Collaborative Testing Services, Inc
FORENSIC TESTING PROGRAM

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DNA Parentage
Test No. 20-5872 Summary Report

Each participant received a sample pack consisting of four blood samples representing a paternity case. Samples were collected from a mother, a son, and two potential fathers. Participants were requested to analyze the samples using their existing protocols. The test also included a paper kinship exercise where participants were requested to evaluate the provided DNA profiles and determine if an uncle and niece relationship was supported. Data were returned from 87 participants and are compiled into the following tables:

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

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

Manufacturer's Information

Each sample set was a collection of known blood samples, provided on FTA Micro cards, from four individuals (Items 1-4); a mother, a son, and two potential fathers. Participants were requested to analyze these items using their existing protocols. Also included with this test was a kinship exercise that consisted of autosomal DNA profiles of two individuals for comparison. Participants were requested to determine if an uncle and niece relationship claim was supported following the review of these profiles.

SAMPLE PREPARATION: All stains were prepared from human whole blood which was drawn into EDTA tubes. Item 1 (75 µl) was blood from a female (mother) donor, Item 2 (75 µl) was blood from a male (son) donor, Item 3 (75 µl) was blood from a male donor who was not the biological father of the Item 2 male, and Item 4 (75 µl) was blood from a male donor who was the biological father of the Item 2 male. The different items were prepared at separate times and were packaged once they were thoroughly dried. Completed sample sets were stored at -20°C until shipment on August 24th, 2020.

SAMPLE SET ASSEMBLY: For each sample set, all four Items (1-4) in their separate envelopes were placed in a pre-labeled sample pack envelope and sealed. The sample pack envelopes were then packaged in pre-labeled Heat Seal envelopes and sealed. This process was repeated until all of the sample sets were prepared.

KINSHIP EXERCISE: This exercise included allelic results representing an uncle and niece relationship.

VERIFICATION: Laboratories that conducted predistribution analysis of the samples reported consistent results and associations.

Amelogenin and STR Results

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

Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	
1	15,16.3	17,24	10,11	16,17	11,12	*
	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31,31	15,16	X,X	10,10
	19,21	11,12	5,12	18,26.2	7,8	8,11
	15,17	NM	NM	NM	NM	
2	13,15	21,24	10,11	14,17	12,12	*
	7,11	10,15	13,15	20,23	8,8	11,12
	15,16	13,15	31,31	15,15	X,Y	10,11
	19,21	11,14	12,12	25.2,26.2	8,9	8,8
	17,17	10	18	17	2	
3	17.3,18.3	16,17	10,10	14,15	10,10	*
	10,11	12,18	13,13	20,24	13,13	11,12
	15,17	13,15	29,30	11,11	X,Y	12,12
	21,23	10,11	14,20	15,28.2	7,9.3	11,11
	17,19	10	19	17	2	
4	13,15	21,25	11,14	14,18	12,12	*
	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12,12	25.2,26.2	7,9	8,8
	14,17	10	18	17	2	

YSTR Results

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

Item	DYF387S1	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
	DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
	DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	Y GATA H4
2	38,39	14	13,13	12	28	23	10	11	14
	16	10	12	20	28	14	15	10	25
	42	11	13	18	17	19	22	12	11
3	35,40	13	14,17	13	30	23	10	14	14
	14	11	12	21	32	14	14	10	26
	38	11	13	19	17	17	22	10	12
4	38,39	14	13,13	12	28	23	10	11	14
	16	10	12	20	28	14	15	10	25
	42	11	13	18	17	19	22	12	11

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

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

Paternity Indices

Mode Paternity Index results compiled from predistribution laboratories and a consensus of at least 10 participants.

Item - Database	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA					
4PI - Grand Mean ±3STD Range**	2.123-11.36	1.864-26.52	0.693-1.097	1.134-8.839	1.737-3.834	*
	1.487-3.132	2.710-6.077	2.021-2.969	1.641-3.536	0.0-9.739	0.625-1.061
	2.102-5.171	1.457-5.231	3.636-10.63	0.862-1.981		1.370-1.991
	1.363-3.069	3.638-13.06	3.094-7.986	0.0-31.128	1.658-5.661	1.560-2.304
	1.457-2.125					
4PI - NIST STRBASE	7.518	13.36	0.9025	4.690	2.578	*
	2.439	4.812	2.541	2.776	4.149	0.7951
	3.406	3.194	6.944	1.556	-	1.618
	2.187	8.210	5.015	12.01	4.198	1.905
	1.761					

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

**These ranges are provided to allow participants that utilized databases other than FBI PopStats and NIST STRBASE to review their results. Following AABB guidelines, ranges were determined by taking the grand mean of all data submitted for the associated locus and calculating 3 standard deviations above and below that value.

Summary Comments

The 20-5872 DNA Parentage test was designed to allow participants to assess their proficiency in the analysis and interpretation of four known blood samples. Item 1 was blood collected from a female donor (mother), Item 2 was blood collected from a male donor (son of the Item 1 female), Item 3 was blood collected from a male donor who is not the biological father of the Item 2 male, and Item 4 was blood collected from a male donor who is the biological father of the Item 2 male. Participants were requested to analyze the samples and provide allelic and statistical results as well as relationship conclusions. The test also included a paper kinship exercise where participants were requested to evaluate the provided DNA profiles and report the kinship index and relationship conclusions (Refer to the Manufacturer's Information for preparation details).

DNA Analysis:
All 87 participants who returned data reported STR results for all four items. For Items 1-4, all but one participant reported data consistent with the consensus; the one participant was different for each item.

Forty participants reported YSTR results for Items 2 and 4 and 39 participants reported YSTR results for Item 3. The individual profiles for all items were consistent among all reporting participants.

Paternity DNA Statistics:
All but one participant reported that the source of Item 4 could not be excluded as the biological father of Item 2. One participant reported that Item 3 could not be excluded as the biological father of Item 2, although their DNA STR results and paternity indices were similar to those participants that could not exclude Item 4. Of the participants that reported probability of paternity values, all reported 99.99% or higher. The most frequently reported population database was NIST STRBASE.

Kinship DNA Statistics
There were 30 participants who responded for the paper kinship exercise. Of the 30 participants, 27 (90%) reported a combined Kinship Index (KI) between 15 and 17. The three remaining participants reported KI values below this range. Sixteen participants reported that the claim of an uncle and niece relationship was supported. Thirteen participants reported that the relationship was inconclusive, some stating that, per lab policy, KI values less than 1000 (or one that said 10,000) are reported as inconclusive. One participant reported that the relationship was not supported.

STR Amplification Kit(s) & Results

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 1 - STR Results

26X8KE	PowerPlex® Fusion 5C					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21	11,12	5,12		7,8	8,11
	15,17					
2QCRGF	GlobalFiler™ Express (Genemapper ID-x)					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21			18,26.2	7,8	8,11
	15,17					
3V797E	GlobalFiler™					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21			18,26.2	7,8	8,11
	15,17					
4TECJ7	Identifiler® Plus, PowerPlex® ESI 17 Fast, NGMSelect (GeneMapper ID v.3.2)					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21			18,26.2	7,8	8,11
	15,17					
67CZN6	PowerPlex® PP21					
	15,16.3	17,24		16,17	11,12	18,21
1	7,8	10,13		20,23	8,11	11,12
	15,18	13,16	31		X	10
	19,21	11,12	5,12		7,8	8,11
	15,17					
77TGGC	GlobalFiler™ Express					
	15,16.3	17,24	10,11	16,17	11,12	-
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X,X	10
	19,21	-	-	18,26.2	7,8	8,11
	15,17	NM	-	-	NM	

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 1 - STR Results

7P67VA	PowerPlex® Fusion 6C					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21	11,12	5,12	18,26.2	7,8	8,11
	15,17					
8CYBC9	PowerPlex® Fusion 6C					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21	11,12	5,12	18,26.2	7,8	8,11
	15,17					
8GANT7	GlobalFiler™					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21			18,26.2	7,8	8,11
	15,17					
8GU6AA	PowerPlex® Fusion 6C					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21	11,12	5,12	18,26.2	7,8	8,11
	15,17					
9736V9	GlobalFiler™					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21			18,26.2	7,8	8,11
	15,17					
9RDQ9H	HuaXia Platinum (GeneMapper® ID-X)					
	15,16.3	17,24	10,11	16,17	11,12	18,21
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21	11,12	5,12		7,8	8,11
	15,17					

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 1 - STR Results

A2648Z	PowerPlex® FUSION 6C (M-FISYS)					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31,31	15,16	X,X	10,10
	19,21	11,12	5,12		7,8	8,11
	15,17					
AKHQT8	PowerPlex® Fusion 6C					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21	11,12	5,12	18,26.2	7,8	8,11
	15,17					
AN48BT	GlobalFiler™					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31,31	15,16	X,X	10,10
	19,21			18,26.2	7,8	8,11
	15,17					
ATVET2	GlobalFiler™					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21			18,26.2	7,8	8,11
	15,17	-			-	
B2N8EZ	PowerPlex® Fusion System, NGMSElect					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21	11,12	5,12	18,26.2	7,8	8,11
	15,17					
B8CUA6	PowerPlex® F6C					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31,31	15,16	X,X	10,10
	19,21	11,12	5,12	18,26.2	7,8	8,11
	15,17					

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 1 - STR Results

BVHDK6	PowerPlex® Fusion 6C					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21	11,12	5,12	18,26.2	7,8	8,11
	15,17					
C47NAQ	GlobalFiler™ express					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21			18,26.2	7,8	8,11
	15,17	NR			NR	
CUGZC3	GlobalFiler™					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21			18,26.2	7,8	8,11
	15,17					
CXGB93	GlobalFiler™					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21			18,26.2	7,8	8,11
	15,17					
DATZLX	PowerPlex® Fusion					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21	11,12	5,12		7,8	8,11
	15,17	NR				
DCGCK4	PowerPlex® Fusion 6C					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21	11,12	5,12	18,26.2	7,8	8,11
	15,17					

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 1 - STR Results

DGQP33	GlobalFiler™					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31,31	15,16	X,X	10,10
	19,21			18,26.2	7,8	8,11
	15,17					
DP6CC7	PowerPlex® Fusion 5C					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21	11,12	5,12		7,8	8,11
	15,17	Inconclusive				
DQCRKW	PowerPlex® ESI 16 FAST					
	15,16.3	17,24	10,11	16,17		
1		10,13	13,14	20,23		11,12
	15,18	13,16	31	15,16	X	
	19,21				7,8	
	15,17					
DXEZP4	PowerPlex® Fusion 6C					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21	11,12	5,12	18,26.2	7,8	8,11
	15,17					
E6RCHV	GlobalFiler™ Express					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31,31	15,16	X,X	10,10
	19,21			18,26.2	7,8	8,11
	15,17	0			0	
EE3D4W	Identifiler® Plus (GeneMapper® ID-X Software v1.5)					
		17,24		16,17	11,12	
1	7,8	10,13			8,11	11,12
	15,18	13,16	31,31		X,X	10,10
	19,21				7,8	8,11
	15,17					

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 1 - STR Results

EFDFPV	Identifiler®					
		17,24		16,17	11,12	
1	7,8	10,13			8,11	11,12
	15,18	13,16	31,31		X,X	10,10
	19,21				7,8	8,11
	15,17					
EJCRLV	Investigator® 24plex					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31,31	15,16	X,X	10,10
	19,21			18,26.2	7,8	8,11
	15,17					
EL24KZ	PowerPlex® Fusion					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21	11,12	5,12		7,8	8,11
	15,17					
EV78BW	PowerPlex® Fusion					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21	11,12	5,12		7,8	8,11
	15,17	NR				
EZWHKU	PowerPlex® Fusion System, ESX17 System, CS7 System, GlobalFiler™					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31,31	15,16	X,X	10,10
	19,21	11,12	5,12	18,26.2	7,8	8,11
	15,17					
FQP3EL	PowerPlex® 21					
	15,16.3	17,24		16,17	11,12	18,21
1	7,8	10,13		20,23	8,11	11,12
	15,18	13,16	31,31		X,X	10,10
	19,21	11,12	5,12		7,8	8,11
	15,17					

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 1 - STR Results

GC4A2Y	GlobalFiler™					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X,X	10
	19,21			18,26.2	7,8	8,11
	15,17					
GNGAXT	PowerPlex® FUSION 6C (M-FISYS)					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31,31	15,16	X,X	10,10
	19,21	11,12	5,12		7,8	8,11
	15,17					
GT9GF2	Identifiler® VERIFILER EXPRESS, IDENTIFILER DIRECT, NGMSE, PowerPlex® FUSION,ESI17, ESX17, CS7,PP21					
	15,16.3	17,24	10,11	16,17	11,12	18,21
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21	11,12	5,12	18,26.2	7,8	8,11
	15,17					
H2XPDX	GlobalFiler™					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31,31	15,16	X,X	10,10
	19,21			18,26.2	7,8	8,11
	15,17					
HAVGLQ	PowerPlex® Fusion ([Lab-specific software])					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31,31	15,16	X,X	10,10
	19,21	11,12	5,12		7,8	8,11
	15,17	-				
HJGKTQ	PowerPlex® FUSION					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31,31	15,16	X,X	10,10
	19,21	11,12	5,12		7,8	8,11
	15,17					

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 1 - STR Results

HTRMER						
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31,31	15,16	X,X	10,10
	19,21			18,26.2	7,8	8,11
	15,17				-	
HUY3LX	GlobalFiler™					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21			18,26.2	7,8	8,11
	15,17	NR			NR	
JUXPEV	PowerPlex® Fusion 5C					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21	11,12	5,12		7,8	8,11
	15,17					
JYWWA7	Verifiler ([English translation of PG Software was not obtained by the time of report publication.])					
	15,16.3	17,24	10,11	16,17	11,12	18,21
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31,31	15,16	X,X	10,10
	19,21	11,12	5,12		7,8	8,11
	15,17					
K43WTV	GlobalFiler™					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31,31	15,16	X,X	10,10
	19,21			18,26.2	7,8	8,11
	15,17					
KMU6QQ	PowerPlex® Fusion					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21	11,12	5,12		7,8	8,11
	15,17	NR				

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 1 - STR Results

KR7QZW	GlobalFiler™					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21			18,26.2	7,8	8,11
	15,17	NR			NR	
KZEKUP	PowerPlex® Fusion 6C					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X,X	10
	19,21	11,12	5,12	18,26.2	7,8	8,11
	15,17					
KZZVTX	PowerPlex® Fusion 6C					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21	11,12	5,12	18,26.2	7,8	8,11
	15,17					
L4UCHX	GlobalFiler™					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21			18,26.2	7,8	8,11
	15,17					
LAYBUM	PowerPlex® 5C					
	15,16.3	17,24	10,11	16,17	11,12	--
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21	11,12	5,12	--	7,8	8,11
	15,17	--	--	--	--	
LKHPWP	PowerPlex® Fusion					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21	11,12	5,12		7,8	8,11
	15,17	NR				

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 1 - STR Results

LM72WV	GlobalFiler™					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21			18,26.2	7,8	8,11
	15,17					
LNG4HT	GlobalFiler™					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31,31	15,16	X,X	10,10
	19,21			18,26.2	7,8	8,11
	15,17					
NEP64T	GlobalFiler™					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X,X	10
	19,21			18,26.2	7,8	8,11
	15,17					
NLRDBL	PowerPlex® FUSION 6C (M-FISYS)					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31,31	15,16	X,X	10,10
	19,21	11,12	5,12		7,8	8,11
	15,17					
NWAV4T	PowerPlex® Fusion 6C					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21	11,12	5,12	18,26.2	7,8	8,11
	15,17					
P36CTN	PowerPlex® Fusion					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21	11,12	5,12		7,8	8,11
	15,17					

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 1 - STR Results

PY7Y9K	GlobalFiler™ (Forensic DNA comparison and identification management system)					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31,31	15,16	X,X	10,10
	19,21			18,26.2	7,8	8,11
	15,17					
QL2YXT	GlobalFiler™ Express					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X,X	10
	19,21			18,26.2	7,8	8,11
	15,17	NM			NM	
QRNRAR	GlobalFiler™					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21			18,26.2	7,8	8,11
	15,17	---			---	
QX98EB	GlobalFiler™					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31,31	15,16	X,X	10,10
	19,21			18,26.2	7,8	8,11
	15,17	NR			NR	
R986ZP	GlobalFiler™					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21			18,26.2	7,8	8,11
	15,17	No Results			No Results	
RBY4EM	PowerPlex® Fusion					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21	11,12	5,12		7,8	8,11
	15,17					

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 1 - STR Results

RVLQWP	GlobalFiler™					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21			18,26.2	7,8	8,11
	15,17	NR			NR	
RZDZ8N	GlobalFiler™					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21			18,26.2	7,8	8,11
	15,17					
T3DQQ9	GlobalFiler™					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21			18,26.2	7,8	8,11
	15,17	NR			NR	
TC496G	PowerPlex® Fusion 6C, PowerPlex® CS7, VeriFiler™ Express (Familias)					
	15,16.3	17,24	10,11	16,17	11,12	18,21
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21	11,12	5,12	18,26.2	7,8	8,11
	15,17					
TERK4M	GlobalFiler™					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31,31	15,16	X,X	10,10
	19,21			18,26.2	7,8	8,11
	15,17					
TQL2TN	PowerPlex® Fusion					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31,31	15,16	X,X	10,10
	19,21	11,12	5,12		7,8	8,11
	15,17					

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 1 - STR Results

TVGVQP	PowerPlex® Fusion 5C					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21	11,12	5,12		7,8	8,11
	15,17					
U7RK6K	PowerPlex® Fusion					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21	11,12	5,12		7,8	8,11
	15,17					
UGRBN8	GlobalFiler™					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21			18,26.2	7,8	8,11
	15,17					
UL9FKG	Qiagen Investigator ESSplex SE plus (Familias)					
	15,16.3	17,24	10,11	16,17		
1		10,13	13,14	20,23		11,12
	15,18	13,16	30,31	15,16	X,X	
	19,21			18,26.2	7,8	
	15,17					
UZQ99N	PowerPlex® Fusion 6C					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21	11,12	5,12	18,26.2	7,8	8,11
	15,17					
VK83CE	Identifiler®					
		17,24		16,17	11,12	
1	7,8	10,13			8,11	11,12
	15,18	13,16	31,31		X,X	10,10
	19,21				7,8	8,11
	15,17					

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 1 - STR Results

VTYKQM	GlobalFiler™ Express					
	15,16.3	17,24	10,11	16,17	11,12	-
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X,X	10
	19,21	-	-	18,26.2	7,8	8,11
	15,17	NM	-	-	NM	
WA663K	PowerPlex® Fusion Direct					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21	11,12	5,12		7,8	8,11
	15,17					
X9N8AK	GlobalFiler™					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31,31	15,16	X,X	10,10
	19,21			18,26.2	7,8	8,11
	15,17	Not Detected			Not Detected	
XCNJ7K	PowerPlex®					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31,31	15,16	X,X	10,10
	19,21	11,12	5,12		7,8	8,11
	15,17					
XHETFH	GlobalFiler™					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21			18,26.2	7,8	8,11
	15,17					
XV4R7K	GlobalFiler™ PowerPlex 21					
	15,16.3	17,24	10,11	16,17	11,12	18,21
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21	11,12	5,12	18,26.2	7,8	8,11
	15,17					

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 1 - STR Results

Y9MU2H	PowerPlex® Fusion 6C					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X	10
	19,21	11,12	5,12	18,26.2	7,8	8,11
	15,17					
YFHYVJ	GlobalFiler™ Express					
	15,16.3	17,24	10,11	16,17	11,12	-
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31	15,16	X,X	10
	19,21	-	-	18,26.2	7,8	8,11
	15,17	NM	-	-	NM	
YL9A6H	GlobalFiler™					
	15,16.3	17,24	10,11	16,17	11,12	
1	7,8	10,13	13,14	20,23	8,11	11,12
	15,18	13,16	31,31	15,16	X,X	10,10
	19,21			18,26.2	7,8	8,11
	15,17	F			F	

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 2 - STR Results

26X8KE	PowerPlex® Fusion 5C					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21	11,14	12		8,9	8
	17	10				
2QCRGF	GlobalFiler™ Express (Genemapper ID-x)					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21			25.2,26.2	8,9	8
	17	10			2	
3V797E	GlobalFiler™					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21			25.2,26.2	8,9	8
	17	10			2	
4TECJ7	Identifiler® Plus, PowerPlex® ESI 17 Fast, NGMSelect (GeneMapper ID v.3.2.)					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21			25.2,26.2	8,9	8
	17					
67CZN6	PowerPlex® PP21					
	13,15	21,24		14,17	12	12,21
2	7,11	10,15		20,23	8	11,12
	15,16	13,15	31		X,Y	10,11
	19,21	11,14	12		8,9	8
	17					
77TGGC	GlobalFiler™ Express					
	13,15	21,24	10,11	14,17	12	-
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21	-	-	25.2,26.2	8,9	8
	17	10	-	-	2	

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 2 - STR Results

7P67VA	PowerPlex® Fusion 6C					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21	11,14	12	25.2,26.2	8,9	8
	17	10	18	17		
8CYBC9	PowerPlex® Fusion 6C					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21	11,14	12	25.2,26.2	8,9	8
	17	10	18	17		
8GANT7	GlobalFiler™					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21			25.2,26.2	8,9	8
	17	10			2	
8GU6AA	PowerPlex® Fusion 6C					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21	11,14	12	25.2,26.2	8,9	8
	17	10	18	17		
9736V9	GlobalFiler™					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21			25.2,26.2	8,9	8
	17	10			2	
9RDQ9H	HuaXia Platinum (GeneMapper® ID-X)					
	13,15	21,24	10,11	14,17	12	12,21
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21	11,14	12		8,9	8
	17				2	

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 2 - STR Results

A2648Z	PowerPlex® FUSION 6C (M-FISYS)					
	13,15	21,24	10,11	14,17	12,12	
2	7,11	10,15	13,15	20,23	8,8	11,12
	15,16	13,15	31,31	15,15	X,Y	10,11
	19,21	11,14	12,12		8,9	8,8
	17,17	10	18	17		
AKHQT8	PowerPlex® Fusion 6C					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21	11,14	12	25.2,26.2	8,9	8
	17	10	18	17		
AN48BT	GlobalFiler™					
	13,15	21,24	10,11	14,17	12,12	
2	7,11	10,15	13,15	20,23	8,8	11,12
	15,16	13,15	31,31	15,15	X,Y	10,11
	19,21			25.2,26.2	8,9	8,8
	17,17	10			2	
ATVET2	GlobalFiler™					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21			25.2,26.2	8,9	8
	17	10			2	
B2N8EZ	PowerPlex® Fusion System, NGMSElect					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21	11,14	12	25.2,26.2	8,9	8
	17	10				
B8CUA6	PowerPlex® F6C					
	13,15	21,24	10,11	14,17	12,12	
2	7,11	10,15	13,15	20,23	8,8	11,12
	15,16	13,15	31,31	15,15	X,Y	10,11
	19,21	11,14	12,12	25.2,26.2	8,9	8,8
	17,17	10	18	17		

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 2 - STR Results

BVHDK6	PowerPlex® Fusion 6C					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21	11,14	12	25.2,26.2	8,9	8
	17	10	18	17		
C47NAQ	GlobalFiler™ express					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21			25.2,26.2	8,9	8
	17	10			2	
CUGZC3	GlobalFiler™					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21			25.2,26.2	8,9	8
	17	10			2	
CXGB93	GlobalFiler™					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21			25.2,26.2	8,9	8
	17	10			2	
DATZLX	PowerPlex® Fusion					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21	11,14	12		8,9	8
	17	10				
DCGCK4	PowerPlex® Fusion 6C					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21	11,14	12	25.2,26.2	8,9	8
	17	10	18	17		

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 2 - STR Results

DGQP33	GlobalFiler™					
	13,15	21,24	10,11	14,17	12,12	
2	7,11	10,15	13,15	20,23	8,8	11,12
	15,16	13,15	31,31	15,15	X,Y	10,11
	19,21			25.2,26.2	8,9	8,8
	17,17	10			2	
DP6CC7	PowerPlex® Fusion 5C					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21	11,14	12		8,9	8
	17	Inconclusive				
DQCRKW	PowerPlex® ESI 16 FAST					
	13,15	21,24	10,11	14,17		
2		10,15	13,15	20,23		11,12
	15,16	13,15	31	15	X,Y	
	19,21				8,9	
	17					
DXEZP4	PowerPlex® Fusion 6C					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21	11,14	12	25.2,26.2	8,9	8
	17	10	18	17		
E6RCHV	GlobalFiler™ Express					
	13,15	21,24	10,11	14,17	12,12	
2	7,11	10,15	13,15	20,23	8,8	11,12
	15,16	13,15	31,31	15,15	X,Y	10,11
	19,21			25.2,26.2	8,9	8,8
	17,17	10			2	
EE3D4W	Identifiler® Plus (GeneMapper® ID-X Software v1.5)					
		21,24		14,17	12,12	
2	7,11	10,15			8,8	11,12
	15,16	13,15	31,31		X,Y	10,11
	19,21				8,9	8,8
	17,17					

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 2 - STR Results

EFDFPV	Identifiler®					
		21,24		14,17	12,12	
2	7,11	10,15			8,8	11,12
	15,16	13,15	31,31		X,Y	10,11
	19,21				8,9	8,8
	17,17					
EJCRLV	Investigator® 24plex					
	13,15	21,24	10,11	14,17	12,12	
2	7,11	10,15	13,15	20,23	8,8	11,12
	15,16	13,15	31,31	15,15	X,Y	10,11
	19,21			25.2,26.2	8,9	8,8
	17,17	10				
EL24KZ	PowerPlex® Fusion					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21	11,14	12		8,9	8
	17	10				
EV78BW	PowerPlex® Fusion					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21	11,14	12		8,9	8
	17	10				
EZWHKU	PowerPlex® Fusion System, ESX17 System, CS7 System, GlobalFiler™					
	13,15	21,24	10,11	14,17	12,12	
2	7,11	10,15	13,15	20,23	8,8	11,12
	15,16	13,15	31,31	15,15	X,Y	10,11
	19,21	11,14	12,12	25.2,26.2	8,9	8,8
	17,17	10			2	
FQP3EL	PowerPlex® 21					
	13,15	21,24		14,17	12,12	12,21
2	7,11	10,15		20,23	8,8	11,12
	15,16	13,15	31,31		X,Y	10,11
	19,21	11,14	12,12		8,9	8,8
	17,17					

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 2 - STR Results

GC4A2Y	GlobalFiler™					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21			25.2,26.2	8,9	8
	17	10			2	
GNGAXT	PowerPlex® FUSION 6C (M-FISYS)					
	13,15	21,24	10,11	14,17	12,12	
2	7,11	10,15	13,15	20,23	8,8	11,12
	15,16	13,15	31,31	15,15	X,Y	10,11
	19,21	11,14	12,12		8,9	8,8
	17,17	10	18	17		
GT9GF2	Identifiler® VERIFILER EXPRESS, IDENTIFILER DIRECT, NGMSE, PowerPlex® FUSION,CS7,ESI17,ESX17,PP21					
	13,15	21,24	10,11	14,17	12	12,21
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21	11,14	12	25.2,26.2	8,9	8
	17	10	18	17		
H2XPDX	GlobalFiler™					
	13,15	21,24	10,11	14,17	12,12	
2	7,11	10,15	13,15	20,23	8,8	11,12
	15,16	13,15	31,31	15,15	X,Y	10,11
	19,21			25.2,26.2	8,9	8,8
	17,17	10			2	
HAVGLQ	PowerPlex® Fusion ([Lab-specific software])					
	13,15	21,24	10,11	14,17	12,12	
2	7,11	10,15	13,15	20,23	8,8	11,12
	15,16	13,15	31,31	15,15	X,Y	10,11
	19,21	11,14	12,12		8,9	8,8
	17,17	10				
HJGKTQ	PowerPlex® FUSION					
	13,15	21,24	10,11	14,17	12,12	
2	7,11	10,15	13,15	20,23	8,8	11,12
	15,16	13,15	31,31	15,15	X,Y	10,11
	19,21	11,14	12,12		8,9	8,8
	17,17	10				

TABLE 1

Item 2 - STR Results

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	
HTRMER						
	13,15	21,24	10,11	14,17	12,12	
2	7,11	10,15	13,15	20,23	8,8	11,12
	15,16	13,15	31,31	15,15	X,Y	10,11
	19,21			25.2,26.2	8,9	8,8
	17,17	10			2	
HUY3LX	GlobalFiler™					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21			25.2,26.2	8,9	8
	17	10			2	
JUXPEV	PowerPlex® Fusion 5C					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21	11,14	12		8,9	8
	17	10				
JYWWA7	Verifiler					
	13,15	21,24	10,11	14,17	12,12	12,21
2	7,11	10,15	13,15	20,23	8,8	11,12
	15,16	13,15	31,31	15,15	X,Y	10,11
	19,21	11,14	12,12		8,9	8,8
	17,17				2	
K43WTV	GlobalFiler™					
	13,15	21,24	10,11	14,17	12,12	
2	7,11	10,15	13,15	20,23	8,8	11,12
	15,16	13,15	31,31	15,15	X,Y	10,11
	19,21			25.2,26.2	8,9	8,8
	17,17	10			2	
KMU6QQ	PowerPlex® Fusion					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21	11,14	12		8,9	8
	17	10				

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 2 - STR Results

KR7QZW	GlobalFiler™					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21			25.2,26.2	8,9	8
	17	10			2	
KZEKUP	PowerPlex® Fusion 6C					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21	11,14	12	25.2,26.2	8,9	8
	17	10	18	17		
KZZVTX	PowerPlex® Fusion 6C					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21	11,14	12	25.2,26.2	8,9	8
	17	10	18	17		
L4UCHX	GlobalFiler™					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21			25.2,26.2	8,9	8
	17	10			2	
LAYBUM	PowerPlex® 5C					
	13,15	21,24	10,11	14,17	12	--
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21	11,14	12	--	8,9	8
	17	10	--	--	--	
LKHPWP	PowerPlex® Fusion					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21	11,14	12		8,9	8
	17	10				

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 2 - STR Results

LM72WV	GlobalFiler™					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21			25.2,26.2	8,9	8
	17	10			2	
LNG4HT	GlobalFiler™					
	13,15	21,24	10,11	14,17	12,12	
2	7,11	10,15	13,15	20,23	8,8	11,12
	15,16	13,15	31,31	15,15	X,Y	10,11
	19,21			25.2,26.2	8,9	8,8
	17,17	10			2	
NEP64T	GlobalFiler™					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21			25.2,26.2	8,9	8
	17	10			2	
NLRDBL	PowerPlex® FUSION 6C (M-FISYS)					
	13,15	21,24	10,11	14,17	12,12	
2	7,11	10,15	13,15	20,23	8,8	11,12
	15,16	13,156	31,31	15,15	X,Y	10,11
	19,21	11,14	12,12		8,9	8,8
	17,17	10	18	17		
NWAV4T	PowerPlex® Fusion 6C					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21	11,14	12	25.2,26.2	8,9	8
	17	10	18	17		
P36CTN	PowerPlex® Fusion					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21	11,14	12		8,9	8
	17	10				

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 2 - STR Results

PY7Y9K	GlobalFiler™ (Forensic DNA comparison and identification management system)					
	13,15	21,24	10,11	14,17	12,12	
2	7,11	10,15	13,15	20,23	8,8	11,12
	15,16	13,15	31,31	15,15	X,Y	10,11
	19,21			25.2,26.2	8,9	8,8
	17,17	10			2	
QL2YXT	GlobalFiler™ Express					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21			25.2,26.2	8,9	8
	17	10			2	
QRNRAR	GlobalFiler™					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21			25.2,26.2	8,9	8
	17	10			2	
QX98EB	GlobalFiler™					
	13,15	21,24	10,11	14,17	12,12	
2	7,11	10,15	13,15	20,23	8,8	11,12
	15,16	13,15	31,31	15,15	X,Y	10,11
	19,21			25.2,26.2	8,9	8,8
	17,17	10			2	
R986ZP	GlobalFiler™					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21			25.2,26.2	8,9	8
	17	10			2	
RBY4EM	PowerPlex® Fusion					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21	11,14	12		8,9	8
	17	10				

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 2 - STR Results

RVLQWP	GlobalFiler™					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21			25.2,26.2	8,9	8
	17	10			2	
RZDZ8N	GlobalFiler™					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21			25.2,26.2	8,9	8
	17	10			2	
T3DQQ9	GlobalFiler™					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21			25.2,26.2	8,9	8
	17	10			2	
TC496G	PowerPlex® Fusion 6C, PowerPlex® CS7, VeriFiler™ Express (Familias)					
	13,15	21,24	10,11	14,17	12	12,21
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21	11,14	12	25.2,26.2	8,9	8
	17	10	18	17	2	
TERK4M	GlobalFiler™					
	13,15	21,24	10,11	14,17	12,12	
2	7,11	10,15	13,15	20,23	8,8	11,12
	15,16	13,15	31,31	15,15	X,Y	10,11
	19,21			25.2,26.2	8,9	8,8
	17,17	10			2	
TQL2TN	PowerPlex® Fusion					
	13,15	21,24	10,11	14,17	12,12	
2	7,11	10,15	13,15	20,23	8,8	11,12
	15,16	13,15	31,31	15,15	X,Y	10,11
	19,21	11,14	12,12		8,9	8,8
	17,17	10				

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 2 - STR Results

TVGVQP	PowerPlex® Fusion 5C					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21	11,14	12		8,9	8
	17	10				
U7RK6K	PowerPlex® Fusion					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21	11,14	12		8,9	8
	17	10				
UGRBN8	GlobalFiler™					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21			25.2,26.2	8,9	8
	17	10			2	
UL9FKG	Investigator ESSplex SE plus (Familias)					
	13,15	21,24	10,11	14,17		
2		10,15	13,15	20,23		11,12
	15,16		31,31	15,15	X,Y	
	19,21			25.2,26.2	8,9	
	17,17					
UZQ99N	PowerPlex® Fusion 6C					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21	11,14	12	25.2,26.2	8,9	8
	17	10	18	17		
VK83CE	Identifiler®					
		21,24		14,17	12,12	
2	7,11	10,15			8,8	11,12
	15,16	13,15	31,31		X,Y	10,11
	19,21				8,9	8,8
	17,17					

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 2 - STR Results

VTYKQM	GlobalFiler™ Express					
	13,15	21,24	10,11	14,17	12	-
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21	-	-	25.2,26.2	8,9	8
	17	10	-	-	2	
WA663K	PowerPlex® Fusion Direct					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21	11,14	12		8,9	8
	17	10				
X9N8AK	GlobalFiler™					
	13,15	21,24	10,11	14,17	12,12	
2	7,11	10,15	13,15	20,23	8,8	11,12
	15,16	13,15	31,31	15,15	X,Y	10,11
	19,21			25.2,26.2	8,9	8,8
	17,17	10			2	
XCNJ7K	PowerPlex®					
	13,15	21,24	10,11	14,17	12,12	
2	7,11	10,15	13,15	20,23	8,8	11,12
	15,16	13,15	31,31	15,15	X,Y	10,11
	19,21	11,14	12,12		8,9	8,8
	17,17	10				
XHETFH	GlobalFiler™					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21			25.2,26.2	8,9	8
	17	10			2	
XV4R7K	GlobalFiler™ PowerPlex 21					
	13,15	21,24	10,11	14,17	12	12,21
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21	11,14	12	25.2,26.2	8,9	8
	17	10			2	

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 2 - STR Results

Y9MU2H	PowerPlex® Fusion 6C					
	13,15	21,24	10,11	14,17	12	
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21	11,14	12	25.2,26.2	8,9	8
	17	10	18	17		
YFHYVJ	GlobalFiler™ Express					
	13,15	21,24	10,11	14,17	12	-
2	7,11	10,15	13,15	20,23	8	11,12
	15,16	13,15	31	15	X,Y	10,11
	19,21	-	-	25.2,26.2	8,9	8
	17	10	-	-	2	
YL9A6H	GlobalFiler™					
	13,15	21,24	10,11	14,17	12,12	
2	7,11	10,15	13,15	20,23	8,8	11,12
	15,16	13,15	31,31	15,15	X,Y	10,11
	19,21			25.2,26.2	8,9	8,8
	17,17	10			2	

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 3 - STR Results

26X8KE	PowerPlex® Fusion 5C					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23	10,11	14,20		7,9.3	11
	17,19	10				
2QCRGF	GlobalFiler™ Express (Genemapper ID-x)					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23			15,28.2	7,9.3	11
	17,19	10			2	
3V797E	GlobalFiler™					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23			15,28.2	7,9.3	11
	17,19	10			2	
4TECJ7	Identifiler® Plus, PowerPlex® ESI 17 Fast, NGMSelect (GeneMapper ID v.3.2.)					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23			15,28.2	7,9.3	11
	17,19					
67CZN6	PowerPlex® PP21					
	17.3,18.3	16,17		14,15	10	18,19
3	10,11	12,18		20,24	13	11,12
	15,17	13,15	29,30		X,Y	12
	21,23	10,11	14,20		7,9.3	11
	17,19					
77TGGC	GlobalFiler™ Express					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23			15,28.2	7,9.3	11
	17,19	10			2	

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 3 - STR Results

7P67VA	PowerPlex® Fusion 6C					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23	10,11	14,20	15,28.2	7,9.3	11
	17,19	10	19	17		
8CYBC9	PowerPlex® Fusion 6C					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23	10,11	14,20	15,28.2	7,9.3	11
	17,19	10	19	17		
8GANT7	GlobalFiler™					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23			15,28.2	7,9.3	11
	17,19	10			2	
8GU6AA	PowerPlex® Fusion 6C					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23	10,11	14,20	15,28.2	7,9.3	11
	17,19	10	19	17		
9736V9	GlobalFiler™					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23			15,28.2	7,9.3	11
	17,19	10			2	
9RDQ9H	HuaXia Platinum (GeneMapper® ID-X)					
	17.3,18.3	16,17	10	14,15	10	18,19
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23	10,11	14,20		7,9.3	11
	17,19				2	

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 3 - STR Results

A2648Z	PowerPlex® FUSION 6C (M-FISYS)					
	17.3,18.3	16,17	10,10	14,15	10,10	
3	10,11	12,18	13,13	20,24	13,13	11,12
	15,17	13,15	29,30	11,11	X,Y	12,12
	21,23	10,11	14,20		7,9.3	11,11
	17,19	10	19	17		
AKHQT8	PowerPlex® Fusion 6C					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23	10,11	14,20	15,28.2	7,9.3	11
	17,19	10	19	17		
AN48BT	GlobalFiler™					
	17.3,18.3	16,17	10,10	14,15	10,10	
3	10,11	12,18	13,13	20,24	13,13	11,12
	15,17	13,15	29,30	11,11	X,Y	12,12
	21,23			15,28.2	7,9.3	11,11
	17,19	10			2	
ATVET2	GlobalFiler™					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23			15,28.2	7,9.3	11
	17,19	10			2	
B2N8EZ	PowerPlex® Fusion System, NGMSElect					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23	10,11	14,20	15,28.2	7,9.3	11
	17,19	10				
B8CUA6	PowerPlex® F6C					
	17.3,18.3	16,17	10,10	14,15	10,10	
3	10,11	12,18	13,13	20,24	13,13	11,12
	15,17	13,15	29,30	11,11	X,Y	12,12
	21,23	10,11	14,20	15,28.2	7,9.3	11,11
	17,19	10	19	17		

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 3 - STR Results

BVHDK6	PowerPlex® Fusion 6C					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23	10,11	14,20	15,28.2	7,9.3	11
	17,19	10	19	17		
C47NAQ	GlobalFiler™ Express					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23			15,28.2	7,9.3	11
	17,19	10			2	
CUGZC3	GlobalFiler™					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23			15,28.2	7,9.3	11
	17,19	10			2	
CXGB93	GlobalFiler™					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23			15,28.2	7,9.3	11
	17,19	10			2	
DATZLX	PowerPlex® Fusion					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23	10,11	14,20		7,9.3	11
	17,19	10				
DCGCK4	PowerPlex® Fusion 6C					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23	10,11	14,20	15,28.2	7,9.3	11
	17,19	10	19	17		

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 3 - STR Results

DGQP33	GlobalFiler™					
	17.3,18.3	16,17	10,10	14,15	10,10	
3	10,11	12,18	13,13	20,24	13,13	11,12
	15,17	13,15	29,30	11,11	X,Y	12,12
	21,23			15,28.2	7,9.3	11,11
	17,19	10			2	
DP6CC7	PowerPlex® Fusion 5C					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23	10,11	14,20		7,9.3	11
	17,19	Inconclusive				
DQCRKW	PowerPlex® ESI 16 FAST					
	17.3,18.3	16,17	10	14,15		
3		12,18	13	20,24		11,12
	15,17	13,15	29,30	11	X,Y	
	21,23				7,9.3	
	17,19					
DXEZP4	PowerPlex® Fusion 6C					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23	10,11	14,20	15,28.2	7,9.3	11
	17,19	10	19	17		
E6RCHV	GlobalFiler™ Express					
	17.3,18.3	16,17	10,10	14,15	10,10	
3	10,11	12,18	13,13	20,24	13,13	11,12
	15,17	13,15	29,30	11,11	X,Y	12,12
	21,23			15,28.2	7,9.3	11,11
	17,19	10			2	
EE3D4W	Identifiler® Plus (GeneMapper® ID-X Software v1.5)					
		16,17		14,15	10,10	
3	10,11	12,18			13,13	11,12
	15,17	13,15	29,30		X,Y	12,12
	21,23				7,9.3	11,11
	17,19					

TABLE 1

Item 3 - STR Results

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	
EFDFPV	Identifiler®					
		16,17		14,15	10,10	
3	10,11	12,18			13,13	11,12
	15,17	13,15	29,30		X,Y	12,12
	21,23				7,9.3	11,11
	17,19					
EJCRLV	Investigator® 24plex					
	17.3,18.3	16,17	10,10	14,15	10,10	
3	10,11	12,18	13,13	20,24	13,13	11,12
	15,17	13,15	29,30	11,11	X,Y	12,12
	21,23			15,28.2	7,9.3	11,11
	17,19	10				
EL24KZ	PowerPlex® Fusion					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23	10,11	14,20		7,9.3	11
	17,19	10				
EV78BW	PowerPlex® Fusion					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23	10,11	14,20		7,9.3	11
	17,19	10				
EZWHKU	PowerPlex® Fusion System, ESX17 System, CS7 System, GlobalFiler™					
	17.3,18.3	16,17	10,10	14,15	10,10	
3	10,11	12,18	13,13	20,24	13,13	11,12
	15,17	13,15	29,30	11,11	X,Y	12,12
	21,23	10,11	14,20	15,28.2	7,9.3	11,11
	17,19	10			2	
FQP3EL	PowerPlex® 21					
	17.3,18.3	16,17		14,15	10,10	18,19
3	10,11	12,18		20,24	13,13	11,12
	15,17	13,15	29,30		X,Y	12,12
	21,23	10,11	14,20		7,9.3	11,11
	17,19					

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 3 - STR Results

GC4A2Y	GlobalFiler™ (eDNA Brutus)					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23			15,28.2	7,9.3	11
	17,19	10			2	
GNGAXT	PowerPlex® FUSION 6C (M-FISYS)					
	17.3,18.3	16,17	10,10	14,15	10,10	
3	10,11	12,18	13,13	20,24	13,13	11,12
	15,17	13,15	29,30	11,11	X,Y	12,12
	21,23	10,11	14,20		7,9.3	11,11
	17,19	10	19	17		
GT9GF2	Identifiler® VERIFILER EXPRESS,IDENTIFILER DIRECT, NGMSE, PowerPlex® FUSION,ESI17,ESX17,CS7,PP21 (PATPCR)					
	17.3,18.3	16,17	10	14,15	10	18,19
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23	10,11	14,20	15,28.2	7,9.3	11
	17,19	10	19	17		
H2XPDX	GlobalFiler™					
	17.3,18.3	16,17	10,10	14,15	10,10	
3	10,11	12,18	13,13	20,24	13,13	11,12
	15,17	13,15	29,30	11,11	X,Y	12,12
	21,23			15,28.2	7,9.3	11,11
	17,19	10			2	
HAVGLQ	PowerPlex® Fusion ([Lab-specific software])					
	17.3,18.3	16,17	10,10	14,15	10,10	
3	10,11	12,18	13,13	20,24	13,13	11,12
	15,17	13,15	29,30	11,11	X,Y	12,12
	21,23	10,11	14,20		7,9.3	11,11
	17,19	10				
HJGKTQ	PowerPlex® FUSION					
	17.3,18.3	16,17	10,10	14,15	10,10	
3	10,11	12,18	13,13	20,24	13,13	11,12
	15,17	13,15	29,30	11,11	X,Y	12,12
	21,23	10,11	14,20		7,9.3	11,11
	17,19	10				

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 3 - STR Results

HTRMER						
	17.3,18.3	16,17	10,10	14,15	10,10	
3	10,11	12,18	13,13	20,24	13,13	11,12
	15,17	13,15	29,30	11,11	X,Y	12,12
	21,23			15,28.2	7,9.3	11,11
	17,19	10			2	
HUY3LX	GlobalFiler™					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23			15,28.2	7,9.3	11
	17,19	10			2	
JUXPEV	PowerPlex® Fusion 5C					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23	10,11	14,20		7,9.3	11
	17,19	10				
JYWWA7	Verifiler					
	17.3,18.3	16,17	10,10	14,15	10,10	18,19
3	10,11	12,18	13,13	20,24	13,13	11,12
	15,17	13,15	29,30	11,11	X,Y	12,12
	21,23	10,11	14,20		7,9.3	11,11
	17,19				2	
K43WTV	GlobalFiler™					
	17.3,18.3	16,17	10,10	14,15	10,10	
3	10,11	12,18	13,13	20,24	13,13	11,12
	15,17	13,15	29,30	11,11	X,Y	12,12
	21,23			15,28.2	7,9.3	11,11
	17,19	10			2	
KMU6QQ	PowerPlex® Fusion					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23	10,11	14,20		7,9.3	11
	17,19	10				

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 3 - STR Results

KR7QZW	GlobalFiler™					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23			15,28.2	7,9.3	11
	17,19	10			2	
KZEKUP	PowerPlex® Fusion 6C					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23	10,11	14,20	15,28.2	7,9.3	11
	17,19	10	19	17		
KZZVTX	PowerPlex® Fusion 6C					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23	10,11	14,20	15,28.2	7,9.3	11
	17,19	10	19	17		
L4UCHX	GlobalFiler™					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23			15,28.2	7,9.3	11
	17,19	10			2	
LAYBUM	PowerPlex® 5C					
	17.3,18.3	16,17	10	14,15	10	--
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23	10,11	14,20	--	7,9.3	11
	17,19	10	--	--	--	
LKHPWP	PowerPlex® Fusion					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23	10,11	14,20		7,9.3	11
	17,19	10				

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 3 - STR Results

LM72WV	GlobalFiler™					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23			15,28.2	7,9.3	11
	17,19	10			2	
LNG4HT	GlobalFiler™					
	17.3,18.3	16,17	10,10	14,15	10,10	
3	10,11	12,18	13,13	20,24	13,13	11,12
	15,17	13,15	29,30	11,11	X,Y	12,12
	21,23			15,28.2	7,9.3	11,11
	17,19	10			2	
NEP64T	GlobalFiler™ (eDNA Brutus)					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23			15,28.2	7,9.3	11
	17,19	10			2	
NLRDBL	PowerPlex® FUSION 6C (M-FISYS)					
	17.3,18.3	16,17	10,10	14,15	10,10	
3	10,11	12,18	13,13	20,24	13,13	11,12
	15,17	13,15	29,30	11,11	X,Y	12,12
	21,23	10,11	14,20		7,9.3	11,11
	17,19	10	19	17		
NWAV4T	PowerPlex® Fusion 6C					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23	10,11	14,20	15,28.2	7,9.3	11
	17,19	10	19	17		
P36CTN	PowerPlex® Fusion					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23	10,11	14,20		7,9.3	11
	17,19	10				

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 3 - STR Results

PY7Y9K	GlobalFiler™ (Forensic DNA comparison and identification management system)					
	17.3,18.3	16,17	10,10	14,15	10,10	
3	10,11	12,18	13,13	20,24	13,13	11,12
	15,17	13,15	29,30	11,11	X,Y	12,12
	21,23			15,28.2	7,9.3	11,11
	17,19	10			2	
QL2YXT	GlobalFiler™ Express					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23			15,28.2	7,9.3	11
	17,19	10			2	
QRNRAR	GlobalFiler™					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23			15,28.2	7,9.3	11
	17,19	10			2	
QX98EB	GlobalFiler™					
	17.3,18.3	16,17	10,10	14,15	10,10	
3	10,11	12,18	13,13	20,24	13,13	11,12
	15,17	13,15	29,30	11,11	X,Y	12,12
	21,23			15,28.2	7,9.3	11,11
	17,19	10			2	
R986ZP	GlobalFiler™					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23			15,28.2	7,9.3	11
	17,19	10			2	
RBY4EM	PowerPlex® Fusion					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23	10,11	14,20		7,9.3	11
	17,19	10				

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 3 - STR Results

RVLQWP	GlobalFiler™					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23			15,28.2	7,9.3	11
	17,19	10			2	
RZDZ8N	GlobalFiler™					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23			15,28.2	7,9.3	11
	17,19	10			2	
T3DQQ9	GlobalFiler™					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23			15,28.2	7,9.3	11
	17,19	10			2	
TC496G	PowerPlex® Fusion 6C, PowerPlex® CS7, VeriFiler™ Express (Familias)					
	17.3,18.3	16,17	10	14,15	10	18,19
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23	10,11	14,20	15,28.2	7,9.3	11
	17,19	10	19	17	2	
TERK4M	GlobalFiler™					
	17.3,18.3	16,17	10,10	14,15	10,10	
3	10,11	12,18	13,13	20,24	13,13	11,12
	15,17	13,15	29,30	11,11	X,Y	12,12
	21,23			15,28.2	7,9.3	11,11
	17,19	10			2	
TQL2TN	PowerPlex® Fusion					
	17.3,18.3	16,17	10,10	14,15	10,10	
3	10,11	12,18	13,13	20,24	13,13	11,12
	15,17	13,15	29,30	11,11	X,Y	12,12
	21,23	10,11	14,20		7,9.3	11,11
	17,19	10				

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 3 - STR Results

TVGVQP	PowerPlex® Fusion 5C					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23	10,11	14,20		7,9.3	11
	17,19	10				
U7RK6K	PowerPlex® Fusion					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23	10,11	14,20		7,9.3	11
	17,19	10				
UGRBN8	GlobalFiler™					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23			15,28.2	7,9.3	11
	17,19	10			2	
UL9FKG	Investigator ESSplex SE plus (Familias)					
	17.3,18.3	16,17	10,10	14,15		
3		12,18	13,13	20,24		11,12
	15,17	13,15	29,30	11,11	X,Y	
	21,23			15,28.2	7,9.3	
	17,19					
UZQ99N	PowerPlex® Fusion 6C					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,20	11	X,Y	12
	21,23	10,11	14,20	15,28.2	7,9.3	11
	17,19	10	19	17		
VK83CE	Identifiler®					
		16,17		14,15	10,10	
3	10,11	12,18			13,13	11,12
	15,17	13,15	29,30		X,Y	12,12
	21,23				7,9.3	11,11
	17,19					

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 3 - STR Results

VTYKQM	GlobalFiler™ Express					
	17.3,18.3	16,17	10	14,15	10	-
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23	-	-	15,28.2	7,9.3	11
	17,19	10	-	-	2	
WA663K	PowerPlex® Fusion Direct					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23	10,11	14,20		7,9.3	11
	17,19	10				
X9N8AK	GlobalFiler™					
	17.3,18.3	16,17	10,10	14,15	10,10	
3	10,11	12,18	13,13	20,24	13,13	11,12
	15,17	13,15	29,30	11,11	X,Y	12,12
	21,23			15,28.2	7,9.3	11,11
	17,19	10			2	
XCNJ7K	PowerPlex®					
	17.3,18.3	16,17	10,10	14,15	10,10	
3	10,11	12,18	13,13	20,24	13,13	11,12
	15,17	13,15	29,30	11,11	X,Y	12,12
	21,23	10,11	14,20		7,9.3	11,11
	17,19	10				
XHETFH	GlobalFiler™					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23			15,28.2	7,9.3	11
	17,19	10			2	
XV4R7K	GlobalFiler™ PowerPlex 21					
	17.3,18.3	16,17	10	14,15	10	18,19
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23	10,11	14,20	15,28.2	7,9.3	11
	17,19	10			2	

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 3 - STR Results

Y9MU2H	PowerPlex® Fusion 6C					
	17.3,18.3	16,17	10	14,15	10	
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23	10,11	14,20	15,28.2	7,9.3	11
	17,19	10	19	17		
YFHYVJ	GlobalFiler™ Express					
	17.3,18.3	16,17	10	14,15	10	-
3	10,11	12,18	13	20,24	13	11,12
	15,17	13,15	29,30	11	X,Y	12
	21,23	-	-	15,28.2	7,9.3	11
	17,19	10	-	-	2	
YL9A6H	GlobalFiler™					
	17.3,18.3	16,17	10,10	14,15	10,10	
3	10,11	12,18	13,13	20,24	13,13	11,12
	15,17	13,15	29,30	11,11	X,Y	12,12
	21,23			15,28.2	7,9.3	11,11
	17,19	10			2	

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 4 - STR Results

26X8KE	PowerPlex® Fusion 5C					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12		7,9	8
	14,17	10				
2QCRGF	GlobalFiler™ Express (Genemapper ID-x)					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8
	14,17	10			2	
3V797E	GlobalFiler™					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8
	14,17	10			2	
4TECJ7	Identifiler® Plus, PowerPlex® ESI 17 Fast, NGMSelect (GeneMapper ID v.3.2.)					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8
	14,17					
67CZN6	PowerPlex® PP21					
	13,15	21,25		14,18	12	12,17
4	8,11	12,15		23,25	8,11	12,13
	13,16	11,15	31,32.2		X,Y	10,11
	21,22	9,14	12		7,9	8
	14,17					
77TGGC	GlobalFiler™ Express					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8
	14,17	10			2	

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 4 - STR Results

7P67VA	PowerPlex® Fusion 6C					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12	25.2,26.2	7,9	8
	14,17	10	18	17		
8CYBC9	PowerPlex® Fusion 6C					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12	25.2,26.2	7,9	8
	14,17	10	18	17		
8GANT7	GlobalFiler™					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8
	14,17	10			2	
8GU6AA	PowerPlex® Fusion 6C					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12	25.2,26.2	7,9	8
	14,17	10	18	17		
9736V9	GlobalFiler™					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8
	14,17	10			2	
9RDQ9H	HuaXia Platinum (GeneMapper® ID-X)					
	13,15	21,25	11,14	14,18	12	12,17
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12		7,9	8
	14,17				2	

TABLE 1

Item 4 - STR Results

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	
A2648Z	PowerPlex® FUSION 6C (M-FISYS)					
	13,15	21,25	11,14	14,18	12,12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12,12		7,9	8,8
	14,17	10	18	17		
AKHQT8	PowerPlex® Fusion 6C					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12	25.2,26.2	7,9	8
	14,17	10	18	17		
AN48BT	GlobalFiler™					
	13,15	21,25	11,14	14,18	12,12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8,8
	14,17	10			2	
ATVET2	GlobalFiler™					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8
	14,17	10			2	
B2N8EZ	PowerPlex® Fusion System, NGMSElect					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12	25.2,26.2	7,9	8
	14,17	10				
B8CUA6	PowerPlex® F6C					
	13,15	21,25	11,14	14,18	12,12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12,12	25.2,26.2	7,9	8,8
	14,17	10	18	17		

TABLE 1

Item 4 - STR Results

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	
BVHDK6	PowerPlex® Fusion 6C					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12	25.2,26.2	7,9	8
	14,17	10	18	17		
C47NAQ	GlobalFiler™ Express					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8
	14,17	10			2	
CUGZC3	GlobalFiler™					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8
	14,17	10			2	
CXGB93	GlobalFiler™					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8
	14,17	10			2	
DATZLX	PowerPlex® Fusion					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12		7,9	8
	14,17	10				
DCGCK4	PowerPlex® Fusion 6C					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12	25.2,26.2	7,9	8
	14,17	10	18	17		

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 4 - STR Results

DGQP33	GlobalFiler™					
	13,15	21,25	11,14	14,18	12,12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8,8
	14,17	10			2	
DP6CC7	PowerPlex® Fusion 5C					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12		7,9	8
	14,17	Inconclusive				
DQCRKW	PowerPlex® ESI 16 FAST					
	13,15	21,25	11,14	14,18		
4		12,15	15,17	23,25		12,13
	13,16	11,15	31,32.2	11,15	X,Y	
	21,22				7,9	
	14,17					
DXEZP4	PowerPlex® Fusion 6C					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12	25.2,26.2	7,9	8
	14,17	10	18	17		
E6RCHV	GlobalFiler™ Express					
	13,15	21,25	11,14	14,18	12,12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8,8
	14,17	10			2	
EE3D4W	Identifiler® Plus (GeneMapper® ID-X Software v1.5)					
		21,25		14,18	12,12	
4	8,11	12,15			8,11	12,13
	13,16	11,15	31,32.2		X,Y	10,11
	21,22				7,9	8,8
	14,17					

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 4 - STR Results

EFDFPV	Identifiler®					
		21,25		14,18	12,12	
4	8,11	12,15			8,11	12,13
	13,16	11,15	31,32.2		X,Y	10,11
	21,22				7,9	8,8
	14,17					
EJCRLV	Investigator® 24plex					
	13,15	21,25	11,14	14,18	12,12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8,8
	14,17	10				
EL24KZ	PowerPlex® Fusion					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12		7,9	8
	14,17	10				
EV78BW	PowerPlex® Fusion					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12		7,9	8
	14,17	10				
EZWHKU	PowerPlex® Fusion System, ESX17 System, CS7 System, GlobalFiler™					
	13,15	21,25	11,14	14,18	12,12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12,12	25.2,26.2	7,9	8,8
	14,17	10			2	
FQP3EL	PowerPlex® 21					
	13,15	21,25		14,18	12,12	12,17
4	8,11	12,15		23,25	8,11	12,13
	13,16	11,15	31,32.2		X,Y	10,11
	21,22	9,14	12,12		7,9	8,8
	14,17					

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 4 - STR Results

GC4A2Y	GlobalFiler™ (eDNA Brutus)					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8
	14,17	10			2	
GNGAXT	PowerPlex® FUSION 6C (M-FISYS)					
	13,15	21,25	11,14	14,18	12,12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12,12		7,9	8,8
	14,17	10	18	17		
GT9GF2	Identifiler® VERIFILER EXPRESS,IDENTIFILER DIRECT, NGMSE, PowerPlex® FUSION,CS7,ESI17,ESX17,CS7,PP21 (PATPCR, FAMILIAS 3.2.2)					
	13,15	21,25	11,14	14,18	12	12,17
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12	25.2,26.2	7,9	8
	14,17	10	18	17		
H2XPDX	GlobalFiler™					
	13,15	21,25	11,14	14,18	12,12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8,8
	14,17	10			2	
HAVGLQ	PowerPlex® Fusion ([Lab-specific software])					
	13,15	21,25	11,14	14,18	12,12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12,12		7,9	8,8
	14,17	10				
HJGKTQ	PowerPlex® FUSION					
	13,15	21,25	11,14	14,18	12,12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12,12		7,9	8,8
	14,17	10				

TABLE 1

Item 4 - STR Results

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	
HTRMER						
	13,15	21,25	11,14	14,18	12,12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8,8
	14,17	10			2	
HUY3LX	GlobalFiler™					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8
	14,17	10			2	
JUXPEV	PowerPlex® Fusion 5C					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12		7,9	8
	14,17	10				
JYWWA7	Verifiler					
	13,15	21,25	11,14	14,18	12,12	12,17
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12,12		7,9	8,8
	14,17				2	
K43WTV	GlobalFiler™					
	13,15	21,25	11,14	14,18	12,12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8,8
	14,17	10			2	
KMU6QQ	PowerPlex® Fusion					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12		7,9	8
	14,17	10				

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 4 - STR Results

KR7QZW	GlobalFiler™					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8
	14,17	10			2	
KZEKUP	PowerPlex® Fusion 6C					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12	25.2,26.2	7,9	8
	14,17	10	18	17		
KZZVTX	PowerPlex® Fusion 6C					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12	25.2,26.2	7,9	8
	14,17	10	18	17		
L4UCHX	GlobalFiler™					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8
	14,17	10			2	
LAYBUM	PowerPlex® 5C					
	13,15	21,25	11,14	14,18	12	--
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12	--	7,9	8
	14,17	10	--	--	--	
LKHPWP	PowerPlex® Fusion					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12		7,9	8
	14,17	10				

TABLE 1

Item 4 - STR Results

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	
LM72WV	GlobalFiler™					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8
	14,17	10			2	
LNG4HT	GlobalFiler™					
	13,15	21,25	11,14	14,18	12,12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8,8
	14,17	10			2	
NEP64T	GlobalFiler™ (eDNA Brutus)					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8
	14,17	10			2	
NLRDBL	PowerPlex® FUSION 6C (M-FISYS)					
	13,15	21,25	11,14	14,18	12,12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12,12		7,9	8,8
	14,17	10	18	17		
NWAV4T	PowerPlex® Fusion 6C					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12	25.2,26.2	7,9	8
	14,17	10	18	17		
P36CTN	PowerPlex® Fusion					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12		7,9	8
	14,17	10				

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 4 - STR Results

PY7Y9K	GlobalFiler™ (Forensic DNA comparison and identification management system)					
	13,15	21,25	11,14	14,18	12,12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8,8
	14,17	10			2	
QL2YXT	GlobalFiler™ Express					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8
	14,17	10			2	
QRNRAR	GlobalFiler™					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8
	14,17	10			2	
QX98EB	GlobalFiler™					
	13,15	21,25	11,14	14,18	12,12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8,8
	14,17	10			2	
R986ZP	GlobalFiler™					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8
	14,17	10			2	
RBY4EM	PowerPlex® Fusion					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12		7,9	8
	14,17	10				

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 4 - STR Results

RVLQWP	GlobalFiler™					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8
	14,17	10			2	
RZDZ8N	GlobalFiler™					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8
	14,17	10			2	
T3DQQ9	GlobalFiler™					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8
	14,17	10			2	
TC496G	PowerPlex® Fusion 6C, PowerPlex® CS7, VeriFiler™ Express (Familias)					
	13,15	21,25	11,14	14,18	12	12,17
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12	25.2,26.2	7,9	8
	14,17	10	18	17	2	
TERK4M	GlobalFiler™					
	13,15	21,25	11,14	14,18	12,12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8,8
	14,17	10			2	
TQL2TN	PowerPlex® Fusion					
	13,15	21,25	11,14	14,18	12,12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12,12		7,9	8,8
	14,17	10				

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 4 - STR Results

TVGVQP	PowerPlex® Fusion 5C					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12		7,9	8
	14,17	10				
U7RK6K	PowerPlex® Fusion					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12		7,9	8
	14,17	10				
UGRBN8	GlobalFiler™					
	13,15	21,25	11,14	14,18	12,NR	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8
	14,17	10			2	
UL9FKG	Investigator ESSplex SE plus (Familias)					
	13,15	21,25	11,14	14,18		
4		12,15	15,17	23,25		12,13
	13,16	11,15	31,32.2	11,15	X,Y	
	21,22			25.2,26.2	7,9	
	14,17					
UZQ99N	PowerPlex® Fusion 6C					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12	25.2,26.2	7,9	8
	14,17	10	18	17		
VK83CE	Identifiler®					
		21,25		14,18	12,12	
4	8,11	12,15			8,11	12,13
	13,16	11,15	31,32.2		X,Y	10,11
	21,22				7,9	8,8
	14,17					

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 4 - STR Results

VTYKQM	GlobalFiler™ Express					
	13,15	21,25	11,14	14,18	12	-
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	-	-	25.2,26.2	7,9	8
	14,17	10	-	-	2	
WA663K	PowerPlex® Fusion Direct					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12		7,9	8
	14,17	10				
X9N8AK	GlobalFiler™					
	13,15	21,25	11,14	14,18	12,12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8,8
	14,17	10			2	
XCNJ7K	PowerPlex®					
	13,15	21,25	11,14	14,18	12,12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12,12		7,9	8,8
	14,17	10				
XHETFH	GlobalFiler™					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8
	14,17	10			2	
XV4R7K	GlobalFiler™ Powerplex 21 (Familias)					
	13,15	21,25	11,14	14,18	12	12,17
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12	25.2,26.2	7,9	8
	14,17	10			2	

TABLE 1

WebCode	Amplification Kits (Probabilistic Genotyping)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	

Item 4 - STR Results

Y9MU2H	PowerPlex® Fusion 6C					
	13,15	21,25	11,14	14,18	12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	9,14	12	25.2,26.2	7,9	8
	14,17	10	18	17		
YFHYVJ	GlobalFiler™ Express					
	13,15	21,25	11,14	14,18	12	-
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22	-	-	25.2,26.2	7,9	8
	14,17	10	-	-	2	
YL9A6H	GlobalFiler™					
	13,15	21,25	11,14	14,18	12,12	
4	8,11	12,15	15,17	23,25	8,11	12,13
	13,16	11,15	31,32.2	11,15	X,Y	10,11
	21,22			25.2,26.2	7,9	8,8
	14,17	10			2	

Paternity Index Results

TABLE 2

WebCode	Population Database(s)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA					

Item 3PI - Paternity Index Results

3V797E FBI PopStats

			1.8051	4.6904		
3PI	2.4390			2.7762		1.5903
		3.1949				
	2.1872					
	1.7612					

4TECJ7 laboratory specific database

	0.000001	0.000008	1.901864	4.273504	0.000082	
3PI	2.551020	0.000038	0.000170	1.953125	0.000000	1.616292
	0.002176	2.941176	0.006714	0.000001		0.000074
	2.049180			0.000298	0.000009	0.000001
	1.678979					

67CZN6 Promega

	0	0		4.6904	0	0
3PI	2.4390	0		2.7762	0	1.5903
	0	3.1949	0			0
	2.1872	0	0		0	0
	1.7612					

77TGGC NIST-STRBASE

	0.0028	0.0010	1.8050	4.6904	0.0010	
3PI	2.4390	0.0040	0.0028	2.7762	0.0020	1.5903
	0.0030	3.1948	0.0010	0.0028		0.0030
	2.1872			0.0064	0.00001	0.0001
	1.7611					

9RDQ9H NIST-STRBASE

	0.0020	1.3370E-5	1.8050	4.6883	0.0003	2.1235E-8
3PI	2.4392	0.0001	0.0013	2.7769	8.2989E-7	1.5903
	0.0077	3.1947	0.0069	3.1121E-6		0.0032
	2.1879	0.0002	0.0003		0.0004	1.9050E-5
	1.7610					

TABLE 2

WebCode	Population Database(s)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA					

Item 3PI - Paternity Index Results

AN48BT [Nationality] Caucasian

	0.00	0.00	1.79	4.19	0.00	
3PI	2.26	0.00	5.15	2.49	0.00	1.67
	4.40	3.07	0.00	0.00		0.00
	1.97			0.00	0.00	0.00
	1.97					

B2N8EZ Local Database

			1,92	4,26		
3PI	2,55			2,00		1,62
		2,94				
	2,27					
	1,69					

B8CUA6 FBI PopStats

				3.60		
3PI	2.46					1.63
		3.70				
	2.17					
	1.90					

C47NAQ FBI PopStats

	0	0	2.0404	3.6075	0	
3PI	2.4631	0	0	2.8043	0	1.6289
	0	3.4819	0	0		0
	2.1720			0	0	0
	1.8706					

DP6CC7 FBI PopStats, Laboratory Specific Database

		0.001		3.51	0.001	
3PI	2.45	0.004			0.002	1.63
	0.003	3.63	0.001			0.003
	2.14	0.001	0.001		0.001	0.00014
	1.89					

TABLE 2

WebCode	Population Database(s)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA					

Item 3PI - Paternity Index Results

EE3D4W [Country-specific reference]

				12.788		
3PI	1.432					2.081
		7.278				
	2.996					
	2.027					

EFDFPV NIST-STRBASE

		0		4.69	0	
3PI	2.43	0			0	1.59
	0	3.19	0			0
	2.18				0	0
	1.76					

FQP3EL NIST-STRBASE

	0	0		4.6904	0	0
3PI	2.4390	0		2.7762	0	1.5903
	0	3.1949	0			0
	2.1872	0	0		0	0
	1.7612					

GC4A2Y NIST-STRBASE

	0.00	0.00	1.8051	4.6904	0.00	
3PI	2.4390	0.00	0.00	2.7762	0.00	1.5903
	0.00	3.1949	0.00	0.00		0.00
	2.19			0.00	0.00	0.00
	1.7612					

GT9GF2 NIST-STRBASE

	EXCLUSION	EXCLUSION	1.805054	4.690431	EXCLUSION	EXCLUSION
3PI	2.439024	EXCLUSION	EXCLUSION	2.776235	EXCLUSION	1.590330
	EXCLUSION	3.194888	EXCLUSION	EXCLUSION		EXCLUSION
	2.187226	EXCLUSION	EXCLUSION	EXCLUSION	EXCLUSION	EXCLUSION
	1.761183					

TABLE 2

WebCode	Population Database(s)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA					

Item 3PI - Paternity Index Results

KR7QZW Laboratory Specific Database

	0.000	0.000	2.040	3.608	0.000	
3PI	2.463	0.000	0.000	2.804	0.000	1.629
	0.000	3.482	0.000	0.000		0.000
	2.172			0.000	0.000	0.000
	1.871					

KZEKUP NIST-STRBASE

	0	0	11.79245	5.51876	0	
3PI	2.46062	0	0	2	0	2
	0	6.21890	0	0		0
	2	0	0	0	0	0
	2.12404					

L4UCHX Life Technologies Database

		0		3.17	0	
3PI	2.77	0			0	1.61
	0	3.17	0			0
	2.17				0	0
	2.04					

LAYBUM FBI PopStats, +Promega/NIST

	0.00	0.00	1.82	3.55	0.00	--
3PI	2.44	0.00	0.00	2.77	0.00	1.62
	0.00	3.63	0.00	0.00		0.00
	2.14	0.00	0.00	--	0.00	0.00
	1.89					

NEP64T NIST-STRBASE

	0	0	1.81	4.69	0	
3PI	2.44	0	0	2.78	0	1.59
	0	3.19	0	0		0
	2.19			0	0	0
	1.76					

TABLE 2

WebCode	Population Database(s)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA					

Item 3PI - Paternity Index Results

PY7Y9K FBI PopStats, Forensic Science International: Genetics V.25, Nov 2016, P175-181;Population data on the expanded CODIS core STR loci for eleven populations of significance for forensic DNA analyses in the United States

	0	0	2.040	3.608	0	
3PI	2.463	0	0	2.804	0	1.629
	0	3.482	0	0		0
	2.172			0	0	0
	1.871					

QL2YXT NIST-STRBASE

	0.0000	0.0000	1.8050	4.6904	0.0000	
3PI	2.4390	0.0000	0.0000	2.7762	0.0000	1.5903
	0.0000	3.1948	0.0000	0.0000		0.0000
	2.1872			0.0000	0.0000	0.0000
	1.7611					

R986ZP NIST-STRBASE

	0	0	1.81	4.69	0	
3PI	2.44	0	0	2.78	0	1.59
	0	3.19	0	0		0
	2.19			0	0	0
	1.76					

RVLQWP FBI PopStats

			1.8051	4.6904		
3PI	2.439			2.7762		1.5903
		3.1949				
	2.1872					
	1.7612					

TC496G NIST-STRBASE

	0	0	1.8052E+00	4.6904E+00	0	0
3PI	2.4390E+00	0	0	2.7768E+00	0	1.5902E+00
	0	3.1942E+00	0	0		0
	2.1874E+00	0	0	0	0	0
	1.7612E+00					

TABLE 2

WebCode	Population Database(s)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA					

Item 3PI - Paternity Index Results

TQL2TN FBI PopStats

	0.0000	0.0000	1.8051	3.6075	0.0000	
3PI	2.4631	0.0000	0.0000	2.7762	0.0000	1.6343
	0.0000	3.7064	0.0000	0.0000		0.0000
	2.1777	0.0000	0.0000		0.0000	0.0000
	1.9026					

UGRBN8 Combined [Country] and [Country] globalfiler

	0	0			0	
3PI		0	0		0	
	0		0	0		0
				0	0	0

VTYKQM NIST-STRBASE

	0.0028	0.0010	1.8050	4.6904	0.0010	-
3PI	2.4390	0.0040	0.0028	2.7762	0.0020	1.5903
	0.0030	3.1948	0.0010	0.0028		0.0030
	2.1872	-	-	0.0064	0.00001	0.0001
	1.7611					

XCNJ7K NIST-STRBASE

	0.00	0.00	1.87	4.60	0.00	
3PI	2.39	0.00	0.00	0.00	0.00	1.61
	0.00	3.26	0.00	0.00		0.00
	2.08	0.00	0.00		0.00	0.00
	1.73					

YFHYVJ NIST-STRBASE

	0.0028	0.0010	1.8050	4.6904	0.0010	-
3PI	2.4390	0.0040	0.0028	2.7762	0.0020	1.5903
	0.0030	3.1948	0.0010	0.0028		0.0030
	2.1872	-	-	0.0064	0.0000	0.0001
	1.7611					

TABLE 2

WebCode	Population Database(s)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA					

Item 3PI - Paternity Index Results

YL9A6H Laboratory Specific Database

	0.0	0.0	1.69	3.61	0.0	
3PI	2.33	0.0	0.0	2.08	0.0	1.52
	0.0	2.42	0.0	0.0		0.0
	1.65			0.0	0.0	0.0
	1.72					

TABLE 2

WebCode	Population Database(s)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA					

Item 4PI - Paternity Index Results

26X8KE	NIST-STRBASE					
	5.2576	7.5075	0.91996	5.7208	2.8305	
4PI	2.1313	3.5613	2.4839	2.8474	5.1813	0.91191
	3.3738	4.2445	6.2422	1.5581		1.8275
	2.4378	10.776	6.2775		2.9603	2.1450
2QCRGF	NIST-STRBASE					
	4.371	15.723	0.787	6.378	2.950	
4PI	1.802	3.861	2.360	2.360	4.537	0.922
	4.0000	3.687	6.553	1.174		1.788
	2.146			21.459	3.420	2.061
	2.034					
3V797E	FBI PopStats					
	7.5188	13.369	0.90253	4.6904	2.5786	
4PI	2.4390	4.8123	2.5419	2.7762	4.1494	0.79517
	3.4060	3.1949	6.9444	1.5562		1.6186
	2.1872			12.019	4.1982	1.9051
	1.7612					
4TECJ7	laboratory specific database					
	6.849315	10.638298	0.950932	4.273504	2.780095	
4PI	2.551020	4.672897	2.127660	1.953125	3.566334	0.808146
	2.590674	2.941176	7.142857	1.351351		1.743983
	2.049180			11.904762	2.520161	1.797914
	1.678979					
67CZN6	Promega					
	7.5188	13.3690		4.6904	2.5786	2.1115
4PI	2.4390	4.8123		2.7762	4.1494	0.7952
	3.4060	3.1949	6.9444			1.6186
	2.1872	8.2102	5.0150		4.1982	1.9051
	1.7612					

TABLE 2

WebCode	Population Database(s)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA					

Item 4PI - Paternity Index Results

77TGGC NIST-STRBASE

	7.5187	13.3689	0.9025	4.6904	2.5786	
4PI	2.4390	4.8123	2.5419	2.7762	4.1493	0.7951
	3.4059	3.1948	6.9444	1.5561		1.6186
	2.1872			12.0192	4.1981	1.9051
	1.7611					

7P67VA FBI PopStats, NIST 1036 (2017) amended database within Popstats

	7.5188	13.369	0.90253	4.6904	2.5786	
4PI	2.4390	4.8123	2.5419	2.7762	4.1494	0.79517
	3.4060	3.1949	6.9444	1.5562		1.6186
	2.1872	8.2102	5.0150	12.019	4.1982	1.9051
	1.7612					

8CYBC9 FBI PopStats

	5.3648	13.158	0.90383	6.4185	2.8433	
4PI	2.3485	3.8670	2.3697	2.2292	4.5331	0.95639
	3.2873	2.9886	9.7466	1.1740		1.6437
	2.0713	7.7399	7.2046	13.158	2.8281	1.9775

8GANT7 FBI PopStats

	5.3648	13.158	0.90383	6.4185	2.8433	
4PI	2.3485	3.8670	2.3697	2.2292	4.5331	0.95639
	3.2873	2.9886	9.7466	1.1740		1.6437
	2.0713			13.158	2.8281	1.9775

8GU6AA FBI PopStats, FBI NIST 2017

	7.51	13.3	0.902	4.69	2.57	
4PI	2.43	4.81	2.54	2.77	4.14	0.795
	3.40	3.19	6.94	1.55		1.61
	2.18	8.21	5.01	12.0	4.19	1.90
	1.76					

9736V9 NIST-STRBASE

[No paternity index values were reported by this participant for this item.]

TABLE 2

WebCode	Population Database(s)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA					

Item 4PI - Paternity Index Results

9RDQ9H NIST-STRBASE

	7.5208	13.3704	0.9025	4.6883	2.5786	2.1235
4PI	2.4392	4.8133	2.5423	2.7769	4.1494	0.7952
	3.4057	3.1947	6.9423	1.5560		1.6188
	2.1879	8.2045	5.0139		4.1977	1.9050
	1.7610					

A2648Z NIST-STRBASE, [Country-specific population study]

	4.3706	10.4167	0.7867	5.5006	3.6324	
4PI	1.8162	3.2468	2.3596	2.3596	6.5963	0.9876
	4.5005	3.0469	8.9928	1.1743		1.96
	2.7494	11.9048	6.3291		3.7369	2.0951
	1.547					

AKHQT8 NIST-STRBASE

	4.37	15.7	0.786	6.37	2.95	
4PI	1.80	3.86	2.36	2.36	4.53	0.921
	4.00	3.68	6.55	1.17		1.78
	2.14	7.12	5.90	21.4	3.42	2.06

AN48BT [Nationality] Caucasian

	7.31	11.73	0.89	4.19	2.86	
4PI	2.26	3.88	2.58	2.49	3.74	0.84
	4.40	3.07	5.87	1.25		1.68
	1.97			16.50	4.19	1.87
	1.97					

B2N8EZ Local Database

	6,80	10,68	0,96	4,26	2,78	
4PI	2,55	4,71	2,15	2,00	3,56	0,81
	2,59	2,94	7,16	1,34		1,75
	2,27	7,26	6,52	12,69	2,52	1,82
	1,69					

TABLE 2

WebCode	Population Database(s)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA					

Item 4PI - Paternity Index Results

B8CUA6 FBI PopStats

		25.3		3.60	2.82	
4PI	2.46	4.55			5.02	0.817
	4.66	3.70	7.00			1.66
	2.17				3.01	1.82
	1.90					

BVHDK6 FBI PopStats

	5.36	13.1	0.90	6.41	2.84	
4PI	2.34	3.86	2.36	2.22	4.53	0.95
	3.28	2.98	9.74	1.17		1.64
	2.07	7.73	7.20	13.1	2.82	1.97

C47NAQ FBI PopStats

	10.101	25.253	1.0202	3.6075	2.8450	
4PI	2.4631	4.6992	2.8852	2.8043	4.9261	.81446
	4.8077	3.4819	6.9638	1.3740		1.6694
	2.1720			10.101	3.0157	1.8282
	1.8706					

CUGZC3 FBI PopStats

	5.3648	13.158	0.90383	6.4185	2.8433	
4PI	2.3485	3.8670	2.3697	2.2292	4.5331	0.95639
	3.2873	2.9886	9.7466	1.1740		1.6437
	2.0713			13.158	2.8281	1.9775

CXGB93 FBI PopStats

	5.3648	13.158	0.90383	6.4185	2.8433	
4PI	2.3485	3.8670	2.3697	2.2292	4.5331	0.95639
	3.2873	2.9886	9.7466	1.1740		1.6437
	2.0713			13.158	2.8281	1.9775

TABLE 2

WebCode	Population Database(s)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA					

Item 4PI - Paternity Index Results

DATZLX NIST-STRBASE

	7.5187	13.3689	0.9025	4.6904	2.5786	
4PI	2.4390	4.8123	2.5419	2.7762	4.1493	0.7951
	3.4059	3.1948	6.9444	1.5561		1.6186
	2.1872	8.2101	5.0150		4.1981	1.9051
	1.7611					

DCGCK4 FBI PopStats, NIST 1036 (2017) amended database within Popstats

	7.5188	13.369	0.90253	4.6904	2.5786	
4PI	2.4390	4.8123	2.5419	2.7762	4.1494	0.79517
	3.4060	3.1949	6.9444	1.5562		1.6186
	2.1872	8.2102	5.0150	12.019	4.1982	1.9051
	1.7612					

DGQP33 NIST 1036 Revised US Population Dataset (July 2017)

	7.5188	13.369	0.90253	4.6904	2.5786	
4PI	2.4390	4.8123	2.5419	2.7762	4.1494	0.79517
	3.4060	3.1949	6.9444	1.5562		1.6186
	2.1872			12.019	4.1982	1.9051
	1.7612					

DP6CC7 FBI PopStats, Laboratory Specific Database

		21.8		3.51	2.81	
4PI	2.45	4.47			4.91	0.813
	4.57	3.63	6.78			1.65
	2.14	8.63	4.73		2.99	1.83
	1.89					

DQCRKW NIST-STRBASE

	7,520	13, 370	0,903	4,688		
4PI		4,813	2, 542	2, 777		0, 795
	3, 406	3, 195	6, 942	1, 556		
	2, 188				4, 198	
	1, 761					

DXEZP4 FBI PopStats

[No paternity index values were reported by this participant for this item.]

TABLE 2

WebCode	Population Database(s)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA					

Item 4PI - Paternity Index Results

E6RCHV NIST-STRBASE

	7.5203	13.3704	0.9025	4.6883	2.5786	
4PI	2.4392	4.8133	2.5423	2.7769	4.1494	0.7952
	3.4057	3.1947	6.9423	1.5560		1.6188
	2.1879			12.0333	4.1977	1.9050
	1.7610					

EE3D4W [Country-specific reference]

		14.749		12.788	4.662	
4PI	1.432	3.008			1.779	1.040
	3.831	7.278	4.826			2.052
	2.996				1.053	1.803
	2.027					

EFDFPV NIST-STRBASE

		13.36		4.69	2.57	
4PI	2.43	4.81			4.14	0.79
	3.40	3.19	6.94			1.61
	2.18				4.19	1.90
	1.76					

EJCRLV NIST-STRBASE

	7.5188	13.3703	0.902617	4.69043	2.57891	
4PI	2.43902	4.81232	2.54245	2.77679	4.14938	0.795086
	3.40634	3.19425	6.94444	1.55618		1.61865
	2.18745			12.024	4.19857	1.90532
	1.76118					

EL24KZ NIST-STRBASE

	7.52	13.4	0.903	4.69	2.58	
4PI	2.44	4.81	2.54		4.15	0.795
	3.41	3.19	6.94	1.56		1.62
	2.19	8.21	5.02		4.20	1.91
	1.76					

TABLE 2

WebCode	Population Database(s)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA					

Item 4PI - Paternity Index Results

EV78BW NIST-STRBASE

	7.5187	13.3689	0.9025	4.6904	2.5786	
4PI	2.4390	4.8123	2.5419	2.7762	4.1493	0.7951
	3.4059	3.1948	6.9444	1.5561		1.6186
	2.1872	8.2101	5.0150		4.1981	1.9051
	1.7611					

EZWHKU NIST-STRBASE

	7.5188	13.3690	0.9025	4.6904	2.5786	
4PI	2.4390	4.8123	2.5419	2.7762	4.1494	0.7952
	3.4060	3.1949	6.9444	1.5562		1.6186
	2.1872	8.2102	5.0150	12.0192	4.1982	1.9051
	1.7612					

FQP3EL NIST-STRBASE

	7.5188	13.3690		4.6904	2.5786	2.1115
4PI	2.4390	4.8123		2.7762	4.1494	0.7952
	3.4060	3.1949	6.9444			1.6186
	2.1872	8.2102	5.0150		4.1982	1.9051
	1.7612					

GC4A2Y NIST-STRBASE

	7.5188	13.3690	0.9025	4.6904	2.5786	
4PI	2.4390	4.8123	2.5419	2.7762	4.1494	0.7952
	3.4060	3.1949	6.9444	1.5562		1.6186
	2.1872			12.0192	4.1982	1.9051
	1.7612					

GNGAXT NIST-STRBASE, [Country-specific population study]

	4.3706	10.4167	0.7867	5.5006	3.6324	
4PI	1.8162	3.2468	2.3596	2.3596	6.5963	0.9876
	4.5005	3.0469	8.9928	1.1743		1.96
	2.7494	11.9048	6.3291		3.7369	2.0951
	1.547					

TABLE 2

WebCode	Population Database(s)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA					

Item 4PI - Paternity Index Results

GT9GF2 NIST-STRBASE

	7.518796	13.368983	0.902527	4.690431	2.578648	2.123142
4PI	2.439024	4.812319	2.541942	2.776235	4.149377	0.795165
	3.405994	3.194888	6.944444	1.556178		1.618646
	2.187226	8.210180	5.015045	12.019230	4.198152	1.905124
	1.761183					

H2XPDX FBI PopStats, NIST population

	4.37	15.7	0.786	6.37	2.94	
4PI	1.80	3.87	2.35	2.35	4.53	0.922
	4.00	3.68	6.55	1.17		1.78
	2.14				3.42	2.06

HAVGLQ PROMEGA data base

	7.52	13.37	0.9	4.69	2.58	
4PI	2.44	4.81	2.54	2.78	4.15	0.8
	3.41	3.19	6.94	1.56		1.62
	2.19	8.2	5.01		4.2	1.91
	1.76					

HJGKTQ NIST-STRBASE

	7.52	13.37	0.90	4.69	2.58	
4PI	2.44	4.81	2.54	2.78	4.15	0.80
	3.41	3.19	6.94	1.56		1.62
	2.19	8.20	5.01		4.20	1.91
	1.76					

HTRMER National frequencies

	4.54	12.5	0.65	6.25	3.33	
4PI	1.31	3.33	2.38	1.78	6.25	0.67
	3.57	2.94	6.25	0.96		1.66
	2.08			50.0	3.12	1.72
	1.56					

HUY3LX FBI PopStats

[No paternity index values were reported by this participant for this item.]

TABLE 2

WebCode	Population Database(s)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA					

Item 4PI - Paternity Index Results

JUXPEV NIST-STRBASE

	7.5188	13.369	0.90253	4.6904	2.5786	
4PI	2.4390	4.8123	2.5419		4.1494	0.79517
	3.4060	3.1949	6.9444	1.5562		1.6186
	2.1872	8.2102	5.0150		4.1982	1.9051
	1.7612					

JYWWA7 DNA Database Laboratory for Forensic biological examination of human DNA

[No paternity index values were reported by this participant for this item.]

K43WTV FBI PopStats, NIST 2017

	4.37	15.7	0.786	6.37	2.94	
4PI	1.80	3.87	2.35	2.35	4.53	0.922
	4.00	3.68	6.55	1.17		1.78
	2.14				3.42	2.06

KMU6QQ NIST-STRBASE

	7.5187	13.3689	0.9025	4.6904	2.5786	
4PI	2.4390	4.8123	2.5419	2.7762	4.1493	0.7951
	3.4059	3.1948	6.9444	1.5561		1.6186
	2.1872	8.2101	5.0150		4.1981	1.9051
	1.7611					

KR7QZW Laboratory Specific Database

	10.101	25.253	1.020	3.608	2.845	
4PI	2.463	4.699	2.885	2.804	4.926	0.814
	4.808	3.482	6.964	1.374		1.669
	2.172			10.101	3.016	1.828
	1.871					

KZEKUP NIST-STRBASE

	3.16667	3.67742	1.11757	2.35849	2.71429	
4PI	2.46043	2.63077	2.53333	3.75824	18.0	0.96338
	2.92308	6.21818	6.33333	1.98837		2.01176
	4.07143	2.01176	7.77273	16.28571	3.13761	2.71713
	2.12422					

TABLE 2

WebCode	Population Database(s)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA					

Item 4PI - Paternity Index Results

KZZVTX FBI PopStats

	5.36	13.1	0.90	6.41	2.84	
4PI	2.34	3.86	2.36	2.22	4.53	0.95
	3.28	2.98	9.74	1.17		1.64
	2.07	7.73	7.20	13.1	2.82	1.97

L4UCHX Life Technologies Database

		19.38		3.17	2.84	
4PI	2.77	5.06			4.11	0.80
	3.67	3.17	6.98			1.57
	2.17				3.09	1.88
	2.04					

LAYBUM FBI PopStats, +Promega/NIST

	7.43	21.80	0.912	3.55	2.81	--
4PI	2.44	4.47	2.54	2.77	4.91	0.81
	4.57	3.63	6.78	1.56		1.65
	2.14	8.63	4.86	--	2.99	1.83
	1.89					

LKHPWP NIST-STRBASE

	7.5187	13.3689	0.9025	4.6904	2.5786	
4PI	2.4390	4.8123	2.5419	2.7762	4.1493	0.7951
	3.4059	3.1948	6.9444	1.5561		1.6186
	2.1872	8.2101	5.0150		4.1981	1.9051
	1.7611					

LM72WV FBI PopStats

	5.3648	13.158	0.90383	6.4185	2.8433	
4PI	2.3485	3.8670	2.3697	2.2292	4.5331	0.95639
	3.2873	2.9886	9.7466	1.1740		1.6437
	2.0713			13.158	2.8281	1.9775

TABLE 2

WebCode	Population Database(s)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA					

Item 4PI - Paternity Index Results

LNG4HT FBI PopStats

	4.37	15.7	0.786	6.37	2.94	
4PI	1.80	3.87	2.35	2.35	4.53	0.922
	4.00	3.68	6.55	1.17		1.78
	2.14				3.42	2.06

NEP64T NIST-STRBASE

	7.52	13.37	0.90	4.69	2.58	
4PI	2.44	4.81	2.54	2.78	4.15	0.80
	3.41	3.19	6.94	1.56		1.62
	2.19			12.02	4.20	1.91
	1.76					

NLRDBL NIST-STRBASE, [Country-specific population study]

	4.3706	10.4167	0.7867	5.5006	3.6324	
4PI	1.8162	3.2468	2.3596	2.3596	6.5963	0.9876
	4.5005	3.0469	8.9928	1.1743		1.96
	2.7494	11.9048	6.3291		3.7369	2.0951
	1.547					

NWAV4T FBI PopStats, NIST 1036 (2017) amended database within Popstats

	7.5188	13.369	0.90253	4.6904	2.5786	
4PI	2.4390	4.8123	2.5419	2.7762	4.1494	0.79517
	3.4060	3.1949	6.9444	1.5562		1.6186
	2.1872	8.2102	5.0150	12.019	4.1982	1.9051
	1.7612					

P36CTN NIST-STRBASE

	7.519	13.37	0.9025	4.690	2.579	
4PI	2.439	4.812	2.542		4.149	0.7952
	3.406	3.195	6.944	1.556		1.619
	2.187	8.210	5.015		4.198	1.905
	1.761					

TABLE 2

WebCode	Population Database(s)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA					

Item 4PI - Paternity Index Results

PY7Y9K — FBI PopStats, Forensic Science International: Genetics V.25, Nov 2016, P175-181;Population data on the expanded CODIS core STR loci for eleven populations of significance for forensic DNA analyses in the United States

	10.101	25.253	1.020	3.608	2.845	
4PI	2.463	4.699	2.885	2.804	4.926	0.814
	4.808	3.482	6.964	1.374		1.669
	2.172			10.101	3.016	1.828
	1.871					

QL2YXT — NIST-STRBASE

	7.5187	13.3689	0.9025	4.6904	2.5786	
4PI	2.4390	4.8123	2.5419	2.7762	4.1493	0.7951
	3.4059	3.1948	6.9444	1.5561		1.6186
	2.1872			12.0192	4.1981	1.9051
	1.7611					

QRNRAR — NIST-STRBASE

	7.5188	13.369	0.90253	4.6904	2.5786	
4PI	2.4390	4.8123	2.5419		4.1494	0.79517
	3.4060	3.1949	6.9444	1.5562		1.6186
	2.1872			12.019	4.1982	1.9051

QX98EB — Local/state database

	7.3099	11.7371	0.8935	4.1911	2.8620	
4PI	2.2563	3.8820	2.5760	2.4900	3.7453	0.8367
	4.4014	3.0694	5.8685	1.2513		1.6750
	1.9701			16.5017	4.1911	1.8720
	1.9701					

R986ZP — NIST-STRBASE

	7.52	13.4	0.903	4.69	2.58	
4PI	2.44	4.81	2.54	2.78	4.15	0.795
	3.41	3.19	6.94	1.56		1.62
	2.19			12	4.2	1.91
	1.76					

RBY4EM — NIST-STRBASE

[No paternity index values were reported by this participant for this item.]

TABLE 2

WebCode	Population Database(s)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA					

Item 4PI - Paternity Index Results

RVLQWP FBI PopStats

	7.5188	13.369	0.90253	4.6904	2.5786	
4PI	2.439	4.8123	2.5419	2.7762	4.1494	0.79517
	3.406	3.1949	6.9444	1.5562		1.6186
	2.1872			12.019	4.1982	1.9051
	1.7612					

RZDZ8N NIST-STRBASE

	5.2576	7.5075	0.91996	5.7208	2.8305	
4PI	2.1313	3.5613	2.4839	2.8474	5.1813	0.91191
	3.3738	4.2445	6.2422	1.5581		1.8275
	2.4378			14.205	2.9603	2.1450
	1.9077					

T3DQQ9 FBI PopStats

[No paternity index values were reported by this participant for this item.]

TC496G NIST-STRBASE

	7.5188E+00	1.3370E+01	9.0262E-01	4.6904E+00	2.5789E+00	2.1234E+00
4PI	2.4390E+00	4.8455E+00	2.5425E+00	2.7768E+00	4.1494E+00	7.9509E-01
	3.4063E+00	3.1942E+00	6.9444E+00	1.5562E+00		1.6186E+00
	2.1874E+00	8.2118E+00	5.0155E+00	1.2024E+01	4.1986E+00	1.9053E+00
	1.7612E+00					

TERK4M FBI PopStats, NIST Population

	4.37	15.7	0.786	6.37	2.94	
4PI	1.80	3.87	2.35	2.35	4.53	0.922
	4.00	3.68	6.55	1.17		1.78
	2.14				3.42	2.06

TQL2TN FBI PopStats

	7.5188	25.3807	0.9025	3.6075	2.8257	
4PI	2.4631	4.5579	2.5419	2.7762	5.0251	0.8171
	4.6685	3.7064	7.0028	1.5562		1.6694
	2.1777	7.0423	5.6497		3.0157	1.8282
	1.9026					

TABLE 2

WebCode	Population Database(s)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA					

Item 4PI - Paternity Index Results

TVGVQP FBI PopStats

	10.101	25.253	1.0202	3.6075	2.8450	
4PI	2.4631	4.6992	2.8852	2.8043	4.9261	0.81446
	4.8077	3.4819	6.9638	1.3740		1.6694
	2.1720	9.1743	6.3131		3.0157	1.8282
	1.8706					

U7RK6K NIST-STRBASE

[No paternity index values were reported by this participant for this item.]

UGRBN8 Combined [Country] and [Country] globalfiler

	6.63	9.87	0.88	4.02	2.74	
4PI	2.25	3.75	2.55	2.25	3.38	0.83
	4.21	3.01	4.50	1.24		1.69
	1.83			12.88	4.02	1.84
	1.90					

UL9FKG local database

	3.946067508	17.84955858	1.02457305	5.597756979		
4PI		3.908446229	2.054094159	2.371134754		0.8799379467
	3.101602908	3.264939383	8.239826701	1.29187229		
	1.983101008			12.01678657	2.566391259	
	1.735412554					

UZQ99N NIST-STRBASE

	7.52	13.3	0.902	4.68	2.57	
4PI	2.43	4.81	2.54	2.77	4.14	0.795
	3.40	3.19	6.94	1.55		1.61
	2.18	8.20	5.01	12.0	4.19	1.90

VK83CE [Country]

[No paternity index values were reported by this participant for this item.]

TABLE 2

WebCode	Population Database(s)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA					

Item 4PI - Paternity Index Results

VTYKQM NIST-STRBASE

	7.5187	13.3689	0.9025	4.6904	2.5786	-
4PI	2.4390	4.8123	2.5419	2.7762	4.1493	0.7951
	3.4059	3.1948	6.9444	1.5561		1.6186
	2.1872	-	-	12.0192	4.1981	1.9051
	1.7611					

WA663K laboratory specific

[No paternity index values were reported by this participant for this item.]

X9N8AK NIST-STRBASE

	7.5188	13.3690	0.9025	4.6904	2.5786	
4PI	2.4390	4.8123	2.5419	-	4.1494	0.7952
	3.4060	3.1949	6.9444	1.5562		1.6186
	2.1872			12.0192	4.1982	1.9051
	1.7612					

XCNJ7K NIST-STRBASE

	7.87	13.11	0.88	4.60	2.59	
4PI	2.56	4.72	2.49	2.80	4.19	0.78
	3.34	3.13	6.81	1.53		1.73
	2.08	8.05	5.15		4.33	1.90
	1.73					

XHETFH FBI PopStats

	5.3648	13.158	0.90383	6.4185	2.8433	
4PI	2.3485	3.8670	2.3697	2.2292	4.5331	0.95639
	3.2873	2.9886	9.7466	1.1740		1.6437
	2.0713			13.158	2.8281	1.9775

XV4R7K Local database

	4,673E+00	1,462E+01	7,911E-01	4,950E+00	3,906E+00	2,433E+00
4PI	1,754E+00	4,545E+00	2,174E+00	1,948E+00	6,024E+00	9,506E-01
	3,731E+00	3,682E+00	7,463E+00	1,433E+00		1,684E+00
	2,717E+00	9,074E+00	5,921E+00	1,087E+01	4,274E+00	1,980E+00
	1,786E+00					

TABLE 2

WebCode	Population Database(s)					
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA					

Item 4PI - Paternity Index Results

Y9MU2H NIST-STRBASE

	7.52	13.37	0.90	4.68	2.57	
4PI	2.43	4.81	2.54	2.77	4.14	0.79
	3.40	3.19	6.94	1.55		1.61
	2.18	8.20	5.01	12.03	4.19	1.90

YFHYVJ NIST-STRBASE

	7.5188	13.3689	0.9025	4.6904	2.5786	-
4PI	2.4390	4.8123	2.5419	2.7762	4.1494	0.7951
	3.4059	3.1948	6.9444	1.5561		1.6186
	2.1872	-	-	12.0192	4.1981	1.9051
	1.7611					

YL9A6H Laboratory Specific Database

	7.81	6.74	0.89	3.61	2.44	
4PI	2.33	4.3	2.91	2.08	2.99	0.80
	3.4	2.42	3.1	1.3		1.87
	1.65			7.81	3.12	1.77
	1.72					

YSTR Amplification Kit(s) & Results

TABLE 3

WebCode Item	Amplification Kit								
	DYF387S1	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
	DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
	DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	Y GATA H4
Item 2 - YSTR Results									
3V797E	Yfiler® PLUS								
2	38,39	14	13	12	28	23	10	11	14
	16	10	12	20	28	14	15	10	25
	42	11		18	17	19	22		11
4TECJ7	Yfiler®, PowerPlex® Y 23								
2		14	13	12	28	23	10	11	14
	16	10	12	20		14	15		25
		11	13	18	17		22	12	11
67CZN6	Yfiler® Y23								
2		14	13	12	28	23	10	11	14
	16	10	12	20		14	15		25
		11	13	18	17		22	12	11
77TGGC	Yfiler®								
2	-	14	13	12	28	23	10	11	14
	16	10	12	20	-	14	15	-	-
	-	-	-	-	-	-	22	-	11
8GANT7	Yfiler® Plus								
2	38,39	14	13	12	28	23	10	11	14
	16	10	12	20	28	14	15	10	25
	42	11		18	17	19	22		11
ATVET2	Yfiler® Plus								
2	38,39	14	13	12	28	23	10	11	14
	16	10	12	20	28	14	15	10	25
	42	11		18	17	19	22		11
B2N8EZ	PowerPlex® Y 23 System								
2		14	13	12	28	23	10	11	14
	16	10	12	20		14	15		25
		11	13	18	17		22	12	11
BVHDK6	PowerPlex® Y 23								
2		14	13	12	28	23	10	11	14
	16	10	12	20		14	15		25
		11	13	18	17		22	12	11
CUGZC3	Yfiler® Plus								
2	38,39	14	13	12	28	23	10	11	14
	16	10	12	20	28	14	15	10	25
	42	11		18	17	19	22		11

TABLE 3

Item 2 - YSTR Results

WebCode Item	Amplification Kit	DYF387S1	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
		DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
		DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	Y GATA H4
CXGB93	Yfiler® Plus									
2		38,39	14	13	12	28	23	10	11	14
		16	10	12	20	28	14	15	10	25
		42	11		18	17	19	22		11
DATZLX	Yfiler®									
2			14	13,13	12	28	23	10	11	14
		16	10	12	20		14	15		
								22		11
DQCRKW	PowerPlex® Y Y23									
2			14	13	12	28	23	10	11	14
		16	10	12	20		14	15		25
			11	13	18	17		22	12	11
E6RCHV	Yfiler® Plus									
2		38,39	14	13,13	12	28	23	10	11	14
		16	10	12	20	28	14	15	10	25
		42	11		18	17	19	22		11
EE3D4W	Yfiler®									
2			14	13,13	12	28	23	10	11	14
		16	10	12	20		14	15		
								22		11
EFDFPV	Yfiler®									
2			14	13,13	12	28	23	10	11	14
		16	10	12	20		14	15		
								22		11
EJCRLV	Yfiler® PLUS									
2		38,39	14	13	12	28	23	10	11	14
		16	10	12	20	28	14	15	10	25
		42	11		18	17	19	22		11
EV78BW	Yfiler®									
2			14	13,13	12	28	23	10	11	14
		16	10	12	20		14	15		
								22		11
EZWHKU	PowerPlex® Y 23 System									
2			14	13,13	12	28	23	10	11	14
		16	10	12	20		14	15		25
			11	13	18	17		22	12	11
GC4A2Y	Yfiler® PLUS									
2		38,39	14	13	12	28	23	10	11	14
		16	10	12	20	28	14	15	10	25
		42	11		18	17	19	22		11

TABLE 3

Item 2 - YSTR Results

WebCode Item	Amplification Kit	DYF387S1	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
		DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
		DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	Y GATA H4
GT9GF2	PowerPlex® Y 23									
2			14	13	12	28	23	10	11	14
		16	10	12	20		14	15		25
			11	13	18	17		22	12	11
HJGKTQ	PowerPlex® Y 23									
2			14	13	12	28	23	10	11	14
		16	10	12	20		14	15		25
			11	13	18	17		22	12	11
HTRMER										
2		38,39	14	13	12	28	23	10	11	14
		16	10	12	20	28	14	15	10	25
		42	11		18	17	19	22		11
JUXPEV	Yfiler®									
2			14	13	12	28	23	10	11	14
		16	10	12	20		14	15		
								22		11
KMU6QQ	Yfiler®									
2			14	13,13	12	28	23	10	11	14
		16	10	12	20		14	15		
								22		11
KZEKUP	PowerPlex® Y 23									
2			14	13	12	28	23	10	11	14
		16	10	12	20		14	15		25
			11	13	18	17		22	12	11
LAYBUM	PowerPlex® Y 23									
2		--	14	13	12	28	23	10	11	14
		16	10	12	20	--	14	15	--	25
		--	11	13	18	17	--	22	12	11
LKHPWP	Yfiler®									
2			14	13,13	12	28	23	10	11	14
		16	10	12	20		14	15		
								22		11
LM72WV	Yfiler® Plus									
2		38,39	14	13	12	28	23	10	11	14
		16	10	12	20	28	14	15	10	25
		42	11		18	17	19	22		11
NEP64T	Yfiler® Plus									
2		38,39	14	13	12	28	23	10	11	14
		16	10	12	20	28	14	15	10	25
		42	11		18	17	19	22		11

TABLE 3

Item 2 - YSTR Results

WebCode Item	Amplification Kit								
	DYF387S1	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
	DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
	DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	Y GATA H4
P36CTN	Yfiler®								
2		14	13	12	28	23	10	11	14
	16	10	12	20		14	15		
							22		11
PY7Y9K	Yfiler® Plus								
2	38,39	14	13,13	12	28	23	10	11	14
	16	10	12	20	28	14	15	10	25
	42	11		18	17	19	22		11
QL2YXT	Yfiler®								
2		14	13	12	28	23	10	11	14
	16	10	12	20		14	15		
							22		11
QRNRAR	Yfiler® Plus								
2	38,39	14	13	12	28	23	10	11	14
	16	10	12	20	28	14	15	10	25
	42	11		18	17	19	22		11
RVLQWP	Yfiler® Plus								
2	38,39	14	13	12	28	23	10	11	14
	16	10	12	20	28	14	15	10	25
	42	11		18	17	19	22		11
TQL2TN	PowerPlex® Y 23								
2		14	13	12	28	23	10	11	14
	16	10	12	20		14	15		25
		11	13	18	17		22	12	11
TVGVQP	Yfiler®								
2		14	13	12	28	23	10	11	14
	16	10	12	20		14	15		
							22		11
UGRBN8	Yfiler® Plus								
2	38,39	14	13	12	28	23	10	11	14
	16	10	12	20	28	14	15	10	25
	42	11		18	17	19	22		11
VTYKQM	Yfiler®								
2	-	14	13	12	28	23	10	11	14
	16	10	12	20	-	14	15	-	-
	-	-	-	-	-	-	22	-	11
XHETFH	Yfiler® Plus								
2	38,39	14	13	12	28	23	10	11	14
	16	10	12	20	28	14	15	10	25
	42	11		18	17	19	22		11

TABLE 3

WebCode Item	Amplification Kit DYF387S1	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
	DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
	DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	Y GATA H4
Item 2 - YSTR Results									
YFHYVJ	Yfiler®								
2	-	14	13	12	28	23	10	11	14
	16	10	12	20	-	14	15	-	-
	-	-	-	-	-	-	22	-	11

TABLE 3

Item 3 - YSTR Results

WebCode Item	Amplification Kit								
	DYF387S1	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
	DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
	DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	Y GATA H4
3V797E	Yfiler® PLUS								
3	35,40	13	14,17	13	30	23	10	14	14
	14	11	12	21	32	14	14	10	26
	38	11		19	17	17	22		12
4TECJ7	Yfiler®, PowerPlex® Y 23								
3		13	14,17	13	30	23	10	14	14
	14	11	12	21		14	14		26
		11	13	19	17		22	10	12
67CZN6	Yfiler® Y23								
3		13	14,17	13	30	23	10	14	14
	14	11	12	21		14	14		26
		11	13	19	17		22	10	12
77TGGC	Yfiler®								
3		13	14,17	13	30	23	10	14	14
	14	11	12	21		14	14		
							22		12
8GANT7	Yfiler® Plus								
3	35,40	13	14,17	13	30	23	10	14	14
	14	11	12	21	32	14	14	10	26
	38	11		19	17	17	22		12
B2N8EZ	PowerPlex® Y 23 System								
3		13	14,17	13	30	23	10	14	14
	14	11	12	21		14	14		26
		11	13	19	17		22	10	12
BVHDK6	PowerPlex® Y 23								
3		13	14,17	13	30	23	10	14	14
	14	11	12	21		14	14		26
		11	13	19	17		22	10	12
CUGZC3	Yfiler® Plus								
3	35,40	13	14,17	13	30	23	10	14	14
	14	11	12	21	32	14	14	10	26
	38	11		19	17	17	22		12
CXGB93	Yfiler® Plus								
3	35,40	13	14,17	13	30	23	10	14	14
	14	11	12	21	32	14	14	10	26
	38	11		19	17	17	22		12
DATZLX	Yfiler®								
3		13	14,17	13	30	23	10	14	14
	14	11	12	21		14	14		
							22		12

TABLE 3

Item 3 - YSTR Results

WebCode Item	Amplification Kit	DYF387S1	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
		DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
		DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	Y GATA H4
DQCRKW	PowerPlex® Y Y23									
3			13	14,17	13	30	23	10	14	14
		14	11	12	21		14	14		26
			11	13	19	17		22	10	12
E6RCHV	Yfiler® Plus									
3		35,40	13	14,17	13	30	23	10	14	14
		14	11	12	21	32	14	14	10	26
		38	11		19	17	17	22		12
EE3D4W	Yfiler®									
3			13	14,17	13	30	23	10	14	14
		14	11	12	21		14	14		
								22		12
EFDFPV	Yfiler®									
3			13	14,17	13	30	23	10	14	14
		14	11	12	21		14	14		
								22		12
EJCRLV	Yfiler® PLUS									
3		35,40	13	14,17	13	30	23	10	14	14
		14	11	12	21	32	14	14	10	26
		38	11		19	17	17	22		12
EV78BW	Yfiler®									
3			13	14,17	13	30	23	10	14	14
		14	11	12	21		14	14		
								22		12
EZWHKU	PowerPlex® Y 23 System									
3			13	14,17	13	30	23	10	14	14
		14	11	12	21		14	14		26
			11	13	19	17		22	10	12
GC4A2Y	Yfiler® PLUS									
3		35,40	13	14,17	13	30	23	10	14	14
		14	11	12	21	32	14	14	10	26
		38	11		19	17	17	22		12
GT9GF2	PowerPlex® Y 23									
3			13	14,17	13	30	23	10	14	14
		14	11	12	21		14	14		26
			11	13	19	17		22	10	12
HJGKTQ	PowerPlex® Y 23									
3			13	14,17	13	30	23	10	14	14
		14	11	12	21		14	14		26
			11	13	19	17		22	10	12

TABLE 3

Item 3 - YSTR Results

WebCode Item	Amplification Kit								
	DYF387S1	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
	DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
	DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	Y GATA H4
HTRMER									
3	35,40	13	14,17	13	30	23	10	14	14
	14	11	12	21	32	14	14	10	26
	38	11		19	17	17	22		12
JUXPEV	Yfiler®								
3		13	14,17	13	30	23	10	14	14
	14	11	12	21		14	14		
							22		12
KMU6QQ	Yfiler®								
3		13	14,17	13	30	23	10	14	14
	14	11	12	21		14	14		
							22		12
KZEKUP	PowerPlex® Y 23								
3		13	14,17	13	30	23	10	14	14
	14	11	12	21		14	14		26
		11	13	19	17		22	10	12
LAYBUM	PowerPlex® Y 23								
3	--	13	14,17	13	30	23	10	14	14
	14	11	12	21	--	14	14	--	26
	--	11	13	19	17	--	22	10	12
LKHPWP	Yfiler®								
3		13	14,17	13	30	23	10	14	14
	14	11	12	21		14	14		
							22		12
LM72WV	Yfiler® Plus								
3	35,40	13	14,17	13	30	23	10	14	14
	14	11	12	21	32	14	14	10	26
	38	11		19	17	17	22		12
NEP64T	Yfiler® Plus								
3	35,40	13	14,17	13	30	23	10	14	14
	14	11	12	21	32	14	14	10	26
	38	11		19	17	17	22		12
P36CTN	Yfiler®								
3		13	14,17	13	30	23	10	14	14
	14	11	12	21		14	14		
							22		12
PY7Y9K	Yfiler® Plus								
3	35,40	13	14,17	13	30	23	10	14	14
	14	11	12	21	32	14	14	10	26
	38	11		19	17	17	22		12

TABLE 3

Item 3 - YSTR Results

WebCode Item	Amplification Kit								
	DYF387S1	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
	DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
	DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	Y GATA H4
QL2YXT	Yfiler®								
3		13	14,17	13	30	23	10	14	14
	14	11	12	21		14	14		
							22		12
QRNRAR	Yfiler® Plus								
3	35,40	13	14,17	13	30	23	10	14	14
	14	11	12	21	32	14	14	10	26
	38	11		19	17	17	22		12
RVLQWP	Yfiler® Plus								
3	35,40	13	14,17	13	30	23	10	14	14
	14	11	12	21	32	14	14	10	26
	38	11		19	17	17	22		12
TQL2TN	PowerPlex® Y 23								
3		13	14,17	13	30	23	10	14	14
	14	11	12	21		14	14		26
		11	13	19	17		22	10	12
TVGVQP	Yfiler®								
3		13	14,17	13	30	23	10	14	14
	14	11	12	21		14	14		
							22		12
UGRBN8	Yfiler® Plus								
3	35,40	13	14,17	13	30	23	10	14	14
	14	11	12	21	32	14	14	10	26
	38	11		19	17	17	22		12
VTYKQM	Yfiler®								
3	-	13	14,17	13	30	23	10	14	14
	14	11	12	21	-	14	14	-	-
	-	-	-	-	-	-	22	-	12
XHETFH	Yfiler® Plus								
3	35,40	13	14,17	13	30	23	10	14	14
	14	11	12	21	32	14	14	10	26
	38	11		19	17	17	22		12
YFHYVJ	Yfiler®								
3	-	13	14,17	13	30	23	10	14	14
	14	11	12	21	-	14	14	-	-
	-	-	-	-	-	-	22	-	12

TABLE 3

Item 4 - YSTR Results

WebCode Item	Amplification Kit	DYF387S1	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
		DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
		DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	Y GATA H4
3V797E	Yfiler® PLUS									
4		38,39	14	13	12	28	23	10	11	14
		16	10	12	20	28	14	15	10	25
		42	11		18	17	19	22		11
4TECJ7	Yfiler®, PowerPlex® Y 23									
4			14	13	12	28	23	10	11	14
		16	10	12	20		14	15		25
			11	13	18	17		22	12	11
67CZN6	Yfiler® Y23									
4			14	13	12	28	23	10	11	14
		16	10	12	20		14	15		25
			11	13	18	17		22	12	11
77TGGC	Yfiler®									
4			14	13	12	28	23	10	11	14
		16	10	12	20		14	15		
								22		11
8GANT7	Yfiler® Plus									
4		38,39	14	13	12	28	23	10	11	14
		16	10	12	20	28	14	15	10	25
		42	11		18	17	19	22		11
ATVET2	Yfiler® Plus									
4		38,39	14	13	12	28	23	10	11	14
		16	10	12	20	28	14	15	10	25
		42	11		18	17	19	22		11
B2N8EZ	PowerPlex® Y 23 System									
4			14	13	12	28	23	10	11	14
		16	10	12	20		14	15		25
			11	13	18	17		22	12	11
BVHDK6	PowerPlex® Y 23									
4			14	13	12	28	23	10	11	14
		16	10	12	20		14	15		25
			11	13	18	17		22	12	11
CUGZC3	Yfiler® Plus									
4		38,39	14	13	12	28	23	10	11	14
		16	10	12	20	28	14	15	10	25
		42	11		18	17	19	22		11
CXGB93	Yfiler® Plus									
4		38,39	14	13	12	28	23	10	11	14
		16	10	12	20	28	14	15	10	25
		42	11		18	17	19	22		11

TABLE 3

Item 4 - YSTR Results

WebCode Item	Amplification Kit	DYF387S1	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
		DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
		DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	Y GATA H4
DATZLX	Yfiler®									
4			14	13,13	12	28	23	10	11	14
		16	10	12	20		14	15		
								22		11
DQCRKW										
4			14	13	12	28	23	10	11	14
		16	10	12	20		14	15		25
			11	13	18	17		22	12	11
E6RCHV	Yfiler® Plus									
4		38,39	14	13,13	12	28	23	10	11	14
		16	10	12	20	28	14	15	10	25
		42	11		18	17	19	22		11
EE3D4W	Yfiler®									
4			14	13,13	12	28	23	10	11	14
		16	10	12	20		14	15		
								22		11
EFDFPV	Yfiler®									
4			14	13,13	12	28	23	10	11	14
		16	10	12	20		14	15		
								22		11
EJCRLV	Yfiler® PLUS									
4		38,39	14	13	12	28	23	10	11	14
		16	10	12	20	28	14	15	10	25
		42	11		18	17	19	22		11
EV78BW	Yfiler®									
4			14	13,13	12	28	23	10	11	14
		16	10	12	20		14	15		
								22		11
EZWHKU	PowerPlex® Y 23 System									
4			14	13,13	12	28	23	10	11	14
		16	10	12	20		14	15		25
			11	13	18	17		22	12	11
GC4A2Y	Yfiler® PLUS									
4		38,39	14	13	12	28	23	10	11	14
		16	10	12	20	28	14	15	10	25
		42	11		18	17	19	22		11
GT9GF2	PowerPlex® Y 23									
4			14	13	12	28	23	10	11	14
		16	10	12	20		14	15		25
			11	13	18	17		22	12	11

TABLE 3

Item 4 - YSTR Results

WebCode Item	Amplification Kit	DYF387S1	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
		DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
		DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	Y GATA H4
HJGKTQ	PowerPlex® Y 23									
4			14	13	12	28	23	10	11	14
		16	10	12	20		14	15		25
			11	13	18	17		22	12	11
HTRMER										
4		38,39	14	13	12	28	23	10	11	14
		16	10	12	20	28	14	15	10	25
		42	11		18	17	19	22		11
JUXPEV	Yfiler®									
4			14	13	12	28	23	10	11	14
		16	10	12	20		14	15		
								22		11
KMU6QQ	Yfiler®									
4			14	13,13	12	28	23	10	11	14
		16	10	12	20		14	15		
								22		11
KZEKUP	PowerPlex® Y 23									
4			14	13	12	28	23	10	11	14
		16	10	12	20		14	15		25
			11	13	18	17		22	12	11
LAYBUM	PowerPlex® Y 23									
4		--	14	13	12	28	23	10	11	14
		16	10	12	20	--	14	15	--	25
		--	11	13	18	17	--	22	12	11
LKHPWP	Yfiler®									
4			14	13,13	12	28	23	10	11	14
		16	10	12	20		14	15		
								22		11
LM72WV	Yfiler® Plus									
4		38,39	14	13	12	28	23	10	11	14
		16	10	12	20	28	14	15	10	25
		42	11		18	17	19	22		11
NEP64T	Yfiler® Plus									
4		38,39	14	13	12	28	23	10	11	14
		16	10	12	20	28	14	15	10	25
		42	11		18	17	19	22		11
P36CTN	Yfiler®									
4			14	13	12	28	23	10	11	14
		16	10	12	20		14	15		
								22		11

TABLE 3

Item 4 - YSTR Results

WebCode Item	Amplification Kit								
	DYF387S1	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
	DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
	DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	Y GATA H4
PY7Y9K	Yfiler® Plus								
4	38,39	14	13,13	12	28	23	10	11	14
	16	10	12	20	28	14	15	10	25
	42	11		18	17	19	22		11
QL2YXT	Yfiler®								
4		14	13	12	28	23	10	11	14
	16	10	12	20		14	15		
							22		11
QRNRAR	Yfiler® Plus								
4	38,39	14	13	12	28	23	10	11	14
	16	10	12	20	28	14	15	10	25
	42	11		18	17	19	22		11
RVLQWP	Yfiler® Plus								
4	38,39	14	13	12	28	23	10	11	14
	16	10	12	20	28	14	15	10	25
	42	11		18	17	19	22		11
TQL2TN	PowerPlex® Y 23								
4		14	13	12	28	23	10	11	14
	16	10	12	20		14	15		25
		11	13	18	17		22	12	11
TVGVQP	Yfiler®								
4		14	13	12	28	23	10	11	14
	16	10	12	20		14	15		
							22		11
UGRBN8	Yfiler® Plus								
4	38,39	14	13	12	28	23	10	11	14
	16	10	12	20	28	14	15	10	25
	42	11		18	17	19	22		11
VTYKQM	Yfiler®								
4	-	14	13	12	28	23	10	11	14
	16	10	12	20	-	14	15	-	-
	-	-	-	-	-	-	22	-	11
XHETFH	Yfiler® Plus								
4	38,39	14	13	12	28	23	10	11	14
	16	10	12	20	28	14	15	10	25
	42	11		18	17	19	22		11
YFHYVJ	Yfiler®								
4	-	14	13	12	28	23	10	11	14
	16	10	12	20	-	14	15	-	-
	-	-	-	-	-	-	22	-	11

Additional DNA & PI Results

TABLE 4

Locus	WebCode	Item 1	Item 2	Item 3	Item 3 PI	Item 4	Item 4 PI
AMELOGENIN	9RDQ9H	X	X,Y	X,Y		X,Y	
CSF1PO	9RDQ9H	10	10,11	12	0.0032	10,11	1.6188
D10S1248	9RDQ9H	13,14	13,15	13	0.0013	15,17	2.5423
D12S391	9RDQ9H	20,23	20,23	20,24	2.7769	23,25	2.7769
D13S317	9RDQ9H	8,11	8	13	8.2989E-7	8,11	4.1494
D16S539	9RDQ9H	11,12	11,12	11,12	1.5903	12,13	0.7952
D18S51	9RDQ9H	15,18	15,16	15,17	0.0077	13,16	3.4057
D19S433	9RDQ9H	13,16	13,15	13,15	3.1947	11,15	3.1947
D1S1656	9RDQ9H	15,16.3	13,15	17.3,18.3	0.0020	13,15	7.5208
D21S11	9RDQ9H	31	31	29,30	0.0069	31,32.2	6.9423
D22S1045	9RDQ9H	15,16	15	11	3.1121E-6	11,15	1.5560
D2S1338	9RDQ9H	17,24	21,24	16,17	1.3370E-5	21,25	13.3704
D2S441	9RDQ9H	10,11	10,11	10	1.8050	11,14	0.9025
D3S1358	9RDQ9H	16,17	14,17	14,15	4.6883	14,18	4.6883
D5S818	9RDQ9H	11,12	12	10	0.0003	12	2.5786
D6S1043	9RDQ9H	18,21	12,21	18,19	2.1235E-8	12,17	2.1235
D7S820	9RDQ9H	7,8	7,11	10,11	2.4392	8,11	2.4392
D8S1179	9RDQ9H	10,13	10,15	12,18	0.0001	12,15	4.8133
F13A01	67CZN6	6	6	3.2,6	1.4269	6	2.8539
	EZWHKU	6,6	6,6	3.2,6		6,6	2.8653
	GT9GF2	6	6	3.2,6	1.432664	6	2.865329
	TC496G	6	6	3.2,6	1.4327E+00	6	2.8653E+00
F13B	67CZN6	9	8,9	9,10	0	8,10	2.0392
	EZWHKU	9,9	8,9	9,10		8,10	2.0284
	GT9GF2	9	8,9	9,10	EXCLUSION	8,10	2.028397
	TC496G	9	8,9	9,10	0	8,10	2.0282E+00
FESFPS	67CZN6	11	11,12	11	0	10,12	2.1115
	EZWHKU	11,11	11,12	11,11		10,12	2.1231
	GT9GF2	11	11,12	11	EXCLUSION	10,12	2.123142
	TC496G	11	11,12	11	0	10,12	2.1231E+00
FGA	9RDQ9H	19,21	19,21	21,23	2.1879	21,22	2.1879
LPL	67CZN6	10,12	10,12	10,12	1.5200	10,12	1.5200
	EZWHKU	10,12	10,12	10,12		10,12	1.5265
	GT9GF2	10,12	10,12	10,12	1.526484	10,12	1.526484
	TC496G	10,12	10,12	10,12	1.5265E+00	10,12	1.5265E+00
PENTA C	67CZN6	11,13	11	12	0	9,11	1.2623
	EZWHKU	11,13	11,11	12,12		9,11	1.2668
	GT9GF2	11,13	11	12	EXCLUSION	9,11	1.266784
	TC496G	11,13	11	12	0	9,11	1.2668E+00

TABLE 4

Locus	WebCode	Item 1	Item 2	Item 3	Item 3 PI	Item 4	Item 4 PI
PENTA D	9RDQ9H	11,12	11,14	10,11	0.0002	9,14	8.2045
PENTA E	9RDQ9H	5,12	12	14,20	0.0003	12	5.0139
TH01	9RDQ9H	7,8	8,9	7,9.3	0.0004	7,9	4.1977
TPOX	9RDQ9H	8,11	8	11	1.9050E-5	8	1.9050
VWA	9RDQ9H	15,17	17	17,19	1.7610	14,17	1.7610
Y-INDEL	9RDQ9H		2	2		2	

Paternity DNA Statistics & Conclusions

TABLE 5

WebCode	Chosen Biological Father	Combined Paternity Index	Probability of Paternity	Population Database Used
26X8KE	Item 4 - Alleged Father B	39,750,000,000		NIST-STRBASE
2QCRGF	Item 4 - Alleged Father B	2.2126e+10	99.99999999	NIST-STRBASE
3V797E	Item 4 - Alleged Father B	21,140,000,000	99.999999995270	FBI PopStats
4TECJ7	Item 4 - Alleged Father B	2797799104.3	0.9999999996	laboratory specific database
67CZN6	Item 4 - Alleged Father B	1,009,678,802,213.46	99.9999	Promega
77TGGC	Item 4 - Alleged Father B	2.1127e+10	99.9999%	NIST-STRBASE
7P67VA	Item 4 - Alleged Father B	870 billion	99.999	FBI PopStats, NIST 1036 (2017) amended database within Popstats
8CYBC9	Item 4 - Alleged Father B	380,300,000,000		FBI PopStats
8GANT7	Item 4 - Alleged Father B	6,821,000,000	>99.99%	FBI PopStats
8GU6AA	Item 4 - Alleged Father B	870 billion	99.99	FBI PopStats, FBI NIST 2017
9736V9	Item 4 - Alleged Father B	21164387514.3033	99.9999	NIST-STRBASE
9RDQ9H	Item 3 - Alleged Father A	1.5364E+11	0.999999999993491	NIST-STRBASE
A2648Z	Item 4 - Alleged Father B	1.1E+011	99.999999999%	NIST-STRBASE, [Country-specific population study]
AKHQT8	Item 4 - Alleged Father B	4.6E+11		NIST-STRBASE
AN48BT	Item 4 - Alleged Father B	13,493,901,510	>99.99%	[Nationality] Caucasian
B2N8EZ	Item 4 - Alleged Father B	166496077279,03	99,999999%	Local Database
B8CUA6	Item 4 - Alleged Father B	55,130,000	99.999998186	FBI PopStats
BVHDK6	Item 4 - Alleged Father B	380, 300, 000, 000		FBI PopStats
C47NAQ	Item 4 - Alleged Father B	20,000,000,000	99.999999995381	FBI PopStats

TABLE 5

WebCode	Chosen Biological Father	Combined Paternity Index	Probability of Paternity	Population Database Used
CUGZC3	Item 4 - Alleged Father B	6.821 billion	>99.99%	FBI PopStats
CXGB93	Item 4 - Alleged Father B	6,821,000,000	>99.99%	FBI PopStats
DATZLX	Item 4 - Alleged Father B	72.4 billion	99.9%	NIST-STRBASE
DCGCK4	Item 4 - Alleged Father B	870,200,000,000	99.999%	FBI PopStats, NIST 1036 (2017) amended database within Popstats
DGQP33	Item 4 - Alleged Father B	21,140,000,000	>99.99%	NIST 1036 Revised US Population Dataset (July 2017)
DP6CC7	Item 4 - Alleged Father B	Black Individual: 14,000,000,000 ; Caucasian Individual: 1,500,000,000 ; Hispanic Individual: 19,000,000,000; Asian Individual: 600,000,000	99.99	FBI PopStats, Laboratory Specific Database
DQCRKW	Item 4 - Alleged Father B	21852020,73	99, 9999954237644	NIST-STRBASE
DXEZP4	Item 4 - Alleged Father B	380,300,000,000		FBI PopStats
E6RCHV	Item 4 - Alleged Father B	21,163,645,558	99.99999999%	NIST-STRBASE
EE3D4W	Item 4 - Alleged Father B	22327317	99.99999%	[Country-specific reference]
EFDFPV	Item 4 - Alleged Father B	22,786,778	99.9999%	NIST-STRBASE
EJCRLV	Item 4 - Alleged Father B	2.12E+10	99.9999	NIST-STRBASE
EL24KZ	Item 4 - Alleged Father B	26,000,000,000	99.9999%	NIST-STRBASE
EV78BW	Item 4 - Alleged Father B	72,400,000,000	99.9%	NIST-STRBASE
EZWHKU	Item 4 - Alleged Father B	20767287300024	99.99999999999	NIST-STRBASE
FQP3EL	Item 4 - Alleged Father B	4.283E+010	N/A	NIST-STRBASE
GC4A2Y	Item 4 - Alleged Father B	21,137,332,943	99.9999%	NIST-STRBASE

TABLE 5

WebCode	Chosen Biological Father	Combined Paternity Index	Probability of Paternity	Population Database Used
GNGAXT	Item 4 - Alleged Father B	1.1E+011	99.999999999%	NIST-STRBASE, [Country-specific population study]
GT9GF2	Item 4 - Alleged Father B	44.091.905.095.593	99.99999999999%	NIST-STRBASE
H2XPDX	Item 4 - Alleged Father B	506,900,000	99.9999%	FBI PopStats, NIST population
HAVGLQ	Item 4 - Alleged Father B	72 349 476 913	> 99.999999 %	PROMEGA data base
HJGKTQ	Item 4 - Alleged Father B	72.349.205.582	99,9999999998617800 00000	NIST-STRBASE
HTRMER	Item 4 - Alleged Father B	5,407,376,950.22	99.99%	National frequencies
HUY3LX	Item 4 - Alleged Father B	N/A (see part IV [Table 9])	N/A (see part IV [Table 9])	FBI PopStats
JUXPEV	Item 4 - Alleged Father B	26,000,000,000	99.9999%	NIST-STRBASE
JYWWA7	Item 4 - Alleged Father B	2390866451421,90	99,999999999958200	DNA Database Laboratory for Forensic biological examination of human DNA
K43WTV	Item 4 - Alleged Father B	506,900,000	99.9999	FBI PopStats, NIST 2017
KMU6QQ	Item 4 - Alleged Father B	72.4 billion	99.9%	NIST-STRBASE
KR7QZW	Item 4 - Alleged Father B	60 billion	99.99%	Laboratory Specific Database
KZEKUP	Item 4 - Alleged Father B	769796963656.613	99.9999999998	NIST-STRBASE
KZZVTX	Item 4 - Alleged Father B	380 billion		FBI PopStats
L4UCHX	Item 4 - Alleged Father B	26,445,270	99.99%	Life Technologies Database
LAYBUM	Item 4 - Alleged Father B	121000000000	99.99999999	FBI PopStats, +Promega/NIST
LKHPWP	Item 4 - Alleged Father B	72.4 billion	99.9%	NIST-STRBASE
LM72WV	Item 4 - Alleged Father B	6,821,000,000	>99.99%	FBI PopStats
LNG4HT	Item 4 - Alleged Father B	506,900,000	99.9999%	FBI PopStats

TABLE 5

WebCode	Chosen Biological Father	Combined Paternity Index	Probability of Paternity	Population Database Used
NEP64T	Item 4 - Alleged Father B	21,137,332,943	99.9999	NIST-STRBASE
NLRDBL	Item 4 - Alleged Father B	1.1E+011	99.999999999%	NIST-STRBASE, [Country-specific population study]
NWAV4T	Item 4 - Alleged Father B	870,200,000,000	99.999999999885	FBI PopStats, NIST 1036 (2017) amended database within Popstats
P36CTN	Item 4 - Alleged Father B	26,000,000,000	99.9999%	NIST-STRBASE
PY7Y9K	Item 4 - Alleged Father B	6.067E+10	>99.999999998%	FBI PopStats, Forensic Science International: Genetics V.25, Nov 2016, P175-181;Population data on the expanded CODIS core STR loci for eleven populations of significance for forensic DNA analyses in the United States
QL2YXT	Item 4 - Alleged Father B	2.1127E+10	99.9999%	NIST-STRBASE
QRNRAR	Item 4 - Alleged Father B	4.32 billion	99.99999997687	NIST-STRBASE
QX98EB	Item 4 - Alleged Father B	1.352E+10	Not calculated	Local/state database
R986ZP	Item 4 - Alleged Father B	21.2 Billion	>99.9999	NIST-STRBASE
RBY4EM	Item 4 - Alleged Father B	26 billion	99.9999%	NIST-STRBASE
RVLQWP	Item 4 - Alleged Father B	21,140,000,000	99.99999999527	FBI PopStats
RZDZ8N	Item 4 - Alleged Father B	15,920,000,000	99.999999993719	NIST-STRBASE
T3DQQ9	Item 4 - Alleged Father B			FBI PopStats
TC496G	Item 4 - Alleged Father B	4.4463E+13	99.999999999998%	NIST-STRBASE
TERK4M	Item 4 - Alleged Father B	506900000	99.9999%	FBI PopStats, NIST Population

TABLE 5

WebCode	Chosen Biological Father	Combined Paternity Index	Probability of Paternity	Population Database Used
TQL2TN	Item 4 - Alleged Father B	163,401,667,557.4850	99.9999	FBI PopStats
TVGVQP	Item 4 - Alleged Father B	348,100,000,000	99.999999999712	FBI PopStats
U7RK6K	Item 4 - Alleged Father B	26 billion	99.9999%	NIST-STRBASE
UGRBN8	Item 4 - Alleged Father B	8.5 x 10E8		Combined [Country] and [Country] globalfiler
UL9FKG	Item 4 - Alleged Father B	77417562	0.9999999871	local database
UZQ99N	Item 4 - Alleged Father B	4.9E+11	not calculated by our lab	NIST-STRBASE
VK83CE	Item 4 - Alleged Father B			[Country]
VTYKQM	Item 4 - Alleged Father B	2.1127e+10	99.9999%	NIST-STRBASE
WA663K	Item 4 - Alleged Father B	3.48E+11	99.9999999997%	laboratory specific
X9N8AK	Item 4 - Alleged Father B	7,613,667,326	99.9999%	NIST-STRBASE
XCNJ7K	Item 4 - Alleged Father B	68.9 billion	99.99%	NIST-STRBASE
XHETFH	Item 4 - Alleged Father B	6,821,000,000	>99.99%	FBI PopStats
XV4R7K	Item 4 - Alleged Father B	2,917E+12	99,9999999999	Local database
Y9MU2H	Item 4 - Alleged Father B	4.9x10^11	Not calculated by our Laboratory	NIST-STRBASE
YFHYVJ	Item 4 - Alleged Father B	2.1135E10	99.9999%	NIST-STRBASE
YL9A6H	Item 4 - Alleged Father B	454,330,677	99.99999%	Laboratory Specific Database

Response Summary **Participants: 87**

Which of the alleged fathers cannot be excluded as the biological parent of Item 2?

Responses

Item 3 - Alleged Father A	1
Item 4 - Alleged Father B	86
Inconclusive	0

Kinship Likelihood Ratio Results

TABLE 6

Locus	WebCode	Formula	Allele Legend	Likelihood Ratio
D1S1656	2QCRGF	(1+4p)/8p	p=12	2.444
	3V797E	(1+4p)/8p	P=12	2.4440
	4TECJ7	(1+4p)/8p	p=12	2.444012
	67CZN6	0.5+0.125/p	p=12	2.444
	77TGGC	(1+4p)/8p	p=12	2.4440
	9736V9	((0+1/2)+(1/4p+1/2))/2	p=12	2.4431
	ATVET2	(1+4p)/8p	p=12	2.4440
	B2N8EZ	(1+4p)/8p	p=12	2.444012
	E6RCHV	(1+4p)/8p	p=12	2.4440
	EE3D4W	(1+4p)/8p	p=12	2.4440
	EFDFPV	[1+(1/4p)]/2	p=12	2.444
	EJCRLV	(1+4p)/8p	p=12	2.443623639
	EZWHKU	(K1+2K0a)/2a	a= 12	2.4440
	GC4A2Y	(1+4p)/8p	p = 12, q = 15, r = 15.3	2.4440
	HJGKTQ	(1/4+2*1/2p)/2p	p=12	2.444
	KZEKUP	(1+4p)/8p	p = 12	2.444
	LAYBUM	(1+4p)/8p	p=0.0643	2.4440
	NEP64T	(1+4p)/8p	p=12	2.444
	PY7Y9K	(1+4p)/8p	p=12	2.444
	QL2YXT	(1+4p)/8p	p = 12	2.4440
	QRNRAR	(1+4p)/8p	p=12	2.444
	R986ZP	(1+4p)/8p	p=12	2.444
	RVLQWP	(1+4p)/8p	p = 12	2.444
	TC496G	(1+4p)/8p	p=12	2.4440
	TQL2TN	((1/8)(1+4p))/p	p=12	2.4440
	UL9FKG	(1+4p)/8p	p = 12	2.444012442
	VTYKQM	(1+4p)/8p	p=12	2.4440
	XCNJ7K	(1+4p)/8p	p=12, q=15, r=15.3	2.444
	XV4R7K	(1+4p)/8p	p=12	2.440
	YFHYVJ	(1+4p)/8p	p=12	2.4440

Statistical Analysis Summary of D1S1656 **Likelihood Ratio Mode: 2.4440**

TABLE 6

Locus	WebCode	Formula	Allele Legend	Likelihood Ratio
D2S1338	2QCRGF	(1+4p)/8p	p=16	2.748
	3V797E	(1+4p)/8p	P=16	2.7482
	4TECJ7	(1+4p)/8p	p=16	2.748201
	67CZN6	0.5+0.125/p	p=16	2.748
	77TGGC	(1+4p)/8p	p=16	2.7482
	9736V9	((0+1/2)+(1/4p+1/2))/2	p=16	2.7498
	ATVET2	(1+4p)/8p	p=16	2.7482
	B2N8EZ	(1+4p)/8p	p=16	2.748201
	E6RCHV	(1+4p)/8p	p=16	2.7482
	EE3D4W	(1+4p)/8p	p=16	2.7482
	EFDFPV	[1+(1/4p)]/2	p=16	2.748
	EJCRLV	(1+4p)/8p	p=16	2.748426259
	EZWHKU	(K1+2K0a)/2a	a= 16	2.7482
	GC4A2Y	(1+4p)/8p	p = 16, q = 19, r = 20	2.7482
	HJGKTQ	(1/4+2*1/2p)/2p	p=16	2.748
	KZEKUP	(1+4p)/8p	p = 16	2.748
	LAYBUM	(1+4p)/8p	p=0.0556	2.7482
	NEP64T	(1+4p)/8p	p=16	2.748
	PY7Y9K	(1+4p)/8p	p=16	2.748
	QL2YXT	(1+4p)/8p	p = 16	2.7482
	QRNRAR	(1+4p)/8p	p=16	2.748
	R986ZP	(1+4p)/8p	p=16	2.748
	RVLQWP	(1+4p)/8p	p = 16	2.7482
	TC496G	(1+4p)/8p	p=16	2.7482
	TQL2TN	((1/8)(1+4p))/p	p=16	2.7482
	UL9FKG	(1+4p)/8p	p = 16	2.748201439
	VTYKQM	(1+4p)/8p	p=16	2.7482
	XCNJ7K	(1+4p)/8p	p=16, q=19, r=20	2.748
	XV4R7K	(1+4p)/8p	p=16	2.748
	YFHYVJ	(1+4p)/8p	p=16	2.7482

Statistical Analysis Summary of D2S1338 **Likelihood Ratio Mode: 2.7482**

TABLE 6

Locus	WebCode	Formula	Allele Legend	Likelihood Ratio
D2S441	2QCRGF	(p+q+4pq)/8pq	p=11.3, q=12	4.104
	3V797E	(p+q+4pq)/8pq	P=11.3, q=12	4.1040
	4TECJ7	(p+q+4pq)/8pq	p=113, q=12	4.104039
	67CZN6	0.5+0.125/p+0.125/q	p=11.3, q=12	4.104
	77TGGC	(p+q+4pq)/8pq	p=11.3, q=12	4.1040
	9736V9	((1/4q+1/2)+(1/4p+1/2))/2	q=12, p=11.3	4.1066
	ATVET2	(p+q+4pq)/8pq	p=11.3, q=12	4.1040
	B2N8EZ	(p+q+4pq)/8pq	p=11.3, q=12	4.104039
	E6RCHV	(a+p+4ap)/8ap	p=11.3, a=12	4.1040
	EE3D4W	(p+q+4pq)/8pq	p=11.3, q=12	4.1040
	EFDFPV	[1+(1/4p)+(1/4q)]/2	p=11.3, q=12	4.104
	EJCRLV	(p+q+4pq)/8pq	p=0.0439, q0.1652	4.104039006
	EZWHKU	(K1a+K1b+K02ab)/2ab	a= 11.3, b= 12	4.1040
	GC4A2Y	(p+q+4pq)/8pq	p = 11.3, q = 12	4.1040
	HJGKTQ	(1/4p+1/4q+1/2*2pq)/2pq	p=11.3, q=12	4.104
	KZEKUP	(p+q+4pq)/8pq	p = 11.3, q = 12	4.104
	LAYBUM	(a+p+4ap)/8ap	p=0.1652 a=0.0439	4.1040
	NEP64T	(p+q+4pq)/8pq	p=11.3, q=12	4.104
	PY7Y9K	(p+q+4pq)/8pq	p=11.3, q=12	4.104
	QL2YXT	(p+q+4pq)/8pq	p = 11.3, q = 12	4.1040
	QRNRAR	(p+q+4pq)/8pq	p=11.3, q=12	4.104
	R986ZP	(p+q+4pq)/8pq	p=11.3, q=12	4.104
	RVLQWP	(p+q+4pq)/8pq	p = 11.3, q = 12	4.104
	TC496G	(p+q+4pq)/8pq	p=11.3, q=12	4.1040
	TQL2TN	((1/8)(p+q+4pq))/(pq)	p=11.3, q=12	4.1040
	UL9FKG	(p+q+4pq)/8pq	p = 11.3, q = 12	4.104039006
	VTYKQM	(a+p+4ap)/8ap	p=11.3 , a=12	4.1040
	XCNJ7K	(p+q+4pq)/8pq	p=11.3, q=12	4.104
	XV4R7K	(p+q+4pq)/8pq	p=11.3, q=12	4.104
	YFHYVJ	(a+p+4ap)/8ap	a=12, p=11.3	4.1040

Statistical Analysis Summary of D2S441 **Likelihood Ratio Mode: 4.1040**

TABLE 6

Locus	WebCode	Formula	Allele Legend	Likelihood Ratio
D3S1358	2QCRGF	(1+2p)/4p	p=16	1.284
	3V797E	(1+2p)/4p	p=16	1.2844
	4TECJ7	(1+2p)/4p	p=16	1.284437
	67CZN6	0.5+0.25/p	p=16	1.284
	77TGGC	(1+2p)/4p	p=16	1.2844
	9736V9	((1/4q+1/2)+(1/4q+1/2))/2	q=16	1.2844
	ATVET2	(1+2p)/4p	p=16	1.2844
	B2N8EZ	(1+2p)/4p	p=16	1.284436
	E6RCHV	(1+2r)/4r	r=16	1.2844
	EE3D4W	(1+2p)/4p	p=16	1.2844
	EFDFPV	[1+(1/2p)]/2	p=16	1.284
	EJCRLV	(1+2p)/4p	p=16	1.284436774
	EZWHKU	(K1+K0a)/a	a= 16	1.2844
	GC4A2Y	(1+2q)/4q	p = 14, q = 16	1.2844
	HJGKTQ	(1/4+1/2p)/p	p=16	1.284
	KZEKUP	(1+2p)/4p	p = 16	1.284
	LAYBUM	(1+2r)/4r	r=0.3187	1.2844
	NEP64T	(1+2p)/4p	p=16	1.284
	PY7Y9K	(1+2p)/4p	p=16	1.284
	QL2YXT	(1+2p)/4p	p = 16	1.2844
	QRNRAR	(1+2p)/4p	p=16	1.284
	R986ZP	(1+2p)/4p	p=16	1.284
	RVLQWP	(1+2p)/4p	p = 16	1.2844
	TC496G	(1+2p)/4p	p=16	1.2844
	TQL2TN	((1/4)(1+2q))/q	q=16	1.2844
	UL9FKG	(1+4p)/8p	p = 16	1.284436774
	VTYKQM	(1+2r)/4r	r=16	1.2844
	XCNJ7K	(1+2q)/4q	p=14, q=16	1.284
	XV4R7K	(1+2p)/4p	p=16	1.284
	YFHYVJ	(1+2r)/4r	r=16	1.2844

Statistical Analysis Summary of D3S1358 **Likelihood Ratio Mode: 1.2844**

TABLE 6

Locus	WebCode	Formula	Allele Legend	Likelihood Ratio
D5S818	2QCRGF			0.500
	3V797E	1/2		0.5000
	4TECJ7	1/2		0.5
	67CZN6			0.5
	77TGGC	0.50		0.5000
	9736V9	((0+1/2)+(0+1/2))/2		0.5000
	ATVET2	0.5	-	0.5
	B2N8EZ	1/2		0.5
	E6RCHV	1/2		0.5000
	EE3D4W	1/2		0.5000
	EFDFPV	1/2		0.5
	EJCRLV	2/4		0.5
	EZWHKU	K0		0.5000
	GC4A2Y	1/2	p = 11, q = 12, r = 13	0.5000
	HJGKTQ	k0=0.5		0.5
	KZEKUP	1/2		0.5
	LAYBUM	1/2		0.5000
	NEP64T	1/2		0.5000
	PY7Y9K	0.5		0.5
	QL2YXT	1/2		0.5000
	QRNRAR	1/2	n/a	0.5000
	R986ZP	1/2	No allele	0.5
	RVLQWP	1/2		0.5
	TC496G	1/2		.50000
	TQL2TN	1/2		0.5000
	UL9FKG	0.5		0.5
	VTYKQM	0.50	-	0.5000
	XCNJ7K	1/2		0.500
	XV4R7K	1/2		.5000
	YFHYVJ	1/2		0.5000

Statistical Analysis Summary of D5S818 **Likelihood Ratio Mode: 0.5000**

TABLE 6

Locus	WebCode	Formula	Allele Legend	Likelihood Ratio
D7S820	2QCRGF	(p+q+4pq)/8pq	p=10, q=11	1.487
	3V797E	(p+q+4pq)/8pq	p=10, q=11	1.4868
	4TECJ7	(p+q+4pq)/8pq	p=10, q=11	1.486849
	67CZN6	0.5+0.125/p+0.125/q	p=10, q=11	1.487
	77TGGC	(p+q+4pq)/8pq	p=10, q=11	1.4868
	9736V9	((1/4q+1/2)+(1/4p+1/2))/2	q=11, p=10	1.4868
	ATVET2	(p+q+4pq)/8pq	p=10, q=11	1.4868
	B2N8EZ	(p+q+4pq)/8pq	p=10, q=11	1.486849
	E6RCHV	(p+q+4pq)/8pq	p=10, q=11	1.4868
	EE3D4W	(p+q+4pq)/8pq	p=10, q=11	1.4868
	EFDFPV	[1+(1/4p)+(1/4q)]/2	p=10, q=11	1.486
	EJCRLV	(p+q+4pq)/8pq	p=10, q=11	1.486948107
	EZWHKU	(K1a+K1b+K02ab)/2ab	a= 10, b= 11	1.4868
	GC4A2Y	(p+q+4pq)/8pq	p = 10, q = 11	1.4868
	HJGKTQ	(1/4p+1/4q+1/2*2pq)/2pq	p=10, q=11	1.487
	KZEKUP	(p+q+4pq)/8pq	p = 10, q = 11	1.487
	LAYBUM	(p+q+4pq)/8pq	p=0.3363 q=0.2032	1.4868
	NEP64T	(p+q+4pq)/8pq	p=10, q=11	1.487
	PY7Y9K	(p+q+4pq)/8pq	p=10, q=11	1.487
	QL2YXT	(p+q+4pq)/8pq	p = 10, q = 11	1.4868
	QRNRAR	(p+q+4pq)/8pq	p=10, q=11	1.487
	R986ZP	(p+q+4pq)/8pq	p=10, q=11	1.487
	RVLQWP	(p+q+4pq)/8pq	p = 10, q = 11	1.4868
	TC496G	(p+q+4pq)/8pq	p=10, q=11	1.4868
	TQL2TN	((1/8)(p+q+4pq))/(pq)	p=10, q=11	1.4868
	UL9FKG	(p+q+4pq)/8pq	p = 10, p = 11	1.486849422
	VTYKQM	(p+q+4pq)/8pq	p=10, q=11	1.4868
	XCNJ7K	(p+q+4pq)/8pq	p=10, q=11	1.487
	XV4R7K	(p+q+4pq)/8pq	p=10, q=11	1.487
	YFHYVJ	(p+q+4pq)/8pq	p=10, q=11	1.4868

Statistical Analysis Summary of D7S820 **Likelihood Ratio Mode: 1.4868**

TABLE 6

Locus	WebCode	Formula	Allele Legend	Likelihood Ratio
D8S1179	2QCRGF	(p+q+4pq)/8pq	p=14, q=15	1.583
	3V797E	(p+q+4pq)/8pq	p=14, q=15	1.5829
	4TECJ7	(p+q+4pq)/8pq	p=14, q=15	1.582863
	67CZN6	0.5+0.125/p+0.125/q	p=14, q=15	1.583
	77TGGC	(p+q+4pq)/8pq	p=14, q=15	1.5828
	9736V9	((1/4q+1/2)+(1/4p+1/2))/2	q=15, p=14	1.5831
	ATVET2	(p+q+4pq)/8pq	p=14, q=15	1.5828
	B2N8EZ	(p+q+4pq)/8pq	p=14, q=15	1.582863
	E6RCHV	(p+q+4pq)/8pq	p=14, q=15	1.5843
	EE3D4W	(p+q+4pq)/8pq	p=14, q=15	1.5829
	EFDFPV	[1+(1/4p)+(1/4q)]/2	p=14, q=15	1.582
	EJCRLV	(p+q+4pq)/8pq	p14, q15	1.582863392
	EZWHKU	(K1a+K1b+K02ab)/2ab	a= 14, b= 15	1.5829
	GC4A2Y	(p+q+4pq)/8pq	p = 14, q = 15	1.5829
	HJGKTQ	(1/4p+1/4q+1/2*2pq)/2pq	p=14, q=15	1.583
	KZEKUP	(p+q+4pq)/8pq	p = 14, q = 15	1.409
	LAYBUM	(p+q+4pq)/8pq	p=0.2939 q=0.1901	1.5829
	NEP64T	(p+q+4pq)/8pq	p=14, q=15	1.583
	PY7Y9K	(p+q+4pq)/8pq	p=14, q=15	1.583
	QL2YXT	(p+q+4pq)/8pq	p = 14, q = 15	1.5828
	QRNRAR	(p+q+4pq)/8pq	p=14, q=15	1.583
	R986ZP	(p+q+4pq)/8pq	p=14, q=15	1.583
	RVLQWP	(p+q+4pq)/8pq	p = 14, q = 15	1.5828
	TC496G	(p+q+4pq)/8pq	p=14, q=15	1.5829
	TQL2TN	((1/8)(p+q+4pq))/(pq)	p=14, q=15	1.5829
	UL9FKG	(p+q+4pq)/8pq	p = 14, p = 15	1.582863392
	VTYKQM	(p+q+4pq)/8pq	p=14, q=15	1.5828
	XCNJ7K	(p+q+4pq)/8pq	p=14, q=15	1.583
	XV4R7K	(p+q+4pq)/8pq	p=14, q=15	1.583
	YFHYVJ	(p+q+4pq)/8pq	p=14, q=15	1.5828

Statistical Analysis Summary of D8S1179 **Likelihood Ratio Mode: 1.583**

TABLE 6

Locus	WebCode	Formula	Allele Legend	Likelihood Ratio
D10S1248	2QCRGF	(1+2p)/4p	p=14	1.404
	3V797E	(1+2p)/4p	p=14	1.4048
	4TECJ7	(1+2p)/4p	p=14	1.404814
	67CZN6	0.5+0.25/p	p=14	1.405
	77TGGC	(1+2p)/4p	p=14	1.4048
	9736V9	((0+1/2)+(1/2p+1/2))/2	p=14	1.4047
	ATVET2	(1+2p)/4p	p=14	1.4048
	B2N8EZ	(1+2p)/4p	p=14	1.404813
	E6RCHV	(1+2q)/4q	q=14	1.4048
	EE3D4W	(1+2p)/4p	p=14	1.4048
	EFDFPV	[1+(1/2p)]/2	p=14	1.404
	EJCRLV	(1+2p)/4p	p=14	1.404813608
	EZWHKU	(K1+K0a)/a	a= 14	1.4048
	GC4A2Y	(1+2q)/4q	p = 13, q = 14	1.4048
	HJGKTQ	(1/4+1/2q)/q	q=14	1.405
	KZEKUP	(1+2p)/4p	p = 14	1.405
	LAYBUM	(1+2q)/4q	q=0.2763	1.4048
	NEP64T	(1+2p)/4p	p=14	1.405
	PY7Y9K	(1+2p)/4p	p=14	1.405
	QL2YXT	(1+2p)/4p	p = 14	1.4048
	QRNRAR	(1+2p)/4p	p=14	1.405
	R986ZP	(1+2p)/4p	p=14	1.405
	RVLQWP	(1+2p)/4p	p = 14	1.4048
	TC496G	(1+2p)/4p	p=14	1.4048
	TQL2TN	((1/4)(1+2q))/q	q=14	1.4048
	UL9FKG	(1+4p)/8p	p = 14	1.404813608
	VTYKQM	(1+2q)/4q	q=14	1.4048
	XCNJ7K	(1+2q)/4q	p=13, q=14	1.405
	XV4R7K	(1+2p)/4p	p=14	1.405
	YFHYVJ	(1+2q)/4q	q=14	1.4048

Statistical Analysis Summary of D10S1248 **Likelihood Ratio Mode: 1.4048**

TABLE 6

Locus	WebCode	Formula	Allele Legend	Likelihood Ratio
D12S391	2QCRGF	(1+4p)/8p	p=17	1.250
	3V797E	(1+4p)/8p	p=17	1.2499
	4TECJ7	(1+4p)/8p	p=17	1.24985
	67CZN6	0.5+0.125/p	p=17	1.250
	77TGGC	(1+4p)/8p	p=17	1.2498
	9736V9	((0+1/2)+(1/4p+1/2))/2	p=17	1.2500
	ATVET2	(1+4p)/8p	p=17	1.2498
	B2N8EZ	(1+4p)/8p	p=17	1.249850
	E6RCHV	(1+4p)/8p	p=17	1.2499
	EE3D4W	(1+4p)/8p	p=17	1.2499
	EFDFPV	[1+(1/4p)]/2	p=17	1.249
	EJCRLV	(1+4p)/8p	p=17	1.25
	EZWHKU	(K1+2K0a)/2a	a= 17	1.2498
	GC4A2Y	(1+4p)/8p	p = 17, q = 21, r = 22	1.2499
	HJGKTQ	(1/4+2*1/2p)/2p	p=17	1.250
	KZEKUP	(1+4p)/8p	p = 17	1.250
	LAYBUM	(1+4p)/8p	p=0.1667	1.2499
	NEP64T	(1+4p)/8p	p=17	1.250
	PY7Y9K	(1+4p)/8p	p=17	1.250
	QL2YXT	(1+4p)/8p	p = 17	1.2498
	QRNRAR	locusnotused		
	R986ZP	(1+4p)/8p	p=17	1.250
	RVLQWP	(1+4p)/8p	p = 17	1.2499
	TC496G	(1+4p)/8p	p=17	1.2499
	TQL2TN	((1/8)(1+4p))/p	p=17	1.2499
	UL9FKG	(1+4p)/8p	p = 17	1.24985003
	VTYKQM	(1+4p)/8p	p=17	1.2498
	XCNJ7K	(1+4p)/8p	p=17, q=21, r=22	1.250
	XV4R7K	(1+4p)/8p	p=17	1.250
	YFHYVJ	(1+4p)/8p	p=17	1.2498

Statistical Analysis Summary of D12S391 **Likelihood Ratio Mode: 1.250**

TABLE 6

Locus	WebCode	Formula	Allele Legend	Likelihood Ratio
D13S317	2QCRGF	(1+2p)/4p	p=12	1.098
	3V797E	(1+2p)/4p	p=12	1.0979
	4TECJ7	(1+2p)/4p	p=12	1.097943
	67CZN6	0.5+0.25/p	p=12	1.098
	77TGGC	(1+2p)/4p	p=12	1.0979
	9736V9	((1/4p+1/2)+(1/4p+1/2))/2	p=12	1.0979
	ATVET2	(1+2p)/4p	p=12	1.0979
	B2N8EZ	(1+2p)/4p	p=12	1.097943
	E6RCHV	(1+2p)/4p	p=12	1.0979
	EE3D4W	(1+2p)/4p	p=12	1.0979
	EFDFPV	[1+(1/2p)]/2	p=12	1.097
	EJCRLV	(1+2p)/4p	p=12	1.097943076
	EZWHKU	(K1+K0a)/a	a= 12	1.0979
	GC4A2Y	(1+2p)/4p	p = 12, q = 13	1.0979
	HJGKTQ	(1/4+1/2p)/p	p=12	1.098
	KZEKUP	(1+2p)/4p	p = 12	1.098
	LAYBUM	(1+2p)/4p	p=0.4181	1.0979
	NEP64T	(1+2p)/4p	p=12	1.098
	PY7Y9K	(1+2p)/4p	p=12	1.098
	QL2YXT	(1+2p)/4p	p = 12	1.0979
	QRNRAR	(1+2p)/4p	p=12	1.098
	R986ZP	(1+2p)/4p	p=12	1.098
	RVLQWP	(1+2p)/4p	p = 12	1.0979
	TC496G	(1+2p)/4p	p=12	1.0979
	TQL2TN	((1/4)(1+2p))/p	p=12	1.0979
	UL9FKG	(1+4p)/8p	p = 12	1.097943076
	VTYKQM	(1+2p)/4p	p=12	1.0979
	XCNJ7K	(1+2p)/4p	p=12, q=13	1.098
	XV4R7K	(1+2p)/4p	p=12	1.098
	YFHYVJ	(1+2p)/4p	p=12	1.0979

Statistical Analysis Summary of D13S317 **Likelihood Ratio Mode: 1.0979**

TABLE 6

Locus	WebCode	Formula	Allele Legend	Likelihood Ratio
D16S539	2QCRGF	(p+q+4pq)/8pq	p=9, q=11	1.582
	3V797E	(p+q+4pq)/8pq	p=9, q=11	1.5819
	4TECJ7	(p+q+4pq)/8pq	p=9, q=11	1.581891
	67CZN6	0.5+0.125/p+0.125/q	p=9, q=11	1.582
	77TGGC	(p+q+4pq)/8pq	p=9, r=11	1.5818
	9736V9	((1/4q+1/2)+(1/4p+1/2))/2	q=11, p=9	1.5817
	ATVET2	(p+q+4pq)/8pq	p=9, q=11	1.5818
	B2N8EZ	(p+q+4pq)/8pq	p=9, q=11	1.581890
	E6RCHV	(p+r+4pr)/8pr	p=9, r=11	1.5819
	EE3D4W	(p+q+4pq)/8pq	p=9, q=11	1.5819
	EFDFPV	[1+(1/4p)+(1/4q)]/2	p=9, q=11	1.581
	EJCRLV	(p+q+4pq)/8pq	p=9, q=11	1.581999103
	EZWHKU	(K1a+K1b+K02ab)/2ab	a= 9, b= 11	1.5819
	GC4A2Y	(p+q+4pq)/8pq	p = 11, q = 9	1.5819
	HJGKTQ	(1/4p+1/4q+1/2*2pq)/2pq	p=9, q=11	1.582
	KZEKUP	(p+q+4pq)/8pq	p = 9, q = 11	1.582
	LAYBUM	(p+r+4pr)/8pr	p=0.1827 r=0.3143	1.5819
	NEP64T	(p+q+4pq)/8pq	p=9, q=11	1.582
	PY7Y9K	(p+q+4pq)/8pq	p=9, q=11	1.582
	QL2YXT	(p+q+4pq)/8pq	p = 9, q = 11	1.5818
	QRNRAR	(p+q+4pq)/8pq	p=9, q=11	1.582
	R986ZP	(p+q+4pq)/8pq	p=9, q=11	1.582
	RVLQWP	(p+q+4pq)/8pq	p = 9, q = 11	1.5819
	TC496G	(p+q+4pq)/8pq	p=9, q=11	1.5819
	TQL2TN	((1/8)(p+q+4pq))/(pq)	q=9, p=11	1.5819
	UL9FKG	(p+q+4pq)/8pq	p = 9, q = 11	1.581890914
	VTYKQM	(p+r+4pr)/8pr	p=9, r=11	1.5818
	XCNJ7K	(p+q+4pq)/8pq	p=11, q=9	1.582
	XV4R7K	(p+q+4pq)/8pq	p=9, q=11	1.582
	YFHYVJ	(p+r+4pr)/8pr	p=9, r=11	1.5819

Statistical Analysis Summary of D16S539 **Likelihood Ratio Mode: 1.5819**

TABLE 6

Locus	WebCode	Formula	Allele Legend	Likelihood Ratio
D18S51	2QCRGF			0.500
	3V797E	1/2		0.5000
	4TECJ7	1/2		0.5
	67CZN6			0.5
	77TGGC	0.5		0.5000
	9736V9	((0+1/2)+(0+1/2))/2		0.5000
	ATVET2	0.5	-	0.5
	B2N8EZ	1/2		0.5
	E6RCHV	1/2		0.5000
	EE3D4W	1/2		0.5000
	EFDFPV	1/2		0.5
	EJCRLV	2/4		0.5
	EZWHKU	K0		0.5000
	GC4A2Y	1/2	p = 13, q = 14, r = 17, s = 18	0.5000
	HJGKTQ	k0=0.5		0.5
	KZEKUP	1/2		0.5
	LAYBUM	1/2		0.5000
	NEP64T	1/2		0.5000
	PY7Y9K	0.5		0.5
	QL2YXT	1/2		0.5000
	QRNRAR	1/2	n/a	0.5000
	R986ZP	1/2	no allele	0.5
	RVLQWP	1/2		0.5
	TC496G	1/2		.50000
	TQL2TN	1/2		0.5000
	UL9FKG	0.5		0.5
	VTYKQM	0.50	-	0.5000
	XCNJ7K	1/2		0.500
	XV4R7K	1/2		.5000
	YFHYVJ	1/2		0.5000

Statistical Analysis Summary of D18S51 **Likelihood Ratio Mode: 0.5000**

TABLE 6

Locus	WebCode	Formula	Allele Legend	Likelihood Ratio
D19S433	2QCRGF	(1+4p)/8p	p=14	1.094
	3V797E	(1+4p)/8p	p=14	1.0938
	4TECJ7	(1+4p)/8p	p=14	1.093824
	67CZN6	0.5+0.125/p	p=14	1.094
	77TGGC	(1+4p)/8p	p=14	1.0938
	9736V9	((0+1/2)+(1/4p+1/2))/2	p=14	1.0937
	ATVET2	(1+4p)/8p	p=14	1.0938
	B2N8EZ	(1+4p)/8p	p=14	1.093824
	E6RCHV	(1+4p)/8p	p=14	1.0938
	EE3D4W	(1+4p)/8p	p=14	1.0938
	EFDFPV	[1+(1/4p)]/2	p=14	1.093
	EJCRLV	(1+4p)/8p	p=14	1.093764846
	EZWHKU	(K1+2K0a)/2a	a= 14	1.0938
	GC4A2Y	(1+4p)/8p	p = 14, q = 14.2, r = 15	1.0938
	HJGKTQ	(1/4+2*1/2p)/2p	p=14	1.094
	KZEKUP	(1+4p)/8p	p = 14	1.094
	LAYBUM	(1+4p)/8p	p=0.2105	1.0938
	NEP64T	(1+4p)/8p	p=14	1.094
	PY7Y9K	(1+4p)/8p	p=14	1.094
	QL2YXT	(1+4p)/8p	p = 14	1.0938
	QRNRAR	(1+4p)/8p	p=14	1.094
	R986ZP	(1+4p)/8p	p=14	1.094
	RVLQWP	(1+4p)/8p	p = 14	1.0938
	TC496G	(1+4p)/8p	p=14	1.0938
	TQL2TN	((1/8)(1+4p))/p	p=14	1.0938
	UL9FKG	(1+4p)/8p	p = 14	1.093824228
	VTYKQM	(1+4p)/8p	p=14	1.0938
	XCNJ7K	(1+4p)/8p	p=14, q=14.2, r=15	1.094
	XV4R7K	(1+4p)/8p	p=14	1.094
	YFHYVJ	(1+4p)/8p	p=14	1.0938

Statistical Analysis Summary of D19S433 **Likelihood Ratio Mode: 1.0938**

TABLE 6

Locus	WebCode	Formula	Allele Legend	Likelihood Ratio
D21S11	2QCRGF	(1+4p)/8p	p=30	1.237
	3V797E	(1+4p)/8p	p=30	1.2370
	4TECJ7	(1+4p)/8p	p=30	1.237028
	67CZN6	0.5+0.125/p	p=30	1.237
	77TGGC	(1+4p)/8p	p=30	1.2370
	9736V9	((0+1/2)+(1/4q+1/2))/2	q=30	1.2371
	ATVET2	(1+4p)/8p	p=30	1.2370
	B2N8EZ	(1+4p)/8p	p=30	1.237028
	E6RCHV	(1+4r)/8r	r=30	1.2370
	EE3D4W	(1+4p)/8p	p=30	1.2370
	EFDFPV	[1+(1/4p)]/2	p=30	1.237
	EJCRLV	(1+4p)/8p	p=30	1.237102005
	EZWHKU	(K1+2K0a)/2a	a= 30	1.2370
	GC4A2Y	(1+4r)/8r	p = 28, q = 29, r = 30	1.2370
	HJGKTQ	(1/4+2*1/2q)/2q	q=30	1.237
	KZEKUP	(1+4p)/8p	p = 30	1.237
	LAYBUM	(1+4r)/8r	r=0.1696	1.2370
	NEP64T	(1+4p)/8p	p=30	1.237
	PY7Y9K	(1+4p)/8p	p=30	1.237
	QL2YXT	(1+4p)/8p	p = 30	1.2370
	QRNRAR	(1+4p)/8p	p=30	1.237
	R986ZP	(1+4p)/8p	p=30	1.237
	RVLQWP	(1+4p)/8p	p = 30	1.237
	TC496G	(1+4p)/8p	p=30	1.2370
	TQL2TN	((1/8)(1+4r))/r	r=30	1.2370
	UL9FKG	(1+4p)/8p	p = 30	1.237028302
	VTYKQM	(1+4r)/8r	r=30	1.2370
	XCNJ7K	(1+4r)/8r	p=28, q=29, r=30	1.237
	XV4R7K	(1+4p)/8p	p=30	1.237
	YFHYVJ	(1+4r)/8r	r=30	1.2370

Statistical Analysis Summary of D21S11 **Likelihood Ratio Mode: 1.2370**

TABLE 6

Locus	WebCode	Formula	Allele Legend	Likelihood Ratio
D22S1045	2QCRGF			0.500
	3V797E	1/2		0.5000
	4TECJ7	1/2		0.5
	67CZN6			0.5
	77TGGC	0.5		0.5000
	9736V9	((0+1/2)+(0+1/2))/2		0.5000
	ATVET2	0.5	-	0.5
	B2N8EZ	1/2		0.5
	E6RCHV	1/2		0.5000
	EE3D4W	1/2		0.5000
	EFDFPV	1/2		0.5
	EJCRLV	2/4		0.5
	EZWHKU	K0		0.5000
	GC4A2Y	1/2	p = 11, q = 14, r = 15, s = 17	0.5000
	HJGKTQ	k0=0.5		0.5
	KZEKUP	1/2		0.5
	LAYBUM	1/2		0.5000
	NEP64T	1/2		0.5000
	PY7Y9K	0.5		0.5
	QL2YXT	1/2		0.5000
	QRNRAR	1/2	n/a	0.5000
	R986ZP	1/2	no allele	0.5
	RVLQWP	1/2		0.5
	TC496G	1/2		.50000
	TQL2TN	1/2		0.5000
	UL9FKG	0.5		0.5
	VTYKQM	0.50	-	0.5000
	XCNJ7K	1/2		0.500
	XV4R7K	1/2		.5000
	YFHYVJ	1/2		0.5000

Statistical Analysis Summary of D22S1045 **Likelihood Ratio Mode: 0.5000**

TABLE 6

Locus	WebCode	Formula	Allele Legend	Likelihood Ratio
CSF1PO	2QCRGF	(1+4p)/8p	p=11	1.003
	3V797E	(1+4p)/8p	p=11	1.0030
	4TECJ7	(1+4p)/8p	p=11	1.003018
	67CZN6	0.5+0.125/p	p=11	1.003
	77TGGC	(1+4p)/8p	p=11	1.0030
	9736V9	((0+1/2)+(1/4p+1/2))/2	p=11	1.0029
	ATVET2	(1+4p)/8p	p=11	1.0030
	B2N8EZ	(1+4p)/8p	p=11	1.003018
	E6RCHV	(1+4t)/8t	t=11	1.0030
	EE3D4W	(1+4p)/8p	p=11	1.0030
	EFDFPV	[1+(1/4p)]/2	p=11	1.003
	EJCRLV	(1+4p)/8p	p=11	1.00306841
	EZWHKU	(K1+2K0a)/2a	a= 11	1.0030
	GC4A2Y	(1+4p)/8p	p = 11, q = 12, r = 7	1.0030
	HJGKTQ	(1/4+2*1/2q)/2q	q=11	1.003
	KZEKUP	(1+4p)/8p	p = 11	1.003
	LAYBUM	(1+4t)/8t	t=0.2485	1.0030
	NEP64T	(1+4p)/8p	p=11	1.003
	PY7Y9K	(1+4p)/8p	p=11	1.003
	QL2YXT	(1+4p)/8p	p = 11	1.0030
	QRNRAR	(1+4p)/8p	p=11	1.003
	R986ZP	(1+4p)/8p	p=11	1.003
	RVLQWP	(1+4p)/8p	p = 11	1.003
	TC496G	(1+4p)/8p	p=11	1.0030
	TQL2TN	((1/8)(1+4p))/p	p=11	1.0030
	UL9FKG	(1+4p)/8p	p = 11	1.003018109
	VTYKQM	(1+4t)/8t	t=11	1.0030
	XCNJ7K	(1+4p)/8p	p=11, q=12, r=7	1.003
	XV4R7K	(1+4p)/8p	p=11	1.003
	YFHYVJ	(1+4t)/8t	t=11	1.0030

Statistical Analysis Summary of CSF1PO **Likelihood Ratio Mode: 1.0030**

TABLE 6

Locus	WebCode	Formula	Allele Legend	Likelihood Ratio
FGA	2QCRGF	(1+4p)/8p	p=23	1.237
	3V797E	(1+4p)/8p	p=23	1.2370
	4TECJ7	(1+4p)/8p	p=23	1.237028
	67CZN6	0.5+0.125/p	p=23	1.237
	77TGGC	(1+4p)/8p	p=23	1.2370
	9736V9	((0+1/2)+(1/4p+1/2))/2	p=23	1.2371
	ATVET2	(1+4p)/8p	p=23	1.2370
	B2N8EZ	(1+4p)/8p	p=23	1.237028
	E6RCHV	(1+4p)/8p	p=23	1.2370
	EE3D4W	(1+4p)/8p	p=23	1.2370
	EFDFPV	[1+(1/4p)]/2	p=23	1.237
	EJCRLV	(1+4p)/8p	p=23	1.237175708
	EZWHKU	(K1+2K0a)/2a	a= 23	1.2370
	GC4A2Y	(1+4p)/8p	p = 23, q = 24, r = 26	1.2370
	HJGKTQ	(1/4+2*1/2p)/2p	p=23	1.237
	KZEKUP	(1+4p)/8p	p = 23	1.237
	LAYBUM	(1+4p)/8p	p=0.1696	1.2370
	NEP64T	(1+4p)/8p	p=23	1.237
	PY7Y9K	(1+4p)/8p	p=23	1.237
	QL2YXT	(1+4p)/8p	p = 23	1.2370
	QRNRAR	(1+4p)/8p	p=23	1.237
	R986ZP	(1+4p)/8p	p=23	1.237
	RVLQWP	(1+4p)/8p	p = 23	1.237
	TC496G	(1+4p)/8p	p=23	1.2370
	TQL2TN	((1/8)(1+4p))/p	p=23	1.2370
	UL9FKG	(1+4p)/8p	p = 23	1.237028302
	VTYKQM	(1+4p)/8p	p=23	1.2370
	XCNJ7K	(1+4p)/8p	p=23, q=24, r=26	1.237
	XV4R7K	(1+4p)/8p	p=23	1.237
	YFHYVJ	(1+4p)/8p	p=23	1.2370

Statistical Analysis Summary of FGA **Likelihood Ratio Mode: 1.2370**

TABLE 6

Locus	WebCode	Formula	Allele Legend	Likelihood Ratio
PentaD	2QCRGF			0.500
	3V797E	1/2		0.5000
	4TECJ7	1/2		0.5
	67CZN6			0.5
	77TGGC	0.5		0.5000
	9736V9	((0+1/2)+(0+1/2))/2		0.5000
	ATVET2	0.5	-	0.5
	B2N8EZ	1/2		0.5
	E6RCHV	1/2		0.5000
	EE3D4W	1/2		0.5000
	EFDFPV	1/2		0.5
	EJCRLV	2/4		0.5
	EZWHKU	K0		0.5000
	GC4A2Y	1/2	p = 2.2, q = 9, r = 11, s = 12	0.5000
	HJGKTQ	k0=0.5		0.5
	KZEKUP	1/2		0.5
	LAYBUM	1/2		0.5000
	NEP64T	1/2		0.5000
	PY7Y9K	0.5		0.5
	QL2YXT	1/2		0.5000
	QRNRAR	1/2	n/a	0.5000
	R986ZP	1/2	no allele	0.5
	RVLQWP	1/2		.5
	TC496G	1/2		.50000
	TQL2TN	1/2		0.5000
	UL9FKG	0.5		0.5
	VTYKQM	0.50	-	0.5000
	XCNJ7K	1/2		0.500
	XV4R7K	1/2		.5000
	YFHYVJ	1/2		0.5000

Statistical Analysis Summary of PentaD **Likelihood Ratio Mode: 0.5000**

TABLE 6

Locus	WebCode	Formula	Allele Legend	Likelihood Ratio
PentaE	2QCRGF	(1+4p)/8p	p=8	1.250
	3V797E	(1+4p)/8p	p=8	1.2499
	4TECJ7	(1+4p)/8p	p=8	1.24985
	67CZN6	0.5+0.125/p	p=8	1.250
	77TGGC	(1+4p)/8p	p=8	1.2498
	9736V9	((0+1/2)+(1/4p+1/2))/2	p=8	1.2500
	ATVET2	(1+4p)/8p	p=8	1.2498
	B2N8EZ	(1+4p)/8p	p=8	1.249850
	E6RCHV	(1+4p)/8p	p=8	1.2499
	EE3D4W	(1+4p)/8p	p=8	1.2499
	EFDFPV	[1+(1/4p)]/2	p=8	1.249
	EJCRLV	(1+2p)/4p		1.25
	EZWHKU	(K1+2K0a)/2a	a= 8	1.2498
	GC4A2Y	(1+4p)/8p	p = 8, q = 9, r = 13	1.2498
	HJGKTQ	(1/4+2*1/2p)/2p	p=8	1.250
	KZEKUP	(1+4p)/8p	p = 8	1.250
	LAYBUM	(1+4p)/8p	p=0.1667	1.2499
	NEP64T	(1+4p)/8p	p=8	1.250
	PY7Y9K	(1+4p)/8p	p=8	1.250
	QL2YXT	(1+4p)/8p	p = 8	1.2498
	QRNRAR	(1+4p)/8p	p=8	1.250
	R986ZP	(1+4p)/8p	p=8	1.250
	RVLQWP	(1+4p)/8p	p = 8	1.2498
	TC496G	(1+4p)/8p	p=8	1.2499
	TQL2TN	((1/8)(1+4q))/q	q=8	1.2499
	UL9FKG	(1+4p)/8p	p = 8	1.24985003
	VTYKQM	(1+4p)/8p	p=8	1.2498
	XCNJ7K	(1+4q)/8q	p=13, q=8, r=9	1.250
	XV4R7K	(1+4p)/8p	p=8	1.250
	YFHYVJ	(1+4r)/8r	r=8	1.2499

Statistical Analysis Summary of PentaE **Likelihood Ratio Mode: 1.250**

TABLE 6

Locus	WebCode	Formula	Allele Legend	Likelihood Ratio
SE33	2QCRGF			0.500
	3V797E	1/2		0.5000
	4TECJ7	1/2		0.5
	67CZN6			0.5
	77TGGC	0.5		0.5000
	9736V9	((0+1/2)+(0+1/2))/2		0.5000
	ATVET2	0.5	-	0.5
	B2N8EZ	1/2		0.5
	E6RCHV	1/2		0.5000
	EE3D4W	1/2		0.5000
	EFDFPV	1/2		0.5
	EJCRLV	2/4		0.5
	EZWHKU	K0		0.5000
	GC4A2Y	1/2	p = 14, q = 18, r = 23.2, s = 24.2	0.5000
	HJGKTQ	k0=0.5		0.5
	KZEKUP	1/2		0.5
	LAYBUM	1/2		0.5000
	NEP64T	1/2		0.5000
	PY7Y9K	0.5		0.5
	QL2YXT	1/2		0.5000
	QRNRAR	1/2	n/a	0.5000
	R986ZP	1/2	no allele	0.5
	RVLQWP	1/2		.5
	TC496G	1/2		.50000
	TQL2TN	1/2		0.5000
	UL9FKG	0.5		0.5
	VTYKQM	0.50	-	0.5000
	XCNJ7K	1/2		0.500
	XV4R7K	1/2		.5000
	YFHYVJ	1/2		0.5000

Statistical Analysis Summary of SE33 **Likelihood Ratio Mode: 0.5000**

TABLE 6

Locus	WebCode	Formula	Allele Legend	Likelihood Ratio
TH01	2QCRGF	(1+2p)/4p	p=7	1.113
	3V797E	(1+2p)/4p	p=7	1.1129
	4TECJ7	(1+2p)/4p	p=7	1.112895
	67CZN6	0.5+0.25/p	p=7	1.113
	77TGGC	(1+2p)/4p	p=7	1.1128
	9736V9	((1/4p+1/2)+(1/4p+1/2))/2	p=7	1.1129
	ATVET2	(1+2p)/4p	p=7	1.1128
	B2N8EZ	(1+2p)/4p	p=7	1.112895
	E6RCHV	(1+2p)/4p	p=7	1.1129
	EE3D4W	(1+2p)/4p	p=7	1.1129
	EFDFPV	[1+(1/2p)]/2	p=7	1.112
	EJCRLV	(1+2p)/4p	p=7	1.112956607
	EZWHKU	(K1+K0a)/a	a= 7	1.1129
	GC4A2Y	(1+2p)/4p	p = 7, q = 8	1.1129
	HJGKTQ	(1/4+1/2p)/p		1.113
	KZEKUP	(1+2p)/4p	p = 7	1.113
	LAYBUM	(1+2p)/4p	p=0.4079	1.1129
	NEP64T	(1+2p)/4p	p=7	1.113
	PY7Y9K	(1+2p)/4p	p=7	1.113
	QL2YXT	(1+2p)/4p	p = 7	1.1128
	QRNRAR	(1+2p)/4p	p=7	1.113
	R986ZP	(1+2p)/4p	p=7	1.113
	RVLQWP	(1+2p)/4p	p = 7	1.1129
	TC496G	(1+2p)/4p	p=7	1.1129
	TQL2TN	((1/4)(1+2p))/p	p=7	1.1129
	UL9FKG	(1+4p)/8p	p = 7	1.112895317
	VTYKQM	(1+2p)/4p	p=7	1.1128
	XCNJ7K	(1+2p)/4p	p=7, q=8	1.113
	XV4R7K	(1+2p)/4p	p=7	1.113
	YFHYVJ	(1+2p)/4p	p=7	1.1128

Statistical Analysis Summary of TH01 **Likelihood Ratio Mode: 1.1129**

TABLE 6

Locus	WebCode	Formula	Allele Legend	Likelihood Ratio
TPOX	2QCRGF	(1+4p)/8p	p=8	0.840
	3V797E	(1+4p)/8p	p=8	0.83967
	4TECJ7	(1+4p)/8p	p=8	0.839674
	67CZN6	0.5+0.125/p	p=8	0.840
	77TGGC	(1+4p)/8p	p=8	0.8396
	9736V9	((0+1/2)+(1/4p+1/2))/2	p=8	0.8406
	ATVET2	(1+4p)/8p	p=8	0.8396
	B2N8EZ	(1+4p)/8p	p=8	0.839673
	E6RCHV	(1+4r)/8r	r=8	0.8397
	EE3D4W	(1+4p)/8p	p=8	0.8397
	EFDFPV	[1+(1/4p)]/2	p=8	0.8396
	EJCRLV	(1+2p)/4p	p=8	0.839639946
	EZWHKU	(K1+2K0a)/2a	a= 8	0.8397
	GC4A2Y	(1+4q)/8q	p = 6, q = 8, r = 9	0.8397
	HJGKTQ	(1/4+2*1/2q)/2q	q=8	0.840
	KZEKUP	(1+4p)/8p	p = 8	0.840
	LAYBUM	(1+4r)/8r	r=0.3680	0.8397
	NEP64T	(1+4p)/8p	p=8	0.8397
	PY7Y9K	(1+4p)/8p	p=8	0.840
	QL2YXT	(1+4p)/8p	p = 8	0.8396
	QRNRAR	(1+4p)/8p	p=8	0.8397
	R986ZP	(1+4p)/8p	p=8	0.840
	RVLQWP	(1+4p)/8p	p = 8	.8396
	TC496G	(1+4p)/8p	p=8	.83967
	TQL2TN	((1/8)(1+4q))/q	q=8	0.8397
	UL9FKG	(1+4p)/8p	p = 8	0.839673913
	VTYKQM	(1+4r)/8r	r=8	0.8396
	XCNJ7K	(1+4q)/8q	p=6, q=8, r=9	0.840
	XV4R7K	(1+4p)/8p	p=8	.8397
	YFHYVJ	(1+4r)/8r	r=8	0.8396

Statistical Analysis Summary of TPOX **Likelihood Ratio Mode: 0.8397**

TABLE 6

Locus	WebCode	Formula	Allele Legend	Likelihood Ratio
vWA	2QCRGF	(1+4p)/8p	p=17	1.031
	3V797E	(1+4p)/8p	p=17	1.0310
	4TECJ7	(1+4p)/8p	p=17	1.031011
	67CZN6	0.5+0.125/p	p=17	1.031
	77TGGC	(1+4p)/8p	p=17	1.0310
	9736V9	((0+1/2)+(1/4p+1/2))/2	p=17	1.0311
	ATVET2	(1+4p)/8p	p=17	1.0310
	B2N8EZ	(1+4p)/8p	p=17	1.031011
	E6RCHV	(1+4s)/8s	s=0.235	1.0310
	EE3D4W	(1+4p)/8p	p=17	1.0310
	EFDFPV	[1+(1/4p)]/2	p=17	1.031
	EJCRLV	(1+2p)/4p	p=17	1.031064146
	EZWHKU	(K1+2K0a)/2a	a= 17	1.0310
	GC4A2Y	(1+4q)/8q	p = 14, q = 17, r = 21	1.0310
	HJGKTQ	(1/4+2*1/2q)/2q	q=17	1.031
	KZEKUP	(1+4p)/8p	p = 17	1.031
	LAYBUM	(1+4s)/8s	s=0.2354	1.0310
	NEP64T	(1+4p)/8p	p=17	1.031
	PY7Y9K	(1+4p)/8p	p=17	1.031
	QL2YXT	(1+4p)/8p	p = 17	1.0310
	QRNRAR	locusnotused		
	R986ZP	1/2	no allele	0.5
	RVLQWP	(1+4p)/8p	p = 17	1.031
	TC496G	(1+4p)/8p	p=17	1.0310
	TQL2TN	((1/8)(1+4q))/q	q=17	1.0310
	UL9FKG	(1+4p)/8p	p = 17	1.031011045
	VTYKQM	(1+4s)/8s	s=17	1.0310
	XCNJ7K	(1+4q)/8q	p=14, q=17, r=21	1.031
	XV4R7K	(1+4p)/8p	p=17	1.031
	YFHYVJ	(1+4s)/8s	s=17	1.0310

Statistical Analysis Summary of vWA **Likelihood Ratio Mode: 1.0310**

Kinship DNA Statistics

Is the claim of the following relationship supported by the genetic evidence: **Uncle and Niece**?

TABLE 7

WebCode	Kinship Index	Claim Supported?
2QCRGF	16.052	Inconclusive
3V797E	16.0517	Inconclusive
4TECJ7	16.0536	Yes
67CZN6	16.05356	Yes
77TGGC	16.0443	Yes
9736V9	16.0865	Yes
ATVET2	16.04857424	Yes
B2N8EZ	16.05356	Inconclusive
E6RCHV	16.0683	Inconclusive
EE3D4W	16.0523	Inconclusive
EFDFPV	15.936	Inconclusive
EJCRLV	16.06220236	No
EZWHKU	16.0536	Inconclusive
GC4A2Y	16.0529	Yes
HJGKTQ	16.054	Inconclusive
KZEKUP	14.293	Yes
LAYBUM	16.05	Yes
NEP64T	16.05	Yes
PY7Y9K	16.067	Inconclusive
QL2YXT	16.0443	Yes
QRNRAR	12.46	Yes

TABLE 7

WebCode	Kinship Index	Claim Supported?
R986ZP	7.787	Inconclusive
RVLQWP	16.05	Inconclusive
TC496G	16.05	Yes
TQL2TN	15.5707	Yes
UL9FKG	16.05356092	Inconclusive
VTYKQM	16.0443	Yes
XCNJ7K	16.1	Yes
XV4R7K	1,61E+01	Inconclusive
YFHYVJ	16.0443	Yes

Response Summary	Participants: 30
Is the relationship claim of Uncle and Niece supported?	
Yes	16
No	1
Inconclusive	13

Additional Kinship Statistical Results

TABLE 8

WebCode	Additional Statistical Results
2QCRGF	The analysis of a greater number of genetic markers is required. In addition, if possible, perform Y chromosome haplotype analysis and Mitochondrial DNA
3V797E	According to laboratory policy, relationships with a kinship index of less than 1000 are reported as inconclusive.
67CZN6	AABB requires that with this type of relationship, the case is to be reported as: The genetic evidence supports the relationship of the uncle and the niece. Pu and Linacre have shown at a likelihood ratio between 10 and 33 that STR test results correctly confirm second degree relationships >98.5% of the time.(Increasing the confidence in half-sibship determination based upon 15 STR loci. Pu and Linacre. Journal of Forensic and Legal Medicine 15 (2008) 373–377.)
77TGGC	It is 16 times more likely that C and D have uncle/niece biological relationship.
9736V9	Current NIST STRBASE African American population database allele frequencies used for avuncular calculation.
ATVET2	The results show that the hypothesis of C and D having the proposed relation, is 16.04857424 times more probable than the hypothesis of them being genetically unrelated. The probability of this uncle-niece relationship is 94.134 %.
CXGB93	We do not do avunculars
E6RCHV	Based on the Kinship index obtained, our policy is to report the relationship under evaluation (uncle-niece) as inconclusive.
EE3D4W	This laboratory only provides the likelihood ratio of half-sibling relationship versus being unrelated, and does not make a conclusion.
EJCRLV	Above results [Table 6: Kinship Likelihood Ratio Results] were obtained using Familias software
EL24KZ	This kinship statistic not calculated at this laboratory
EZWHKU	When performing the comparison between the genetic profile reported as C with the genetic profile reported as D, a kinship index of 16.0536 was obtained. Additional filiation analisys must be performed.
GT9GF2	Calculations for kinship relationships between uncle and nephews are not included in our laboratory´s scope of accreditation under the ISO / IEC 17025: 2017 standard, for this reason we do not report any result from the part III: KINSHIP DNA STATISTICS [Table 6: Kinship Likelihood Ratio Results & Table 7: Kinship DNA Statistics].
HJGKTQ	Conclusion: When comparing the genetic profiles obtained from the uncle (C) and niece (D) samples, a relationship index of 16,054 and a probability of relationship of 94,136% were obtained
JYWWA7	The laboratory does not conduct research to establish the relationship between the uncle and nephew.
LAYBUM	Probability of relationship: 94.1% (50% prior probability). It is very probable that the African American Uncle (C) is an uncle of Niece (D). AABB RT Standard 5.3.8.2 states that likelihood ratios greater than 10 shall be considered genetic evidence supporting the tested relationship. 100% of the ratios above this value have been found to be associated with a true second-degree relationship between the tested parties.

TABLE 8

WebCode	Additional Statistical Results
LM72WV	This kinship calculation is not applicable to our laboratory - we do not perform this calculation.
PY7Y9K	The STR results showed that the kinship index value is 16.067,and probability of kinship is 94.141%. The kinship index of this case is only 16.067,which is lower than the kinship index (10000) of our laboratory.The relationship between uncle and niece is inconclusive. Furthermore, we suggest that Y-STR data should be provided to further determine whether there is patrilineal relationship between them.
QL2YXT	It is 16 times more likely that Uncle (C) and Niece (D) have uncle-niece relationship RATHER THAN having unrelated relationship.
QRNRAR	There is moderate support from the DNA evidence that "C" is the uncle of "D" rather than unrelated individuals. Our laboratory does not use D12 and vWA when calculating statistics for related individuals.
R986ZP	The term "no allele" indicates that no alleles are shared between the two individuals for that specific locus.
RVLQWP	According to our kinship interpretation protocols,a kinship index of below 1000 does not support a relationship.
TC496G	Although the LR can be considered low, the Standards for Relationship Testing Laboratories of AABB indicates for two-party comparisons: "Likelihood ratios greater than 10 shall be considered genetic evidence supporting the tested relationship". The Laboratory should have comprehensive validation studies for similar cases like the present, and stablish its own cut-off values.
TQL2TN	vWA was ignored during final calculation due to linkage with D12S391 and laboratory protocol.
U7RK6K	Avuncular relationships are not evaluated at this lab.
VTYKQM	It is 16 times more likely that C and D have uncle/niece biological relationship rather than having unrelated relationship.
XCNJ7K	For answer #2 [Table 7: Kinship DNA Statistics; Claim Supported], Yes, there is limited support.
XHETFH	Currently, the [Laboratory] does not evaluate and statistically assess Avuncular type relationships. Therefore, Part III: Kinship Statistics [Table 6: Kinship Likelihood Ratio Results & Table 7: Kinship DNA Statistics] was not completed.
XV4R7K	the Kinship index supports the kinship hypothesis; however, it is a low value for decision making. If you want to make a decision based on genetic data, you should add the study of other markers (e.g. LPL, Penta C, etc.). Another option is to complete with genetic information from other relatives. Additionally, the a priori must be high, therefore, the non-genetic information must be complementary.
YFHYVJ	It is 16 times more likely that C and D have an uncle and niece relationship rather than having unrelated relationship.

Additional Comments

TABLE 9

WebCode	Additional Comments
26X8KE	No PIs reported for alleged father A because he is excluded. At our lab, if more than 3 loci are mismatches, we exclude and do not calculate any statistics. No PI reported for vWA for alleged father B because at our lab we only use vWA or D12 for the CPI calculation, not both. Lab does not report probability of paternity, only the CPI.
3V797E	[Laboratory] routinely reports the three most common ethnic populations. However, in this proficiency, the known samples were designated to be from Caucasian individuals; therefore, the PI's reported are for Caucasian population. Per [Laboratory] policy, samples that are determined by autosomal analysis to be from female donors are not amplified using YSTR technology.
4TECJ7	Statistical software used for PI calculation in our laboratory includes mutation rate information for particular loci into PI formula.
77TGGC	1) On comparison of the DNA profiles obtained, I found that the source of bloodstain specimen "Item 4" is the biological father to the source of bloodstain specimen "Item 2" (given that the biological mother is represented by the source of bloodstain specimen "Item 1"). 2) On comparison of the DNA profiles obtained, I found that the source of bloodstain specimen "Item 3" is not the biological father to the source of bloodstain specimen "Item 2". 3) Extraction: Item 1, Item 2, Item 3 and Item 4 were extracted using in-situ method. 4) Amplification: Item 1, Item 2, Item 3 and Item 4 were amplified using Globalfiler Express (GFE) on PROFLEX PCR System. Item 2, Item 3 and Item 4 were further amplified using AmpF1STR Y-Filer PCR Amplification kit on 9700 GeneAmp PCR System. 5) Electrophoresis: Electrophoresis was carried out on Genetic Analyzer 3500xL for Item 1, Item 2, Item 3 and Item 4 (Globalfiler Express). Electrophoresis was carried out on Genetic Analyzer 3130xL for Item 2, Item 3 and Item 4 (Y-filer). 6) Quality Control: Reagent blank, positive control and negative control were incorporated in the overall analysis and gave designated results. 7) The statistical formula was derived from DNAView Statistical Software and calculated using Microsoft Excel. 8) NM: Represents non-male allele.
7P67VA	No PI statistics were calculated for exclusionary conclusions (Item 1.3)
8CYBC9	The STR DNA profile detected from (Known Child) is consistent with being the STR DNA profile of a biological child of (Known Parent) and (Alleged Father B). (Alleged Father B) is included as a possible biological father of (Known Child). Given that (Known Parent) is the biological mother of (Known Child) it is at least 380 billion times more likely to observe the profile from (Known Child) if (Alleged Father B) is his biological father than if a random, unrelated male is the father.
8GANT7	For Part II [Table 5: Paternity DNA Statistics & Conclusions], per laboratory policy, the vWA locus will not be used for statistical evaluations when complete profiles are used for kinship comparisons. Assuming prior probabilities of 10%, 50% and 90% the probability of paternity in this case is greater than 99.99%. For the locus and Combined Paternity Index values, our laboratory protocol is to report the smallest CPI calculated in Popstats for the selected population groups/ethnicities. For Part III [Table 6: Kinship Likelihood Ratio Results & Table 7: Kinship DNA Statistics], per laboratory policy, avuncular relationship testing is not conducted.
A2648Z	THE SE33 ALLELE WAS NOT USED IN THIS ANALYSIS BECAUSE IT IS NOT INCORPORATED IN THE VERSION THAT WE HAVE OF THE M-FISYS SOFTWARE. THE D6S1043 ALLELE IS NOT PART OF THE GENETIC MARKERS OF THE POWERPLEX FUSION 6C KIT USED IN THE LABORATORY. ITEM NUMBER 3 IS EXCLUDED AS A BIOLOGICAL PARENT FOR WHICH NO STATISTICAL CALCULATIONS ARE MADE.
AKHQT8	The most conservative combined PI is reported, which aligns with the Hispanic population. vWA was omitted from the statistical calculation due to linkage with D12S391; the more discriminating value was chosen. Laboratory practice is to truncate values to two significant digits. Our laboratory does not calculate the probability of paternity or kinship for niece-uncle relationships. We do not report individual locus statistics if the overall statistic is zero.

TABLE 9

WebCode	Additional Comments
ATVET2	Markers with empty boxes indicate that no experiment was performed. Markers filled with a single dash "-" indicate that no alleles resulted.
C47NAQ	NR = no results
CUGZC3	For part II [Table 5: Paternity DNA Statistics & Conclusions], the locus vWA was not used in the statistical calculation. For the locus and combined paternity index values, our laboratory protocol is to report the smallest CPI calculated in FBI Popstats of the selected population groups/ethnicities. The probability of paternity was calculated assuming prior probabilities of 10%, 50% and 90%. Part III [Table 6: Kinship Likelihood Ratio Results & Table 7: Kinship DNA Statistics] was not completed as our laboratory does not calculate uncle-niece relationship statistics.
CXGB93	For locus and the combined paternity index value, our laboratory protocol is to report the smallest CPI calculated in PopStats of the selected population groups/ethnicities. For part II [Table 5: Paternity DNA Statistics & Conclusions]: Assuming prior probabilities of 10%, 50% and 90%, the probability of paternity is greater than 99.99%. Probability of Paternity - the following locus was not used in statistical calculation: vWA.
DATZLX	NR = No Results. PowerPlex Fusion and YFiler Results were concordant at DYS391 for Items 2, 3 and 4.
DCGCK4	We are using the FBI Popstats program with the NIST 1036 (2017 amended) frequencies. Paternity Indices were not calculated for Item 3, per lab policy, due to exclusion.
DP6CC7	DYS391 is reported as INC for all samples tested as per laboratory policy. For all samples tested, any labeled peaks that are likely due to PCR/STR artifact were not reported and will not be used for conclusions or comparisons. The profile obtained from the alleged father B is 600,000,000 to 19,000,000,000 times more likely if he is the father of the child than if he is unrelated. The relative chance of paternity for a Caucasian individual assuming a 50% prior chance is 99.99%. Paternity is practically proven. The alleged father B is consistent with being the biological father of the child. The alleged father A is excluded as being the biological father of the child.
DXEZP4	Kinship statistic not included as not calculated in this laboratory. For Paternity statistic, it should be noted vWA was omitted from calculation due to possible linkage with D12. The probability of paternity is not reported as well as it is not reported by this laboratory.
EL24KZ	Per laboratory policy, D12S391 genetic locus not used for statistical analysis and CPI value truncated to 2 significant figures.
EV78BW	Item 2, Item 3, and Item 4 were processed in PowerPlex Fusion and Yfiler. Results were concordant at locus DYS391 for each sample. NR = no results.
EZWHKU	Part I-II [Tables 1-5: STR & YSTR Results, Paternity DNA Statistics & Conclusions] Comments: In our laboratory the results of exclusion are confirmed by reprocessing from original samples, a procedure performed in the present test. Likewise, our internal protocols establish that for cases with results of confirmed exclusion, it is not necessary to perform probability calculations. Part III [Tables 6-7: Kinship Likelihood Ratio Results & Statistics] Comments: K0= 0.5000, K1= 0.2500, 2K1= 0.5000.
GNGAXT	THE SE33 ALLELE WAS NOT USED IN THIS ANALYSIS BECAUSE IT IS NOT INCORPORATED IN THE VERSION THAT WE HAVE OF THE M-FISYS SOFTWARE. THE D6S1043 ALLELE IS NOT PART OF THE GENETIC MARKERS OF THE POWERPLEX FUSION 6C KIT USED IN THE LABORATORY. ITEM NUMBER 3 IS EXCLUDED AS A BIOLOGICAL PARENT FOR WHICH NO STATISTICAL CALCULATIONS ARE MADE.
GT9GF2	PART I [Tables 1-4: STR & YSTR Results], DNA Analysis for Item 3: The laboratory does not perform any statistical analysis if more than three exclusions are observed. For that reason, the blanks provided for PI of the excluded systems were filled as "Exclusion". For calculations of part II: Paternity DNA Statistics [Table 5: Paternity DNA Statistics & Conclusions], the software Familias 3.2.2 and PATPCR were employed.

TABLE 9

WebCode	Additional Comments
H2XPDX	The NIST population used for statistics is the 2017 dataset. Per laboratory procedures vWA and SE33 were not included in statistical calculations. No statistical calculations were performed on Item 3 due to the alleged father being eliminated per laboratory procedures.
HAVGLQ	For the "wet" paternity test (Items 1, 2, 3 and 4) statistics we used : caucasian frequencies.
HJGKTQ	In Part III [Table 6: Kinship Likelihood Ratio Results]: DNA STATISTICS OF RELATIVES in the D19S433 system for sample C (14,14,2) the microvariant is not separated by point.
HTRMER	Only the statistical calculation of paternity IP is performed for the alleles of item #4, due to compatibility.
HUY3LX	Our laboratory does not calculate a Paternity Index. Per our SOP, we identify obligate alleles which are used to calculate a "Random Man Not Excluded" (RMNE) statistic. For this case, the obligate alleles were as follows: D3 (14), vWA (17), D16 (11,12), CSF (11), TPOX (8), D8 (15), D21 (31), D18 (16), D2S441 (10,11), D19 (15), TH01 (9), FGA (19,21), D22 (15), D5 (12), D13 (8), D7 (11), SE33 (25.2), D10 (15), D1 (13), D12 (20,23), and D2S1338 (21). RMNE report statement: The expected frequency of individuals who could be the father of Known Child is less than 1 in 47 billion in the general male population. Part 1 [Table 1: STR Amplification Kit(s) & Results]: NR = no results
JUXPEV	No PI calculations were performed for Item 3 since, as per our lab protocol, greater than or equal to three inconsistencies were visually observed when the profiles were compared. No PI statistics were provided for Item 4 at the D12S391 locus because, per our lab protocol. there may be linkage between D12S391 and vWA for distantly related persons and therefore, only the vWA locus is utilized for statistical purposes. The reported CPI value was truncated to two significant integers, as per our lab protocol. The Probability of Parentage value was truncated at four significant integers beyond the decimal point, as per our lab protocol. The 2017 NIST 1036 revised database was used for statistical calculations.
JYWWA7	The laboratory does not conduct research to establish the relationship between the uncle and nephew.
K43WTV	vWA and SE33 not included for statistics calculations per lab SOP. NIST 2017 is the database on Popstats. No statistics on exclusions per lab SOP.
KMU6QQ	NR = No Result. For Items 2, 3, and 4, the DYS391 results are concordant between PowerPlex Fusion and Yfiler, respectively. Item 3: PI not reported for exclusions.
KZZVTX	It is our laboratory's policy to report the most conservative number when using multiple population databases. Additionally, vWA and D12S391 are not included together in the same statistical calculation. The locus selected provides the most discriminating potential. The Combined Paternity Index value reported in Part 2 [Table 5: Paternity DNA Statistics & Conclusions] is from the Southeast Hispanic database using D12S391 (excluding vWA). We do not report the Probability of Paternity.
LKHPWP	NR = No Results. Item 2 is concordant with PowerPlex Fusion and Yfiler at DYS391. Item 3 is concordant with PowerPlex Fusion and Yfiler at DYS391. Item 4 is concordant with PowerPlex Fusion and Yfiler at DYS391.
LM72WV	For the locus and Combined Paternity Index values, our laboratory protocol is to report the smallest CPI calculated in PopStats of the selected population groups/ethnicities. For Part II [Table 5: Paternity DNA Statistics & Conclusions]: Assuming prior probabilities of 10%, 50%, and 90%, the probability of paternity is greater than 99.99%. Probability of Paternity - following locus was not used in statistical calculation: vWA
LNG4HT	Used FBI Popstats - NIST 2017 population database to calculate stats. vWA and SE33 not included in calculations per lab SOP. No calculations done on Alleged Father A that was eliminated per lab SOP.
NLRDBL	THE SE33 ALLELE WAS NOT USED IN THIS ANALYSIS BECAUSE IT IS NOT INCORPORATED IN THE VERSION THAT WE HAVE OF THE M-FISYS SOFTWARE. THE D6S1043 ALLELE IS NOT PART OF THE GENETIC MARKERS OF THE POWERPLEX FUSION 6C KIT USED IN THE LABORATORY. ITEM NUMBER 3 IS EXCLUDED AS A BIOLOGICAL PARENT FOR WHICH NO STATISTICAL CALCULATIONS ARE MADE.

TABLE 9

WebCode	Additional Comments
P36CTN	Combined Paternity Index value truncated to 2 significant digits per lab protocol. The D12S391, DYS391, and Amelogenin loci are not used for statistical purposes per lab protocol. Kinship DNA Statistics Section is not applicable.
QL2YXT	Extraction: Item 1, Item 2, Item 3 and Item 4 were extracted using in-situ method. Amplification: Item 1, Item 2, Item 3 and Item 4 were amplified using GlobalFiler Express PCR Amplification kit on ProFlex PCR system. Item 2, Item 3 and Item 4 were further amplified using Y-Filer kit on 9700 GeneAmp PCR system. Electrophoresis: Electrophoresis was carried out on Genetic Analyzer 3500xL for Item 1, Item 2, Item 3 and Item 4 for GlobalFiler Express, while Item 2, Item 3 and Item 4 for Y-Filer. Quality Control: Reagent blank, Positive control and Negative control were carried out throughout analysis and all gave intended results. NM represents Non-Male profile.
QRNRAR	PI is not calculated when an individual is excluded as the biological father of the offspring. Our laboratory does not use D12 and vWA when calculating statistics for related individuals.
QX98EB	Only statistical calculations routinely generated in the laboratory were reported. The paternity index for individual loci were not calculated for Alleged Father A as he could be excluded from being the biological father at several loci (e.g. CSF1PO, TPOX, D8S1179, D21S11). The probability of paternity is also not routinely calculated therefore was not reported. Kinship calculations are performed using a computer program with no ability to alter allele frequencies, or are submitted to an external expert for calculation.
RBY4EM	D12S391 is omitted from calculations, as per laboratory policy. The CPI is truncated to 2 significant figures, as per laboratory policy.
RVLQWP	Our laboratory reports the three main ethnic groups for the area we serve (Caucasian, African American and Hispanic); therefore, the PI and Probability of Paternity in the paternity tab is for the stated group (African American). According to laboratory procedure, female reference samples with an undetermined Y quant value will not be amplified for Y-STRs.
T3DQQ9	Our laboratory does not calculate a paternity index. Per our SOP, we identify obligate alleles which are used to calculate a "Random Man Not Excluded" (RMNE) statistic. For this case, obligate alleles were as follows: D3 (14), vWA (17), D16 (11,12), CSF (11), TPOX (8), D8 (15), D21 (31), D18 (16), D2S441 (10, 11), D19 (15), TH01 (9), FGA (19, 21), D22 (15), D5 (12), D13 (8), D7 (11), SE33 (25.2), D10 (15), D1 (13), D12 (20, 23), and D2S1338 (21). RMNE report statement: The expected frequency of individuals who could be the father of Child (son) is less than 1 in 47 billion in the general male population.
TERK4M	vWA and SE33 not used due to the fact the lab does not use those loci to calculate statistics. Further, the lab only does parentage testing so the kindship DNA test was not done. NIST 2017 population used. This lab does not do statistics on eliminations and therefore none done for item 3.
UGRBN8	Laboratory procedure is not to calculate PI at any loci where 3 or more loci in a full profile show exclusion of paternity. Laboratory does not calculate Probability of paternity as not a requirement of the courts in [Country]. Item 4 D5S818 locus showed a possible null allele and was reported as 12,NR. 12 allele did not amplify as a 12 homozygous allele, given the strength of the remainder of the profile. This null allele was not taken into account in the paternity calculations but could be.
UZQ99N	Due to linkage concerns, our laboratory does not report out the combined PI value to include both VWA and D12S391. The more discriminating PI value of these two loci is chosen for calculating the combined PI. The combined PI is truncated to 2 significant figures per laboratory policy.
VK83CE	By studying the DNA profiles of all the donors, we clarify that blood stain labeled with item 4 is the biological father of the donor of blood stain labeled with item 2.

TABLE 9

WebCode	Additional Comments
VTYKQM	1) On comparison to the DNA profiles obtained, I found that the source of bloodstain specimen "Item 4" is the biological father to the source of bloodstain specimen "Item 2" (given that the biological mother is represented by the source of bloodstain specimen "Item 1"). 2) On comparison to the DNA profiles obtained, I found that the source of bloodstain specimen "Item 3" is not the biological father to the source of bloodstain specimen "Item 2". 3) Extraction: Item 1, Item 2, Item 3 and Item 4 were extracted using in-situ method. 4) Amplification: Item 1, Item 2, Item 3 and Item 4 were amplified using Globalfiler Express (GFE)on PROFLEX PCR System. Item 2, Item 3 and Item 4 were further amplified using AmpFlSTR Y-Filer PCR Amplification kit on 9700 GeneAmp PCR System. 5)Electrophoresis: Electrophoresis was carried out on Genetic Analyzer 3500xL for Item 1, Item 2, Item 3 and Item 4 (Globalfiler Express). Electrophoresis was carried out on Genetic Analyzer 3130xL for Item 2, Item 3 and Item 4 (Y-filer). 6)Quality Control: Reagent blank, positive control and negative control were incorporated in the overall analysis and gave designated results. 7)The statistical formula was derived from DNAView Statistical Software and calculated using Microsoft Excel. 8)NM: Represents non-male allele.
X9N8AK	For Part I [Tables 1-4: STR & YSTR Results]: Based on our laboratory's procedure, when there are three or more genetic inconsistencies, the alleged parent will be excluded as a possible biological parent of the child. Paternity Index calculations are not done for instances of exclusion of parent-child relationship. For Part I and II [Tables 1-5: STR & YSTR Results, Paternity DNA Statistics & Conclusions]: The loci D12S391 is not used for Paternity Index calculations in our laboratory. For Part III [Tables 6-7: Kinship Likelihood Ratio Results & Statistics]: Uncle-Niece relationships are not evaluated in our laboratory.
XHETFH	For the locus and combined paternity index values, our laboratory protocol is to report the smallest paternity index values calculated in FBI PopStats using selected population groups/ethnicities (African-American, Caucasian, Southeast Hispanic, and Southwest Hispanic). Based on our laboratory protocol, the vWA locus is not used for kinship statistical estimation purposes. Additionally, the probability of paternity is calculated using prior values of 0.01, 0.05, and 0.09. Probability of paternity values greater than 99.99% are reported as >99.99%.
Y9MU2H	Due to linkage concerns, our laboratory does not report out the combined PI value to include both the vWA and D12S391 loci. The more discriminating PI value of these two loci is chosen for calculating the combined PI. The combined PIs are truncated to 2 significant figures as per laboratory policy. Suspected parents will be excluded if they do not possess the necessary obligate alleles at 3 loci and no PI is reported for exclusions.
YFHYVJ	Extraction: Item1, Item2, Item3 and Item4 were extracted using in-situ method. Amplification: Item1, Item2, Item3 and Item4 were amplified using GlobalFiler Express kit on 9700 GeneAmp PCR System. Item2, Item3 and Item4 were amplified using AMPFLSTR Y-Filer Kit on 9700 GeneAmp PCR System. Electrophoresis: Electrophoresis were carried out on Genetic Analyzer 3500xl for Item1, Item2, Item3 and Item4 (GlobalFiler Express). Electrophoresis were carried out on Genetic Analyzer 3500xl for Item2, Item3 and Item4 (Yfiler). Quality Control: Reagent Blank, Positive Control and Negative Control were carried out throughout the analysis and all gave intended results. The statistical formula were derived by DNA View Statistical Software and calculated using Microsoft Excel.

-End of Report-
(Appendix may follow)

Collaborative Testing Services ~ Forensic Testing Program

Test No. 20-5872: DNA Parentage

DATA MUST BE SUBMITTED BY **Oct. 26, 2020, 11:59 p.m.** TO BE INCLUDED IN THE REPORT

Participant Code: U1234A WebCode: PKN7JD

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

Scenario:
A paternity case has been presented to your laboratory. Blood standards have been collected from the mother, son, and two alleged fathers. Your laboratory is tasked with examining the blood standards and comparing the DNA profiles.

Items Submitted (Sample Pack DNP3):
Item 1: Blood Sample from Known Parent (Caucasian Mother)
Item 2: Blood Sample from Known Child (Son)
Item 3: Blood Sample from Alleged Father A (Caucasian)
Item 4: Blood Sample from Alleged Father B (Caucasian)

DNA REPORTING INSTRUCTIONS
Use the instructions below to complete the following DNA Analysis sections of this data sheet

- Report alleles in numerical order, separated by a comma.
- Follow your laboratory procedures for reporting homozygotes (i.e. "14,14", "14,-", "14") and null responses
- PI = Paternity Index
- If your laboratory does not produce PI calculations, record your explanation within the Part IV: Additional comments section.

Example	D1S1656	D2S1338	D2S441	D3S1358	D5S818
STR	15,18	12,17	10	14	5,13
PI	1.65	3.01	3.16	4.12	5.65

Part I: DNA Analysis for Item 1

STR Amplification Kit(s) Used:

Please check all the brands that apply for this item and record only additional kit specific information in the blank provided (i.e. 16, Plus, Direct, HS, Fusion, etc.).

☐ Identifiler® ☐ GlobalFiler™ ☐ Investigator® 24plex

☐ PowerPlex® Other

Report the Probabilistic Genotyping Software Used (if applicable):

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

ITEM	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
1						
ITEM	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
1						
ITEM	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
1						
ITEM	FGA	Penta D	Penta E	SE33	TH01	TPOX
1						
ITEM	vWA	DYS391	DYS570	DYS576	Y Indel	
1						

Part I (continued): DNA Analysis for Item 2

STR Amplification Kit(s) Used: Please check all the brands that apply for this item and record only additional kit specific information in the blank provided (i.e. 16, Plus, Direct, HS, Fusion, etc.).

☐ Identifiler® ☐ GlobalFiler™ ☐ Investigator® 24plex

☐ PowerPlex® Other

Report the Probabilistic Genotyping Software Used (if applicable):

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

ITEM	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
2						
ITEM	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
2						
ITEM	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
2						
ITEM	FGA	Penta D	Penta E	SE33	TH01	TPOX
2						
ITEM	vWA	DYS391	DYS570	DYS576	Y Indel	
2						

YSTR results are for proficiency concordance only.

YSTR Amplification Kit(s) Used: Please check all the brands that apply for this item and record only additional kit specific information in the blank provided (i.e. Plus, 23, etc.).

☐ YFiler™ ☐ PowerPlex® Y Other

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

ITEM	DYF387S1	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
2									
ITEM	DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
2									
ITEM	DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	Y GATA H4
2									

Part I (continued): DNA Analysis for Item 3

Please refer to the 'Part II: Paternity DNA Statistics' section of this data sheet regarding the suggested Population Database(s) to use to determine PI values. Report a minimum of three significant figures in your PI values.

STR Amplification Kit(s) Used: Please check all the brands that apply for this item and record only additional kit specific information in the blank provided (i.e. 16, Plus, Direct, HS, Fusion, etc.).

☐ Identifiler® ☐ GlobalFiler™ ☐ Investigator® 24plex

☐ PowerPlex® Other

Report the Probabilistic Genotyping Software Used (if applicable):

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

ITEM	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
3 STR						
3 PI						
ITEM	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
3 STR						
3 PI						
ITEM	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
3 STR						
3 PI						
ITEM	FGA	Penta D	Penta E	SE33	TH01	TPOX
3 STR						
3 PI						
ITEM	vWA	DYS391	DYS570	DYS576	Y Indel	
3 STR						
3 PI						

YSTR results are for proficiency concordance only.

YSTR Amplification Kit(s) Used: Please check all the brands that apply for this item and record only additional kit specific information in the blank provided (i.e. Plus, 23, etc.).

☐ YFiler™ ☐ PowerPlex® Y Other

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

ITEM	DYF387S1	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
3									
ITEM	DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
3									
ITEM	DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	Y GATA H4
3									

Part I (continued): DNA Analysis for Item 4

Please refer to the 'Part II: Paternity DNA Statistics' section of this data sheet regarding the suggested Population Database(s) to use to determine PI values. Report a minimum of three significant figures in your PI values.

STR Amplification Kit(s) Used: Please check all the brands that apply for this item and record only additional kit specific information in the blank provided (i.e. 16, Plus, Direct, HS, Fusion, etc.).

☐ Identifiler® ☐ GlobalFiler™ ☐ Investigator® 24plex

☐ PowerPlex® Other

Report the Probabilistic Genotyping Software Used (if applicable):

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

ITEM	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
4 STR						
4 PI						
ITEM	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
4 STR						
4 PI						
ITEM	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
4 STR						
4 PI						
ITEM	FGA	Penta D	Penta E	SE33	TH01	TPOX
4 STR						
4 PI						
ITEM	vWA	DYS391	DYS570	DYS576	Y Indel	
4 STR						
4 PI						

YSTR results are for proficiency concordance only.

YSTR Amplification Kit(s) Used: Please check all the brands that apply for this item and record only additional kit specific information in the blank provided (i.e. Plus, 23, etc.).

☐ YFiler™ ☐ PowerPlex® Y Other

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

ITEM	DYF387S1	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
4									
ITEM	DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
4									
ITEM	DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	Y GATA H4
4									

Participant Code: U1234A
WebCode: PKN7JD

Part I (continued): DNA Analysis - Additional DNA

- Use this section to report results for loci not currently listed in other sections of the data sheet.
- Report alleles in numerical order, separated by a comma.
- Click "Add Row" to show another row of boxes for entry.

Locus	Item 1	Item 2	Item 3 Alleles	Item 3 PI	Item 4 Alleles	Item 4 PI

Part II: PATERNITY DNA STATISTICS

Select which of the alleged fathers below cannot be excluded as the biological parent of the child (Item 2) and answer the remaining questions based on your selection.

○ Item 3 - Alleged Father A ○ Item 4 - Alleged Father B

For the selected alleged parent, please utilize your own lab protocols regarding ethnicity and choose one of the following population databases for all statistical calculations in this test:
1. **FBI Popstats**: If FBI Popstats is already available in your laboratory then you may select that option, otherwise use the population database below.
2. **NIST-STRBASE** is a publicly available U.S. population dataset at STRBASE on the following NIST web site: http://www.cstl.nist.gov/strbase/NISTpop.htm#Autosomal
   a. On the NIST web site, access the population database by selecting the hyperlink labeled "Allele frequencies from autosomal STRs as Excel file" under the title "NIST 1036 U.S. Population Dataset".
3. If you are unable to use one of the suggested population databases, report the population database used in the blank provided next to the 'Other Pop. Database' option. Due to the tendency for allele frequencies to vary amongst different databases, no consensus value will be determined for this option. When reporting a population database name, please refrain from using terms that would allude to a laboratory specific name or location; general terms such as 'local/state database' or 'laboratory specific database' are preferred.
4. If you did not calculate paternity statistics, please provide an explanation in your additional comments.

1. Choose a Population Database:

   ☐ **FBI Popstats Pop. Database:** ☐ **NIST STRBASE Pop. Database:**

   Other Pop. Database:

2. Record the Combined Paternity Index value:

3. Record the Probability of Paternity:

Part III: KINSHIP DNA STATISTICS

Complete the following Kinship DNA Statistics section, **if applicable to your laboratory**, using the instructions below.

- Use the provided scenario for context.
- Use the supplied allele frequencies for calculations (adopted from the NIST STRBASE database).
- Only test the relationship in question (eg. half siblings versus unrelated).
- Complete the entire table including the formula used in the calculation and the allele legend.
- Report a minimum of four significant figures in your likelihood ratio values.

Example: Questioned Half Sibling Relationship

Locus	Profile A	Profile B	Allele Frequencies		Formula Used	Allele Legend	Likelihood Ratio
FGA	18, 26	18, 26	18: 0.0249	26: 0.0263	(p+q+4pq) / 8pq	p = 18 q = 26	10.272
vWA	14, 15	14, 17	14: 0.0928 17: 0.1053	15: 0.1053	(1+4p)/8p	p = 14	1.847

Scenario:

The two DNA profiles below are presented as a potential African American Uncle (C) and Niece (D) relationship. Using the allele frequencies shown for the tested loci, calculate the likelihood ratio for support of the proposed relationship versus being unrelated.

Locus	C	D	Allele Frequencies		Formula Used	Allele Legend	Likelihood Ratio
D1S1656	12,15	12,15.3	12: 0.0643 15.3: 0.0292	15: 0.1579			
D2S1338	16,20	16,19	16: 0.0556 20: 0.1038	19: 0.1389			
D2S441	11.3,12	11.3,12	11.3: 0.0439	12: 0.1652			
D3S1358	16,16	14,16	14: 0.0906	16: 0.3187			
D5S818	11,13	12,12	11: 0.2339 13: 0.2237	12: 0.3684			

Locus	C	D	Allele Frequencies		Formula Used	Allele Legend	Likelihood Ratio
D7S820	10,11	10,11	10: 0.3363	11: 0.2032			
D8S1179	14,15	14,15	14: 0.2939	15: 0.1901			
D10S1248	13,14	14,14	13: 0.2339	14: 0.2763			
D12S391	17,22	17,21	17: 0.1667	21: 0.0643			
			22: 0.0365				
D13S317	12,12	12,13	12: 0.4181	13: 0.1404			
D16S539	9,11	9,11	9: 0.1827	11: 0.3143			
D18S51	14,18	13,17	13: 0.0409	14: 0.0716			
			17: 0.1520	18: 0.1213			
D19S433	14,14.2	14,15	14: 0.2105	14.2: 0.0746			
			15: 0.0804				
D21S11	29,30	28,30	28: 0.2456	29: 0.2047			
			30: 0.1696				
D22S1045	11,14	15,17	11: 0.1447	14: 0.0775			
			15: 0.2515	17: 0.2091			

Locus	C	D	Allele Frequencies		Formula Used	Allele Legend	Likelihood Ratio
CSF1PO	7,11	11,12	7: 0.0556	11: 0.2485			
			12: 0.2953				
FGA	23,24	23,26	23: 0.1696	24: 0.1330			
			26: 0.0702				
PentaD	9,11	2.2,12	2.2: 0.1140	9: 0.1681			
			11: 0.1798	12: 0.1082			
PentaE	8,13	8,9	8: 0.1667	9: 0.0512			
			13: 0.1038				
SE33	14,24.2	18,23.2	14: 0.0512	18: 0.1199			
			23.2: 0.0175	24.2: 0.0132			
TH01	7,7	7,8	7: 0.4079	8: 0.1959			
TPOX	6,8	8,9	6: 0.0894	8: 0.3680			
			9: 0.1950				
vWA	14,17	17,21	14: 0.0804	17: 0.2354			
			21: 0.0015				

1. Evaluate the profiles above and record the kinship index.

2. Is the relationship of Uncle and Niece supported by the genetic evidence?

3. Use the space provided to document any additional statistical results and relationship conclusions.

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

Part IV: ADDITIONAL COMMENTS

Comments regarding any part of this Test.

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

RELEASE OF DATA TO ACCREDITATION BODIES

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

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

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

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

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

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

A2LA Certificate No.

Step 2: Complete the Laboratory Identifying Information in its entirety

Authorized Contact Person and Title

Laboratory Name

Location (City/State)