12	21,22,23,24
	- 11	-	17,19,20,22.2,27.2	0,7,8,9,9.3	8,9,11	10,17
	1.1	-	-	2		

DNA	Interpretation					Test 18-589
Web	Code Amplificatio	on Kits (File Format)				
	D1\$1656	D2S1338	D2S441	D3S1358	D5S818	D7S820
	D8\$1179	D10S1248	D125391	D13S317	D16S539	D18\$51
ltem	D195433	D21S11	D22S1045	Amelogenin	CSF1PO	FGA
	Penta D	Penta E	SE33	TH01	TPOX	vWA
	DYS391	DY\$570	DYS576	Y Indel		
			ltem 4 - STR R	esults		
CYN	MMB PowerPlex®	Fusion 6C (PDF For	mat)			
	14,15,16,17,18,3,19,3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10.12.13.14.15	13,15,16	18.20.22.23	8.11.12.13	9.11.12.13	12.13.15.16.18
4	11 14 14 2 15	28 30 31 31 2 32 2	11 15 17	× ×	8 10 11 12	21 22 23 24
-	2 2 10 14 15	5 7 9 10 12 14	17,10,17	678003	9.0.11	16 17
	2.2,10,14,13	17 21	15 17	0,7,0,7,7.0	0,7,11	10,17
		17721	10,17			
DW9	TX4 PowerPlex®	© Fusion 6C (PDF For	mat), (HID Format)			
	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,16,17	X,Y	8,10,11,12	21,22,23,24
	2.2,10,14,15	5,7,8,10,12,14	17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11	17,20,21	15,17			
FRTR	DE GlobalEilor	™ (PDE Earmat)				
LOID	14 15 14 17 19 3 10 3		10 11 14 15	141417	11 10	7 9 10 11 10 13
	10,10,17,18.3,19.3	17,20,21	10,11,14,15	14,10,17	0.11.10.12	10.10.11.12,13
	10,12,13,14,15	13,15,10	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,10,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,16,17	X,Y	8,10,11,12	21,22,23,24
	11		17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
				2		
EKFH	IBF PowerPlex®	Fusion 5C (PDF For	mat)			
	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11.14.14 2.15	28.30.31 2.32 2	11,15,17	XY	8.10.11.12	21.22.23.24
-	2 2.10.14.15	5.7.8.10.12.14		6.7.8.9.9.3	8.9.11	16.17
	11	- / · / - / · - / · - / · ·		-/. /-/. /	-,,,	/
JX4EI	E9 GlobalFiler	(PDF Format)				
	14,15,16,17,18.3,	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,16,17	X,Y	8,10,11,12	21,22,23,24
			17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11			2		
	19.3					
4maj	or					
N HZL 1			1)			
ΝKΗ	VKE Investigator	™ 24plex (HID Forme	at)			
	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,17	X,Y	8,10,11	21,22,23,24
			17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11					

WebCode Amplification Kits (File Formal) D35133 D551129 D551179 D55513 D75820 D831179 D1051248 D123591 D135317 D165539 D13551 Pente D Pente S S33 TH01 TPOX WMA U15351 DY5370 DY5376 Yindol WMA Q2YD15 GlobalFler" (PDF Formal) Hitm 4 - STR Results Q2YD15 GlobalFler" (PDF Formal) 4 11,14,15 13,15,16 18,20,22,23 8,11,12,13 9,11,12,13 12,13,15,16,18 10,12,13,14,15 13,15,16 18,20,22,23 8,11,12,13 9,11,12,13 12,13,15,16,18 11 2 2 11,15,16,17 X,Y 8,10,11,12,13 12,13,15,16,18 12,13,14,15 13,15,16 18,20,22,23 8,11,12,13 9,11,12,13 12,13,15,16,18 14,15,16,17,18,3,19,3 17,20,21 10,11,14,15 14,16,17 11,12,13 12,13,15,16,18 11,14,15 14,15,16,17 X,Y 8,10,11 2,12,23,24 17,19,2022,22,72 6,7,89,93	DNA Ir	nterpretation					Test 18-589
D131356 D231338 D233138 D233138 D233137 D16324 D15351 D15351 Item D194333 D21311 D2231045 Amelogenin CSTPO P6A Pento D Pento E S533 TH01 TROX VMA DYS391 DYS570 DYS576 Y Indel VMA DYS11 D233138 D31112 D11112 D11112 D11112 D111112 D11112 D111112 D111112 D111112 D111112 D11112 D111112 D11112 D11112 D11112 D111112 D11112 D111112 D11112 D111112 D111112 D111112 D11112 D111112 D111112 <thd111112< th=""> <thd111112< th=""> <thd111112<< th=""><th>WebC</th><th>Code Amplificatio</th><th>on Kits (File Format)</th><th></th><th></th><th></th><th></th></thd111112<<></thd111112<></thd111112<>	WebC	Code Amplificatio	on Kits (File Format)				
DBS11/V D1051240 D12331/1 D18331/2 D18331/2 Pente D Pente E \$\$\$3 TH01 TPOX vWA DYS30 DYS370 DYS370 V14cl V14cl V14cl C2YD16 GlobalFiler*" (PDF formet) 14,15,16,17,18,3,19,3 17,20,21 10,11,14,15 14,16,17 11,12,13 9,11,12,13 12,13,15,16,18 4 11,14,14,2,15 28,30,31,31,23,22 11,15,16,17 X,Y 8,10,11,12 21,22,3,24 11 7,1920,222,27,2 6,78,99,3 8,9,11 16,17 1 1,12,13 12,13,15,16,18 4 11,14,14,2,15 28,30,31,31,23,22 11,15,16,17 X,Y 8,10,11,12 21,23,24 10,12,13,14,15 13,15,16 18,20,22,23 8,11,12,13 9,11,12,13 12,13,15,16,18 4 11,14,14,2,15 28,30,21,31,23,22 11,15,16,17 X,Y 8,10,11 21,22,23,24 11 14,15,16,17,18,3,19,3 17,20,21 10,11,14,15 14,16,17 11,12 2,8,10,11,12,13 10,12,13,		D1S1656	D251338	D25441	D3S1358	D5S818	D75820
Infm D195353 D21511 D225013 Ambigginin CST PO FeA DYS371 DYS370 DYS370 DYS370 Vindel Vindel Q2YD16 GlobalFiler*" (PDF Formal) 14.15.16.17.18.3.19.3 17.20.21 10.11.14.15 14.16.17 11.12 7.8.10.11.12 12.22.22.22.4 10.17.13.14.15 13.15.16 18.20.22.23 8.11.12.13 9.11.12 12.12.3.15.16.16 4 11.4.14.2.15 28.30.3.13.12.32.2 11.5.16.17 X.Y 8.10.11.12 2.2.22.22.4 QDUN2C Investigator® 24plex (HID Format) 14.15.16.17.18.3.19.3 17.20.21 10.11.14.15 14.16.17 11.12 7.8.10.11.12.13 12.13.15.16.16 11 12.23.23.13.12.32.2 11.15.16 18.20.22.23 8.11.12.13 9.11.2.13 12.13.15.16.16 12.13.14.15 13.15.14 18.20.22.23 8.11.12.13 9.11.12.13 12.13.15.16.18 13.14 11.14.15 14.16.17 11.12 7.8.10.11.12 12.22.22.42 14.15.16.17.18.3.19.3 17.20.21 10.11.14		D851179	D1051248	D125391	D135317	D165539	D18551
DVIKU DVSTO DVSTO DVSTO VIAL DVSTO Viad Item 4 - STR Results Q2VDT6 GlobalFiler** (PDF Formed) 141.51.61.71.83.319.3 17.20.21 10.11.14.15 14.16.17 11.12.13 21.31.51.61.18 10.12.13.14.15 13.15.16 13.20.22.23 6.71.17.21.3 9.11.12.13 12.13.15.16.18 4 11.14.14.2.15 28.30.31.31.23.22 11.15.16.17 X.Y 8.10.11.12 21.22.22.24 QDUNZC Investigators 24plex (HD Format) 141.516.17.18.3.19.3 17.20.22.22.27.2 6.7.8.9.9.3 8.9.11 16.17 11 2 2 17.19.20.22.22.27.2 6.7.8.9.9.3 8.9.11 16.17 11.2.13.14.15 13.15.16 18.20.22.23 8.11.12.13 9.11.12.13 12.13.15.16.18 Resettigators 258.30.3.31.2.32.2 11.15.17 X.Y 8.10.11.12.13 12.13.15.16.18 Resettigators 268.5 formed! 14.15.16.17.18.3.19.3 17.20.21 10.11.14.15	Item	D195433	D21511	D2251045	Amelogenin	CSFIPO	FGA
Drays Herm 4 - STR Results Q2YD76 GlobalFiler " (PDF Format) 14.15,16,17,18.3,19,3 17,20,21 10,11,14,15 14,16,17 11,12,13 12,13,15,16,18 4 11,14,14,2,15 28,30,31,31,2,32,2 11,15,16,17 X,Y 8,10,11,12 21,22,23,24 1 1 2 1 16,17 X,Y 8,10,11,12 21,22,23,24 1 1 2 1 16,17 X,Y 8,10,11,12 21,22,23,24 1 1 12,20,22,272 6,7,8,9,9,3 8,9,11 16,17 1 1 12,20,22 10,11,14,15 14,16,17 11,12 7,8,10,11,12,13 10,12,13,14,15 13,15,16 18,20,22,23 8,11,12,13 9,11,12,13 12,13,15,16,18 14,15,16,17,18,3,19,3 17,20,21 10,11,14,15 14,16,17 11,12 7,8,10,11,12 21,22,23,24 11,14,14,2,15 26,30,31,31,2,32,2 11,15,16,17 X,Y 8,10,11,12 21,22,23,24 11,14,14,2,15 26,30,31,31		Penia D		DVSE76	Vindol	IPOX	VWA
Item 4 - 51K Kesults Q2VD76 GlobalFiler*** (PDF Format) 14,15,16,17,18,3,19,3 17,20,21 10,11,14,15 14,16,17 11,12,13 9,11,12,13 12,13,15,16,18 4 11,14,14,2,15 28,30,31,31,2,32,2 11,15,16,17 X/X 8,10,11,12 21,22,22,24 11 2 2 8,9,11 16,17 11 12,13,15,16,18 QDUN2C Investigator® 24plex (HID Format) 14,15,16,17,18,3,19,3 12,20,21 10,11,14,15 14,16,17 11,12 7,8,10,11,12,13 10,12,13,14,15 13,15,16 18,20,22,23 8,11,12,13 9,11,12,13 12,13,15,16,18 4 11,14,14,2,15 28,30,3,13,12,32,2 11,15,16,17 X/Y 8,10,11 21,22,32,42 11 11 17,19,20,22,2,27 6,7,8,9,8,3 8,9,11 16,17 11 11,14,14,15 14,16,17 11,12,13 12,13,15,16,18 14,15,16,17,18,3,19,3 12,20,21 10,11,14,15 14,16,17 11,12,13 12,13,15,16,18 11,14,14,2,15 28,30,31,312,3		D122A1	D15570		r Indei		
Q2YDT6 GlobalFile*" (PDF Format) 14,15,16,17,18,3,19.3 17,20,21 10,11,14,15 14,16,17 11,12,13 12,13,15,16,17 4 11,14,14,2,15 28,30,31,31,2,32,2 11,15,16,17 XY 8,10,11,12 21,22,23,24 11 2 2 2 2 2 2 2 QDUN2C Investigator® 24plex (HID Format) 14,15,16,17,18,3,19,3 17,20,21 10,11,14,15 14,16,17 11,12,13 12,12,13,16,16,18 4 11,14,14,2,15 28,30,31,31,2,32,2 11,15,17 X,Y 8,10,11 21,22,23,24 11 11 11 10,12,13,14,15 13,15,16 18,20,22,23 8,11,12,13 9,11,12,13 12,12,13,16,16,18 4 11,14,14,2,15 28,30,31,31,2,32,2 11,0,11,14,15 14,16,17 11,12,13 12,13,15,16,18 8 10,12,14,15 13,15,16 18,20,22,23 6,7,8,9,9,3 8,9,11 16,17 11 11,14,15 14,16,17 11,12,13 12,13,15,16,18 12,13,15,16,18 12,13,15,16,18				Item 4 - STR R	esults		
Image: Product State Image: Pr	Q2YD	T6 GlobalFiler	™ (PDF Format)				
10,12,13,14,15 13,15,16 18,20,22,23 8,11,12,13 9,11,12,13 12,13,15,16,18 4 11,14,14,2,15 28,30,31,31,2,32,2 11,15,16,17 XY 8,10,11,12 21,22,23,24 11 2 2 2 16,17 11 2 QDUN2C Investigator® 24plax (HID Format) 14,15,16,17,18,3,19,3 17,20,21 10,11,14,15 9,11,12,13 12,13,15,16,18 4 11,14,14,2,15 28,30,31,31,2,32,2 11,15,17 XY 8,10,11 21,22,32,42 11 12,12,15,16,18 18,20,22,23 8,11,12,13 9,11,12,13 12,13,15,16,16 4 11,14,14,2,15 28,30,31,31,2,32,2 11,15,17 XY 8,10,11 21,22,32,44 11 11,14,15 13,15,16 18,20,22,23 8,11,12,13 9,11,12,13 12,13,15,16,18 4 11,41,42,15 28,30,31,31,2,32,2 11,15,16,17 XY 8,01,11,12 21,22,32,44 11 11,14,2,15 28,30,31,31,2,32,2 11,15,16,17 11,12 7,8,10,11,12,13 10,12,13,	14	4,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
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14,15,16,17,18.3,19.3 17,20,21 10,11,14,15 14,16,17 11,12 7,8,10,11,12,13 10,12,13,14,15 13,15,16 18,20,22,23 8,11,12,13 9,11,12,13 12,13,15,16,18 4 11,14,14.2,15 28,30,31,31.2,32.2 X,Y 8,10,11,12 21,22,23,24 2.2,10,14,15 5,7,8,10,12,14 17,19,20,222,27.2 6,7,8,9,9.3 8,9,11 16,17 11 17,21 15,17 14,16,17 11,12 7,8,10,11,12,13 UU938Z GlobalFiler™ (PDF Format) 14,15,16,17,18.3,19.3 17,20,21 10,11,14,15 14,16,17 11,12 7,8,10,11,12,13 10,12,13,14,15 13,15,16 18,20,22,23 8,11,12,13 9,11,12,13 12,13,15,16,18 4 11,14,14.2,15 28,30,31,31.2,32.2 11,15,16,17 X,Y 8,10,11,12 21,22,23,24 4 11,14,14.2,15 28,30,31,31.2,32.2 11,15,16,17 X,Y 8,10,11,12 21,22,23,24 4 11,14,14.2,15 28,30,31,31.2,32.2 11,15,16,17 X,Y 8,10,11,12 21,22,23,24 10, N/A N/A 17,19,20,222.2,27.2 6,78,9,9.3 8,9	IN/VI	IW GlobalFiler	™, Investigator® 24pl	ex, PowerPlex® Fusion	5C, PowerPlex® Fu	ision 6C (FSA Fori	mat), (PDF Format)
4 10,12,13,14,15 13,15,16 18,20,22,23 8,11,12,13 9,11,12,13 12,13,15,16,18 4 11,14,14.2,15 28,30,31,31.2,32.2 X,Y 8,10,11,12 21,22,23,24 2.2,10,14,15 5,7,8,10,12,14 17,19,20,22.2,27.2 6,7,8,9,9.3 8,9,11 16,17 11 17,21 15,17 10,11,14,15 14,16,17 11,12 7,8,10,11,12,13 UU938Z GlobalFiler™ (PDF Format) 14,15,16,17,18.3,19.3 17,20,21 10,11,14,15 14,16,17 11,12 7,8,10,11,12,13 10,12,13,14,15 13,15,16 18,20,22,23 8,11,12,13 9,11,12,13 12,13,15,16,18 4 11,14,14.2,15 28,30,31,31.2,32.2 11,15,16,17 X,Y 8,10,11,12 21,22,23,24 4 N/A N/A 17,19,20,222,27.2 6,7,8,9,9.3 8,9,11 16,17 11 N/A N/A 17,19,20,222,27.2 6,7,8,9,9.3 8,9,11 16,17]4	4,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
4 11,14,14.2,15 28,30,31,31.2,32.2 X,Y 8,10,11,12 21,22,23,24 2.2,10,14,15 5,7,8,10,12,14 17,19,20,22.2,27.2 6,7,8,9,9.3 8,9,11 16,17 11 17,21 15,17 10,11,14,15 14,16,17 11,12 7,8,10,11,12,13 UU938Z GlobalFiler™ (PDF Format) 14,15,16,17,18.3,19.3 17,20,21 10,11,14,15 14,16,17 11,12 7,8,10,11,12,13 10,12,13,14,15 13,15,16 18,20,22,23 8,11,12,13 9,11,12,13 12,13,15,16,18 4 11,14,14.2,15 28,30,31,31.2,32.2 11,15,16,17 X,Y 8,10,11,12 21,22,23,24 N/A N/A 17,19,20,222,27.2 6,7,8,9,9.3 8,9,11 16,17		10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
2.2,10,14,15 5,7,8,10,12,14 17,19,20,222,27.2 6,7,8,9,9.3 8,9,11 16,17 11 17,21 15,17 10,17 11,12 7,8,10,11,12,13 UU938Z GlobalFiler™ (PDF Format) 14,15,16,17,18.3,19.3 17,20,21 10,11,14,15 14,16,17 11,12 7,8,10,11,12,13 10,12,13,14,15 13,15,16 18,20,22,23 8,11,12,13 9,11,12,13 12,13,15,16,18 4 11,14,14.2,15 28,30,31,31.2,32.2 11,15,16,17 X,Y 8,10,11,12 21,22,23,24 N/A N/A 17,19,20,222,27.2 6,7,8,9,9.3 8,9,11 16,17 11 N/A N/A 2 10,17 14,16,17 11,12	4	11,14,14.2,15	28,30,31,31.2,32.2		X,Y	8,10,11,12	21,22,23,24
11 17,21 15,17 UU938Z GlobalFiler™ (PDF Format) 14,15,16,17,18.3,19.3 17,20,21 10,11,14,15 14,16,17 11,12 7,8,10,11,12,13 10,12,13,14,15 13,15,16 18,20,22,23 8,11,12,13 9,11,12,13 12,13,15,16,18 4 11,14,14.2,15 28,30,31,31.2,32.2 11,15,16,17 X,Y 8,10,11,12 21,22,23,24 N/A N/A 17,19,20,222,27.2 6,78,9,9.3 8,9,11 16,17		2.2,10,14,15	5,7,8,10,12,14	17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
UU938Z GlobalFiler™ (PDF Format) 14,15,16,17,18.3,19.3 17,20,21 10,11,14,15 14,16,17 11,12 7,8,10,11,12,13 10,12,13,14,15 13,15,16 18,20,22,23 8,11,12,13 9,11,12,13 12,13,15,16,18 4 11,14,14.2,15 28,30,31,31.2,32.2 11,15,16,17 X,Y 8,10,11,12 21,22,23,24 N/A N/A 17,19,20,222,2,27.2 6,7,8,9,9.3 8,9,11 16,17 11 N/A N/A 2		11	17,21	15,17			
14,15,16,17,18.3,19.3 17,20,21 10,11,14,15 14,16,17 11,12 7,8,10,11,12,13 10,12,13,14,15 13,15,16 18,20,22,23 8,11,12,13 9,11,12,13 12,13,15,16,18 4 11,14,14.2,15 28,30,31,31.2,32.2 11,15,16,17 X,Y 8,10,11,12 21,22,23,24 N/A N/A 17,19,20,222,27.2 6,7,8,9,9.3 8,9,11 16,17 11 N/A N/A 2 14,14,14 14,14 14,14	UU938	8Z GlobalFiler	™ (PDF Format)				
4 11,14,14.2,15 28,30,31,31.2,32.2 11,15,16,17 X,Y 8,10,11,12 21,22,23,24 N/A N/A 17,19,20,22.2,27.2 6,7,8,9,9.3 8,9,11 16,17 11 N/A N/A 2 10,12 10,12,13,14,15	14	4,15,16,17.18.3.19.3	17,20.21	10,11,14.15	14,16.17	11.12	7,8,10,11.12.13
4 11,14,14.2,15 28,30,31,31.2,32.2 11,15,16,17 X,Y 8,10,11,12 21,22,23,24 N/A N/A 17,19,20,22.2,27.2 6,7,8,9,9.3 8,9,11 16,17 11 N/A N/A 2 2 11 11 11 10,17 11 10,17 11 10,17 11 10,17 11 <td></td> <td>10.12.13.14.15</td> <td>13.15.16</td> <td>18.20.22.23</td> <td>8.11.12.13</td> <td>9.11.12.13</td> <td>12.13.15.16.18</td>		10.12.13.14.15	13.15.16	18.20.22.23	8.11.12.13	9.11.12.13	12.13.15.16.18
N/A N/A 17,19,20,222,27.2 6,78,9,9.3 8,9,11 16,17 11 N/A N/A 2	4	11 14 14 2 15	28 30 31 31 2 32 2	11 15 16 17	X Y	8 10 11 12	21 22 23 24
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	-	Ν/Δ	_N/A	17 19 20 22 2 27 2	678993	8.9.11	_16.17
		11	N/A	N/A	2	0,7,11	

DNA I	Interpretation					Test 18-589
Web	Code Amplification	on Kits (File Format)				
	D1S1656	D2S1338	D25441	D3S1358	D55818	D75820
	D8S1179	D1051248	D125391	D135317	D165539	D18551
ltem	D195433	D21511	D2251045	Amelogenin	CSF1PO	FGA
	Penta D	Penta E	SE33	TH01	ΤΡΟΧ	VWA
	DY\$391	DY\$570	DY\$576	Y Indel		
			ltem 4 - STR R	esults		
JZEX	QZ GlobalFiler	™, PowerPlex® Fusio	n 6C (PDF Format)			
- 1	1/ 15 1/ 17 18 3 19 3	, 17 20 21	10 11 14 15	14 16 17	11 12	7810111213
	10 10 10 10 14 15	12 15 14	10,11,14,10	0 11 10 10	0 11 10 12	10 10 15 14 10
	10,12,13,14,13	13,13,10	10,20,22,23	0,11,12,13	9,11,12,13	12,13,13,10,10
1	11,14,14.2,15	28,30,31,31.2,32.2	, 5, 6, /	Х,Ү	8,10,11,12	21,22,23,24
	2.2,10,14,15	5,7,8,10,12,14	17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11	17,21	15,17	2		
NVXC	CVX GlobalFiler	™ (PDF Format)				
1	1/15 1/17 18 3 19 3	17 20 21	10 11 14 15	14 16 17	11.12	7810111213
1	10 10 10 10 14 15	12 15 14	10,11,14,13	0 11 10 10	0 11 10 12	10.10.15.14.10
	10,12,13,14,15	13,15,16	10,20,22,23	0,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,16,17	X,Y	8,10,11,12	21,22,23,24
			17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11			2		
WWR	7DU GlobalEiler	™ Investigator® 24p	lex PowerPlex® Fusion	5C PowerPlex® Fi	usion 6C (PDF For	mat)
1		17 20 21		14 16 17		7 9 10 11 10 13
1	14,15,10,17,18.5,19.5	17,20,21	10,11,14,13	14,10,17	0.11.10.10	10.10.15.14.10
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,16,17	X,Y	8,10,11,12	21,22,23,24
	2.2,10,14,15	5,7,8,10,12,14	17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11	17,21	15,17	2		
WYU2	2C6 PowerPlex®	Eusion 6C (HID For	mat)			
1		17 20 21	10 11 14 15	14 16 17	11.12	7810111213
1	10,10,10,10,10,10,10	12,20,21	10,11,14,13	0.11.10.12	0111010	10.10.15.17.10
	10,12,13,14,15	13,15,10	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,16,17	X,Y	8,10,11,12	21,22,23,24
	2.2,10,14,15	5,7,8,10,12,14	17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11	17,20,21	15,17			
(VDT	QQ GlobalEiler	™ (PDF Format)				
1		17 20 21	10 11 14 15	141417	11.10	7010111012
1	14,15,10,17,18.5,19.5	17,20,21	10,11,14,13	14,10,17	0.11.10.10	10.10.15.14.10
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,16,17	X,Y	8,10,11,12	21,22,23,24
			17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11			2		
77HG	MQ PowerPlex®	Eusion 5C (ESA For	mat)			
_///0	15 10 2	17.00.01	10.14.15	141417	11.10	7 11 10 12
	15,19.5	17,20,21	10,14,15	14,10,17	11,12	/, , 2, 3
	10,12,13,15	13,15	20,22,23	12	11,13	13,15,18
4	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14	NT	7,8,9.3	8,9	16,17
	11	NT	NT	NT		
771 FD		Eusion 5C (PDE Ear	(mat)			
			101415	1 4 1 / 1 7	11 10	7 1 1 1 0 1 0
	14,15,16,18.3,19.3	17,20,21	10,14,15	14,10,1/	11,12	7,11,12,13
	10,12,13,14,15	13,15	20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11,12	21,22,23,24
	2.2,10,14,15	5,7,8,10,12,14		6,7,8,9.3	8,9,11	16,17
	11					

DNA	Interpretation					Test 18-589
Web	Code Amplification D1S1656 D8S1179	on Kits (File Format) D2S1338 D10S1248	D25441 D125391	D3S1358 D13S317	D5S818 D16S539	D75820 D18551
ltem	D195433	D21511	D22S1045	Amelogenin	CSF1PO	FGA
	Penta D	Penta E	SE33	TH01	ΤΡΟΧ	vWA
	DYS391	DYS570	DY\$576	Y Indel		
			ltem 4 - STR R	esults		
Z9Q3	36R GlobalFile	r™ (PDF Format)				
	14,15,16,17,18.3,19.3	17,20,21	10,11,14,15	14,16,17	11,12	7,8,10,11,12,13
	10,12,13,14,15	13,15,16	18,20,22,23	8,11,12,13	9,11,12,13	12,13,15,16,18
4	11,14,14.2,15	28,30,31,31.2,32.2	11,15,16,17	X,Y	8,10,11,12	21,22,23,24
			17,19,20,22.2,27.2	6,7,8,9,9.3	8,9,11	16,17
	11			2		
ZNKR	ZN PowerPlex®	® Fusion 5C (FSA For	mat)			
	15,19.3	17,20,21	10,14,15	14,16,17	11,12	7,11,12,13
	10,12,13,15	13,15	20,22,23	12	11,13	13,15,18
4	11,14,15	28,30,31.2,32.2	11,15,17	X,Y	8,10,11	22,23,24
	2.2,10,14,15	7,8,12,14		7,8,9.3	8,9	16,17
	11					

YSTR Results

WebCode	Amplification H	(its (File For	rmat)		DVC200	DV6201	DVS202	DVS202
Itom		DVS/129	DVS/20	D15509-11	DV\$454	DYS459	DVS/191	DV\$522
nem	DYS549	DY\$570	DY\$576	DY\$635	DYS643	Y GATA H4	013401	013333
	015549	-913570	015570		013043	T GATA H4		
050100			Item 1	- YSIK Resul	Its			
2F3JCR	PowerPlex® Y23 (FSA Format)	10	01	01			10
1	15	16,18	13	31	21	14	11	13
I	14	21	15	20	15	10	2/	
(7000)	12			۲ <u>۲</u>	14	١Z		
0/PQBM	Itiler® (FSA Forme	at), (PDF Form ۱۸۱۹	at), (HID Forma ז א	וזג) רצ	21	11	11	13
1	14	11	11	20	15	16	27	13
I	12	21	15	21	14	12	<u> </u>	. 1
				21		12		
68JE1H	YowerPlex® Y23 (HID Format)	10	21	21	11	11	10
1	15	10,18	13	3T 2∩	21	16	27	13
I	14	21	15	20	11	12	21	11
	12	Ζ1	10	۷ ا	14	١Z		
8M4PTP	Yfiler®, PowerPlex	® Y23 (PDF F	ormat)	63	<u>.</u>			10
1	15	16,18	13	31	21	11	11	13
I	14	01	15	20	15	10	27	11
	12	21	15	21	14	TZ		
9ADA6G	Yfiler® (PDF Form	at)						
1	15	16,18	13	31	21	11	11	13
I	14			20	15	16	-	-
	-	-	-	21	-	12		
9W7NGG	(PDF Format)							
	15	16,18	13	31	21	11	11	13
1	14	11	11	20	15	16		
		21	15	21		12		
AUEP3J	Yfiler® (PDF Form	at)						
	15	16,18	13	31	21	11	11	13
1	14	11	11	20	15	16		
				21		12		
BLYQLD	Yfiler® (PDF Form	at)						
	15	16,18	13	31	21	11	11	13
1	14	11	11	20	15	16	-	-
	-	-	-	21	-	12		
DW9TX4	PowerPlex® Y23 (PDF Format)						
	15	16,18	13	31	21	11	11	13
1	14	11	11	20	15	16	27	11
	12	21	15	21	14	12		

DNA	Interpretation
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WebCode	Amplificatio	on Kits (File For	mat)					
	DYS1	9 DYS385	DYS389-1	DYS389-II	DYS390	DY\$391	DY\$392	DYS393
Item	DYS43	37 DYS438	DYS439	DYS448	DYS456	DYS458	DYS481	DYS533
	DYS54	9 DYS570	DYS576	DYS635	DYS643	Y GATA H4		
			ltem 1 ·	YSTR Resul	ts			
E8TBDE	Yfiler® (PDF Fo	ormat)						
	15	16,18	13	31	21	11	11	13
1	14	11	11	20	15	16		
				21		12		
EKFHBF	PowerPlex® Y2	23 (PDF Format)						
	15	16,18	13	31	21	11	11	13
1	14	11	11	20	15	16	27	11
	12	21	15	21	14	12		
JX4EE9	Yfiler® (PDF Fo	ormat)						
	15	16,18	13	31	21	11	11	13
1	14	11	11	20	15	16		
				21		12		
Q2YDT6	PowerPlex® Y2	23 (PDF Format)						
	15	16,18	13	31	21	11	11	13
1	14	11	11	20	15	16	27	11
	12	21	15	21	14	12		
R3UJM6	Yfiler® (FSA Fo	ormat)						
	15	16,18	13	31	21	11	11	13
1	14	11	11	20	15	16		
				21		12		
TD8ZU2	PowerPlex® Y2	23 (HID Format)						
	15	16,18	13	31	21	11	11	13
1	14	11	11	20	15	16	27	11
	12	21	15	21	14	12		
TN7VTW	Yfiler®, Powerl	Plex® Y23 (FSA Fo	ormat), (PDF Fc	ormat)				
	15	16,18	13	31	21		11	13
1	14	11	11	20	15	16	27	11
	12			21	14	12		
UU938Z	Yfiler® (PDF Fo	ormat)						
	15	16,18	13	31	21	11	11	13
1	14	11	11	20	15	16	N/A	N/A
	N/A	N/A	N/A	21	N/A	12		
UZEXQZ	Yfiler®, Power	Plex® Y23 (FSA Fo	ormat), (PDF Fc	ormat)				
	15	16,18	13	31	21	11	11	13
1	14	11	11	20	15	16	27	11
	12	21	15	21	14	12		

WebCode	Amp	lification K	its (File For	mat)					
		DYS19	DYS385	DYS389-1	DYS389-II	DYS390	DYS391	DYS392	DYS393
ltem		DYS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS481	DYS533
		DYS549	DYS570	DYS576	DYS635	DYS643	Y GATA H4		
				ltem 1 ·	YSTR Resul	ts			
WVXCVX	Powerl	Plex® Y23 (P	DF Format)						
		15	16,18	13	31	21	11	11	13
1		14	11	11	20	15	16	27	11
		12	21	15	21	14	12		
WWRZDU	Yfiler®	Yfiler®, PowerPlex® Y23 (PDF Format)							
		15	16,18	13	31	21	11	11	13
1		14	11	11	20	15	16	27	11
		12	21	15	21	14	12		
XVDTQQ	Yfiler®) (PDF Forma	at)						
		15	16,18	13	31	21	11	11	13
1		14	11	11	20	15	16		
					21		12		
Z7LFRM	Powerl	Plex® Y23 (P	DF Format)						
		15	16,18	13	31	21	11	11	13
1		14	11	11	20	15	16	27	11
		12	21	15	21	14	12		

11,14

			T,	ABLE 3					
WebCode	Amplification H	Kits (File Foi	rmat)						
•-	DYS19	DYS385	DYS389-1	DYS389-II	DYS390	DYS391	DYS392	DYS393	
Item	DYS437 DYS549	DYS438 DYS570	DYS439 DYS576	DYS448 DYS635	DYS456 DYS643	DYS458 Y GATA H4	DYS481	DYS533	
			Itom 2	VSTR Rosul	te				
2F3JCR	PowerPlex® Y23 (werPlex® Y23 (FSA Format)							
	14	11,14	13	29	23	11	13	13	
2	15	12	12	19	16	18	23	12	
	13	17	17	23	10	11			
67PQBM	Yfiler®, PowerPlex	® Y23 (FSA Fo	ormat), (PDF Fo	ormat), (HID Fo	ormat)				
	14	11,14	13	29	23	11	13	13	
2	15	12	12	19	16	18	23	12	
	13	17	17	23	10	11			
68JETH	PowerPlex® Y23 (HID Format)							
	14	11,14	13	29	23	11	13	13	
2	15	12	12	19	16	18	23	12	
	13	17	17	23	10	11			
8M4PTP	Yfiler®, PowerPlex	® Y23 (PDF Fo	ormat)						
	14	11,14	13	29	23	11	13	13	
2	15	12	12	19	16	18	23	12	
	13	17	17	23	10	11			
9ADA6G	Yfiler® (PDF Form	at)							
	14	11,14	13	29	23	11	13	13	
2	15	12	12	19	16	18	-	-	
	-	-	-	23	-	11			
9W7NGG	(PDF Format)								
	14	11,14	13	29	23	11	13	13	
2	15	12	12	19	16	18			
		17	17	23		11			
AUEP3J	Yfiler® (PDF Form	at)							
_	14	11,14	13	29	23	11	13	13	
2	15	12	12	19	16	18			
				23		11			
BLYQLD	Yfiler® (PDF Form	at)				_			
0	14	11,14	13	29	23	11	13	13	
2	15	12	12	19	16	18	-	-	
	-	-	-	23	-	11			
DW9TX4	PowerPlex® Y23								

DNA	Interpretation
	merpretunon

TABLE	3
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WebCode	Ampli	ficati <u>on K</u>	its (Fi <mark>le Fo</mark> r	mat)					
		DYS19	DYS385	DYS389-1	DYS389-II	DYS390	DYS391	DYS392	DYS393
ltem		DYS437	DYS438	DY\$439	DYS448	DY\$456	DY\$458	DY\$481	DY\$533
		DYS549	DYS570	DYS576	DYS635	DYS643	Y GATA H4		
				ltem 2 -	YSTR Resul	ts			
E8TBDE	Yfiler® ((PDF Forma	ıt)						
		14	11,14	13	29	23	11	13	13
2		15	12	12	19	16	18		
					23		11		
EKFHBF	PowerPle	ex® Y23 (P	DF Format)						
		14	11,14	13	29	23	11	13	13
2		15	12	12	19	16	18	23	12
		13	17	17	23	10	11		
JX4EE9	Yfiler®								
		14	11,14	13	29	23	(8),11	13	13
2		15	12	12	19	16	18		
					23		11		
Q2YDT6	PowerPle	ex® Y23 (P	DF Format)						
	_	14	11,14	13	29	23	11	13	13
2		15	12	12	19	16	18	23	12
		13	17	17	23	10	11		
R3UJM6	Yfiler® ((FSA Forma	t)						
		14	11,14	13	29	23	11	13	13
2		15	12	12	19	16	18		
					23		11		
TD8ZU2	PowerPle	ex® Y23 (⊢	IID Format)						
		14	11,14	13	29	23	11	13	13
2		15	12	12	19	16	18	23	12
		13	17	17	23	10	11		
TN7VTW	Yfiler®,	PowerPlex®	® Y23 (FSA Fo	rmat), (PDF Fo	ormat)				
		14	11,14	13	29	23		13	13
2		15	12	12	19	16	18	23	12
		13			23	10	11		
UU938Z	Yfiler® ((PDF Forma							
	_	14	11,14	13	29	23	11	13	13
2		15	12	12	19	16	18	N/A	N/A
		N/A	N/A	N/A	23	N/A	11		
UZEXQZ	Yfiler®,	PowerPlex®	® Y23 (FSA Fo	rmat), (PDF Fo	ermat)				
		14	11,14	13	29	23	11	13	13
2		15	12	12	19	16	18	23	12
		13	17	17	23	10	11		

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TABLE 3

WebCode	Ampl	lification K	its (File <u>Fo</u> r	mat)					
		DYS19	DYS385	DYS389-1	DYS389-II	DYS390	DYS391	DYS392	DY\$393
ltem		DYS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS481	DYS533
		DYS549	DYS570	DY\$576	DYS635	DYS643	Y GATA H4		
				Item 2	- YSTR Resul	ts			
WVXCVX	PowerF	Plex® Y23 (P	DF Format)						
		14	11,14	13	29	23	11	13	13
2		15	12	12	19	16	18	23	12
		13	17	17	23	10	11		
WWRZDU	Yfiler®	, PowerPlex	® Y23 (PDF Fo	ormat)					
		14	11,14	13	29	23	11	13	13
2		15	12	12	19	16	18	23	12
		13	17	17	23	10	11		
XVDTQQ	Yfiler®	(PDF Forme	at)						
		14	11,14	13	29	23	11	13	13
2		15	12	12	19	16	18		
					23		11		
Z7LFRM	PowerF	Plex® Y23 (P	DF Format)						
		14	11,14	13	29	23	11	13	13
2		15	12	12	19	16	18	23	12
		13	17	17	23	10	11		

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DNA Interpretation

WebCode	Amplifi	cation K	(its (File For	mat)					
	l i	DYS19	DYS385	DYS389-1	DYS389-II	DYS390	DYS391	DY\$392	DY\$393
ltem	D	YS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS481	DYS533
	D	YS549	DY\$570	DYS576	DY\$635	DYS643	Y GATA H4		
				ltem 3 ·	- YSTR Resul	ts			
2F3JCR	PowerPlex	k® Y23 (F	SA Format)						
		14,15	11,14,16,18	13	29,30,31	21,23	11	11,12,13	13
3		14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
		12,13	17,21	15,17	21,23	10,14	11,12		
		14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
3major		14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
		12,13	17,21	15,17	21,23	10,14	11,12		
					30			12	
3minor									
67PQBM	Yfiler®, P	owerPlex	® Y23 (FSA Fo	rmat), (PDF Fc	ormat), (HID Fo	ermat)			
	_	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
3		14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
		12,13	17,21	15,17	21,23	10,14	11,12		
68JETH	PowerPlex	k® Y23 (H	HID Format)						
	_	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
3		14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
		12,13	17,21	15,17	21,23	10,14	11,12		
8M4PTP	Yfiler®, P	owerPlex	® Y23 (PDF Fo	rmat)					
		14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
3		14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
		12,13	17,21	15,17	21,23	10,14	11,12		
9ADA6G	Yfiler® (P	DF Form	at)						
		14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
3		14,15	11,12	11,12	19,20	15,16	16,18	-	-
		-	-	-	21,23	-	11,12		
9W7NGG	(PDF For	mat)							
		14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
3		14,15	11,12	11,12	19,20	15,16	16,18		
			17,21	15,17	21,23		11,12		
AUEP3J	Yfiler® (P	DF Form	at)						
		14,15	11,14,16,18	13	29,31	21,23	11	11,12,13	13
3		14,15	11,12	11,12	19,20	15,16	16,17,18		
					21,23		11,12		
BLYQLD	Yfiler® (P	DF Form	at)						
		14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
3		14,15	11,12	11,12	19,20	15,16	16,18	-	-
		-	-	-	21,23	-	11,12		

DNA Interpretation

WebCode	Amplificat	ion K	its (Fi <mark>le For</mark> i	mat)					
	DYS	19	DYS385	DYS389-1	DYS389-II	DYS390	DYS391	DYS392	DYS393
ltem	DYS4	137	DYS438	DYS439	DYS448	DYS456	DYS458	DYS481	DYS533
	DYS	549	DYS570	DYS576	DYS635	DYS643	Y GATA H4		
				Item 3 -	YSTR Resul	ts			
DW9TX4	PowerPlex® `	Y23 (F	SA Format), (P	DF Format)					
	14,	15	11,14,16,18	13	29,31	21,23	11	11,13	13
3	14,	15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,	13	17,21	15,17	21,23	10,14	11,12		
E8TBDE	Yfiler® (PDF	Forma	t)						
	14,	15	, 11,14,16,18	13	29,31	21,23	11	11,12,13	13
3	14,	15	11,12	11,12	19,20	15,16	16,17,18		
					21,23		11,12		
EKFHBF	PowerPlex® `	Y23 (P	DF Format)						
	14,	15	, 11,14,16,18	13	29,31	21,23	11	11,13	13
3	14,	15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,	13	17,21	15,17	21,23	10,14	11,12		
JX4EE9	Yfiler®								
	14,	15	11,14,16,18	13	29,31	21,23	11	11,13	13
3	14,	15	11,12	11,12	19,20	15,16	16,18		
					21,23		11,12		
Q2YDT6	PowerPlex® `	Y23 (P	DF Format)						
	14,	15	11,14,16,18	13	29,31	21,23	11	11,13	13
3	14,	15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,	13	17,21	15,17	21,23	10,14	11,12		
R3UJM6	Yfiler® (FSA	Forma	t)						
	14,	15	11,14,16,18	13	29,31	21,23	11	11,13	13
3	14,	15	11,12	11,12	19,20	15,16	16,18		
					21,23		11,12		
TD8ZU2	PowerPlex® `	Y23 (H	IID Format)						
	14,	15	, 11,14,16,18	13	29,31	21,23	11	11,13	13
3	14,	15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,	13	17,21	15,17	21,23	10,14	11,12		
TN7VTW	Yfiler®, Powe	erPlex®	® Y23 (FSA Fo	rmat), (PDF Fa	ormat)				
	14,	15	11,14,16,18	13	29,31	21,23		11,13	13
3	14,	15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12,	13			21,23	10,14	11,12		
UU938Z	Yfiler® (PDF	Forma	t)						
	14,	15	11,14,16,18	13	29,31	21,23	11	11,13	13
3	14,	15	11,12	11,12	19,20	15,16	16,18	N/A	N/A
	N/	Ą	N/A	N/A	21,23	N/A	11,12		

TABI F	3
	0

WebCode	Ampl	ification H	Kits (File For	mat)	DVC000-H	DVCOOR	DVC001	DVCOOR	DYGOOD
		DYS19	DYS385	DYS389-1	DYS389-11	DYS390	DY5391	DYS392	DYS393
ltem		DYS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS481	DY\$533
		DYS549	DYS570	DYS576	DYS635	DYS643	Y GATA H4		
				Item 3 ·	- YSTR Resul	ts			
UZEXQZ	Yfiler®	, PowerPlex	® Y23 (FSA Fo	rmat), (PDF Fc	ormat)				
		14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
3		14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
		12,13	17,21	15,17	21,23	10,14	11,12		
WVXCVX	PowerP	lex® Y23 (PDF Format)						
		14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
3		14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
		12,13	17,21	15,17	21,23	10,14	11,12		
WWRZDU	Yfiler®	, PowerPlex	® Y23 (PDF Fo	ormat)					
		14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
3		14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
		12,13	17,21	15,17	21,23	10,14	11,12		
XVDTQQ	Yfiler®	(PDF Form	at)						
		14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
3		14,15	11,12	11,12	19,20	15,16	16,18		
					21,23		11,12		
Z7LFRM	PowerP	lex® Y23 (PDF Format)						
		14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
3		14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
		12,13	17,21	15,17	21,23	10,14	11,12		

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DNA Interpretation

WebCode	Amplifica	tion k	Kits (File For	nat)					
	DY	S19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
ltem	DYS	6437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS481	DYS533
	DYS	549	DYS570	DYS576	DYS635	DYS643	Y GATA H4		
				Item 4	- YSTR Resul	ts			
2F3JCR	PowerPlex®	Y23 (I	FSA Format)						
	14	,15	11,14,16,18	13	29,30,31	21,23	11	11,12,13	13
4	14	,15	10,11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12	,13	17,21	15,17	21,23	10,14	11,12		
	14	,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4major	14	,15	10,11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12	,13	17,21	15,17	21,23	10,14	11,12		
					30			12	
4minor									
67PQBM	Yfiler®, Pow	verPlex	® Y23 (FSA Fo	rmat), (PDF Fo	ormat), (HID Fo	rmat)			
	14	,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4	14	,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12	,13	17,21	15,17	21,23	10,14	11,12		
68JETH	PowerPlex®	Y23 (I	HID Format)						
	14	,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4	14	,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12	,13	17,21	15,17	21,23	10,14	11,12		
8M4PTP	Yfiler®, Pow	verPlex	® Y23 (PDF Fo	rmat)					
	14	,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4	14	,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
	12	,13	17,21	15,17	21,23	10,14	11,12		
9ADA6G	Yfiler® (PDF	Form	at)						
	14	,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4	14	,15	11,12	11,12	19,20	15,16	16,18	-	-
		-	-	-	21,23	-	11,12		
9W7NGG	(PDF Formo	at)							
	14	,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4	14	,15	11,12	11,12	19,20	15,16	16,18		
			17,21	15,17	21,23		11,12		
AUEP3J	Yfiler® (PDF	Form	at)						
-	14	,15	, 11,14,16,18	13	29,31	21,23	11	11,13	13
4	14	,15	11,12	11,12	19,20	15,16	16,18		
					21,23		11,12		
BLYQLD	Yfiler® (PDF	Form	at)						
	14	,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4	14	,15	11,12	11,12	19,20	15,16	16,18	-	-
		-	-	-	21,23	-	11,12		

DNA Interpretation

WebCode	Amplif	fication k	(its (File For	mat)					
		DYS19	DYS385	DYS389-1	DYS389-II	DYS390	DYS391	DYS392	DYS393
ltem		DYS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS481	DYS533
		DYS549	DYS570	DYS576	DYS635	DYS643	Y GATA H4		
				ltem 4 -	YSTR Resul	ts			
DW9TX4	PowerPle	ex® Y23 (I	-SA Format), (P	DF Format)					
		14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4		14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
		12,13	17,21	15,17	21,23	10,14	11,12		
E8TBDE	Yfiler® (PDF Form	at)						
	,	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4		14,15	11,12	11,12	19,20	15,16	16,18		
					21,23		11,12		
EKFHBF	PowerPle	ex® Y23 (I	PDF Format)						
		14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4		14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
		12,13	17,21	15,17	21,23	10,14	11,12		
JX4EE9	Yfiler®								
		14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4		14,15	11,12	11,12	19,20	15,16	16,18		
					21,23		11,12		
Q2YDT6	PowerPle	ex® Y23 (I	PDF Format)						
		14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4		14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
		12,13	17,21	15,17	21,23	10,14	11,12		
R3UJM6	Yfiler® (FSA Form	at)						
	·	14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4	I	14,15	11,12	11,12	19,20	15,16	16,18		
					21,23		11,12		
TD8ZU2	PowerPle	ex® Y23 (I	HID Format)						
		14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4		14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
		12,13	17,21	15,17	21,23	10,14	11,12		
TN7VTW	Yfiler®,	PowerPlex	® Y23 (FSA Fo	rmat), (PDF Fa	ermat)				
		14,15	11,14,16,18	13	29,31	21,23		11,13	13
4		14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12
		12,13			21,23	10,14	11,12		
UU938Z	Yfiler® (PDF Form	at)						
	(14,15	11,14,16,18	13	29,31	21,23	11	11,13	13
4		14,15	11,12	11,12	19,20	15,16	16,18	N/A	N/A
	_	N/A	N/A	N/A	21,23	N/A	11,12		

12,13

17,21

15,17

WebCode	Ampl	Amplification Kits (File Format)											
		DYS19	DYS385	DYS389-1	DYS389-11	DYS390	DYS391	DYS392	DYS393				
ltem		DYS437	DYS438	DYS439	DYS448	DYS456	DY\$458	DYS481	DY\$533				
		DYS549	DYS570	DY\$576	DYS635	DYS643	Y GATA H4						
				ltem 4 ·	- YSTR Resul	ts							
UZEXQZ	Yfiler®,	, PowerPlex	® Y23 (FSA Fo	rmat), (PDF Fc	ormat)								
		14,15	11,14,16,18	13	29,31	21,23	11	11,13	13				
4		14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12				
		12,13	17,21	15,17	21,23	10,14	11,12						
WVXCVX	PowerP	lex® Y23 (PDF Format)										
		14,15	11,14,16,18	13	29,31	21,23	11	11,13	13				
4		14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12				
		12,13	17,21	15,17	21,23	10,14	11,12						
WWRZDU	Yfiler®,	, PowerPlex	® Y23 (PDF Fo	ormat)									
		14,15	11,14,16,18	13	29,31	21,23	11	11,13	13				
4		14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12				
		12,13	17,21	15,17	21,23	10,14	11,12						
XVDTQQ	Yfiler®	(PDF Form	at)										
		14,15	11,14,16,18	13	29,31	21,23	11	11,13	13				
4		14,15	11,12	11,12	19,20	15,16	16,18						
					21,23		11,12						
Z7LFRM	PowerP	lex® Y23 (PDF Format)										
		14,15	11,14,16,18	13	29,31	21,23	11	11,13	13				
4		14,15	11,12	11,12	19,20	15,16	16,18	23,27	11,12				

21,23

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10,14

11,12

DNA Conclusions

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

			TABLE 4	1		
WahCada	<u>Item</u>	<u>3 Conclusion</u>	ltom 2	<u>It</u> # of Contributors	em 4 Conclusi	on Itom 2
2B9MM2	2	Included	Included	<u># 01 Collimbutors</u> ≥ 3	Inconclusive /	Inconclusive /
					Uninterpretable	Uninterpretable
2F3JCR	overt 2	Included	Included	overt 3	Included	Included
2NVUK3	2	Included	Included	≥3	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable
3KFLXN	2	Included	Included	at least 2	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable
67PQBM	2	Included	Included	3	Included	Included
68JETH	2	Included	Included	3	Included	Included
6JUR9X	Тwo	Included	Included	Three or more	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable
8M4PTP	2	Included	Included	3	Included	Included
9ADA6G	AT LEAST 2	Included	Included	AT LEAST 3	Included	Included
9W7NGG	2	Included	Included	3	Included	Included
9YB7R9	2	Included	Included	3	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable
AUEP3J	2	Included	Included	AT LEAST 3	Included	Included
B9WY6E	2	Included	Included	at least 2	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable
BLYQLD	at least 2	Included	Included	at least 3	Included	Included
СҮММВ	2	Included	Included	3	Included	Included
DW9TX4	At least 2	Included	Included	At least 3	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable
E8TBDE	2	Included	Included	3	Included	Included
EKFHBF	2	Included	Included	3	Included	Included
JX4EE9	2	Included	Included	3 (globalfiler), 2 (Yfiler)	Included	Included
NKHVKE	2	Included	Included	≥3	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable

Test 18-589

TABLE 4

	Item 3 Conclusion			Item 4 Conclusion		
WebCode	<u># of Contributors</u>	<u>Item 1</u>	Item 2	<u># of Contributors</u>	ltem 1	Item 2
Q2YDT6	at least 2	Included	Included	at least 3	Included	Included
QDUN2C	2	Included	Included	≥3	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable
R3UJM6	2	Included	Included	3	Included	Included
RNMG2P	2	Included	Included	3	Included	Included
TD8ZU2	2	Included	Included	3	Included	Included
TN7VTW	2	Included	Included	3	Included	Included
UU938Z	2	Included	Included	≥3	Included	Included
UZEXQZ	at least 2	Included	Included	at least 3	Included	Included
WVXCVX	2	Included	Included	3	Included	Included
WWRZDU	2	Included	Included	3	Included	Included
WYU2C6	2	Included	Included	3	Included	Included
XVDTQQ	at least 2	Included	Included	at least 3	Included	Included
Z7HQMQ	2	Included	Included	At least 2	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable
Z7LFRM	At least two	Included	Included	At least three	Included	Included
Z9Q36R	at least two	Included	Included	at least three	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable
ZNKRZN	2	Included	Included	at least 2	Inconclusive / Uninterpretable	Inconclusive / Uninterpretable

Conclusions Response Summary

Participants reporting conclusions: 36

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

		lte	<u>m 3</u>	lten	<u>n 4</u>	
		<u>ltem 1</u>	<u>Item 2</u>	Item 1	<u>Item 2</u>	
es S	Included	36	36	24	24	
ouse	Excluded	0	0	0	0	
esp	Inconclusive	0	0	12	12	
2	No Response	0	0	0	0	
	Total	36	36	36	36	

Statistical Analysis for Item 3

WebCode	Item 3 Methods & Results
2B9MM2	Method(s): Combined Probability of Exclusion/Inclusion
	Stats Analysis: 1 in 25.68 trillion from the US Caucasian population 1 in 199.6 trillion from the US African American population 1 in 30.82 trillion from the US Hispanic population
2F3JCR	Method(s): Likelihood Ratio
	Stats Analysis: Autosomal: Depending on assumptions, support for presence of V is \sim 10^14-10^23. Depending on assumptions, support for presence of S is \sim 10^13-10^19. Y: For the "major" mixed profile, the proportion of the population that could contribute is at least 1/1700
2NVUK3	Method(s): Combined Probability of Exclusion/Inclusion
	Stats Analysis: The estimated portion* of the population that cannot be excluded from Item 3: 1 in 25.68 trillion from the US Caucasian population; 1 in 199.6 trillion from the US African American population; 1 in 30.82 trillion from the US Hispanic population
3KFLXN	 Method(s): Random Match Probability
	Stats Analysis: A mixture of DNA profiles was identified in Item 3 that has been interpreted as a mixture of 2 people. Assuming this is a mixture of the suspect (Item 2) and one additional contributor, a male DNA profile was identified from which the victim (Item 1) cannot be excluded (is included). The expected frequency of occurrence for this profile was calculated for the African American, Caucasian, and Hispanic population groups and was found to be more common than approximately 1 in 240 quintillion unrelated individuals.
67PQBM	Method(s): Likelihood Ratio
	Stats Analysis: Item 1 and 2 Conclusion: Under the assumption that the VICTIM and the SUSPECT are contributors to this mixture, the likelihood of observing this mixed source profile is $\geq 1,000,000$ times greater (actual LR available upon request) than if it is assumed that two unrelated persons selected at random from the general population are contributors to this mixed-source sample.
68JETH	Method(s): Likelihood Ratio
	Stats Analysis: The observed mixture profile is approximately 7.89x10E21 times more likely to occur under the scenario that it is a mixture of DNA from the suspect and the victim, as opposed to the scenario that it originated from a mixture of DNA from the suspect, and an unrelated unknown individual, in the African American population. The observed mixture profile is approximately 1.86x10E25 times more likely to occur under the scenario that it is a mixture of DNA from the suspect and the victim, as opposed to the scenario that it originated from a mixture of DNA from the suspect, and an unrelated unknown individual, in the Caucasian population. The observed mixture profile is approximately 4.87x10E24 times more likely to occur under the scenario that it is a mixture of DNA from the suspect and the victim, as opposed to the scenario that it originated from a mixture of DNA from the suspect, and an unrelated unknown individual, in the Caucasian population.
ΟΊΟΚΑΥ	Stats Analysis: The results identified from Item 3 are consistent with a mixture from two contributors. The Item 1, male victim and the Item 2, male suspect cannot be excluded as possible contributors to this mixture of DNA. Using 21 of 21 loci, the probabilities of selecting an unrelated individual at random who cannot be excluded as one of the possible sources of the DNA profile obtained from the item are approximately: 1 in 20.6 Trillion CPI; >99.9% CPE in the Caucasian population; 1 in 257 Trillion CPI; >99.9% CPE in the African American population; 1 in 56.8 Trillion CPI; >99.9% CPE in the Hispanic population

WebCode	Item 3 Methods & Results
8M4PTP	Method(s): Likelihood Ratio
	Stats Analysis: The DNA profile of the trace found on the suspect's shirt (Item 3) has been compared with the profile of the victim (Item 1) and the suspect (Item 2). Based on the information available, the presence of the DNA from the suspect is not contested. For victim, the results of the comparison were assessed given the propositions that (a) The DNA originates from the victim and the suspect; (b) The DNA originates from the suspect and an unknown person. The DNA results are in the order of 1E+27 times more probable if the first proposition (a) is true than if the alternative (b) is true.
9ADA6G	Method(s): Likelihood Ratio
	Stats Analysis: A mixed DNA profile of at least two individuals was developed from Item 3. The DNA profile obtained from reference sample Item 1 and Item 2 are consistent with being contributors to this mixed DNA profile. The mixed DNA profile are 2.1x10exp27, 5.3x10exp27 and 1.2x10exp27 times more likely if they originated from Item 1 and Item 2 rather than if they originated from Item 1 and one unknown individual as calculated based on the [Location-specific] population databases respectively.
9W7NGG	Method(s): Likelihood Ratio
	Stats Analysis: LR.total Autosomal: 2,6441E+51. LR.total Y chromosome: 16.921
9YB7R9	Method(s): Combined Probability of Exclusion/Inclusion
	Stats Analysis: Cauc: 1 in 4 quadrillion (4E15) African Amer: 1 in 8 quadrillion (8E15)
AUEP3J	Method(s): Likelihood Ratio
	Stats Analysis: Please note that we couldn't include THO1 locus in the calculation because of the LR mix Studio 2.1.3 software which is still under training in our lab and the calculation is done for this test only and is not used yet in our daily reports. Two hypothesis were evaluated. Hypothesis 1: Hp= suspect(S)+victim(V); Hd= 2 unknowns (unrelated); probability of dropout P(D)=0 for S, V and defense unknowns and probability of drop-in is 0.05; LR= 1E38. Hypothesis 2: Hp= S + V; Hd= S + 1 unknown (unrelated), probability of dropout P(D)=0 for S, V and defense unknowns, and probability of dropout P(D)=0 for S, V and defense unknowns, and probability of dropout P(D)=0 for S, V and defense unknowns, and probability of dropout P(D)=0 for S, V and defense unknowns, and probability of dropout P(D)=0 for S, V and defense unknowns, and probability of dropout P(D)=0 for S, V and defense unknowns, and probability of dropout P(D)=0 for S, V and defense unknowns, and probability of dropout P(D)=0 for S, V and defense unknowns, and probability of dropout P(D)=0 for S, V and defense unknowns, and probability of dropout P(D)=0 for S, V and defense unknowns, and probability of dropout P(D)=0 for S, V and defense unknowns, and probability of dropout P(D)=0 for S, V and defense unknowns, and probability of dropout P(D)=0 for S, V and defense unknowns, and probability of dropout P(D)=0 for S, V and defense unknowns, and probability of dropout P(D)=0 for S, V and defense unknowns, and probability of dropout P(D)=0 for S, V and defense unknowns, and probability of dropout P(D)=0 for S, V and defense unknowns, and probability of dropout P(D)=0 for S, V and defense unknowns, and probability of dropout P(D)=0 for S, V and defense unknowns, and probability of dropout P(D)=0 for S, V and defense unknowns, and probability of dropout P(D)=0 for S, V and defense unknowns, and probability of dropout P(D)=0 for S, V and defense unknowns, and probability of dropout P(D)=0 for S, V and defense unknowns, and probability of dropout P(D)=0
B9WY6E	Method(s): Random Match Probability
	Stats Analysis: A mixture of human DNA profiles was identified in Item 3 which was interpreted as a mixture of two people. Assuming this is a mixture of Suspect and one additional contributor, a DNA profile was identified from which Victim cannot be excluded (is included). The expected frequency of occurrence for this DNA profile was calculated for the African-American, Caucasian and Hispanic population groups and was found to be no more common than approximately 1 in 1.1 sextillion unrelated individuals.
BLYQLD	Method(s): Likelihood Ratio
	Stats Analysis: A mixed DNA profile from at least two individuals was developed from Item 3. The DNA profile obtained from reference samples ITEM 1 and ITEM 2 are consistent with being the contributors to this mixed DNA profile. The mixed DNA profile are 2.1 x 10exp27, 5.3 x 10exp27 and 1.2 x 10exp27 times more likely if they originated from ITEM 1 and ITEM 2 rather than if they originated from ITEM 1 and ONE UNKNOWN individual as calculated based on the [Location-specific] population databases respectively.
СҮММВ	Method(s): Likelihood Ratio
	Stats Analysis: For LR calculations following hypothesis were formed: 1) Hp: DNA comes from suspect and victim 2) Hd: DNA comes from suspect and 1 unknown person. Drop-out probability 0,1 was used. Drop-in probability 0,05 was used. Theta value 0,01 was used. Rare allele frequency 0,0083 was assigned to rare alleles. LR=4,2E+27

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

WebCode	Item 3 Methods & Results
TN7VTW	Method(s): Likelihood Ratio Stats Analysis: Is 6.380.405.965.271.420.000.000.000.000.000 times more likely the finding if the mixture comes from the victim and the suspect than if it comes from the victim and an individual taken at random in the reference population.
UU938Z	Method(s): N/A Stats Analysis: I am a forensic consultant that reviews DNA case files that are submitted to me as evidence. I review the analyst allele calls and evidence to reference sample comparisons so I can understand how the original analyst arrived at their opinions and conclusions. I do not calculate population statistics as part of my case reviews. I accept that the population calculations are correct. N/A = Not Applicable
UZEXQZ	Method(s) : Combined Probability of Exclusion/Inclusion, YSTR-Mixture Counting Method Stats Analysis: The Fusion C6 DNA profile from item #3 (DNA profile found on suspect's shirt) is consistent with being a mixture of at least two individuals. The victim (Item #1) and suspect (Item #2) are included as potential contributors to the Fusion 6C DNA profile from item #3. The Yfiler DNA profile from item #3 (DNA profile found on suspect's shirt) is consistent with being a mixture of at least two males. The victim (Item #1) and suspect (Item #2) are included as potential contributors to the Yfiler DNA profile from item #3. The expected frequency of male individuals who could be included as a contributor to the Fusion 6C DNA profile and the Yfiler YSTR DNA profile from item #3 is less than 1 in 7 billion in the African American, Caucasian, and Hispanic populations. (Ceiling statistic).
WVXCVX	Method(s): [Participant did not report a Method] Stats Analysis: No statistical analysis performed. For databasing purposes only
WWRZDU	Method(s): Likelihood Ratio Stats Analysis: Victim and suspect cannot be excluded as a contributors of the cell mix found in this evidence (Item 3 -T shirt). Is 2,64414735166266E51 times more probable this finding if the origin cell mix comes from the victim and the suspect than two unknown individuals in the reference population.
WYU2C6	Method(s): Likelihood Ratio Stats Analysis: The DNA typing profile obtained from the suspect's shirt (item 3) is of mixed origin consistent with having originated from 2 individuals. The victim is included as a possible contributor. Assuming 2 contributors and the suspect as one of those contributors, it is 16 octillion times more likely that the observed DNA profile occurred as a result of a mixture of the suspect and victim than if it originated from the suspect and one unrelated individual selected at random from the U.S. population.
XVDTQQ	Method(s): Likelihood Ratio Stats Analysis: A mixed DNA profile from at least two individuals was developed from ITEM 3. The DNA profile obtained from reference samples ITEM 1 and ITEM 2 are consistent with being the contributors to this mixed DNA profile. The mixed DNA profile are 2.1 x 10exp27, 5.3 x 10exp27 and 1.2 x 10exp27 times more likely if they originated from ITEM 1 and ITEM 2 rather than if they originated from ITEM 1 and ONE UNKNOWN individual as calculated based on the [Location-specific] population databases respectively.
Z7HQMQ	Method(s): Random Match Probability Stats Analysis: A mixture of human DNA profiles was identified in Item 3 that was interpreted as a mixture of two people. Assuming this profile is a mixture of the suspect and one other individual, a DNA profile was identified from which the victim (Item 1) cannot be excluded (is included). The expected frequency of occurrence for this profile was calculated for the African American, Caucasian, and Hispanic population groups and was found to be no more common than approximately 1 in 2.0 quintillion unrelated individuals.

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

Statistical Analysis for Item 4

 2F3JCR Method(s): Likelihood Ratio Stats Analysis: Auto: Depending on assumptions, support for the presence the V is ~ 10 ^ 7-10 ^ 11. Depending on assumptions, support for the presence the S is ~ 10 ^ 10-10 ^ 13. Y: For the 'major' mixed profile, the proportion of the population that could contribute is at least 1/1700 67PQBM Method(s): Likelihood Ratio Stats Analysis: Item 1 and 2 Conclusion: Under the assumption that the VICTIM, the SUSPECT and one UNKNOWN person are contributors to this mixture, the likelihood of observing this mixed source profile is a 1,000,000 times greater (actual L 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. 68JETH Method(s): Likelihood Ratio Stats Analysis: The observed mixture profile is approximately 8.44x10E11 times more likely to occur under the scenario that it originated from a mixture of DNA from the suspect, the victim, and an unknown, as opposed to the scenario that it originated from a mixture of DNA from the suspect and two unrelated unknown individuals, in the African American population. The observed mixture profile is approximately 5.31x10E14 times more likely to occur under the scenario that it is a mixture of DNA from the suspect, the victim, and an unknown, as opposed to the scenario that it is a mixture of DNA from the suspect, the victim, and an unknown individuals, in the Caucasian population. The observed mixture profile is approximately 2.44x10E14 times more likely to occur under the scenario that it a ciginated from a mixture of DNA from suspect and two unrelated unknown individuals, in the Hispanic population. 8M4PTP Method(s): Likelihood Ratio Stats Analysis: The DNA profile of the trace found on the suspect's knife (Item 4) has been compared with the profile of the victim (Item 1) and the suspect and two unknown persons. The DNA resul	WebCode	Item 4 Methods & Results
 Stats Analysis: Auto: Depending on assumptions, support for the presence the Vis ~ 10^7-10^11. Depending on assumptions, support for the presence the Sis ~ 10^10-10^13. Y: For the "major" mixed profile, the proportion of the population that could contribute is at least 1/1700 67PQBM Method(s): Likelihood Ratio Stats Analysis: Item 1 and 2 Conclusion: Under the assumption that the VICTIM, the SUSPECT and one UNKINOWN person are contributors to this mixture, the likelihood of observing this mixed source profile is a 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. 68JETH Method(s): Likelihood Ratio Stats Analysis: The observed mixture profile is approximately 8.44x10E11 times more likely to occur under the scenario that it originated from a mixture of DNA from the suspect, the victim, and an unknown, as opposed to the scenario that it originated from a mixture of DNA from the suspect and two unrelated unknown individuals, in the African American population. The observed mixture profile is approximately 2.44x10E14 times more likely to occur under the scenario that it originated from a mixture of DNA from suspect and two unrelated unknown individuals, in the Caucasian population. The observed mixture of DNA from the suspect, the victim, and an unknown, as opposed to the scenario that it is a mixture of DNA from the suspect and two unrelated unknown individuals, in the Caucasian population. 8M4PTP Method(s): Likelihoad Ratio Stats Analysis: The DNA profile of the trace found on the suspect's knife (Item 4) has been compared with the profile of the victim (Item 1) and the suspect is not contested. For victim, the results of the comparison were assessed given the proposition that (0) The DNA originates from the suspect and mu unknown persons. The DNA regulater and unknown perso	2F3JCR	Method(s): Likelihood Ratio
 Method(s): Likelihood Ratio Stats Analysis: Item 1 and 2 Conclusion: Under the assumption that the VICTIM, the SUSPECT and one UNKNOWN person are contributors to this mixture, the likelihood of observing this mixed source profile is >1,000,000 times greater (actual IR avoilable 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. Method(s): Likelihood Ratio Sitas Analysis: The observed mixture profile is approximately 8.44x10E11 times more likely to occur under the scenario that it originated from a mixture of DNA from the suspect, the victim, and an unknown, as opposed to the scenario that it originated from a mixture of DNA from the suspect and two unrelated unknown individuals, in the African American population. The observed mixture profile is approximately 5.31x10E14 times more likely to occur under the scenario that it is a mixture of DNA from the suspect, the victim, and an unknown, as opposed to the scenario that it originated from a mixture of DNA from suspect and two unrelated unknown individuals, in the Caucasian population. The observed mixture profile is approximately 2.44x10E14 times more likely to occur under the scenario that it is a mixture of DNA from the suspect, the victim, and an unknown, as opposed to the scenario that it originated from a mixture of DNA from suspect and two unrelated unknown individuals, in the Hispanic population. BM4PTP Method(s): Likelihood Ratio Stats Analysis: The DNA profile of the trace found on the suspect's knife (Item 4) has been compared with the profile of the victim (Item 1) and the suspect (Item 2). Based on the information available, the presence of the DNA from the suspect is not contested. For victim, the suspect and an unknown person; (b) The DNA originates from the victim, the suspect and an unknown person; (b) The DNA originates from the suspect is proposition (a) is true		Stats Analysis : Auto: Depending on assumptions, support for the presence the V is $\sim 10^7 - 10^1 $. Depending on assumptions, support for the presence the S is $\sim 10^1 - 10^1 $. Y: For the "major" mixed profile, the proportion of the population that could contribute is at least 1/1700
 Stats Analysis: Item 1 and 2 Conclusion: Under the assumption that the VICTIM, the SUSPECT and one UNKNOWN person are contributors to this mixture, the likelihood of observing this mixed source profile is ≥1,000,000 times greater (actual Iz 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. 68JETH Method(s): Likelihood Ratio Stats Analysis: The observed mixture profile is approximately 8,44x10E11 times more likely to occur under the scenario that it is a mixture of DNA from the suspect, the victim, and an unknown, as opposed to the scenario that it originated from a mixture of DNA from the suspect and two unrelated unknown individuals, in the African American appolation. The observed mixture profile is approximately 2.14x10E14 times more likely to occur under the scenario that it originated from a the suspect, the victim, and an unknown, as opposed to the scenario that it originated from a mixture of DNA from the suspect and two unrelated unknown individuals, in the African American appolation. The observed mixture profile is approximately 2.44x10E14 times more likely to occur under the scenario that it is a mixture of DNA from the suspect, the victim, and an unknown, as opposed to the scenario that it is a mixture of DNA from the suspect and two unrelated unknown individuals, in the Hispanic population. 8M4PTP Method(s): Likelihood Ratio Stats Analysis: The DNA profile of the trace found on the suspect's knife (Item 4) has been compared with the profile of the victim (Item 1) and the suspect (Item 2). Based on the information available, the presence of the DNA from the suspect is not contested. For vicim, the suspect and an unknown persons, The DNA profile of the trace found on the suspect's knife (Item 4) has been compared with the profile of the vicitim (Item 1) and the suspect and two unknown persons. The DNA results are in the	67PQBM	Method(s): Likelihood Ratio
 68JETH Method(s): Likelihood Ratio Stats Analysis: The observed mixture profile is approximately 8.44x10E11 times more likely to occur under the scenario that it is a mixture of DNA from the suspect, the victim, and an unknown, as opposed to the scenario that it originated from a mixture of DNA from the suspect and two unrelated unknown individuals, in the African American population. The observed mixture profile is approximately 5.31x10E14 times more likely to occur under the scenario that it originated from a mixture of DNA from the suspect, the victim, and an unknown, as opposed to the scenario that it originated from a mixture of DNA from suspect and two unrelated unknown individuals, in the Caucasian population. The observed mixture profile is approximately 2.44x10E14 times more likely to occur under the scenario that it is a mixture of DNA from the suspect, the victim, and an unknown, as opposed to the scenario that it is a mixture of DNA from the suspect, the victim, and an unknown individuals, in the Caucasian population. 8M4PTP Method(s): Likelihood Ratio Stats Analysis: The DNA profile of the trace found on the suspect's knife (Item 4) has been compared with the profile of the victim (Item 1) and the suspect [Item 2). Based on the information available, the presence of the DNA from the suspect is not contested. For victim, the results of the comparison were assessed given the propositions that (a) The DNA originates from the victim, the suspect and an unknown person; (b) The DNA originates from the suspect and two unknown persons. The DNA results are in the order of 1E+14 times more probable if the first proposition (a) is true than if the alternative (b) is true. 9ADA6G Method(s): Likelihood Ratio Stats Analysis: A mixed DNA profile of at least three individuals were developed from Item 4. The DNA profile obtained from terence sample, Item 1 and Item 2 are consistent with being the contributors to this mixed DNA profile. The mixed DNA profile are		Stats Analysis : Item 1 and 2 Conclusion: Under the assumption that the VICTIM, the SUSPECT and one UNKNOWN person are contributors to this mixture, the likelihood of observing this mixed source profile is $\geq 1,000,000$ times greater (actual LR available upon request) than if it is assumed that three unrelated persons selected at random from the general population are contributors to this mixed-source sample.
 Stats Analysis: The observed mixture profile is approximately 8.44x10E11 times more likely to occur under the scenario that it is a mixture of DNA from the suspect, the victim, and an unknown, as opposed to the scenario that it originated from a mixture of DNA from the suspect and two unrelated unknown individuals, in the African American population. The observed mixture profile is approximately 5.31x10E14 times more likely to occur under the scenario that it originated from a mixture of DNA from the suspect, the victim, and an unknown, as opposed to the scenario that it originated from a mixture of DNA from suspect and two unrelated unknown individuals, in the Caucasian population. The observed mixture profile is approximately 2.44x10E14 times more likely to occur under the scenario that it originated from a mixture of DNA from the suspect, the victim, and an unknown, as opposed to the scenario that it originated from a mixture of DNA from the suspect and two unrelated unknown individuals, in the Hispanic population. 8M4PTP Method(s): Likelihood Ratio Stats Analysis: The DNA profile of the trace found on the suspect's knife (Item 4) has been compared with the profile of the DNA from the suspect (Item 2). Based on the information available, the presence of the DNA from the suspect is not contested. For victim, the suspect and an unknown person; (b) The DNA originates from the suspect and two unknown persons. The DNA results are in the order of 1E+14 times more probable if the first proposition (a) is true than if the alternative (b) is true. 9ADA6G Method(s): Likelihood Ratio Stats Analysis: A mixed DNA profile of at least three individuals were developed from Item 4. The DNA profile lotaned from reference sample, Item 2 and one unknown mithed in the subsect structure and two unknown if the other structure and two unknown individual rather than if they originated from Item 1, Item 2 and one unknown individual rather than	68JETH	Method(s): Likelihood Ratio
 8M4PTP Method(s): Likelihood Ratio Stats Analysis: The DNA profile of the trace found on the suspect's knife (Item 4) has been compared with the profile of the victim (Item 1) and the suspect (Item 2). Based on the information available, the presence of the DNA from the suspect is not contested. For victim, the results of the comparison were assessed given the propositions that (a) The DNA originates from the victim, the suspect and an unknown person; (b) The DNA originates from the suspect and two unknown persons. The DNA results are in the order of 1E+14 times more probable if the first proposition (a) is true than if the alternative (b) is true. 9ADA6G Method(s): Likelihood Ratio Stats Analysis: A mixed DNA profile of at least three individuals were developed from Item 4. The DNA profile obtained from reference sample, Item 1 and Item 2 are consistent with being the contributors to this mixed DNA profile. The mixed DNA profile are 3.0x10exp15, 7.7x10exp15 and 1.5x10exp15 times more likely if they originated from Item 1, Item 2 and one unknown individual rather than if they originated from Item 1 and two unknown individual as calculated based on the [Location-specific] population databases respectively. 9W7NGG Method(s): Likelihood Ratio Stats Analysis: LR.total Autosomal: 1,73462E+29. LR.total Y chromosome: 16.921 		Stats Analysis: The observed mixture profile is approximately 8.44x10E11 times more likely to occur under the scenario that it is a mixture of DNA from the suspect, the victim, and an unknown, as opposed to the scenario that it originated from a mixture of DNA from the suspect and two unrelated unknown individuals, in the African American population. The observed mixture profile is approximately 5.31x10E14 times more likely to occur under the scenario that it is a mixture of DNA from the suspect, the victim, and an unknown, as opposed to the scenario that it originated from a mixture of DNA from suspect and two unrelated unknown individuals, in the Caucasian population. The observed mixture profile is approximately 2.44x10E14 times more likely to occur under the scenario that it is a mixture of DNA from the suspect, the victim, and an unknown, as opposed to the scenario that it is a mixture of DNA from the suspect, the victim, and an unknown individuals, in the Caucasian population.
 Stats Analysis: The DNA profile of the trace found on the suspect's knife (Item 4) has been compared with the profile of the victim (Item 1) and the suspect (Item 2). Based on the information available, the presence of the DNA from the suspect is not contested. For victim, the results of the comparison were assessed given the propositions that (a) The DNA originates from the victim, the suspect and an unknown person; (b) The DNA originates from the suspect and two unknown persons. The DNA results are in the order of 1E+14 times more probable if the first proposition (a) is true than if the alternative (b) is true. 9ADA6G Method(s): Likelihood Ratio Stats Analysis: A mixed DNA profile of at least three individuals were developed from Item 4. The DNA profile obtained from reference sample, Item 1 and Item 2 are consistent with being the contributors to this mixed DNA profile. The mixed DNA profile are 3.0x10exp15, 7.7x10exp15 and 1.5x10exp15 times more likely if they originated from Item 1, Item 2 and one unknown individual rather than if they originated from Item 1 and two unknown individual as calculated based on the [Location-specific] population databases respectively. 9W7NGG Method(s): Likelihood Ratio Stats Analysis: LR.total Autosomal: 1,73462E+29. LR.total Y chromosome: 16.921 	8M4PTP	Method(s): Likelihood Ratio
 9ADA6G Method(s): Likelihood Ratio Stats Analysis: A mixed DNA profile of at least three individuals were developed from Item 4. The DNA profile obtained from reference sample, Item 1 and Item 2 are consistent with being the contributors to this mixed DNA profile. The mixed DNA profile are 3.0x10exp15, 7.7x10exp15 and 1.5x10exp15 times more likely if they originated from Item 1, Item 2 and one unknown individual rather than if they originated from Item 1 and two unknown individual as calculated based on the [Location-specific] population databases respectively. 9W7NGG Method(s): Likelihood Ratio Stats Analysis: LR.total Autosomal: 1,73462E+29. LR.total Y chromosome: 16.921 		Stats Analysis : The DNA profile of the trace found on the suspect's knife (Item 4) has been compared with the profile of the victim (Item 1) and the suspect (Item 2). Based on the information available, the presence of the DNA from the suspect is not contested. For victim, the results of the comparison were assessed given the propositions that (a) The DNA originates from the victim, the suspect and an unknown person; (b) The DNA originates from the suspect and two unknown persons. The DNA results are in the order of 1E+14 times more probable if the first proposition (a) is true than if the alternative (b) is true.
 Stats Analysis: A mixed DNA profile of at least three individuals were developed from Item 4. The DNA profile obtained from reference sample, Item 1 and Item 2 are consistent with being the contributors to this mixed DNA profile. The mixed DNA profile are 3.0x10exp15, 7.7x10exp15 and 1.5x10exp15 times more likely if they originated from Item 1, Item 2 and one unknown individual rather than if they originated from Item 1 and two unknown individual as calculated based on the [Location-specific] population databases respectively. 9W7NGG Method(s): Likelihood Ratio Stats Analysis: LR.total Autosomal: 1,73462E+29. LR.total Y chromosome: 16.921 	9ADA6G	Method(s): Likelihood Ratio
9W7NGG Method(s) : Likelihood Ratio Stats Analysis : LR.total Autosomal: 1,73462E+29. LR.total Y chromosome: 16.921		Stats Analysis : A mixed DNA profile of at least three individuals were developed from Item 4. The DNA profile obtained from reference sample, Item 1 and Item 2 are consistent with being the contributors to this mixed DNA profile. The mixed DNA profile are 3.0x10exp15, 7.7x10exp15 and 1.5x10exp15 times more likely if they originated from Item 1, Item 2 and one unknown individual rather than if they originated from Item 1 and two unknown individual as calculated based on the [Location-specific] population databases respectively.
Stats Analysis: LR.total Autosomal: 1,73462E+29. LR.total Y chromosome: 16.921	9W7NGG	Method(s): Likelihood Ratio
		Stats Analysis: LR.total Autosomal: 1,73462E+29. LR.total Y chromosome: 16.921

WebCode	Item 4 Methods & Results
AUEP3J	Method(s): Likelihood Ratio
	Stats Analysis: Please note that we couldn't include THO1 locus in the calculation because of the LR mix Studio 2.1.3 software which is still under training in our lab and the calculation is done for this test only and is not used yet in our daily reports. Two hypothesis were evaluated. Hypothesis 1: Hp= suspect(S)+victim(V)+ 1 unknown; Hd= 3 unknowns (unrelated). P(D)= 0 for V and S and estimated P(D) for defense unknowns and prosecution unknown after sensitivity analysis is 0.24 and probability of drop-in is 0.05 LR= 1E24. Hypothesis 2: Hp= S + V + 1 unknown; Hd= S + 2 unknowns (unrelated), probability of dropout P(D)=0 for S, V and defense and prosecution unknowns, and probability of drop-in is 0.05 LR= 1.4E12
BLYQLD	Method(s): Likelihood Ratio
	Stats Analysis : A mixed DNA profile from at least three individuals was developed from Item 4. The DNA profile obtained from reference samples ITEM 1 and ITEM 2 are consistent with being the contributors to this mixed DNA profile. The mixed DNA profile are 3.0 x 10exp15, 7.7 x 10exp15 and 1.5 x 10exp15 times more likely if they originated from ITEM 1, ITEM 2 and ONE UNKNOWN individual rather than if they originated from ITEM 1 and TWO UNKNOWN individuals as calculated based on the [Location-specific] population databases respectively.
СҮММВ	Method(s): Likelihood Ratio
	Stats Analysis : For LR calculations following hypothesis were formed: 1) Hp: DNA comes from suspect and victim and 1 unknown person. 2) Hd: DNA comes from suspect and 2 unknowns. Drop-out probability 0,1 was used. Drop-in probability 0,05 was used. Theta value 0,01 was used. Rare allele frequency 0,0083 was assigned to rare alleles. LR=1,6E+15
E8TBDE	Method(s): Combined Probability of Exclusion/Inclusion
	Stats Analysis : Assuming at least 3 contributors, the probability of randomly selecting an unrelated individual who would be included as a contributor to the DNA mixture profile is 1 in greater than 7 billion (approximate population of world).
EKFHBF	Method(s): Likelihood Ratio
	Stats Analysis: LR=1,4E011_Hp_(item1+2unkonown_persons)_Hd_(3unkonown_persons)_ LR=2,2E010_Hp_(item2+2unknown_persons)_Hd_(3unkonown_persons)
JX4EE9	Method(s): NONE
	Stats Analysis : I am a forensic DNA consultant who works with defense attorneys. I review the bench notes, SOP manuals, qualifications of the analyst, contamination issues, corrective action reports and unexpected results report. I review the case data sheets to determine if the results are accurately interpreted and the data was correctly entered into the statistical software. I reach a conclusion about the quality of the data, the thoroughness of the evidence screening and the final determination as to who contributed any of the DNA. I do not perform any separate statistical analysis.
Q2YDT6	Method(s): [Participant did not report a Method]
	Stats Analysis: No statistical analysis performed. For databasing purposes only.
R3UJM6	Method(s) : Combined Probability of Exclusion/Inclusion Stats Analysis : CPI = 3.37 x 10 ⁻⁸
RNMG2P	Method(s): Combined Probability of Exclusion/Inclusion
	Stats Analysis : African American Population Probability - 1 in 54,380,000. Caucasian Population Probability - 1 in 50,790,000

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

Databases Used

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

WebCode	Databases Used
BLYQLD	Item 3: [Location-specific] population databases.
	Item 4: [Location-specific] population databases.
CYNMMB	Item 3: [Nationality] population database was used
	Item 4: [Nationality] population database was used.
DW9TX4	Item 3: NIST Revised July 2017
	Item 4: [No databases were reported by this participant for this item.]
E8TBDE	Item 3: FBI expanded Database
	Item 4: FBI expanded database
EKFHBF	Item 3: U.Spopulation_data_for_29_autosomal_STR_loci.Forensic_Sci.Int.Genet.
	Item 4: U.Spopulation_data_for_29_autosomal_STR_loci.Forensic_Sci.Int.Genet.
NKHVKE	Item 3: *NOTE: Exclusion/Inclusion statements and statistical calculations were generated using eDNA software version 3.2.0.0 2017-03-13 and the NIST Databases for the US Caucasian, African American, and Hispanic populations.
	Item 4: [No databases were reported by this participant for this item.]
QDUN2C	Item 3: *Statistical calculations were generated using eDNA software version eDNA 3.2.0.0 2017-03-13 and the NIST Databases for the US Caucasian, African American, and Hispanic populations.
	Item 4: [No databases were reported by this participant for this item.]
R3UJM6	Item 3: NIST 1036 Revised U.S. population Dataset July 2017 (US Caucasian) [https://strbase.nist.gov/NISTpop.htm]
	Item 4: NIST 1036 Revised U.S. Population Dataset July 2017 (US Caucasian) [https://strbase.nist.gov/NISTpop.htm]
RNMG2P	Item 3: Expanded FBI STR 2015
	Item 4: Expanded FBI STR 2015
TD8ZU2	Item 3: Caucasian NIST database
	Item 4: Caucasian NIST database
TN7VTW	Item 3: [Location-identifying databases listed by participant]
	Item 4: [Location-identifying databases listed by participant]
UZEXQZ	Item 3: Autosomal: CT DNA Database Frequencies YSTR: National YSTR Database (http://www.usystrdatabase.org) - MSP YSTR Mixture Tool
	Item 4: Autosomal: CT DNA Database Frequencies YSTR: National YSTR Database (http://www.usystrdatabase.org) - MSP YSTR Mixture Tool
WVXCVX	Item 3: No statistical analysis performed. For databasing purposes only
	Item 4: No statistical analysis performed. For databasing purposes only
WWRZDU	Item 3: [Location-identifying databases listed by participant]. Software used to calculate LR was Genética Forense Final 3.0.01 [Website].
	Item 4: [Location-identifying databases listed by participant]. Software used to calculate LR was Genética Forense Final 3.0.01 [Website]
WYU2C6	Item 3: FBI Extended BLK, CAU, SWH
	Item 4: FBI Extended BLK, CAU, SWH

WebCode	Databases Used
XVDTQQ	Item 3: [Location-specific] population databases.
	Item 4: [Location-specific] population databases.
Z7HQMQ	Item 3: 2015 Expanded FBI STR Population Data.
	Item 4: [No databases were reported by this participant for this item.]
Z9Q36R	Item 3: STRidER STRs for identity ENFSI Reference database: https://strider.online/
	Item 4: [No databases were reported by this participant for this item.]
ZNKRZN	Item 3: The [Laboratory] uses the allele frequencies from the 2015 Expanded FBI STR Population Data that has been compiled by the FBI Laboratory for the African American, Caucasian, Southeastern Hispanic and Southwestern Hispanic populations.
	Item 4: [No databases were reported by this participant for this item.]

Amplification Kit Survey

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

TABLE 8

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

WYU2C6 PowerPlex Fusion 6C and PowerPlex Y23

Additional Comments

WebCode	Additional Comments
28914142	N/A = pot applicable
207101012	
2F3JCR	The two low level alleles detected in the Y-profiles of both Items 3 and 4 are ambiguous. The heights and positions open the possibility that they could be stutter or double stutter. However, without further work, the possibility of a 3rd contributor cannot be rejected. They were not included in the statistic for the "major" apparently 2 person mixture. The autosomal statistics were calculated using a variety of assumptions, either assuming the suspect on the items found in his car, or using now assumptions. Thus the range or results. Although I would normally use a run-specific, color-specific, empirical threshold, these peaks were all so high it just didn't matter.
3KFLXN	Item 3 "major" profile represents the assumed profile of the suspect. The "minor" profile represents the deduced male profile. Inconclusive= Any possible sister allele
6JUR9X	Item 4, D1S1656 results: 14,15,16,17,18.3,19.3
9W7NGG	The allelic frequencies used for the statistical analyzes correspond to the [Location-identifying databases listed by participant]. Item 4: The autosomal systems CSFPO and D22S1045 were not considered for the analysis taking into account the reproducibility. Item 3 and item 4: The DYS481, DYS549, DYS533 and DYS643 systems on the Y chromosome were not considered for analysis, taking into account the reproducibility.
B9WY6E	For Item 3"3 major" represents the alleles of the assumed DNA profile, "3 minor" represents the alleles of the deduced DNA profile. Please note "inc." indicates inconclusive.
EKFHBF	Laboratory_Specific_Interpretation_Guidelines_for_ABI_3130XL
JX4EE9	Item #1: Victim's blood sample = clean profile, no anomalies Item #2: Suspect's blood sample = Off ladder allele at D18S51, an 8 allele at DYS391 and an OMR between DYS438 and DYS448. None of these anomalies are seen on the data sheets for Items 3 and 4. They do not interfere with any interpretations of the Q-sample data. Item #3: Suspect's shirt shows alleles from only 2 persons. This profile is consistent with a mixture of DNA from the victim and the suspect both on GlobalFiler and YFiler. YFiler shows alleles called at DYS458 and DYS392 that are consistent with stutter alleles. Stutter alleles are also seen at other loci on the expanded datasheets. Item #4: GlobalFiler shows a 3 person profile. YFiler shows a 2 person profile. The 3rd person on GlobalFiler is most likely a female. The YFiler e-gram is very clean. Stutter alleles are seen on the expanded e-grams for both.
Q2YDT6	Item 4: Trace contributor not suitable for comparison. Interpretation performed on 2 main contributors.
UU938Z	The pdf files for GlobalFiler are printed with an analytical threshold of 75rfu. This is a problem for those of us that do not have the ability to reanalyze the fsa files at thresholds less than 75rfu. It is possible that there is important information below 75rfu that we are unable to evaluate. In addition, 75rfu is a rather conservative analytical threshold for GlobalFiler. Many forensic laboratories use 50rfu as the analytical threshold for GlobalFiler and some even lower at 25rfu. For future tests you should provide pdf files that have been made with a lower analytical threshold.
WYU2C6	The AT, PHR and ST are used for manual analysis of profiles but PHR and ST are not applicable for STRmix analysis. For Item 4 at DYS570, allele 20 was included in the table as it is above our manual stutter threshold but has been interpreted as enhanced stutter by this analyst.
Z7HQMQ	NT=Not Tested. inc=inconclusive. Item 3-Major represents assumed profile of suspect and minor represents deduced profile consistent with victim.

WebCode	Additional Comments
Z7LFRM	The reference samples were overloaded. The Item #3 results are consistent with an approximately 60:40 mixture of the (V) & (S). As there is no clear major donor, and CPI/CPE is no longer considered reliable, a LR should be provided for the STRs from this sample. I am unable to calculate the appropriate LR as I have no access to PG software. The Item #4 results are consistent with a mixture of at least three donors including the (V) & (S). As there is no clear major donor, a LR should be provided for the STRs from this sample. The YSTR results for both Item #3 & Item #4 indicate the presence of at least two male donors including the (V) & (S). As there is no clear major donor for either item, no haplotype statistics can be calculated.
Z9Q36R	Item 3: The subject (item 2) is an assumed contributor.

ZNKRZN Raw data was analyzed using Genemapper ID-X version 2.0. inc = inconclusive. For Item 3: 3 Major = Assumed profile of male suspect (Item 2), 3 Minor = Deduced male profile consistent with victim (Item 1)

-End of Report-(Appendix may follow)

Appendix: Data Sheet

Collaborative Testing Services ~ Forensic Testing Program

Test No. 18-589: DNA Interpretation

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

Participant Code:

WebCode:

Accreditation Release Statement						
CTS submits external proficiency test data directly to ASCLD/LAB, ANAB, and A2LA. Please select one of the following statements to ensure your data is handled appropriately.						
This participant's data is intended for submission to AS (Accreditation Release section on the last page must be co	CLD/LAB, ANAB, and/or A2LA. mpleted and submitted.)					
This participant's data is NOT intended for submission	n to ASCLD/LAB, ANAB or A2LA.					

Scenario:

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

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

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

Items Submitted (Sample Pack INT2):

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

Part I: DNA ANALYSIS INSTRUCTIONS

Use your laboratory's Interpretation guidelines for evaluation of this test.

Please report Laboratory Specific Interpretation Guidelines below per amplification kit.

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

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

For STR Analysis: Analytical Threshold: 75 rfu, Peak Height Ratio: 60%, Stochastic Threshold (Peak Amplitude): 50 rfu

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

DNA Reporting Instructions:

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

Report alleles in numerical order, separated by a comma.

If major and minor contributor(s) can be distinguished and your laboratory normally reports this distinction, report the results of the major profile and the minor profile in the appropriately labeled boxes; otherwise, list the alleles in numerical order in the row of boxes labeled with only the Item number.

Please Note: Samples were completely consumed during extraction.



Part I: DNA ANALYSIS

STR & Amelogenin Results for Known Item 1 STR Amplification Kit Used: Please indicate the electropherogram(s) reviewed for this test. GlobalFiler™ PowerPlex® Fusion 6C FSA format HID format PDF format D7S820 D1S1656 D2S1338 D2S441 D3S1358 D5S818 ITEM 1 ITEM D8S1179 D10S1248 D12S391 D13S317 D16S539 D18S51 1 ITEM D21S11 CSF1P0 D19S433 D22S1045 Amelogenin FGA 1 Penta D Penta E **SE33** TH01 TPOX vWA ITEM 1 DYS391 DYS570 DYS576 Y Indel ITEM 1 **YSTR Results for Known Item 1** YSTR Amplification Kit Used: Please indicate the electropherogram(s) reviewed for this test. GlobalFiler™ HID format YFiler® FSA format PowerPlex® Y23 PowerPlex® Fusion 6C PDF format **DYS19** DYS385 DYS389-1 DYS390 DYS392 DYS389-11 DYS391 DYS393 ITEM 1 DYS437 **DYS438** DYS439 **DYS448** DYS456 DYS458 DYS481 DYS533 ITEM 1 ITEM DYS549 DYS570 DYS576 DYS635 DYS643 Y GATA H4 1

STR & Amelogenin Results for Known Item 2



STR & Amelogenin Results for Questioned Item 3

STR Amplification Kit Used: Please indicate the electropherogram(s) reviewed for this test.							
G	GlobalFiler™	PowerPle	ex® Fusion 6C	FSA format	HID format	PDF format	
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D7S820	
3							
major							
minor							
	D8S1179	D10S1248	D12S391	D13S317	D16S539	D18551	
3							
major							
minor							
ITEM	D19S433	D21S11	D22S1045	Amelogenin	CSF1P0	FGA	
3							
major							
minor							
ITEM	Penta D	Penta E	SE33	TH01	ТРОХ	vWA	
3							
major							
minor							
ITEM	DYS391	DYS570	DYS576	Y Indel			
3							
major							
minor]			

YSTR Results for Questioned Item 3

YSTR	YSTR Amplification Kit Used: Please indicate the electropherogram(s) reviewed for this test.							
	YFiler®		GlobalFiler	, TM		FSA format	HI	D format
	PowerPlex® `	Y23	PowerPlex®	® Fusion 6C		PDF format		
ITEM	DYS19	DYS385	DYS389-1	DYS389-II	DYS390	DYS391	DYS392	DYS393
3								
major								
minor								
	DVC 407						DVC 401	
	DIS437	DIS438	U12439	UIS448	DI 2420	U15458	U15481	U12233
3								
major								
minor								
L			. <u></u>	<u> </u>				
ITEM	DYS549	DYS570	DYS576	DYS635	DYS643	Y GATA H4		
3								
major								
minor								

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) Random Match Probability (RMP) Other: 						
4) Please list any databases used in the statistical analyses of Item 3 below.						

STR & Amelogenin Results for Questioned Item 4

STR A	STR Amplification Kit Used: Please indicate the electropherogram(s) reviewed for this test.						
	GiobalFiler	L rowerPl		LIFSA format	U Tormat	PUP format	
ITEM	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D7S820	
4							
major							
minor							
ITEM	N8C1170		n120301	n130317	N145539	D18551	
4			0123071				
				1		ıı	
major							
minor							
ITEM	D19S433	D21S11	D22S1045	Amelogenin	CSF1P0	FGA	
4							
major		[]]		1	
minor							
ITEM	Penta D	Penta E	SE33	TH01	TPOX	vWA	
4							
major							
minor							
				·			
ITEM	DYS391	DYS570	DYS576	Y Indel			
4							
major							
minor							

YSTR Results for Questioned Item 4

YSTR Ar	mplificatior	n Kit Used: P	lease indicate	the electrophe	erogram(s) revie	wed for this te	est.	
YFi	iler®		GlobalFiler	ТМ		FSA format	🔲 ні	D format
Pov	werPlex® Y	23	PowerPlex®	Fusion 6C		PDF format		
ITEM	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
4								
major								
minor								
ΙΤΕΜ	DYS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS481	DYS533
4								
major								
minor								
	100540	DVC570	DVC574	DVC435		V CATA HA		
4	1.5547	0100	010010					
major								
minor								

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.):

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 inco	nconclusive/uninterpretable.					
2 Conclusion						
Item 2 (suspect) is included (cannot be excluded) as a possible contril	outor to the DNA obtained from Item 4.					
Item 2 (suspect) is excluded as a possible contributor to the DNA obto	ained from Item 4.					
The DNA typing results for Item 4 in comparison with Item 2 are inco	nconclusive/uninterpretable.					
stical Analysis of item 4 DNA Typing Kesults: he statistical method(s) used by marking the associated box and report	these results in the space below:					
Combined Probability of Evolution /Inclusions (CPE/CPI)	Likelihood Patio (LP)					
Combined Hobdbinity of Exclosion/Inclosions (CFE/CFI)						
Random Match Probability (RMP)	Other:					
a list any databases used in the statistical analyses of Item 4 halow						
se insi any adiabases used in the statistical analyses of item 4 below.						
	1 Conclusion Item 1 (victim) is included (cannot be excluded) as a possible contribution to the DNA obtai The DNA typing results for Item 4 in comparison with Item 1 are incomparison 2 Conclusion Item 2 (suspect) is included (cannot be excluded) as a possible contributor to the DNA obtai The DNA typing results for Item 4 in comparison with Item 1 are incomparison 2 Conclusion Item 2 (suspect) is excluded (cannot be excluded) as a possible contributor to the DNA obtai The DNA typing results for Item 4 in comparison with Item 2 are incomposition stical Analysis of Item 4 DNA Typing Results: he statistical method(s) used by marking the associated box and report Combined Probability of Exclusion/Inclusions (CPE/CPI) Random Match Probability (RMP) se list any databases used in the statistical analyses of Item 4 below.					

Part II: ADDITIONAL COMMENTS

Comments regarding any part of this test.

Part III: AMPLIFICATION KIT SURVEY (optional)

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

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

Please return all pages of this data sheet.

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Collaborative Testing Services ~ Forensic Testing Program

RELEASE OF DATA TO ACCREDITATION BODIES

The following Accreditation Releases will apply only to:

Participant Code:

WebCode:

for Test No. 18-589: DNA Interpretation

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

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

Step 1: Provide the applicable Accreditation Certificate Number(s) for your laboratory				
ANA	B Certificate No.			
A2LA Certificate No.				
Step 2: Complete the Laboratory Identifying Information in its entirety				
Signature and Title				
Laboratory Name				
Location (City/State)				

Accreditation Release

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

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