



## **DNA Parentage**

# **Test No. 22-5871/6 Summary Report**

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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 aunt and niece relationship was supported. Data were returned from 80 participants and are compiled into the following tables:

	<u>Page</u>
<u><a href="#">Manufacturer's Information</a></u>	<u><a href="#">2</a></u>
<u><a href="#">Summary Comments</a></u>	<u><a href="#">5</a></u>
<u><a href="#">Table 1: STR Amplification Kit(s) &amp; Results</a></u>	<u><a href="#">6</a></u>
<u><a href="#">Table 2: Paternity Index Results</a></u>	<u><a href="#">62</a></u>
<u><a href="#">Table 3: YSTR Amplification Kit(s) &amp; Results</a></u>	<u><a href="#">78</a></u>
<u><a href="#">Table 4: Additional DNA &amp; PI Results</a></u>	<u><a href="#">90</a></u>
<u><a href="#">Table 5: Paternity DNA Statistics &amp; Conclusions</a></u>	<u><a href="#">92</a></u>
<u><a href="#">Table 6: Kinship Likelihood Ratio Results</a></u>	<u><a href="#">97</a></u>
<u><a href="#">Table 7: Kinship DNA Statistics</a></u>	<u><a href="#">143</a></u>
<u><a href="#">Table 8: Additional Kinship Statistical Results</a></u>	<u><a href="#">145</a></u>
<u><a href="#">Table 9: Additional Comments</a></u>	<u><a href="#">147</a></u>
<u><a href="#">Appendix: Data Sheet</a></u>	

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 either FTA Microcards or swabs, 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 aunt 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 was blood from a female (mother) donor, Item 2 was blood from a male (son) donor, Item 3 was blood from a male donor who was the biological father of the Item 2 male, and Item 4 was blood from a male donor who was not the biological father of the Item 2 male. Each FTA card was spotted with 75uL of blood, while each swab (two swabs per item) was spotted with 100uL of blood. 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 May 31st, 2022.

**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 aunt and niece relationship.

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

### **Key to Test Substrates**

5871 - FTA Microcards

5876 - Swabs

### 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	14,16	16,23	10,11	15,17	12,13	11,11
	8,9	13,14	13,14	20,22	11,12	10,11
	15,16	14,15.2	28,33.2	11,11	X,X	10,10
	24,25	9,10	12,13	12,27.2	9,9	9,11
	16,18	NM	NM	NM	NM	
2	14,16.3	16,26	10,10	16,17	12,12	11,13
	9,10	8,14	13,14	18,20	12,12	9,10
	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24	10,12	13,17	12,13,17	6,9	11,11
	16,18	10	19	16	2	
3	16.3,18.3	23,26	10,15	15,16	12,13	13,13
	10,11	8,10	13,17	18,18	12,12	9,11
	14,18	12.2,13	28,29	15,15	X,Y	12,12
	19,21	10,12	11,17	17,18	6,9.3	11,12
	16,18	10	19	16	2	
4	16,17	22,25	14,14	16,18	9,13	10,12
	10,13	10,10	13,15	17.3,19	12,14	9,10
	12,15	13,14	30,30.2	16,16	X,Y	11,12
	20,24	9,11	7,10	13,16	6,9	8,11
	17,17	11	15	18	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	37	15	14,17	14	31	23	10	12	15
	14	10	11	20	27	14	14	11	26
	40	12	13	19	16	22	21	12	11
3	37	15	14,17	14	31	23	10	12	15
	14	10	11	20	27	14	14	11	26
	40	12	13	19	16	22	21	12	11
4	35	14	11,14	13	29	24	11	13	13
	14	12	12	18	32	14	17	11	23
	37	12	13	15	18	24	23	10	11

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

## 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 $\pm$ 3STD Range\*\*

0-0.004	0-0.180	0	1.473-2.518	0-0.001	*
1.335-2.308	0-0.004	0.761-0.898	0	1.064-2.493	2.105-6.336
0-7.487	0-0.096	0-0.002	0	-	1.219-1.712
0-0.005	0-0.001	0	*	1.710-2.785	1.800-2.168
0-0.002					

#### 3PI - NIST STRBASE

8.21	16.39	2.375	2.099	1.289	*
1.951	35.97	0.826	5.824	3.721	4.69
6.443	357.1	2.472	3.112	-	2.777
2.798	2.148	10.3	*	2.123	1.983
2.481					

#### 3PI - Grand Mean $\pm$ 3STD Range\*\*

3.729-13.18	5.927-35.58	0.071-5.015	1.278-2.593	1.097-1.671	6.445-15.031
1.304-2.297	0-104.6	0.677-1.022	2.988-7.539	1.653-5.537	0.833-7.016
3.152-8.774	0-548.7	1.843-3.229	0.591-5.744	-	1.993-3.963
0.974-5.592	1.454-3.411	2.281-16.20	*	0.940-3.827	1.600-2.368
1.837-3.016					

\* 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 the one(s) listed above 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 22-5871/6 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 from a female (mother) donor, Item 2 was blood from a male (son) donor, Item 3 was blood from a male donor who was the biological father of the Item 2 male, and Item 4 was blood from a male donor who was not 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 80 participants who returned data, reported STR results for all four items. For Item 1, all participants reported consistent data, except for one who reported "11,13" at D5S818 whereas consensus was "12,13."

For Item 2, all participants reported consistent data except for four participants. One reported "28,33.2" at D21S11 whereas consensus was "29,33.2" and the other reported "X,X" at Amelogenin whereas the consensus was "X,Y." The remaining two participants reported "12,17" at SE33 whereas the consensus was "12,13,17." A majority of participants identified observing a tri-allelic pattern at this locus.

For Item 3, all participants reported consistent data except for two participants. One reported "12.2,23" at D19S433 whereas consensus was "12.2,13" and the other reported "8,9" at D8S1179 whereas the consensus was "8,10."

For Item 4, all participants reported consistent data.

For YSTR results, all but one participant reported consistent data for Items 2-4. The remaining participant reported "25.1,26" at DYS481 whereas the consensus was "26."

### Paternity DNA Statistics:

All participants reported that the source of Item 3 could not be excluded as the biological father of Item 2. Of the participants that reported probability of paternity values, all reported 99.99% or higher. The most frequently reported population database was FBI PopStats.

### Kinship DNA Statistics:

There were 32 participants who responded for the paper kinship exercise. For the loci likelihood ratio (LR) data, seven participants reported values that differed from the consensus. Two of these participants reported differing values at more than one locus.

Of the 32 participants, 28 (~87%) reported a combined Kinship Index (KI) between 7 and 7.84. A consensus was not achieved for the question regarding whether the relationship was supported. Fifteen participants reported that the claim of an Aunt and Niece relationship was supported, four participants did not support the relationship claim, and thirteen reported "Inconclusive."

# STR Amplification Kit(s) & Results

TABLE 1

WebCode-Test	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

2GF6WZ-5876	PowerPlex® Fusion 5C					
	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11	X	10
	24,25	9,10	12,13		9	9,11
	16,18					
2MKYXM-5871	PowerPlex® 21					
	14,16	16,23		15,17	12,13	11,11
	8,9	13,14		20,22	11,12	10,11
1	15,16	14,15.2	28,33.2		X,X	10,10
	24,25	9,10	12,13		9,9	9,11
	16,18					
2TBJUC-5871	GlobalFiler™					
	14,16	16,23	10,11	15,17	12,13	-
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11,11	X,X	10,10
	24,25	-	-	12,27.2	9,9	9,11
	16,18	N/D	-	-	N/D	
49FKPP-5876	GlobalFiler™					
	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11	X	10
	24,25			12,27.2	9	9,11
	16,18					
4E637L-5871	PowerPlex® 21					
	14,16	16,23		15,17	12,13	11,11
	8,9	13,14		20,22	11,12	10,11
1	15,16	14,15.2	28,33.2		X,X	10,10
	24,25	9,10	12,13		9,9	9,11
	16,18					
6D9Q27-5876	PowerPlex® ESI 16 Fast					
	14,16	16,23	10,11	15,17		
		13,14	13,14	20,22		10,11
1	15,16	14,15.2	28,33.2	11	X	
	24,25				9	
	16,18					

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

6GAPJQ-5871	GlobalFiler™					
		14,16	16,23	10,11	15,17	12,13
		8,9	13,14	13,14	20,22	11,12
1		15,16	14,15.2	28,33.2	11	X
		24,25			12,27.2	9
		16,18				9,11
6V6GXZ-5876	GlobalFiler™					
		14,16	16,23	10,11	15,17	12,13
		8,9	13,14	13,14	20,22	11,12
1		15,16	14,15.2	28,33.2	11	X
		24,25			12,27.2	9
		16,18				9,11
76TL9C-5871	GlobalFiler™ Express					
		14,16	16,23	10,11	15,17	12,13
		8,9	13,14	13,14	20,22	11,12
1		15,16	14,15.2	28,33.2	11,11	X,X
		24,25			12,27.2	9,9
		16,18	N/A			N/A
7EC4YX-5876	GlobalFiler™					
		14,16	16,23	10,11	15,17	12,13
		8,9	13,14	13,14	20,22	11,12
1		15,16	14,15.2	28,33.2	11	X
		24,25			12,27.2	9
		16,18				9,11
7RZATD-5871	PowerPlex® 5C					
		14,16	16,23	10,11	15,17	12,13
		8,9	13,14	13,14	20,22	11,12
1		15,16	14,15.2	28,33.2	11	X
		24,25	9,10	12,13	--	9
		16,18	--	--	--	--
8C63FC-5876	HuaXia Platinum (Gene Mapper® ID-X)					
		14,16	16,23	10,11	15,17	12,13
		8,9	13,14	13,14	20,22	11,12
1		15,16	14,15.2	28,33.2	11	X
		24,25	9,10	12,13		9
		16,18	NM	NM	NM	NM

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

8N4YHE-5871	PowerPlex® Fusion 6C					
	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11,11	X,X	10,10
	24,25	9,10	12,13	12,27.2	9,9	9,11
	16,18					
9NVAR8-5871	PowerPlex® 21					
	14,16	16,23		15,17	12,13	11,11
	8,9	13,14		20,22	11,12	10,11
1	15,16	14,15.2	28,33.2		X,X	10,10
	24,25	9,10	12,13		9,9	9,11
	16,18					
9Z8NQZ-5876	GlobalFiler™					
	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11	X	10
	24,25			12,27.2	9	9,11
	16,18	No Results			No Results	
AHLDLC-5871	GlobalFiler™					
	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11,11	X,X	10,10
	24,25			12,27.2	9,9	9,11
	16,18	-			-	
AWTRG-5876	GlobalFiler™					
	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11	X	10
	24,25			12,27.2	9	9,11
	16,18					
BV73C2-5871	GlobalFiler™ IQC (GenoProof Software)					
	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11,11	X,X	10,10
	24,25			12,27.2	9,9	9,11
	16,18	-			-	



TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

BWLEYD-5871	GlobalFiler™					
	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11,11	X,X	10,10
	24,25			12,27.2	9,9	9,11
	16,18					
C7KGUU-5876	GlobalFiler™					
	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11	X	10
	24,25			12,27.2	9	9,11
	16,18					
D3VNW-5876	PowerPlex® ES17					
	14,16	16,23	10,11	15,17		
		13,14	13,14	20,22		
1	15,16	14,15.2	28,33.2	11,11	X,X	
	24,25			12,27.2	9,9	
	16,18					
D4UP4A-5871	GlobalFiler™					
	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11	X,X	10
	24,25			12,27.2	9	9,11
	16,18	-			-	
DF4AJW-5871	GlobalFiler™ Express (Personal software)					
	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11,11	X,X	10,10
	24,25			12,27.2	9,9	9,11
	16,18					
DKDPQY-5876	PowerPlex® PP21					
	14,16	16,23		15,17	12,13	11
	8,9	13,14		20,22	11,12	10,11
1	15,16	14,15.2	28,33.2		X	10
	24,25	9,10	12,13		9	9,11
	16,18					

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

E4NVX9-5871	PowerPlex® 21					
	14,16	16,23		15,17	12,13	11,11
	8,9	13,14		20,22	11,12	10,11
1	15,16	14,15.2	28,33.2		X,X	10,10
	24,25	9,10	12,13		9,9	9,11
	16,18					
ELNU23-5876	GlobalFiler™					
	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11	X	10
	24,25			12,27.2	9	9,11
	16,18					
F79BKL-5871	Investigator® 24plex GO!					
	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11,11	X,X	10,10
	24,25			12,27.2	9,9	9,11
	16,18					
G36VP4-5871	PowerPlex® Fusion 6C					
	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11,11	X,X	10,10
	24,25	9,10	12,13	12,27.2	9,9	9,11
	16,18					
HAKVHL-5876	PowerPlex® Fusion 6C					
	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11	X	10
	24,25	9,10	12,13	12,27.2	9	9,11
	16,18					
HFCXRD-5871	GlobalFiler™ Express					
	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11	X	10
	24,25			12,27.2	9	9,11
	16,18	NR			NR	

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

HR3UUB-5876	GlobalFiler™					
		14,16	16,23	10,11	15,17	12,13
		8,9	13,14	13,14	20,22	11,12
1		15,16	14,15.2	28,33.2	11	X
		24,25			12,27.2	9
		16,18				9,11
HR3UUB-5876	GlobalFiler™					
		14,16	16,23	10,11	15,17	12,13
		8,9	13,14	13,14	20,22	11,12
1		15,16	14,15.2	28,33.2	11	X
		24,25			12,27.2	9
		16,18	NR			NR
JGZX3T-5871	PowerPlex® ESI 16 FAST SYSTEM					
		14,16	16,23	10,11	15,17	
			13,14	13,14	20,22	10,11
1		15,16	14,15.2	28,33.2	11	X
		24,25				9
		16,18				
K3WUGY-5871	GlobalFiler™					
		14,16	16,23	10,11	15,17	12,13
		8,9	13,14	13,14	20,22	11,12
1		15,16	14,15.2	28,33.2	11,11	X,X
		24,25			12,27.2	9,9
		16,18				9,11
KFJ2EZ-5871	PowerPlex® Fusion 5C (Familias)					
		14,16	16,23	10,11	15,17	12,13
		8,9	13,14	13,14	20,22	11,12
1		15,16	14,15.2	28,33.2	11,11	X
		24,25	9,10	12,13		9,9
		16,18	-			9,11
KWQZJX-5871	PowerPlex® ESX17, GlobalFiler™, PowerPlex® Fusion (Familias, versión 3.3)					
		14,16	16,23	10,11	15,17	12,13
		8,9	13,14	13,14	20,22	11,12
1		15,16	14,15.2	28,33.2	11,11	X,X
		24,25	9,10	12,13	12,27.2	9,9
		16,18				9,11

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

KZA9QW-5871	PowerPlex® 21					
	14,16	16,23		15,17	12,13	11,11
	8,9	13,14		20,22	11,12	10,11
1	15,16	14,15.2	28,33.2		X,X	10,10
	24,25	9,10	12,13		9,9	9,11
	16,18					
LKQRDZ-5871	PowerPlex® Fusion					
	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11	X	10
	24,25	9,10	12,13		9	9,11
	16,18	NR				
M843TN-5876	GlobalFiler™					
	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11	X	10
	24,25			12,27.2	9	9,11
	16,18					
M9U4WQ-5871	PowerPlex® Fusion 6C					
	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11,11	X,X	10,10
	24,25	9,10	12,13	12,27.2	9,9	9,11
	16,18					
MG6PKK-5871	GlobalFiler™ Express					
	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11,11	X,X	10,10
	24,25			12,27.2	9,9	9,11
	16,18					
MGN9QR-5871	Identifiler®					
		16,23		15,17	12,13	
	8,9	13,14			11,12	10,11
1	15,16	14,15.2	28,33.2		X,X	10,10
	24,25				9,9	9,11
	16,18					

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

MH4M28-5871 GlobalFiler™ Express

	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11	X	10
	24,25			12,27.2	9	9,11
	16,18	NR			NR	

MHYD2U-5871 PowerPlex® Fusion-ESX17, GlobalFiler™, VeriFiler

	14,16	16,23	10,11	15,17	12,13	11,11
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11,11	X,X	10,10
	24,25	9,10	12,13	12,27.2	9,9	9,11
	16,18					

MLXQMY-5876 PowerPlex® FusionSystem, Qiagen, HDplex (GeneMapper ID v.3.2.1)

	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11,11	X,X	10,10
	24,25	9,10	12,13	12,27.2	9,9	9,11
	16,18	-				

NHTHVU-5876 Identifiler®, PowerPlex® CS7, VeriFiler™ Express, Investigator HDplex, SureID 27comp

	14,16	16,23	10,11	15,17	12,13	11,11
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11,11	X,X	10,10
	24,25	9,10	12,13	12,27.2	9,9	9,11
	16,18					

NHXTV8-5871 PowerPlex® Fusion 6C

	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11,11	X,X	10,10
	24,25	9,10	12,13	12,27.2	9,9	9,11
	16,18					

NNMFKK-5871 Identifiler® DIRECT / PLUS

		16,23		15,17	12,13	
	8,9	13,14			11,12	10,11
1	15,16	14,15.2	28,33.2		X,X	10
	24,25				9	9,11
	16,18					

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

P2MGXL-5871	PowerPlex® Fusion 5C					
	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11	X	10
	24,25	9,10	12,13		9	9,11
	16,18					
PHBKL3-5876	GlobalFiler™					
	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11	X	10
	24,25			12,27.2	9	9,11
	16,18					
PHDJDP-5871	GlobalFiler™					
	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11,11	X,X	10,10
	24,25			12,27.2	9,9	9,11
	16,18					
PKH9HK-5871	PowerPlex® Fusion 5C (eDNA)					
	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11,11	X,X	10,10
	24,25	9,10	12,13		9,9	9,11
	16,18					
PLDKLZ-5871	PowerPlex® 21					
	14,16	16,23		15,17	12,13	11,11
	8,9	13,14		20,22	11,12	10,11
1	15,16	14,15.2	28,33.2		X,X	10,10
	24,25	9,10	12,13		9,9	9,11
	16,18					
PLFAQW-5871	PowerPlex® Fusion 6C					
	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11,11	X,X	10,10
	24,25	9,10	12,13	12,27.2	9,9	9,11
	16,18					

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

Q3V4UQ-5876	GlobalFiler™					
		14,16	16,23	10,11	15,17	12,13
		8,9	13,14	13,14	20,22	11,12
1		15,16	14,15.2	28,33.2	11,11	X,X
		24,25			12,27.2	9,9
		16,18				9,11
QLNQEU-5871	PowerPlex® Fusion					
		14,16	16,23	10,11	15,17	12,13
		8,9	13,14	13,14	20,22	11,12
1		15,16	14,15.2	28,33.2	11	X
		24,25	9,10	12,13		9
		16,18	NR			9,11
R3847R-5876	PowerPlex® ESX17, PPHS16, CS7, CS7 (GeneMapper ID-X)					
		14,16	16,23	10,11	15,17	12,13
		8,9	13,14	13,14	20,22	11,12
1		15,16	14,15.2	28,33.2	11,11	X,X
		24,25	9,10	12,13	12,27.2	9,9
		16,18				9,11
R3QQ3N-5876	GlobalFiler™ EXPRESS					
		14,16	16,23	10,11	15,17	12,13
		8,9	13,14	13,14	20,22	11,12
1		15,16	14,15.2	28,33.2	11,11	X,X
		24,25			12,27.2	9,9
		16,18				9,11
RPLUJL-5871	PowerPlex® Fusion 6C					
		14,16	16,23	10,11	15,17	12,13
		8,9	13,14	13,14	20,22	11,12
1		15,16	14,15.2	28,33.2	11,11	X,X
		24,25	9,10	12,13	12,27.2	9,9
		16,18	-	-	-	-
T9FPVA-5871	Investigator® 24plex GO!					
		14,16	16,23	10,11	15,17	12,13
		8,9	13,14	13,14	20,22	11,12
1		15,16	14,15.2	28,33.2	11,11	X,X
		24,25			12,27.2	9,9
		16,18				9,11

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

TG86HT-5871	PowerPlex® Fusion					
	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11	X	10
	24,25	9,10	12,13		9	9,11
	16,18	NR				
TGAVPB-5876	PowerPlex® Fusion 6C					
	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11	X	10
	24,25	9,10	12,13	12,27.2	9	9,11
	16,18					
TXUJ2Q-5876	Identifiler® PLUS					
		16,23		15,17	12,13	
	8,9	13,14			11,12	10,11
1	15,16	14,15.2	28,33.2		X,X	10,10
	24,25				9,9	9,11
	16,18					
UTYEGL-5876	GlobalFiler™					
	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11	X	10
	24,25			12,27.2	9	9,11
	16,18	No Result			No Result	
V26FGC-5876	PowerPlex® Fusion 5C, Verifiler plus					
	14,16	16,23	10,11	15,17	12,13	11
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11	X	10
	24,25	9,10	12,13		9	9,11
	16,18					
VBAK89-5876	GlobalFiler™					
	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11	X,X	10
	24,25			12,27.2	9	9,11
	16,18					



TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

VWTKJU-5876	GlobalFiler™					
		14,16	16,23	10,11	15,17	12,13
		8,9	13,14	13,14	20,22	11,12
1		15,16	14,15.2	28,33.2	11	X
		24,25			12,27.2	9
		16,18				9,11
VYYT49-5871	GlobalFiler™					
		14,16	16,23	10,11	15,17	12,13
		8,9	13,14	13,14	20,22	11,12
1		15,16	14,15.2	28,33.2	11	X
		24,25			12,27.2	9
		16,18				9,11
WDTYB9-5876	GlobalFiler™					
		14,16	16,23	10,11	15,17	12,13
		8,9	13,14	13,14	20,22	11,12
1		15,16	14,15.2	28,33.2	11	X
		24,25			12,27.2	9
		16,18				9,11
WLPPZP-5871	PowerPlex® Fusion 6C					
		14,16	16,23	10,11	15,17	12,13
		8,9	13,14	13,14	20,22	11,12
1		15,16	14,15.2	28,33.2	11,11	X,X
		24,25	9,10	12,13	12,27.2	9,9
		16,18				9,11
WLTCDW-5871	PowerPlex® Fusion 6C					
		14,16	16,23	10,11	15,17	12,13
		8,9	13,14	13,14	20,22	11,12
1		15,16	14,15.2	28,33.2	11,11	X,X
		24,25	9,10	12,13	12,27.2	9,9
		16,18				9,11
WM42WA-5876	GlobalFiler™					
		14,16	16,23	10,11	15,17	12,13
		8,9	13,14	13,14	20,22	11,12
1		15,16	14,15.2	28,33.2	11	X
		24,25			12,27.2	9
		16,18				9,11

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

WX6M2M-5871 VeriFiler Express

	14,16	16,23	10,11	15,17	11,13	11,11
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11,11	X,X	10,10
	24,25	9,10	12,13		9,9	9,11
	16,18					

X4RRDN-5871 PowerPlex® Fusion 6C

	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11,11	X,X	10,10
	24,25	9,10	12,13	12,27.2	9,9	9,11
	16,18					

XVT9RK-5871 GlobalFiler™ Express

	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11,11	X,X	10,10
	24,25			12,27.2	9,9	9,11
	16,18					

YAAJXL-5876 GlobalFiler™

	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11,11	X,X	10,10
	24,25			12,27.2	9,9	9,11
	16,18					

YG7J7M-5871 PowerPlex® Fusion

	14,16	16,23	10,11	15,17	12,13	
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11	X	10
	24,25	9,10	12,13		9	9,11
	16,18	NR	NR	NR	NR	

YG8AKH-5871 VeriFiler Express

	14,16	16,23	10,11	15,17	12,13	11,11
	8,9	13,14	13,14	20,22	11,12	10,11
1	15,16	14,15.2	28,33.2	11,11	X,X	10,10
	24,25	9,10	12,13		9,9	9,11
	16,18					

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

WebCode-Test	Identifiler® Direct						
1		16,23		15,17	12,13		
		8,9	13,14		11,12	10,11	
		15,16	14,15.2	28,33.2		X,X	10,10
		24,25				9,9	9,11
		16,18					
<hr/>							
ZHV3VR-5876	GlobalFiler™						
1		14,16	16,23	10,11	15,17	12,13	
		8,9	13,14	13,14	20,22	11,12	10,11
		15,16	14,15.2	28,33.2	11	X	10
		24,25			12,27.2	9	9,11
		16,18					

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

2GF6WZ-5876 PowerPlex® Fusion 5C

	14,16.3	16,26	10	16,17	12	
	9,10	8,14	13,14	18,20	12	9,10
2	15,18	12.2,14	28,33.2	11,15	X,Y	10,12
	21,24	10,12	13,17		6,9	11
	16,18	10				

2MKYXM-5871 PowerPlex® 21

	14,16.3	16,26		16,17	12,12	11,13
	9,10	8,14		18,20	12,12	9,10
2	15,18	12.2,14	29,33.2		X,Y	10,12
	21,24	10,12	13,17		6,9	11,11
	16,18					

2TBJUC-5871 GlobalFiler™

	14,16.3	16,26	10,10	16,17	12,12	-
	9,10	8,14	13,14	18,20	12,12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24	-	-	12,13,17	6,9	11,11
	16,18	10	-	-	2	

49FKPP-5876 GlobalFiler™

	14,16.3	16,26	10	16,17	12	
	9,10	8,14	13,14	18,20	12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24			12,13,17	6,9	11
	16,18	10			2	

4E637L-5871 PowerPlex® 21

	14,16.3	16,26		16,17	12,12	11,13
	9,10	8,14		18,20	12,12	9,10
2	15,18	12.2,14	29,33.2		X,Y	10,12
	21,24	10,12	13,17		6,9	11,11
	16,18					

6D9Q27-5876 PowerPlex® ESI 16 Fast

	14,16.3	16,26	10	16,17		
		8,14	13,14	18,20		9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	
	21,24				6,9	
	16,18					

TABLE 1

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

## Item 2 - STR Results

6GAPJQ-5871	GlobalFiler™					
	14,16.3	16,26	10	16,17	12	
	9,10	8,14	13,14	18,20	12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24			12,13,17	6,9	11
	16,18	10			2	
6V6GXZ-5876	GlobalFiler™					
	14,16.3	16,26	10	16,17	12	
	9,10	8,14	13,14	18,20	12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24			12,13,17	6,9	11
	16,18	10			2	
76TL9C-5871	GlobalFiler™ Express					
	14,16.3	16,26	10,10	16,17	12,12	
	9,10	8,14	13,14	18,20	12,12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24			12,13,17	6,9	11,11
	16,18	10			2	
7EC4YX-5876	GlobalFiler™					
	14,16.3	16,26	10	16,17	12	
	9,10	8,14	13,14	18,20	12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24			12,13,17	6,9	11
	16,18	10			2	
7RZATD-5871	PowerPlex® 5C					
	14,16.3	16,26	10	16,17	12	--
	9,10	8,14	13,14	18,20	12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24	10,12	13,17	--	6,9	11
	16,18	10	--	--	--	
8C63FC-5876	HuaXia Platinum (Gene Mapper® ID-X)					
	14,16.3	16,26	10	16,17	12	11,13
	9,10	8,14	13,14	18,20	12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24	10,12	13,17		6,9	11
	16,18				2	

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

8N4YHE-5871	PowerPlex® Fusion 6C					
	14,16.3	16,26	10,10	16,17	12,12	
	9,10	8,14	13,14	18,20	12,12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24	10,12	13,17	12,13,17	6,9	11,11
	16,18	10	19	16		
9NVAR8-5871	PowerPlex® 21					
	14,16.3	16,26		16,17	12,12	11,13
	9,10	8,14		18,20	12,12	9,10
2	15,18	12.2,14	29,33.2		X,Y	10,12
	21,24	10,12	13,17		6,9	11,11
	16,18					
9Z8NQZ-5876	GlobalFiler™					
	14,16.3	16,26	10	16,17	12	
	9,10	8,14	13,14	18,20	12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24			12,13,17	6,9	11
	16,18	10			2	
AHLDLC-5871	GlobalFiler™					
	14,16.3	16,26	10,10	16,17	12,12	
	9,10	8,14	13,14	18,20	12,12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24			12,13,17	6,9	11,11
	16,18	10			2	
AWTRG-5876	GlobalFiler™					
	14,16.3	16,26	10	16,17	12	
	9,10	8,14	13,14	18,20	12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24			12,13,17	6,9	11
	16,18	10			2	
BV73C2-5871	GlobalFiler™ IQC (GenoProof Software)					
	14,16.3	16,26	10,10	16,17	12,12	
	9,10	8,14	13,14	18,20	12,12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24			12,13,17	6,9	11,11
	16,18	10			2	

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

BWLEYD-5871	GlobalFiler™					
	14,16.3	16,26	10,10	16,17	12,12	
	9,10	8,14	13,14	18,20	12,12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24				6,9	11,11
	16,18	10			2	
C7KGUU-5876	GlobalFiler™					
	14,16.3	16,26	10	16,17	12	
	9,10	8,14	13,14	18,20	12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24			12,13,17	6,9	11
	16,18	10			2	
D3VNW-5876	PowerPlex® ES17					
	14,16.3	16,26	10,10	16,17		
		8,14	13,14	18,20		9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	
	21,24			12,13,17	6,9	
	16,18					
D4UP4A-5871	GlobalFiler™					
	14,16.3	16,26	10	16,17	12	
	9,10	8,14	13,14	18,20	12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24			12,13,17	6,9	11
	16,18	10			2	
DF4AJW-5871	GlobalFiler™ Express (Personal software)					
	14,16.3	16,26	10,10	16,17	12,12	
	9,10	8,14	13,14	18,20	12,12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24			12,13,17	6,9	11,11
	16,18	10			2	
DKDPQY-5876	PowerPlex® PP21					
	14,16.3	16,26		16,17	12	11,13
	9,10	8,14		18,20	12	9,10
2	15,18	12.2,14	29,33.2		X,Y	10,12
	21,24	10,12	13,17		6,9	11
	16,18					

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

E4NVX9-5871		PowerPlex® 21					
		14,16.3	16,26		16,17	12,12	11,13
		9,10	8,14		18,20	12,12	9,10
2		15,18	12.2,14	29,33.2		X,Y	10,12
		21,24	10,12	13,17		6,9	11,11
		16,18					
ELNU23-5876		GlobalFiler™					
		14,16.3	16,26	10	16,17	12	
		9,10	8,14	13,14	18,20	12	9,10
2		15,18	12.2,14	29,33.2	11,15	X,Y	10,12
		21,24			12,13,17	6,9	11
		16,18	10			2	
F79BKL-5871		Investigator® 24plex GO!					
		14,16.3	16,26	10,10	16,17	12,12	
		9,10	8,14	13,14	18,20	12,12	9,10
2		15,18	12.2,14	29,33.2	11,15	X,Y	10,12
		21,24			12,13,17	6,9	11,11
		16,18	10				
G36VP4-5871		PowerPlex® Fusion 6C					
		14,16.3	16,26	10,10	16,17	12,12	
		9,10	8,14	13,14	18,20	12,12	9,10
2		15,18	12.2,14	29,33.2	11,15	X,Y	10,12
		21,24	10,12	13,17	12,13,17	6,9	11,11
		16,18	10	19	16		
HAKVHL-5876		PowerPlex® Fusion 6C					
		14,16.3	16,26	10	16,17	12	
		9,10	8,14	13,14	18,20	12	9,10
2		15,18	12.2,14	29,33.2	11,15	X,Y	10,12
		21,24	10,12	13,17	12,13,17	6,9	11
		16,18	10	19	16		
HFCXRD-5871		GlobalFiler™ Express					
		14,16.3	16,26	10	16,17	12	
		9,10	8,14	13,14	18,20	12	9,10
2		15,18	12.2,14	29,33.2	11,15	X,Y	10,12
		21,24			12,13,17	6,9	11
		16,18	10			2	



TABLE 1

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

## Item 2 - STR Results

HR3UUB-5876	GlobalFiler™					
	14,16.3	16,26	10	16,17	12	
	9,10	8,14	13,14	18,20	12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24			12,13,17	6,9	11
	16,18	10			2	
HR3UUB-5876	GlobalFiler™					
	14,16.3	16,26	10	16,17	12	
	9,10	8,14	13,14	18,20	12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24			12,13,17	6,9	11
	16,18	10			2	
JGZX3T-5871	PowerPlex® ESI 16 FAST SYSTEM					
	14,16.3	16,26	10	16,17		
		8,14	13,14	18,20		9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	
	21,24				6,9	
	16,18					
K3WUGY-5871	GlobalFiler™					
	14,16.3	16,26	10,10	16,17	12,12	
	9,10	8,14	13,14	18,20	12,12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24			12,13,17	6,9	11,11
	16,18	10			2	
KFJ2EZ-5871	PowerPlex® Fusion 5C (Familias)					
	14,16.3	16,26	10,10	16,17	12,12	
	9,10	8,14	13,14	18,20	12,12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24	10,12	13,17		6,9	11,11
	16,18	10				
KWQZJX-5871	PowerPlex® ESX17, GlobalFiler™, PowerPlex® Fusion (Familias, versión 3.3)					
	14,16.3	16,26	10,10	16,17	12,12	
	9,10	8,14	13,14	18,20	12,12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24	10,12	13,17	12,13,17	6,9	11,11
	16,18	10			2	

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

KZA9QW-5871 PowerPlex® 21

	14,16.3	16,26		16,17	12,12	11,13
	9,10	8,14		18,20	12,12	9,10
2	15,18	12.2,14	29,33.2		X,Y	10,12
	21,24	10,12	13,17		6,9	11,11
	16,18					

LKQRDZ-5871 PowerPlex® Fusion

	14,16.3	16,26	10	16,17	12	
	9,10	8,14	13,14	18,20	12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24	10,12	13,17		6,9	11
	16,18	10				

M843TN-5876 GlobalFiler™

	14,16.3	16,26	10	16,17	12	
	9,10	8,14	13,14	18,20	12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24			12,13,17	6,9	11
	16,18	10			2	

M9U4WQ-5871 PowerPlex® Fusion 6C

	14,16.3	16,26	10,10	16,17	12,12	
	9,10	8,14	13,14	18,20	12,12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24	10,12	13,17	12,13,17	6,9	11,11
	16,18	10	19	16		

MG6PKK-5871 GlobalFiler™ Express

	14,16.3	16,26	10,10	16,17	12,12	
	9,10	8,14	13,14	18,20	12,12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24			12,13,17	6,9	11,11
	16,18	10			2	

MGN9QR-5871 Identifiler®

		16,26		16,17	12,12	
	9,10	8,14			12,12	9,10
2	15,18	12.2,14	29,33.2		X,X	10,12
	21,24				6,9	11,11
	16,18					

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

MH4M28-5871 GlobalFiler™ Express

	14,16.3	16,26	10	16,17	12	
	9,10	8,14	13,14	18,20	12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24			12,13,17	6,9	11
	16,18	10			2	

MHYD2U-5871 PowerPlex® Fusion-ESX17, GlobalFiler™, VeriFiler

	14,16.3	16,26	10,10	16,17	12,12	11,13
	9,10	8,14	13,14	18,20	12,12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24	10,12	13,17	12,13,17	6,9	11,11
	16,18	10			2	

MLXQMY-5876 PowerPlex® FusionSystem, PowerPlex Y23, Qiagen, HDplex (GeneMapper ID v. 3.2.1)

	14,16.3	16,26	10,10	16,17	12,12	
	9,10	8,14	13,14	18,20	12,12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24	10,12	13,17	12,13,17	6,9	11,11
	16,18	10				

NHTHVU-5876 Identifiler®, PowerPlex® CS7, VeriFiler™ Express, Investigator HDplex, SureID 27comp

	14,16.3	16,26	10,10	16,17	12,12	11,13
	9,10	8,14	13,14	18,20	12,12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24	10,12	13,17	12,17	6,9	11,11
	16,18				2	

NHXTV8-5871 PowerPlex® Fusion 6C

	14,16.3	16,26	10,10	16,17	12,12	
	9,10	8,14	13,14	18,20	12,12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24	10,12	13,17	12,13,17	6,9	11,11
	16,18	10	19	16		

NNMFKK-5871 Identifiler® DIRECT / PLUS

		16,26		16,17	12	
	9,10	8,14			12	9,10
2	15,18	12.2,14	29,33.2		X,Y	10,12
	21,24				6,9	11
	16,18					

TABLE 1

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

## Item 2 - STR Results

P2MGXL-5871	PowerPlex® Fusion 5C					
	14,16.3	16,26	10	16,17	12	
	9,10	8,14	13,14	18,20	12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24	10,12	13,17		6,9	11
	16,18	10				
PHBKL3-5876	GlobalFiler™					
	14,16.3	16,26	10	16,17	12	
	9,10	8,14	13,14	18,20	12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24			12,13,17	6,9	11
	16,18	10			2	
PHDJDP-5871	GlobalFiler™					
	14,16.3	16,26	10,10	16,17	12,12	
	9,10	8,14	13,14	18,20	12,12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24			12,13,17	6,9	11,11
	16,18	10			2	
PKH9HK-5871	PowerPlex® Fusion 5C (eDNA)					
	14,16.3	16,26	10,10	16,17	12,12	
	9,10	8,14	13,14	18,20	12,12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24	10,12	13,17		6,9	11,11
	16,18	10				
PLDKLZ-5871	PowerPlex® 21					
	14,16.3	16,26		16,17	12,12	11,13
	9,10	8,14		18,20	12,12	9,10
2	15,18	12.2,14	29,33.2		X,Y	10,12
	21,24	10,12	13,17		6,9	11,11
	16,18					
PLFAQW-5871	PowerPlex® Fusion 6C					
	14,16.3	16,26	10,10	16,17	12,12	
	9,10	8,14	13,14	18,20	12,12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24	10,12	13,17	12,13,17	6,9	11,11
	16,18	10	19	16		

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

Q3V4UQ-5876 GlobalFiler™

	14,16.3	16,26	10,10	16,17	12,12	
	9,10	8,14	13,14	18,20	12,12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24			12,13,17	6,9	11,11
	16,18	10			2	

QLNQEU-5871 PowerPlex® Fusion

	14,16.3	16,26	10	16,17	12	
	9,10	8,14	13,14	18,20	12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24	10,12	13,17		6,9	11
	16,18	10				

R3847R-5876 PowerPlex® ESX17, PPHS16, CS7 (GeneMapper ID-X)

	14,16.3	16,26	10,10	16,17	12,12	
	9,10	8,14	13,14	18,20	12,12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24	10,12	13,17	12,13,17	6,9	11,11
	16,18					

R3QQ3N-5876 GlobalFiler™ EXPRESS

	14,16.3	16,26	10,10	16,17	12,12	
	9,10	8,14	13,14	18,20	12,12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24			12,13,17	6,9	11,11
	16,18	10			2	

RPLUJL-5871 PowerPlex® Fusion 6C

	14,16.3	16,26	10,10	16,17	12,12	-
	9,10	8,14	13,14	18,20	12,12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24	10,12	13,17	12,13,17	6,9	11,11
	16,18	10	19	16	-	

T9FPVA-5871 Investigator® 24plex GO!

	14,16.3	16,26	10,10	16,17	12,12	
	9,10	8,14	13,14	18,20	12,12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24			12,13,17	6,9	11,11
	16,18	10				

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

TG86HT-5871	PowerPlex® Fusion					
	14,16.3	16,26	10	16,17	12	
	9,10	8,14	13,14	18,20	12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24	10,12	13,17		6,9	11
	16,18	10				
TGAVPB-5876	PowerPlex® Fusion 6C					
	14,16.3	16,26	10	16,17	12	
	9,10	8,14	13,14	18,20	12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24	10,12	13,17	12,13,17	6,9	11
	16,18	10	19	16		
TXUJ2Q-5876	Identifiler® PLUS					
		16,26		16,17	12,12	
	9,10	8,14			12,12	9,10
2	15,18	12.2,14	29,33.2		X,Y	10,12
	21,24				6,9	11,11
	16,18					
UTYEGL-5876	GlobalFiler™					
	14,16.3	16,26	10	16,17	12	
	9,10	8,14	13,14	18,20	12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24			12,13,17	6,9	11
	16,18	10			2	
V26FGC-5876	PowerPlex® Fusion 5C, Verifiler plus					
	14,16.3	16,26	10	16,17	12	11,13
	9,10	8,14	13,14	18,20	12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24	10,12	13,17		6,9	11
	16,18	10			2	
VBAK89-5876	GlobalFiler™					
	14,16.3	16,26	10	16,17	12	
	9,10	8,14	13,14	18,20	12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24			12,13,17	6,9	11
	16,18	10			2	

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

VWTKJU-5876	GlobalFiler™					
	14,16.3	16,26	10	16,17	12	
	9,10	8,14	13,14	18,20	12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24			12,13,17	6,9	11
	16,18	10			2	
VYYT49-5871	GlobalFiler™					
	14,16.3	16,26	10	16,17	12	
	9,10	8,14	13,14	18,20	12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24			12,13,17	6,9	11
	16,18	10			2	
WDTYB9-5876	GlobalFiler™					
	14,16.3	16,26	10	16,17	12	
	9,10	8,14	13,14	18,20	12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24			12,13,17	6,9	11
	16,18	10			2	
WLPPZP-5871	PowerPlex® Fusion 6C					
	14,16.3	16,26	10,10	16,17	12,12	
	9,10	8,14	13,14	18,20	12,12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24	10,12	13,17	12,13,17	6,9	11,11
	16,18	10	19	16		
WLTCDW-5871	PowerPlex® Fusion 6C					
	14,16.3	16,26	10,10	16,17	12,12	
	9,10	8,14	13,14	18,20	12,12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24	10,12	13,17	12,13,17	6,9	11,11
	16,18	10	19	16		
WM42WA-5876	GlobalFiler™					
	14,16.3	16,26	10	16,17	12	
	9,10	8,14	13,14	18,20	12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24			12,13,17	6,9	11
	16,18	10			2	

TABLE 1

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

## Item 2 - STR Results

WX6M2M-5871 VeriFiler Express

	14,16.3	16,26	10,10	16,17	12,12	11,13
	9,10	8,14	13,14	18,20	12,12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24	10,12	13,17		6,9	11,11
	16,18				2	

X4RRDN-5871 PowerPlex® Fusion 6C

	14,16.3	16,26	10,10	16,17	12,12	
	9,10	8,14	13,14	18,20	12,12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24	10,12	13,17	12,13,17	6,9	11,11
	16,18	10	19	16		

XVT9RK-5871 GlobalFiler™ Express

	14,16.3	16,26	10,10	16,17	12,12	
	9,10	8,14	13,14	18,20	12,12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24			12,13,17	6,9	11,11
	16,18	10			2	

YAAJXL-5876 GlobalFiler™

	14,16.3	16,26	10,10	16,17	12,12	
	9,10	8,14	13,14	18,20	12,12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24			12,17	6,9	11,11
	16,18	10			2	

YG7J7M-5871 PowerPlex® Fusion

	14,16.3	16,26	10	16,17	12	
	9,10	8,14	13,14	18,20	12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24	10,12	13,17		6,9	11
	16,18	10	NR	NR	NR	

YG8AKH-5871 VeriFiler Express

	14,16.3	16,26	10,10	16,17	12,12	11,13
	9,10	8,14	13,14	18,20	12,12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24	10,12	13,17		6,9	11,11
	16,18				2	



TABLE 1

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

## Item 2 - STR Results

ZFQGYE-5871 Identifiler® Direct

		16,26		16,17	12,12	
	9,10	8,14			12,12	9,10
2	15,18	12.2,14	29,33.2		X,Y	10,12
	21,24				6,9	11,11
	16,18					

ZHV3VR-5876 GlobalFiler™

	14,16.3	16,26	10	16,17	12	
	9,10	8,14	13,14	18,20	12	9,10
2	15,18	12.2,14	29,33.2	11,15	X,Y	10,12
	21,24			12,13,17	6,9	11
	16,18	10			2	

TABLE 1

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

## Item 3 - STR Results

2GF6WZ-5876 PowerPlex® Fusion 5C

	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18	12	9,11
3	14,18	12,2,13	28,29	15	X,Y	12
	19,21	10,12	11,17		6,9,3	11,12
	16,18	10				

2MKYXM-5871 PowerPlex® 21 (Kinship)

	16,3,18,3	23,26		15,16	12,13	13,13
	10,11	8,10		18,18	12,12	9,11
3	14,18	12,2,13	28,29		X,Y	12,12
	19,21	10,12	11,17		6,9,3	11,12
	16,18					

2TBJUC-5871 GlobalFiler™

	16,3,18,3	23,26	10,15	15,16	12,13	-
	10,11	8,10	13,17	18,18	12,12	9,11
3	14,18	12,2,13	28,29	15,15	X,Y	12,12
	19,21	-	-	17,18	6,9,3	11,12
	16,18	10	-	-	2	

49FKPP-5876 GlobalFiler™

	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18	12	9,11
3	14,18	12,2,13	28,29	15	X,Y	12
	19,21			17,18	6,9,3	11,12
	16,18	10			2	

4E637L-5871 PowerPlex® 21 (Kinship (Paternity Trio Module))

	16,3,18,3	23,26		15,16	12,13	13,13
	10,11	8,10		18,18	12,12	9,11
3	14,18	12,2,13	28,29		X,Y	12,12
	19,21	10,12	11,17		6,9,3	11,12
	16,18					

6D9Q27-5876 PowerPlex® ESI 16 Fast

	16,3,18,3	23,26	10,15	15,16		
		8,10	13,17	18		9,11
3	14,18	12,2,13	28,29	15	X,Y	
	19,21				6,9,3	
	16,18					

TABLE 1

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

## Item 3 - STR Results

6GAPJQ-5871	GlobalFiler™					
	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18	12	9,11
3	14,18	12,2,13	28,29	15	X,Y	12
	19,21			17,18	6,9,3	11,12
	16,18	10			2	
6V6GXZ-5876	GlobalFiler™					
	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18	12	9,11
3	14,18	12,2,13	28,29	15	X,Y	12
	19,21			17,18	6,9,3	11,12
	16,18	10			2	
76TL9C-5871	GlobalFiler™ Express					
	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18,18	12,12	9,11
3	14,18	12,2,13	28,29	15,15	X,Y	12,12
	19,21			17,18	6,9,3	11,12
	16,18	10			2	
7EC4YX-5876	GlobalFiler™					
	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18	12	9,11
3	14,18	12,2,13	28,29	15	X,Y	12
	19,21			17,18	6,9,3	11,12
	16,18	10			2	
7RZATD-5871	PowerPlex® 5C					
	16,3,18,3	23,26	10,15	15,16	12,13	--
	10,11	8,10	13,17	18	12	9,11
3	14,18	12,2,13	28,29	15	X,Y	12
	19,21	10,12	11,17	--	6,9,3	11,12
	16,18	10	--	--	--	
8C63FC-5876	HuaXia Platinum (Gene Mapper® ID-X)					
	16,3,18,3	23,26	10,15	15,16	12,13	13
	10,11	8,10	13,17	18	12	9,11
3	14,18	12,2,13	28,29	15	X,Y	12
	19,21	10,12	11,17		6,9,3	11,12
	16,18				2	

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

8N4YHE-5871	PowerPlex® Fusion 6C					
	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18,18	12,12	9,11
3	14,18	12,2,13	28,29	15,15	X,Y	12,12
	19,21	10,12	11,17	17,18	6,9,3	11,12
	16,18	10	19	16		
9NVAR8-5871	PowerPlex® 21					
	16,3,18,3	23,26		15,16	12,13	13,13
	10,11	8,10		18,18	12,12	9,11
3	14,18	12,2,13	28,29		X,Y	12,12
	19,21	10,12	11,17		6,9,3	11,12
	16,18					
9Z8NQZ-5876	GlobalFiler™					
	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18	12	9,11
3	14,18	12,2,13	28,29	15	X,Y	12
	19,21			17,18	6,9,3	11,12
	16,18	10			2	
AHLDLC-5871	GlobalFiler™					
	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18,18	12,12	9,11
3	14,18	12,2,13	28,29	15,15	X,Y	12,12
	19,21			17,18	6,9,3	11,12
	16,18	10			2	
AWTRG-5876	GlobalFiler™					
	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18	12	9,11
3	14,18	12,2,13	28,29	15	X,Y	12
	19,21			17,18	6,9,3	11,12
	16,18	10			2	
BV73C2-5871	GlobalFiler™ IQC (GenoProof Software)					
	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18,18	12,12	9,11
3	14,18	12,2,13	28,29	15,15	X,Y	12,12
	19,21			17,18	6,9,3	11,12
	16,18	10			2	

TABLE 1

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

## Item 3 - STR Results

BWLEYD-5871 GlobalFiler™						
	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18,18	12,12	9,11
3	14,18	12,2,13	28,29	15,15	X,Y	12,12
	19,21			17,18	6,9,3	11,12
	16,18	10			2	
C7KGUU-5876 GlobalFiler™						
	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18	12	9,11
3	14,18	12,2,13	28,29	15	X,Y	12
	19,21			17,18	6,9,3	11,12
	16,18	10			2	
D3VNVW-5876 PowerPlex® ES17						
	16,3,18,3	23,26	10,15	15,16		
		8,10	13,17	18,18		9,11
3	14,18	12,2,13	28,29	15,15	X,Y	
	19,21			17,18	6,9,3	
	16,18					
D4UP4A-5871 GlobalFiler™						
	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18	12	9,11
3	14,18	12,2,13	28,29	15	X,Y	12
	19,21			17,18	6,9,3	11,12
	16,18	10			2	
DF4AJW-5871 GlobalFiler™ Express (Personal software)						
	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18,18	12,12	9,11
3	14,18	12,2,13	28,29	15,15	X-Y	12,12
	19,21			17,18	6,9,3	11,12
	16,18	10			2	
DKDPQY-5876 PowerPlex® PP21						
	16,3,18,3	23,26		15,16	12,13	13
	10,11	8,10		18	12	9,11
3	14,18	12,2,13	28,29		X,Y	12
	19,21	10,12	11,17		6,9,3	11,12
	16,18					

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

E4NVX9-5871		PowerPlex® 21					
		16,3,18,3	23,26		15,16	12,13	13,13
		10,11	8,10		18,18	12,12	9,11
3		14,18	12,2,13	28,29		X,Y	12,12
		19,21	10,12	11,17		6,9,3	11,12
		16,18					
ELNU23-5876		GlobalFiler™					
		16,3,18,3	23,26	10,15	15,16	12,13	
		10,11	8,10	13,17	18	12	9,11
3		14,18	12,2,13	28,29	15	X,Y	12
		19,21			17,18	6,9,3	11,12
		16,18	10			2	
F79BKL-5871		Investigator® 24plex GO!					
		16,3,18,3	23,26	10,15	15,16	12,13	
		10,11	8,10	13,17	18,18	12,12	9,11
3		14,18	12,2,13	28,29	15,15	X,Y	12,12
		19,21			17,18	6,9,3	11,12
		16,18	10				
G36VP4-5871		PowerPlex® Fusion 6C					
		16,3,18,3	23,26	10,15	15,16	12,13	
		10,11	8,10	13,17	18,18	12,12	9,11
3		14,18	12,2,13	28,29	15,15	X,Y	12,12
		19,21	10,12	11,17	17,18	6,9,3	11,12
		16,18	10	19	16		
HAKVHL-5876		PowerPlex® Fusion 6C					
		16,3,18,3	23,26	10,15	15,16	12,13	
		10,11	8,10	13,17	18	12	9,11
3		14,18	12,2,13	28,29	15	X,Y	12
		19,21	10,12	11,17	17,18	6,9,3	11,12
		16,18	10	19	16		
HFCXRD-5871		GlobalFiler™ Express					
		16,3,18,3	23,26	10,15	15,16	12,13	
		10,11	8,10	13,17	18	12	9,11
3		14,18	12,2,13	28,29	15	X,Y	12
		19,21			17,18	6,9,3	11,12
		16,18	10			2	

TABLE 1

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

## Item 3 - STR Results

HR3UUB-5876	GlobalFiler™					
	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18	12	9,11
3	14,18	12,2,13	28,29	15	X,Y	12
	19,21			17,18	6,9,3	11,12
	16,18	10			2	
HR3UUB-5876	GlobalFiler™					
	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18	12	9,11
3	14,18	12,2,13	28,29	15	X,Y	12
	19,21			17,18	6,9,3	11,12
	16,18	10			2	
JGZX3T-5871	PowerPlex® ESI 16 FAST SYSTEM					
	16,3,18,3	23,26	10,15	15,16		
		8,10	13,17	18		9,11
3	14,18	12,2,13	28,29	15	X,Y	
	19,21				6,9,3	
	16,18					
K3WUGY-5871	GlobalFiler™ (Genoproof)					
	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18,18	12,12	9,11
3	14,18	12,2,13	28,29	15,15	X,Y	12,12
	19,21			17,18	6,9,3	11,12
	16,18	10			2	
KFJ2EZ-5871	PowerPlex® Fusion 5C (Familias)					
	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18,18	12,12	9,11
3	14,18	12,2,13	28,29	15,15	X,Y	12,12
	19,21	10,12	11,17		6,9,3	11,12
	16,18	10				
KWQZJX-5871	PowerPlex® ESX17, GlobalFiler™, PowerPlex® Fusion (Familias, versión 3.3)					
	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18,18	12,12	9,11
3	14,18	12,2,13	28,29	15,15	X,Y	12,12
	19,21	10,12	11,17	17,18	6,9,3	11,12
	16,18	10			2	

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

KZA9QW-5871 PowerPlex® 21

	16,3,18,3	23,26		15,16	12,13	13,13
	10,11	8,10		18,NR	12,12	9,11
3	14,18	12,2,13	28,29		X,Y	12,12
	19,21	10,12	11,17		6,9,3	11,12
	16,18					

LKQRDZ-5871 PowerPlex® Fusion

	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18	12	9,11
3	14,18	12,2,13	28,29	15	X,Y	12
	19,21	10,12	11,17		6,9,3	11,12
	16,18	10				

M843TN-5876 GlobalFiler™

	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18	12	9,11
3	14,18	12,2,13	28,29	15	X,Y	12
	19,21			17,18	6,9,3	11,12
	16,18	10			2	

M9U4WQ-5871 PowerPlex® Fusion 6C

	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18,18	12,12	9,11
3	14,18	12,2,13	28,29	15,15	X,Y	12,12
	19,21	10,12	11,17	17,18	6,9,3	11,12
	16,18	10	19	16		

MG6PKK-5871 GlobalFiler™ Express

	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,9	13,17	18,18	12,12	9,11
3	14,18	12,2,13	28,29	15,15	X,Y	12,12
	19,21			17,18	6,9,3	11,12
	16,18	10			2	

MGN9QR-5871 Identifiler®

		23,26		15,16	12,13	
	10,11	8,10			12,12	9,11
3	14,18	12,2,13	28,29		X,Y	12,12
	19,21				6,9,3	11,12
	16,18					



TABLE 1

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

## Item 3 - STR Results

MH4M28-5871 GlobalFiler™ Express

	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18	12	9,11
3	14,18	12,2,13	28,29	15	X,Y	12
	19,21			17,18	6,9,3	11,12
	16,18	10			2	

MHYD2U-5871 PowerPlex® Fusion-ESX17, GlobalFiler™, VeriFiler

	16,3,18,3	23,26	10,15	15,16	12,13	13,13
	10,11	8,10	13,17	18,18	12,12	9,11
3	14,18	12,2,13	28,29	15,15	X,Y	12,12
	19,21	10,12	11,17	17,18	6,9,3	11,12
	16,18	10			2	

MLXQMY-5876 PowerPlex® FusionSystem, PowerPlex Y23, Qiagen, HDplex (GeneMapper ID v. 3.2.1)

	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18,18	12,12	9,11
3	14,18	12,2,13	28,29	15,15	X,Y	12,12
	19,21	10,12	11,17	17,18	6,9,3	11,12
	16,18	10				

NHTHVU-5876 Identifiler®, PowerPlex® CS7, VeriFiler™ Express, Investigator HDplex, SureID 27comp

	16,3,18,3	23,26	10,15	15,16	12,13	13,13
	10,11	8,10	13,17	18,18	12,12	9,11
3	14,18	12,2,13	28,29	15,15	X,Y	12,12
	19,21	10,12	11,17	17,18	6,9,3	11,12
	16,18				2	

NHXTV8-5871 PowerPlex® Fusion 6C

	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18,18	12,12	9,11
3	14,18	12,2,13	28,29	15,15	X,Y	12,12
	19,21	10,12	11,17	17,18	6,9,3	11,12
	16,18	10	19	16		

NNMFKK-5871 Identifiler® DIRECT / PLUS

		23,26		15,16	12,13	
	10,11	8,10			12	9,11
3	14,18	12,2,13	28,29		X,Y	12
	19,21				6,9,3	11,12
	16,18					

TABLE 1

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

## Item 3 - STR Results

P2MGXL-5871	PowerPlex® Fusion 5C					
	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18	12	9,11
3	14,18	12,2,13	28,29	15	X,Y	12
	19,21	10,12	11,17		6,9,3	11,12
	16,18	10				
PHBKL3-5876	GlobalFiler™					
	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18	12	9,11
3	14,18	12,2,23	28,29	15	X,Y	12
	19,21			17,18	6,9,3	11,12
	16,18	10			2	
PHDJDP-5871	GlobalFiler™					
	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18,18	12,12	9,11
3	14,18	12,2,13	28,29	15,15	X,Y	12,12
	19,21			17,18	6,9,3	11,12
	16,18	10			2	
PKH9HK-5871	PowerPlex® Fusion 5C (eDNA)					
	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18,18	12,12	9,11
3	14,18	12,2,13	28,29	15,15	X,Y	12,12
	19,21	10,12	11,17		6,9,3	11,12
	16,18	10				
PLDKLZ-5871	PowerPlex® 21					
	16,3,18,3	23,26		15,16	12,13	13,13
	10,11	8,10		18,18	12,12	9,11
3	14,18	12,2,13	28,29		X,Y	12,12
	19,21	10,12	11,17		6,9,3	11,12
	16,18					
PLFAQW-5871	PowerPlex® Fusion 6C					
	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18,18	12,12	9,11
3	14,18	12,2,13	28,29	15,15	X,Y	12,12
	19,21	10,12	11,17	17,18	6,9,3	11,12
	16,18	10	19	16		

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

Q3V4UQ-5876 GlobalFiler™

	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18,18	12,12	9,11
3	14,18	12,2,13	28,29	15,15	X,Y	12,12
	19,21			17,18	6,9,3	11,12
	16,18	10			2	

QLNQEU-5871 PowerPlex® Fusion

	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18	12	9,11
3	14,18	12,2,13	28,29	15	X,Y	12
	19,21	10,12	11,17		6,9,3	11,12
	16,18	10				

R3847R-5876 PowerPlex® ESX17, PPHS16, Power Plex CS7 (GeneMapper ID-X)

	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18,18	12,12	9,11
3	14,18	12,2,13	28,29	15,15	X,Y	12,12
	19,21	10,12	11,17	17,18	6,9,3	11,12
	16,18					

R3QQ3N-5876 GlobalFiler™ EXPRESS

	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18,18	12,12	9,11
3	14,18	12,2,13	28,29	15,15	X,Y	12,12
	19,21			17,18	6,9,3	11,12
	16,18	10			2	

RPLUJL-5871 PowerPlex® Fusion 6C

	16,3,18,3	23,26	10,15	15,16	12,13	-
	10,11	8,10	13,17	18,18	12,12	9,11
3	14,18	12,2,13	28,29	15,15	X,Y	12,12
	19,21	10,12	11,17	17,18	6,9,3	11,12
	16,18	10	19	16	-	

T9FPVA-5871 Investigator® 24plex GO!

	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18,18	12,12	9,11
3	14,18	12,2,13	28,29	15,15	X,Y	12,12
	19,21			17,18	6,9,3	11,12
	16,18	10				

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

TG86HT-5871 PowerPlex® Fusion						
	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18	12	9,11
3	14,18	12,2,13	28,29	15	X,Y	12
	19,21	10,12	11,17		6,9,3	11,12
	16,18	10				
TGAVPB-5876 PowerPlex® Fusion 6C						
	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18	12	9,11
3	14,18	12,2,13	28,29	15	X,Y	12
	19,21	10,12	11,17	17,18	6,9,3	11,12
	16,18	10	19	16		
TXUJ2Q-5876 Identifiler® PLUS						
		23,26		15,16	12,13	
	10,11	8,10			12,12	9,11
3	14,18	12,2,13	28,29		X,Y	12,12
	19,21				6,9,3	11,12
	16,18					
UTYEGL-5876 GlobalFiler™						
	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18	12	9,11
3	14,18	12,2,13	28,29	15	X,Y	12
	19,21			17,18	6,9,3	11,12
	16,18	10			2	
V26FGC-5876 PowerPlex® Fusion 5C, Verifiler plus						
	16,3,18,3	23,26	10,15	15,16	12,13	13
	10,11	8,10	13,17	18	12	9,11
3	14,18	12,2,13	28,29	15	X,Y	12
	19,21	10,12	11,17		6,9,3	11,12
	16,18	10			2	
VBAK89-5876 GlobalFiler™						
	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18	12	9,11
3	14,18	12,2,13	28,29	15	X,Y	12
	19,21			17,18	6,9,3	11,12
	16,18	10			2	

TABLE 1

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

## Item 3 - STR Results

VWTKJU-5876 GlobalFiler™						
	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18	12	9,11
3	14,18	12,2,13	28,29	15	X,Y	12
	19,21			17,18	6,9,3	11,12
	16,18	10			2	
VYYT49-5871 GlobalFiler™						
	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18	12	9,11
3	14,18	12,2,13	28,29	15	X,Y	12
	19,21			17,18	6,9,3	11,12
	16,18	10			2	
WDTYB9-5876 GlobalFiler™						
	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18	12	9,11
3	14,18	12,2,13	28,29	15	X,Y	12
	19,21			17,18	6,9,3	11,12
	16,18	10			2	
WLPPZP-5871 PowerPlex® Fusion 6C						
	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18,18	12,12	9,11
3	14,18	12,2,13	28,29	15,15	X,Y	12,12
	19,21	10,12	11,17	17,18	6,9,3	11,12
	16,18	10	19	16		
WLTCDW-5871 PowerPlex® Fusion 6C						
	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18,18	12,12	9,11
3	14,18	12,2,13	28,29	15,15	X,Y	12,12
	19,21	10,12	11,17	17,18	6,9,3	11,12
	16,18	10	19	16		
WM42WA-5876 GlobalFiler™						
	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18	12	9,11
3	14,18	12,2,13	28,29	15	X,Y	12
	19,21			17,18	6,9,3	11,12
	16,18	10			2	

TABLE 1

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

## Item 3 - STR Results

WX6M2M-5871 VeriFiler Express

	16,3,18,3	23,26	10,15	15,16	12,13	13,13
	10,11	8,10	13,17	18,18	12,12	9,11
3	14,18	12,2,13	28,29	15,15	X,Y	12,12
	19,21	10,12	11,17		6,9,3	11,12
	16,18				2	

X4RRDN-5871 PowerPlex® Fusion 6C

	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18,18	12,12	9,11
3	14,18	12,2,13	28,29	15,15	X,Y	12,12
	19,21	10,12	11,17	17,18	6,9,3	11,12
	16,18	10	19	16		

XVT9RK-5871 GlobalFiler™ Express

	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18,18	12,12	9,11
3	14,18	12,2,13	28,29	15,15	X,Y	12,12
	19,21			17,18	6,9,3	11,12
	16,18	10			2	

YAAJXL-5876 GlobalFiler™

	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18,18	12,12	9,11
3	14,18	12,2,13	28,29	15,15	X,Y	12,12
	19,21			17,18	6,9,3	11,12
	16,18	10			2	

YG7J7M-5871 PowerPlex® Fusion

	16,3,18,3	23,26	10,15	15,16	12,13	
	10,11	8,10	13,17	18	12	9,11
3	14,18	12,2,13	28,29	15	X,Y	12
	19,21	10,12	11,17		6,9,3	11,12
	16,18	10	NR	NR	NR	

YG8AKH-5871 VeriFiler Express

	16,3,18,3	23,26	10,15	15,16	12,13	13,13
	10,11	8,10	13,17	18,18	12,12	9,11
3	14,18	12,2,13	28,29	15,15	X,Y	12,12
	19,21	10,12	11,17		6,9,3	11,12
	16,18				2	

TABLE 1

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

Item 3 - STR Results

WebCode-Test	Identifiler® Direct					
		23,26		15,16	12,13	
		10,11	8,10		12,12	9,11
3		14,18	12.2,13	28,29	X,Y	12,12
		19,21			6,9.3	11,12
		16,18				
WebCode-Test	GlobalFiler™					
		16.3,18.3	23,26	10,15	15,16	12,13
		10,11	8,10	13,17	18	12
3		14,18	12.2,13	28,29	15	X,Y
		19,21			17,18	6,9.3
		16,18	10			2

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

2GF6WZ-5876	PowerPlex® Fusion 5C					
	16,17	22,25	14	16,18	9,13	
	10,13	10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16	X,Y	11,12
	20,24	9,11	7,10		6,9	8,11
	17	11				
2MKYXM-5871	PowerPlex® 21 (Kinship)					
	16,17	22,25		16,18	9,13	10,12
	10,13	10,10		17,3,19	12,14	9,10
4	12,15	13,14	30,30.2		X,Y	11,12
	20,24	9,11	7,10		6,9	8,11
	17,17					
2TBJUC-5871	GlobalFiler™					
	16,17	22,25	14,14	16,18	9,13	-
	10,13	10,10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16,16	X,Y	11,12
	20,24	-	-	13,16	6,9	8,11
	17,17	11	-	-	2	
49FKPP-5876	GlobalFiler™					
	16,17	22,25	14	16,18	9,13	
	10,13	10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16	X,Y	11,12
	20,24			13,16	6,9	8,11
	17	11			2	
4E637L-5871	PowerPlex® 21 (Kinship (Paternity Trio Module))					
	16,17	22,25		16,18	9,13	10,12
	10,13	10,10		17,3,19	12,14	9,10
4	12,15	13,14	30,30.2		X,Y	11,12
	20,24	9,11	7,10		6,9	8,11
	17,17					
6D9Q27-5876	PowerPlex® ESI 16 Fast					
	16,17	22,25	14	16,18		
		10	13,15	17,3,19		9,10
4	12,15	13,14	30,30.2	16	X,Y	
	20,24				6,9	
	17					



TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

6GAPJQ-5871	GlobalFiler™					
		16,17	22,25	14	16,18	9,13
		10,13	10	13,15	17,3,19	12,14
4		12,15	13,14	30,30.2	16	X,Y
		20,24			13,16	6,9
		17	11			2
6V6GXZ-5876	GlobalFiler™					
		16,17	22,25	14	16,18	9,13
		10,13	10	13,15	17,3,19	12,14
4		12,15	13,14	30,30.2	16	X,Y
		20,24			13,16	6,9
		17	11			2
76TL9C-5871	GlobalFiler™ Express					
		16,17	22,25	14,14	16,18	9,13
		10,13	10,10	13,15	17,3,19	12,14
4		12,15	13,14	30,30.2	16,16	X,Y
		20,24			13,16	6,9
		17,17	11			2
7EC4YX-5876	GlobalFiler™					
		16,17	22,25	14	16,18	9,13
		10,13	10	13,15	17,3,19	12,14
4		12,15	13,14	30,30.2	16	X,Y
		20,24			13,16	6,9
		17	11			2
7RZATD-5871	PowerPlex® 5C					
		16,17	22,25	14	16,18	9,13
		10,13	10	13,15	17,3,19	12,14
4		12,15	13,14	30,30.2	16	X,Y
		20,24	9,11	7,10	--	6,9
		17	11	--	--	--
8C63FC-5876	HuaXia Platinum (Gene Mapper® ID-X)					
		16,17	22,25	14	16,18	9,13
		10,13	10	13,15	17,3,19	12,14
4		12,15	13,14	30,30.2	16	X,Y
		20,24	9,11	7,10		6,9
		17				2

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

8N4YHE-5871	PowerPlex® Fusion 6C					
	16,17	22,25	14,14	16,18	9,13	
	10,13	10,10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16,16	X,Y	11,12
	20,24	9,11	7,10	13,16	6,9	8,11
	17,17	11	15	18		
9NVAR8-5871	PowerPlex® 21					
	16,17	22,25		16,18	9,13	10,12
	10,13	10,10		17,3,19	12,14	9,10
4	12,15	13,14	30,30.2		X,Y	11,12
	20,24	9,11	7,10		6,9	8,11
	17,17					
9Z8NQZ-5876	GlobalFiler™					
	16,17	22,25	14	16,18	9,13	
	10,13	10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16	X,Y	11,12
	20,24			13,16	6,9	8,11
	17	11			2	
AHLDLC-5871	GlobalFiler™					
	16,17	22,25	14,14	16,18	9,13	
	10,13	10,10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16,16	X,Y	11,12
	20,24			13,16	6,9	8,11
	17,17	11			2	
AWTRG-5876	GlobalFiler™					
	16,17	22,25	14	16,18	9,13	
	10,13	10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16	X,Y	11,12
	20,24			13,16	6,9	8,11
	17	11			2	
BV73C2-5871	GlobalFiler™ IQC (GenoProof Software)					
	16,17	22,25	14,14	16,18	9,13	
	10,13	10,10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16,16	X,Y	11,12
	20,24			13,16	6,9	8,11
	17,17	11			2	

TABLE 1

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

## Item 4 - STR Results

BWLEYD-5871	GlobalFiler™					
	16,17	22,25	14,14	16,18	9,13	
	10,13	10,10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16,16	X,Y	11,12
	20,24			13,16	6,9	8,11
	17,17	11			2	
C7KGUU-5876	GlobalFiler™					
	16,17	22,25	14	16,18	9,13	
	10,13	10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16	X,Y	11,12
	20,24			13,16	6,9	8,11
	17	11			2	
D3VNVW-5876	PowerPlex® Esi17					
	16,17	22,25	14,14	16,18		
		10,10	13,15	17,3,19		9,10
4	12,15	13,14	30,30.2	16,16	X,Y	
	20,24			13,16	6,9	
	17,17					
D4UP4A-5871	GlobalFiler™					
	16,17	22,25	14	16,18	9,13	
	10,13	10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16	X,Y	11,12
	20,24			13,16	6,9	8,11
	17	11			2	
DF4AJW-5871	GlobalFiler™ Express (Personal software)					
	16,17	22,25	14,14	16,18	9,13	
	10,13	10,10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16,16	X,Y	11,12
	20,24			13,16	6,9	8,11
	17,17	11			2	
DKDPQY-5876	PowerPlex® PP21					
	16,17	22,25		16,18	9,13	10,12
	10,13	10		17,3,19	12,14	9,10
4	12,15	13,14	30,30.2		X,Y	11,12
	20,24	9,11	7,10		6,9	8,11
	17					

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

E4NVX9-5871	PowerPlex® 21					
	16,17	22,25		16,18	9,13	10,12
	10,13	10,10		17,3,19	12,14	9,10
4	12,15	13,14	30,30.2		X,Y	11,12
	20,24	9,11	7,10		6,9	8,11
	17,17					
ELNU23-5876	GlobalFiler™					
	16,17	22,25	14	16,18	9,13	
	10,13	10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16	X,Y	11,12
	20,24			13,16	6,9	8,11
	17	11			2	
F79BKL-5871	Investigator® 24plex GO!					
	16,17	22,25	14,14	16,18	9,13	
	10,13	10,10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16,16	X,Y	11,12
	20,24			13,16	6,9	8,11
	17,17	11				
G36VP4-5871	PowerPlex® Fusion 6C					
	16,17	22,25	14,14	16,18	9,13	
	10,13	10,10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16,16	X,Y	11,12
	20,24	9,11	7,10	13,16	6,9	8,11
	17,17	11	15	18		
HAKVHL-5876	PowerPlex® Fusion 6C					
	16,17	22,25	14	16,18	9,13	
	10,13	10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16	X,Y	11,12
	20,24	9,11	7,10	13,16	6,9	8,11
	17	11	15	18		
HFCXRD-5871	GlobalFiler™ Express					
	16,17	22,25	14	16,18	9,13	
	10,13	10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16	X,Y	11,12
	20,24			13,16	6,9	8,11
	17	11			2	

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

HR3UUB-5876	GlobalFiler™					
	16,17	22,25	14	16,18	9,13	
	10,13	10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16	X,Y	11,12
	20,24			13,16	6,9	8,11
	17	11			2	
HR3UUB-5876	GlobalFiler™					
	16,17	22,25	14	16,18	9,13	
	10,13	10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16	X,Y	11,12
	20,24			13,16	6,9	8,11
	17	11			2	
JGZX3T-5871	PowerPlex® ESI 16 FAST SYSTEM					
	16,17	22,25	14	16,18		
		10	13,15	17,3,19		9,10
4	12,15	13,14	30,30.2	16	X,Y	
	20,24				6,9	
	17					
K3WUGY-5871	GlobalFiler™ (Genoproof)					
	16,17	22,25	14,14	16,18	9,13	
	10,13	10,10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16,16	X,Y	11,12
	20,24			13,16	6,9	8,11
	17,17	11			2	
KFJ2EZ-5871	PowerPlex® Fusion 5C (Familias)					
	16,17	22,25	14,14	16,18	9,13	
	10,13	10,10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16,16	X,Y	11,12
	20,24	9,11	7,10		6,9	8,11
	17,17	11				
KWQZJX-5871	PowerPlex® ESX17, GlobalFiler™, PowerPlex® Fusion					
	16,17	22,25	14,14	16,18	9,13	
	10,13	10,10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16,16	X,Y	11,12
	20,24	9,11	7,10	13,16	6,9	8,11
	17,17	11			2	

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

KZA9QW-5871 PowerPlex® 21						
	16,17	22,25		16,18	9,13	10,12
	10,13	10,10		17,3,19	12,14	9,10
4	12,15	13,14	30,30.2		X,Y	11,12
	20,24	9,11	7,10		6,9	8,11
	17,17					
LKQRDZ-5871 PowerPlex® Fusion						
	16,17	22,25	14	16,18	9,13	
	10,13	10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16	X,Y	11,12
	20,24	9,11	7,10		6,9	8,11
	17	11				
M843TN-5876 GlobalFiler™						
	16,17	22,25	14	16,18	9,13	
	10,13	10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16	X,Y	11,12
	20,24			13,16	6,9	8,11
	17	11			2	
M9U4WQ-5871 PowerPlex® Fusion 6C						
	16,17	22,25	14,14	16,18	9,13	
	10,13	10,10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16,16	X,Y	11,12
	20,24	9,11	7,10	13,16	6,9	8,11
	17,17	11	15	18		
MG6PKK-5871 GlobalFiler™ Express						
	16,17	22,25	14,14	16,18	9,13	
	10,13	10,10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16,16	X,Y	11,12
	20,24			13,16	6,9	8,11
	17,17	11			2	
MGN9QR-5871						
		22,25		16,18	9,13	
	10,13	10,10			12,14	9,10
4	12,15	13,14	30,30.2		X,Y	11,12
	20,24				6,9	8,11
	17,17					

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

MH4M28-5871 GlobalFiler™ Express

	16,17	22,25	14	16,18	9,13	
	10,13	10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16	X,Y	11,12
	20,24			13,16	6,9	8,11
	17	11			2	

MHYD2U-5871 PowerPlex® Fusion-ESX17, GlobalFiler™, VeriFiler

	16,17	22,25	14,14	16,18	9,13	10,12
	10,13	10,10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16,16	X,Y	11,12
	20,24	9,11	7,10	13,16	6,9	8,11
	17,17	11			2	

MLXQMY-5876 PowerPlex® FusionSystem, PowerPlex Y23, Qiagen, HDplex (GeneMapper ID v. 3.2.1)

	16,17	22,25	14,14	16,18	9,13	
	10,13	10,10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16,16	X,Y	11,12
	20,24	9,11	7,10	13,16	6,9	8,11
	17,17	11				

NHTHVU-5876 Identifiler®, PowerPlex® CS7, VeriFiler™ Express, Investigator HDplex, SureID 27comp

	16,17	22,25	14,14	16,18	9,13	10,12
	10,13	10,10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16,16	X,Y	11,12
	20,24	9,11	7,10	13,16	6,9	8,11
	17,17				2	

NHXTV8-5871 PowerPlex® Fusion 6C

	16,17	22,25	14,14	16,18	9,13	
	10,13	10,10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16,16	X,Y	11,12
	20,24	9,11	7,10	13,16	6,9	8,11
	17,17	11	15	18		

NNMFKK-5871 Identifiler® DIRECT / PLUS

		22,25		16,18	9,13	
	10,13	10			12,14	9,10
4	12,15	13,14	30,30.2		X,Y	11,12
	20,24				6,9	8,11
	17					

TABLE 1

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

## Item 4 - STR Results

P2MGXL-5871	PowerPlex® Fusion 5C					
	16,17	22,25	14	16,18	9,13	
	10,13	10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16	X,Y	11,12
	20,24	9,11	7,10		6,9	8,11
	17	11				
PHBKL3-5876	GlobalFiler™					
	16,17	22,25	14	16,18	9,13	
	10,13	10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16	X,Y	11,12
	20,24			13,16	6,9	8,11
	17	11			2	
PHDJDP-5871	GlobalFiler™					
	16,17	22,25	14,14	16,18	9,13	
	10,13	10,10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16,16	X,Y	11,12
	20,24			13,16	6,9	8,11
	17,17	11			2	
PKH9HK-5871	PowerPlex® Fusion 5C (eDNA)					
	16,17	22,25	14,14	16,18	9,13	
	10,13	10,10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16,16	X,Y	11,12
	20,24	9,11	7,10		6,9	8,11
	17,17	11				
PLDKLZ-5871	PowerPlex® 21					
	16,17	22,25		16,18	9,13	10,12
	10,13	10,10		17,3,19	12,14	9,10
4	12,15	13,14	30,30.2		X,Y	11,12
	20,24	9,11	7,10		6,9	8,11
	17,17					
PLFAQW-5871	PowerPlex® Fusion 6C					
	16,17	22,25	14,14	16,18	9,13	
	10,13	10,10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16,16	X,Y	11,12
	20,24	9,11	7,10	13,16	6,9	8,11
	17,17	11	15	18		



TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

Q3V4UQ-5876 GlobalFiler™						
	16,17	22,25	14,14	16,18	9,13	
	10,13	10,10	13,15	17.3,19	12,14	9,10
4	12,15	13,14	30,30.2	16,16	X,Y	11,12
	20,24			13,16	6,9	8,11
	17,17	11			2	
QLNQEU-5871 PowerPlex® Fusion						
	16,17	22,25	14	16,18	9,13	
	10,13	10	13,15	17.3,19	12,14	9,10
4	12,15	13,14	30,30.2	16	X,Y	11,12
	20,24	9,11	7,10		6,9	8,11
	17	11				
R3847R-5876 PowerPlex® ESX17, PPHS16, CS7 (GeneMapper ID-X)						
	16,17	22,25	14,14	16,18	9,13	
	10,13	10,10	13,15	17.3,19	12,14	9,10
4	12,15	13,14	30,30.2	16,16	X,Y	11,12
	20,24	9,11	7,10	13,16	6,9	8,11
	17,17					
R3QQ3N-5876 GlobalFiler™ EXPRESS						
	16,17	22,25	14,14	16,18	9,13	
	10,13	10,10	13,15	17.3,19	12,14	9,10
4	12,15	13,14	30,30.2	16,16	X,Y	11,12
	20,24			13,16	6,9	8,11
	17,17	11			2	
RPLUJL-5871 PowerPlex® Fusion 6C						
	16,17	22,25	14,14	16,18	9,13	-
	10,13	10,10	13,15	17.3,19	12,14	9,10
4	12,15	13,14	30,30.2	16,16	X,Y	11,12
	20,24	9,11	7,10	13,16	6,9	8,11
	17,17	11	15	18	-	
T9FPVA-5871 Investigator® 24plex GO!						
	16,17	22,25	14,14	16,18	9,13	
	10,13	10,10	13,15	17.3,19	12,14	9,10
4	12,15	13,14	30,30.2	16,16	X,Y	11,12
	20,24			13,16	6,9	8,11
	17,17	11				

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

TG86HT-5871	PowerPlex® Fusion					
	16,17	22,25	14	16,18	9,13	
	10,13	10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16	X,Y	11,12
	20,24	9,11	7,10		6,9	8,11
	17	11				
TGAVPB-5876	PowerPlex® Fusion 6C					
	16,17	22,25	14	16,18	9,13	
	10,13	10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16	X,Y	11,12
	20,24	9,11	7,10	13,16	6,9	8,11
	17	11	15	18		
TXUJ2Q-5876	Identifiler® PLUS					
		22,25		16,18	9,13	
	10,13	10,10			12,14	9,10
4	12,15	13,14	30,30.2		X,Y	11,12
	20,24				6,9	8,11
	17,17					
UTYEGL-5876	GlobalFiler™					
	16,17	22,25	14	16,18	9,13	
	10,13	10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16	X,Y	11,12
	20,24			13,16	6,9	8,11
	17	11			2	
V26FGC-5876	PowerPlex® Fusion 5C, Verifiler plus					
	16,17	22,25	14	16,18	9,13	10,12
	10,13	10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16	X,Y	11,12
	20,24	9,11	7,10		6,9	8,11
	17	11			2	
VBAK89-5876	GlobalFiler™					
	16,17	22,25	14	16,18	9,13	
	10,13	10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16	X,Y	11,12
	20,24			13,16	6,9	8,11
	17	11			2	

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

VWTKJU-5876	GlobalFiler™					
		16,17	22,25	14	16,18	9,13
		10,13	10	13,15	17,3,19	12,14
4		12,15	13,14	30,30.2	16	X,Y
		20,24			13,16	6,9
		17	11			2
VYYT49-5871	GlobalFiler™					
		16,17	22,25	14	16,18	9,13
		10,13	10	13,15	17,3,19	12,14
4		12,15	13,14	30,30.2	16	X,Y
		20,24			13,16	6,9
		17	11			2
WDTYB9-5876	GlobalFiler™					
		16,17	22,25	14	16,18	9,13
		10,13	10	13,15	17,3,19	12,14
4		12,15	13,14	30,30.2	16	X,Y
		20,24			13,16	6,9
		17	11			2
WLPPZP-5871	PowerPlex® Fusion 6C					
		16,17	22,25	14,14	16,18	9,13
		10,13	10,10	13,15	17,3,19	12,14
4		12,15	13,14	30,30.2	16,16	X,Y
		20,24	9,11	7,10	13,16	6,9
		17,17	11	15	18	
WLTCDW-5871	PowerPlex® Fusion 6C					
		16,17	22,25	14,14	16,18	9,13
		10,13	10,10	13,15	17,3,19	12,14
4		12,15	13,14	30,30.2	16,16	X,Y
		20,24	9,11	7,10	13,16	6,9
		17,17	11	15	18	
WM42WA-5876	GlobalFiler™					
		16,17	22,25	14	16,18	9,13
		10,13	10	13,15	17,3,19	12,14
4		12,15	13,14	30,30.2	16	X,Y
		20,24			13,16	6,9
		17	11			2

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

WX6M2M-5871 VeriFiler Express

	16,17	22,25	14,14	16,18	9,13	10,12
	10,13	10,10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16,16	X,Y	11,12
	20,24	9,11	7,10		6,9	8,11
	17,17				2	

X4RRDN-5871 PowerPlex® Fusion 6C

	16,17	22,25	14,14	16,18	9,13	
	10,13	10,10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16,16	X,Y	11,12
	20,24	9,11	7,10	13,16	6,9	8,11
	17,17	11	15	18		

XVT9RK-5871 GlobalFiler™ Express

	16,17	22,25	14,14	16,18	9,13	
	10,13	10,10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16,16	X,Y	11,12
	20,24			13,16	6,9	8,11
	17,17	11			2	

YAAJXL-5876 GlobalFiler™

	16,17	22,25	14,14	16,18	9,13	
	10,13	10,10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16,16	X,Y	11,12
	20,24			13,16	6,9	8,11
	17,17	11			2	

YG7J7M-5871 PowerPlex® Fusion

	16,17	22,25	14	16,18	9,13	
	10,13	10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16	X,Y	11,12
	20,24	9,11	7,10		6,9	8,11
	17	11	NR	NR	NR	

YG8AKH-5871 VeriFiler Express

	16,17	22,25	14,14	16,18	9,13	10,12
	10,13	10,10	13,15	17,3,19	12,14	9,10
4	12,15	13,14	30,30.2	16,16	X,Y	11,12
	20,24	9,11	7,10		6,9	8,11
	17,17				2	

TABLE 1

WebCode-Test	Amplification Kits (Probabilistic Genotyping)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

WebCode-Test	Kit	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
ZFQGYE-5871	Identifiler® Direct		22,25		16,18	9,13	
4		10,13	10,10			12,14	9,10
		12,15	13,14	30,30.2		X,Y	11,12
		20,24				6,9	8,11
		17,17					
ZHV3VR-5876	GlobalFiler™		22,25	14	16,18	9,13	
4		10,13	10	13,15	17.3,19	12,14	9,10
		12,15	13,14	30,30.2	16	X,Y	11,12
		20,24			13,16	6,9	8,11
		17	11			2	

# Paternity Index Results

TABLE 2

WebCode-Test	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

2GF6WZ-5876		NIST-STRBASE					
		8.20	16.41	2.36	2.10	1.29	
		1.95	36.1	0.826	5.79	3.71	4.69
3PI		6.45	72.2	2.47	3.10		2.77
		2.80	2.15	10.31		2.12	1.98
		2.48					
2MKYXM-5871		NIST-STRBASE					
		7.3421	22.0264		1.768	1.4132	10.3627
		1.6984	47.1698		4.7962	3.2841	3.0750
3PI		5.6948	27.9330	2.4486			2.9019
		3.3967	2.9274	9.6899		2.5523	2.0392
		2.4378					
2TBJUC-5871		NIST-STRBASE					
		8.2045	16.4091	2.3750	2.0988	1.2893	-
		1.9514	36.1000	0.8261	5.8226	3.7216	4.6883
3PI		6.4464	361.0000	2.4726	3.1121		2.7769
		2.7984	-	-	8.0222	2.1235	1.9835
		2.4811					
49FKPP-5876		FBI PopStats					
		5.1706	20.921	4.9801	1.6113	1.3086	
		1.5042	108.70	0.99285	4.3975	2.2437	2.4414
3PI		4.0750	8.4890	2.7427	4.6620		3.4916
		4.6816				3.8521	2.3063
4E637L-5871		NIST-STRBASE					
		7.3421	22.0264		1.7680	1.4132	10.3627
		1.6984	47.1698		4.7962	3.2841	3.0750
3PI		5.6948	27.9330	2.4486			2.9019
		3.3967	2.9274	9.6899		2.5523	2.0392
		2.4378					
6GAPJQ-5871		FBI PopStats					
		9.8425	29.586	1.4841	1.7876	1.4749	
		1.6276	33.784	0.81659	5.6180	4.2517	3.5765
3PI		6.3776	39.370	2.4085	2.3485		2.6667
		3.2787				2.0886	1.9670
		2.1552					
6V6GXZ-5876		FBI PopStats					
		9.6154	22.422	2.7670	2.1487	1.4225	
		1.7265	25.253	0.81780	5.6915	3.2321	4.8077
3PI		5.4585	40.323	2.7670	2.7480		3.0609
		2.8458				2.2202	1.9608
		2.3629					

TABLE 2

WebCode-Test	Population Database(s)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

7EC4YX-5876	FBI PopStats					
		9.6154	22.422	2.7670	2.1487	1.4225
		1.7265	25.253	.81780	5.6915	4.8077
3PI		5.4585	40.323	2.7670	2.7480	3.0609
		2.8458			2.2202	1.9608
		2.3629				
7RZATD-5871	FBI PopStats, Promega/NIST					
		8.86	19.1	2.34	2.13	1.41
		1.72	24.6	0.833	5.72	3.25
3PI		5.31	30.5	2.73	3.11	3.04
		2.85	2.08	10.1	--	2.19
		2.34				1.94
8C63FC-5876	NIST-STRBASE					
		8.210	16.39	2.375	2.099	1.289
		1.952	35.97	0.8260	5.824	3.722
3PI		6.443	357.1	2.473	3.112	2.777
		2.798	2.149	10.31		2.123
		2.481				1.983
8N4YHE-5871	FBI PopStats					
		19.380	13.850	1.8657	1.5156	2.4248
		1.9019	19.380	0.87382	3.8037	4.7326
3PI		16.181	19.380	2.4876	3.2331	2.5867
		4.8497	2.7716	6.0606		2.9394
		2.8952				1.7018
9NVAR8-5871	NIST-STRBASE					
		7.35	22.04		1.77	1.42
		1.70	47.09		4.80	3.28
3PI		5.69	28.00	2.45		2.90
		3.40	2.95	9.68		2.55
		2.44				2.05
9Z8NQZ-5876	NIST-STRBASE					
		8.20	16.4	2.38	2.10	1.29
		1.95	36.1	0.826	5.82	3.72
3PI		6.45	72.2	2.47	3.11	2.78
		2.80				2.12
		2.48				1.98
AHLDLC-5871	FBI PopStats					
		9.6154	22.422	2.7670	2.1487	1.4225
		1.7265	25.253	0.81780	5.6915	4.8077
3PI		5.4585	40.323	2.7670	2.7480	3.0609
		2.8458			2.2202	1.9608
		2.3629				

TABLE 2

WebCode-Test	Population Database(s)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

AVVTRG-5876	FBI PopStats					
		5.1706	20.921	4.9801	1.6113	1.3086
		1.5042	108.70	0.99285	4.3975	2.2437
3PI		4.0750	8.4890	2.7427	4.6620	3.4916
		4.6816				3.8521
						2.3063

BV73C2-5871	[Location Identifying Database]					
		9.5635	24.9925	2.6715	1.9968	1.3135
		1.9075	38.2496	0.9940	5.3919	3.6291
3PI		7.0108	471.6981	2.3162	2.7597	3.1038
		2.7880			Excluded	2.1500
		2.3696				2.0170

BWLEYD-5871	[Location Identifying Database]					
		8.48	27.79	2.23	1.96	1.43
		2.02	24.00	0.80	6.81	3.64
3PI		6.14	527.99	2.39	2.50	3.16
		2.82				2.02
		2.44				2.03

C7KGUU-5876	FBI PopStats					
		9.6154	22.422	2.7670	2.1487	1.4225
		1.7265	25.253	0.81780	5.6915	3.2321
3PI		5.4585	40.323	2.7670	2.7480	3.0609
		2.8458				2.2202
		2.3629				1.9608

D3VNVW-5876	Local survey data					
		6.06	6.944	2.105	1.898	
			6.944	0.826	4.975	3.623
3PI		5.155	6.944	2.268	2.725	
		2.247			N/A	2.331
		2.195				

D4UP4A-5871	FBI PopStats					
		9.6154	22.422	2.7670	2.1487	1.4225
		1.7265	25.253	0.81780	5.6915	3.2321
3PI		5.4585	40.323	2.7670	2.7480	3.0609
		2.8458			-	2.2202
		2.3629				1.9608

DF4AJW-5871	STRidER2.0					
		12.72	31.09	2.56	1.80	1.74
		2.38	52.75	0.86	5.34	5.23
3PI		7.99	165.18	2.23	2.76	2.83
		3.02			7.45	2.57
		2.53				2.03



TABLE 2

WebCode-Test	Population Database(s)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

DKDPQY-5876	Promega					
		8.2102	16.3934		2.0991	1.2893
		1.9516	35.9712		5.8241	3.7216
3PI		6.4433	72.4638	2.4728		2.7770
		2.7980	2.1487	10.3093		1.9833
		2.4814				
E4NVX9-5871	[Location Identifying Database]					
		6.758	12.430		1.905	1.426
		1.780	13.172		4.939	3.179
3PI		5.890	24.117	2.279		2.896
		2.585	2.251	7.563		1.928
		2.238				
ELNU23-5876	FBI PopStats					
		7.3421	22.026	2.4606	1.7680	1.4152
		1.6955	47.170	0.87367	4.7962	3.2787
3PI		5.6948	27.933	2.4486	3.1162	2.9019
		3.3967				2.5523
		2.4378				2.0458
F79BKL-5871	FBI PopStats					
		9.8425	29.586	1.4841	1.7876	1.4749
		1.6276	33.784	0.81659	5.6180	4.2517
3PI		6.3776	39.370	2.4085	2.3485	2.6667
		3.2787				2.0886
		2.1552				1.9670
G36VP4-5871	LOCAL					
		8.86	32.3	1.43	1.9	1.66
		1.65	32.3	0.794	5.7	5.47
3PI		7.34	32.3	2.38	2.4	2.86
		4.89	3.14	8.73	1	2.07
		2.17				2.18
HAKVHL-5876	FBI PopStats					
		9.6154	22.422	2.7670	2.1487	1.4225
		1.7265	25.253	0.81780	5.6915	3.2321
3PI		5.4585	40.323	2.7670	2.7480	3.0609
		2.8458	2.3764	7.2150		2.2202
		2.3629				1.9608
HR3UUB-5876	FBI PopStats					
		5.1706	20.921	4.9801	1.6113	1.3086
		1.5042	108.70	0.99285	4.3975	2.2437
3PI		4.0750	8.4890	2.7427	4.6620	2.4414
		4.6816				3.4916
						3.8521
						2.3063

TABLE 2

WebCode-Test	Population Database(s)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

HZV8KX-5876	FBI PopStats	7.34	22.0	2.46	1.76	1.41	
		1.69	47.1	0.873	4.79	3.27	3.07
	3PI	5.69	27.9	2.44	3.11		2.90
		3.39				2.55	2.04
		2.43					
JGZX3T-5871	NIST-STRBASE	7,348	22,043	2,461	1,768		
			47,091	0,874	4,796		3,074
	3PI	5,692	28	2,449	3,116		
		3,397				2,552	
		2,438					
K3WUGY-5871	[Location Identifying Database]	9.1041	23.1696	2.6492	2.0684	1.3271	
		1.9287	26.0688	0.8022	5.6967	3.4041	3.8610
	3PI	6.9735	2,083.3333	2.4850	3.0752		3.0021
		2.9956			Not Excluded	2.3828	1.9359
		2.4645					
KFJ2EZ-5871	NIST-STRBASE	8.204	16.409	2.375	2.098	1.289	
		1.951	36.100	0.826	5.822	3.721	4.688
	3PI	6.446	361.000	2.472	3.112		2.776
		2.798	2.148	10.314		2.123	1.983
		2.481					
KWQZJX-5871	NIST-STRBASE	8.21018	16.39344	2.37530	2.09908	1.28932	
		1.95160	35.97122	0.82604	5.82411	3.72162	4.69043
	3PI	6.44330	357.14286	2.47280	3.11236		2.77701
		2.79799	2.14869	10.30928		2.12314	1.98334
		2.48139					
KZA9QW-5871	local DNA database	7.92	19.54		1.89	1.40	11.40
		1.76	21.78		2.77	3.34	3.74
	3PI	6.66	50.00	2.28			3.01
		2.60	2.25	9.18		2.04	1.91
		2.24					
LKQRDZ-5871	NIST-STRBASE	8.2101	16.3934	2.3752	2.0990	1.2893	
		1.9516	35.9712	0.8260	5.8241	3.7216	4.6904
	3PI	6.4432	72.2000	2.4727	3.1123		2.7770
		2.7979	2.1486	10.3092		2.1231	1.9833
		2.4813					

TABLE 2

WebCode-Test	Population Database(s)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

M843TN-5876	Life Technologies Database					
		18.38		2.19	1.42	
		1.84	21.83		3.25	4.78
3PI		6.46	69.44	2.44		3.05
		2.96			2.44	1.93
		2.18				
M9U4WQ-5871	[Location Identifying Database]					
		12.195	23.810	2.660	20.075	1.359
		1.908	45.455	0.872	4.651	4.461
3PI		6.173	250.000	2.316	6.135	3.862
		2.632	2.591	14.706	mutation	2.150
		2.245				2.017
MG6PKK-5871	FBI PopStats					
		9.6153	22.4215	2.767	2.1486	1.4224
		1.7265	25.2525	0.8177	5.6915	4.8076
3PI		5.4585	40.3225	2.767	2.748	3.0609
		2.8457			N/A	2.2202
		2.3629				1.9607
MGN9QR-5871	[Location Identifying Database]					
		24.2		1.51	1.35	
		1.62	198		2.45	2.68
3PI		3.72	14.6	3.77		3.43
		5.47			6.47	2.21
		2.42				
MHYD2U-5871	NIST-STRBASE					
		7.342	22.026	2.461	1.768	10.256
		1.695	47.170	0.874	4.796	3.075
3PI		5.695	27.933	2.449	3.116	2.902
		3.397	2.948	9.690		2.552
		2.438			2.552	2.046
MLXQMY-5876	[Location Identifying Database]					
		7.0422	30.8641	2.4038	2.1413	1.3838
		80.6451	80.6451	0.8361	5.4945	3.7878
3PI		5.7603	39.1	2.7056	3.1065	3.125
		2.5214	2.1459	8.3333	7.4074	2.4485
		2.4420				1.7857
NHTHVU-5876	Laboratory specific database					
		8.1967	22.7273	2.3923	1.9305	12.5000
		1.9531	50.0000	0.8741	4.8077	3.2468
3PI		6.1728	45.4545	2.3923	2.9940	3.2787
		3.2468	2.4038	15.6250	7.4627	2.3256
		2.4213				1.9608

TABLE 2

WebCode-Test	Population Database(s)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

NHXTV8-5871	NIST-STRBASE					
	19.380	13.850	1.8657	1.5156	2.4248	
	1.9019	19.380	0.87382	3.8037	4.7326	1.4057
3PI	16.181	19.380	2.4876	3.2331		2.5867
	4.8497	2.7716	6.0606		2.9394	1.7018
	2.8952					
NNMFKK-5871	NIST-STRBASE					
		16.3934		2.0991	1.2893	
	1.9516	35.9712			3.7216	4.6904
3PI	6.4433	357.1429	2.4728			2.7770
	2.7980				2.1231	1.9833
	2.4814					
P2MGXL-5871	FBI PopStats					
	5.6433	15.823	2.9257	1.6124	1.5798	
	1.4908	15.823	1.0128	3.3613	3.3613	3.2916
3PI	9.8814	15.823	2.3935	4.1580		3.5907
	4.9358	7.0028	5.5006		2.6330	1.7556
	2.2899					
PHBKL3-5876	FBI PopStats					
	5.1706	20.921	4.9801	1.6113	1.3086	
	1.5042	108.70	0.99285	4.3975	2.2437	2.4414
3PI	4.0750	8.4890	2.7427	4.6620		3.4916
	4.6816				3.8521	2.3063
PHDJD-5871	NIST-STRBASE, NIST1036 Caucasian					
	8.20	16.4	2.38	2.10	1.29	
	1.95	35.8	0.827	5.83	3.72	4.69
3PI	6.45	340	2.48	3.11		2.78
	2.80			8.03	2.13	1.99
	2.48					
PKH9HK-5871	FBI PopStats					
	8.2102	21.7391	2.3753	2.1487	1.4128	
	1.7265	38.4615	0.8260	5.8241	3.2669	4.7847
3PI	5.4466	38.4615	2.7609	3.1124		3.0609
	2.8818	2.5126	11.3636		2.2202	1.9608
	2.3618					
PLDKLZ-5871	NIST-STRBASE					
	8.2102	16.3934		2.0991	1.2893	11.6414
	1.9516	35.9712		5.8241	3.7216	4.6904
3PI	6.4433	72.2000	2.4728			2.7770
	2.7980	2.1487	10.3093		2.1231	1.9833
	2.4814					

TABLE 2

WebCode-Test	Population Database(s)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

PLFAQW-5871	FBI PopStats					
		19.380	13.850	1.8657	1.5156	2.4248
		1.9019	19.380	.87382	3.8037	4.7326
3PI		16.181	19.380	2.4876	3.2331	2.5867
		4.8497	2.7716	6.0606		2.9394
		2.8952				1.7018
Q3V4UQ-5876	Globalfiler local database					
		8.49	27.78	2.23	1.96	1.43
		2.02	24.04	0.80		3.64
3PI		6.14	555.56	2.39	2.50	3.16
		2.82				2.02
		1.22				2.03
QLNQEU-5871	NIST-STRBASE					
		8.2101	16.3934	2.3752	2.0990	1.2893
		1.9516	35.9712	0.8260	5.8241	3.7216
3PI		6.4432	72.2000	2.4727	3.1123	2.7770
		2.7979	2.1486	10.3092		2.1231
		2.4813				1.9833
R3847R-5876	NIST-STRBASE					
		8.210181	16.393443	2.375297	2.099076	1.289324
		1.9516	35.971223	0.826037	5.824112	3.721623
3PI		6.443299	357.142857	2.472799	7.189073	4.541326
		2.797985	2.148689	10.309278	8.025682	2.123142
		2.48139				1.98334
R3QQ3N-5876	NIST-STRBASE					
		8.21	16.39	2.38	2.10	1.29
		1.95	35.97	0.89	5.82	3.72
3PI		6.44	357	2.47	3.11	2.78
		2.79			8.02	2.12
		2.93				1.98
RPLUJL-5871	NIST-STRBASE					
		8.21018	16.39344	2.37530	2.09908	1.28932
		1.95160	35.97122	0.82604	5.82411	3.72162
3PI		6.44330	357.14286	2.47280	3.11236	2.77701
		2.79799	2.14869	10.30928	6.33333	2.12314
		2.48139				1.98334
T9FPVA-5871	NIST-STRBASE					
		9.8425	29.586	1.4841	1.7876	1.4749
		1.6276	33.784	0.81659	5.6180	4.2517
3PI		6.3776	39.370	2.4085	2.3485	2.6667
		3.2787				2.0886
		2.1552				1.9670

TABLE 2

WebCode-Test	Population Database(s)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

TG86HT-5871	NIST-STRBASE					
	8.2101	16.3934	2.3752	2.0990	1.2893	
	1.9516	35.9712	0.8260	5.8241	3.7216	4.6904
3PI	6.4432	72.2000	2.4727	3.1123		2.7770
	2.7979	2.1486	10.3092		2.1231	1.9833
	2.4813					
TGAVPB-5876	FBI PopStats					
	9.6154	22.422	2.7670	2.1487	1.4225	
	1.7265	25.253	0.81780	5.6915	3.2321	4.8077
3PI	5.4585	40.323	2.7670	2.7480		3.0609
	2.8458	2.3764	7.2150		2.2202	1.9608
	2.3629					
TXUJ2Q-5876	NIST-STRBASE					
		16.393		2.099	1.289	
	1.952	35.971			3.722	4.690
3PI	6.443	357.143	2.473			2.777
	2.798				2.123	1.983
	2.481					
UTYEGL-5876	FBI PopStats					
	7.3421	22.026	2.4606	1.7680	1.4152	
	1.6955	47.170	0.87367	4.7962	3.2787	3.0750
3PI	5.6948	27.933	2.4486	3.1162		2.9019
	3.3967			Not Used	2.5523	2.0458
	2.4378					
V26FGC-5876	in house database					
	9.104803493	23.16666667	2.649301144	2.068452381	1.32718014	6.790322581
	1.928769658	26.0625	0.802231628	5.696721311	3.404081633	3.861111111
3PI	6.973244147	2085	2.485101311	3.075221239		3.002159827
	2.995689655	2.15392562	10.17073171		2.382857143	1.935933148
	2.464539007					
VBAK89-5876	FBI PopStats					
	9.6154	22.422	2.7670	2.1487	1.4225	
	1.7265	25.253	.81780	5.6915	3.2321	4.8077
3PI	5.4585	40.323	2.7670	2.7480		3.0609
	2.8458				2.2202	1.9608
	2.3629					
VWTKJU-5876	FBI PopStats					
	9.6154	22.422	2.7670	2.1487	1.4225	
	1.7265	25.253	0.81780	5.6915	3.2321	4.8077
3PI	5.4585	40.323	2.7670	2.7480		3.0609
	2.8458				2.2202	1.9608
	2.3629					

TABLE 2

WebCode-Test	Population Database(s)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

WebCode-Test	Population Database(s)	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
VYYT49-5871	NIST-STRBASE	9.8425	29.586	1.4841	1.7876	1.4749	
		1.6276	33.784	0.81659		4.2517	3.5765
3PI		6.3776	39.370	2.4085	2.3485		2.6667
		3.2787				2.0886	1.9670

WebCode-Test	Population Database(s)	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
WDTYB9-5876	FBI PopStats	9.6154	22.422	2.7670	2.1487	1.4225	
		1.7265	25.253	0.81780	5.6915	3.2321	4.8077
3PI		5.4585	40.323	2.7670	2.7480		3.0609
		2.8458				2.2202	1.9608
		2.3629					

WebCode-Test	Population Database(s)	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
WLPPZP-5871	FBI PopStats	19.380	13.850	1.8657	1.5156	2.4248	
		1.9019	19.380	0.87382	3.8037	4.7326	1.4057
3PI		16.181	19.380	2.4876	3.2331		2.5867
		4.8497	2.7716	6.0606		2.9394	1.7018
		2.8952					

WebCode-Test	Population Database(s)	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
WLTCDW-5871	FBI PopStats	9.6154	22.422	2.7670	2.1487	1.4225	
		1.7265	25.253	0.81780	5.6915	3.2321	4.8077
3PI		5.4585	40.323	2.7670	2.7480		3.0609
		2.8458	2.3764	7.2150		2.2202	1.9608
		2.3629					

WebCode-Test	Population Database(s)	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
WM42WA-5876	FBI PopStats	9.6154	22.422	2.7670	2.1487	1.4225	
		1.7265	25.253	0.81780	5.6915	3.2321	4.8077
3PI		5.4585	40.323	2.7670	2.7480		3.0609
		2.8458			N/A	2.2202	1.9608
		2.3629					

WebCode-Test	Population Database(s)	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
WX6M2M-5871	Nacional	12.5	46.72	1.08	1.66	1.66	NA
		1.66	50.00	0.75	5.64	4.51	4.33
3PI		5.00	16.66	1.72	1.92		2.56
		3.64	2.77	5.0		1.25	1.91
		1.72					

WebCode-Test	Population Database(s)	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
X4RRDN-5871	FBI PopStats	19.380	13.850	1.8657	1.5156	2.4248	
		1.9019	19.380	0.87382	3.8037	4.7326	1.4057
3PI		16.181	19.380	2.4876	3.2331		2.5867
		4.8497	2.7716	6.0606		2.9394	1.7018
		2.8952					

TABLE 2

WebCode-Test	Population Database(s)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

XVT9RK-5871	NIST-STRBASE	9.833	29.5	1.484	1.788	1.475	
		1.628	33.714	0.817	5.619	4.252	3.576
3PI		6.378	39.333	2.408	2.348		2.667
		3.278				2.088	1.967
		2.155					
YG7J7M-5871	NIST-STRBASE	8.2101	16.3934	2.3752	2.0990	1.2893	
		1.9516	35.9712	0.8260	5.8241	3.7216	4.6904
3PI		6.4432	72.2000	2.4727	3.1123		2.7770
		2.7979	2.1486	10.3092		2.1231	1.9833
		2.4813					
YG8AKH-5871	NIST-STRBASE	8.210180624	16.39508197	2.375534442	2.099076406	1.289453326	11.4558992
		1.951600312	35.97122302	0.8262018834	5.825276645	3.721622627	4.689962475
3PI		6.443943297	357.0714286	2.472799209	3.112356054		2.777006387
		2.798265248	2.149119038	10.31030928		2.123354564	1.983538279
		2.481389578					
ZHV3VR-5876	FBI PopStats	5.1706	20.921	4.9801	1.6113	1.3086	
		1.5042	108.70	0.99285	4.3975	2.2437	2.4414
3PI		4.0750	8.4890	2.7427	4.6620		3.4916
		4.6816				3.8521	2.3063



TABLE 2

WebCode-Test	Population Database(s)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

2GF6WZ-5876	NIST-STRBASE					
		0	0.0195	2.10	0	
		1.95	0.826	0	1.85	4.69
4PI		0	0	0		1.39
		0	0		2.12	1.98
		0				
2MKYXM-5871	NIST-STRBASE					
		0		1.768	0	0
		1.6984		0	1.642	3.075
4PI		0	0			1.451
		0	0		2.5523	2.0392
		0				
4E637L-5871	NIST-STRBASE					
		0		1.7680	0	0
		1.6984		0	1.6420	3.0750
4PI		0	0			1.4510
		0	0		2.5523	2.0392
		0				
7EC4YX-5876	FBI PopStats					
				2.1487		
		1.7265	.81780		1.6160	4.8077
4PI						1.5305
					2.2202	1.9608
7RZATD-5871	FBI PopStats, Promega/NIST					
		--	--	2.13	--	--
		1.72	0.833	--	1.62	4.71
4PI		--	--	--	--	1.52
		--	--	--	2.19	1.94
		--				
AHLDLC-5871	FBI PopStats					
				2.1487		
		1.7265	0.81780		1.6160	4.8077
4PI						1.5305
					2.2202	1.9608
BWLEYD-5871	[Location Identifying Database]					
		0.00	0.00	1.96	0.00	
		2.02	0.80	0.00	1.82	4.09
4PI		0.00	0.00	0.00		1.58
		0.00			2.02	2.03
		0.00				

TABLE 2

WebCode-Test	Population Database(s)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

C7KGUU-5876 FBI PopStats

			2.1487		
	1.7265		0.81780	1.6160	4.8077
4PI					1.5305
				2.2202	1.9608

D4UP4A-5871 FBI PopStats

			2.1487		
	1.7265		0.81780	1.6160	4.8077
4PI					1.5305
				2.2202	1.9608

DF4AJW-5871 STRidER2.0

	0	0	0	1.80	0
	2.38	0	0.86	0	2.62
4PI	0	0	0	0	1.42
	0			0	2.57
	0				2.03

DKDPQY-5876 Promega

	0	0		2.0991	0
	1.9516	0		0	1.8608
4PI	0	0	0		1.3885
	0	0	0		2.1231
	0				1.9833

ELNU23-5876 FBI PopStats

			1.7680		
	1.6955		0.87367	1.6393	3.0750
4PI					1.4510
				2.5523	2.0458

F79BKL-5871 FBI PopStats

			1.7876		
	1.6276		0.81659	2.1259	3.5765
4PI					1.3333
				2.0886	1.9670

G36VP4-5871 LOCAL

	0	1/833	0	1.9	1/625
	1.65	1/357	0.794	0	2.74
4PI	1/278	1/909	1/455	0	1.43
	1/208	1/714	1/625	1	2.07
	1/294				2.18

TABLE 2

WebCode-Test	Population Database(s)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

HZV8KX-5876 FBI PopStats

			1.76			
	1.69		0.873		1.63	3.07
4PI						1.45
					2.55	2.04

K3WUGY-5871 [Location Identifying Database]

	0.0045	0.0177	0.0001	2.0684	0.0011	
	1.9287	0.0075	0.8022	0.0014	1.7020	3.8610
4PI	0.0001	0.7812	0.0021	0.0015		1.5010
	0.0055			Not Excluded	2.3828	1.9359
	0.0040					

KFJ2EZ-5871 NIST-STRBASE

	0	0	0	2.098	0	
	1.951	0	0.826	0	1.860	4.688
4PI	0	0	0	0		1.388
	0	0	0		2.123	1.983
	0					

KZA9QW-5871 local DNA database

	0	0		1.89	0	0
	1.76	0		0	1.67	3.74
4PI	0	0	0			1.51
	0	0	0		2.04	1.91
	0					

M843TN-5876 Life Technologies Database

		0		2.19	0	
	1.84	0			1.62	4.78
4PI	0	0	0			1.52
	0				2.44	1.93
	0					

M9U4WQ-5871 [Location Identifying Database]

	0.000	0.018	0.000	2.075	0.001	
	1.907	0.004	0.872	0.001	2.101	4.461
4PI	0.000	0.000	0.002	0.000		1.552
	0.003	0.001	0.000	mutation	2.150	2.017
	0,002					

MGN9QR-5871 [Location Identifying Database]

		0.00		1.51	0.00	
	1.62	0.00			1.22	2.68
4PI	0.00	0.00	0.00			1.71
	0.00				6.47	2.21
	0.00					

TABLE 2

WebCode-Test	Population Database(s)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

MLXQMY-5876 [Location Identifying Database]

	0	0	0	2.1413	0	
	80.6451	0	0.8361	0	1.8939	5.1387
4PI	0	0	0	0		1.5625
	0	0	0	0	2.4485	1.7857
	0					

NNMFKK-5871 NIST-STRBASE

		0.0010		2.0991	0.0010	
	1.9516	0.0040			1.8608	4.6904
4PI	0.0030	0.0010	0.0010			1.3885
	0.0041				2.1231	1.9833
	0.0030					

PHDJDP-5871 NIST-STRBASE, NIST1036 Caucasian

	0	0	0	2.10	0	
	1.95	0	0.827	0	1.86	4.69
4PI	0	0	0	0		1.39
	0			30.0	2.13	1.99
	0					

PKH9HK-5871 FBI PopStats

	0	0	0	2.1487	0	
	1.7265	0	0.8260	0	1.6335	4.7847
4PI	0	0	0	0		1.5305
	0	0	0		2.2202	1.9608
	0					

PLDKLZ-5871 NIST-STRBASE

	0	0		2.0991	0	0
	1.9516	0		0	1.8608	4.6904
4PI	0	0	0			1.3885
	0	0	0		2.1231	1.9833
	0					

R3847R-5876 NIST-STRBASE

	0.004105	0.006721	0.000000	2.099076	0.000593	
	1.951600	0.002266	0.826037	0.000000	1.860811	4.690432
4PI	0.000035	0.137500	0.001743	0.000000		1.388503
	0.003176	0.001558	0.000000	0.031300	2.123142	1.983340
	0.002097					

RPLUJL-5871 NIST-STRBASE

	0.0	0.0	0.0	2.09908	0.0	-
	1.95160	0.0	0.82604	0.0	1.86081	4.69043
4PI	0.0	0.0	0.0	0.0		1.38850
	0.0	0.0	0.0	6.33333	2.12314	1.98334
	0.0					

TABLE 2

WebCode-Test	Population Database(s)					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
Item	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

T9FPVA-5871	NIST-STRBASE					
	1.7876					
	1.6276		0.81659		2.1259	3.5765
4PI	1.3333					
	2.0886					
	1.9670					
UTYEGL-5876	FBI PopStats					
	1.7680					
	1.6955		0.87367		1.6393	3.0750
4PI	1.4510					
	Not Used					
	2.5523					
	2.0458					
VBAK89-5876	FBI PopStats					
	2.1487					
	1.7265		.81780		1.6160	4.8077
4PI	1.5305					
	2.2202					
	1.9608					
YG8AKH-5871	NIST-STRBASE					
	0	0	0	2.099076406	0	0
	1.951600312	0	0.8262018834	0	1.860811314	4.689962475
4PI	0	0	0	0	1.388503194	
	0	0	0	2.123354564		1.983538279
	0					

# YSTR Amplification Kit(s) & Results

TABLE 3

WebCode-Test	Amplification Kit								
	DYF387S1	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
	DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
Item	DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	Y GATA H4
<b>Item 2 - YSTR Results</b>									
49FKPP-5876	Yfiler® Plus								
	37	15	14,17	14	31	23	10	12	15
2	14	10	11	20	27	14	14	11	26
	40	12		19	16	22	21		11
76TL9C-5871	Yfiler® Plus								
	37,37	15	14,17	14	31	23	10	12	15
2	14	10	11	20	27	14	14	11	26
	40	12		19	16	22	21		11
7RZATD-5871	PowerPlex® Y 23								
	--	15	14,17	14	31	23	10	12	15
2	14	10	11	20	--	14	14	--	26
	--	12	13	19	16	--	21	12	11
8C63FC-5876	Goldeneye Y Plus								
	37	15	14,17	14	31	23	10	12	15
2	14	10	11	20	27	14	14	11	26
	40	12	13	19	16	22	21	12	11
9NVAR8-5871	Yfiler® Plus								
	37	15	14,17	14	31	23	10	12	15
2	14	10	11	20	27	14	14	11	25.1,26
	40	12		19	16	22	21		11
AHLDLC-5871	Yfiler® Plus								
	37,37	15	14,17	14	31	23	10	12	15
2	14	10	11	20	27	14	14	11	26
	40	12		19	16	22	21		11
AVVTRG-5876	Yfiler® Plus								
	37	15	14,17	14	31	23	10	12	15
2	14	10	11	20	27	14	14	11	26
	40	12		19	16	22	21		11
BV73C2-5871	Yfiler®								
		15	14,17	14	31	23	10	12	15
2	14	10	11	20		14	14		
							21		11
D4UP4A-5871	Yfiler® Plus								
	37	15	14,17	14	31	23	10	12	15
2	14	10	11	20	27	14	14	11	26
	40	12		19	16	22	21		11

TABLE 3

WebCode-Test		Amplification Kit								
		DYF387S1	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
Item		DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
		DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	Y GATA H4
<b>Item 2 - YSTR Results</b>										
DKDPQY-5876		PowerPlex® Y 23								
		15	14,17	14	31	23	10	12	15	
2		14	10	11	20	14	14	14	26	
		12	13	19	16		21	12	11	
ELNU23-5876		Yfiler® Plus								
		37	15	14,17	14	31	23	10	12	15
2		14	10	11	20	27	14	14	11	26
		40	12		19	16	22	21		11
G36VP4-5871		PowerPlex® Y 23								
		15	14,17	14	31	23	10	12	15	
2		14	10	11	20	14	14	14	26	
		12	13	19	16		21	12	11	
HR3UUB-5876		Yfiler® Plus								
		37	15	14,17	14	31	23	10	12	15
2		14	10	11	20	27	14	14	11	26
		40	12		19	16	22	21		11
HZV8KX-5876		Yfiler® Plus								
		37	15	14,17	14	31	23	10	12	15
2		14	10	11	20	27	14	14	11	26
		40	12		19	16	22	21		11
JGZX3T-5871		PowerPlex® Y 23 SYSTEM								
		15	14,17	14	31	23	10	12	15	
2		14	10	11	20	14	14	14	26	
		12	13	19	16		21	12	11	
K3WUGY-5871		PowerPlex® Y 23								
		15	14,17	14	31	23	10	12	15	
2		14	10	11	20	14	14	14	26	
		12	13	19	16		21	12	11	
KFJ2EZ-5871		Investigator Argus Y-12 QS								
		15	14,17	14	31	23	10	12	15	
2		14	10	11						
KWQZJX-5871		Yfiler® Plus, PowerPlex® Y 23								
		37	15	14,17	14	31	23	10	12	15
2		14	10	11	20	27	14	14	11	26
		40	12	13	19	16	22	21	12	11
KZA9QW-5871		Yfiler® Plus								
		37,37	15	14,17	14	31	23	10	12	15
2		14	10	11	20	27	14	14	11	26
		40	12		19	16	22	21		11

TABLE 3

WebCode-Test		Amplification Kit							
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

Item 2 - YSTR Results

LKQRDZ-5871	Yfiler®								
	15	14,17	14	31	23	10	12	15	
2	14	10	11	20	14	14	21	11	
M9U4WQ-5871	PowerPlex® Y 23								
	15	14,17	14	31	23	10	12	15	
2	14	10	11	20	14	14	26	11	
	12	13	19	16		21	12	11	
MHYD2U-5871	PowerPlex® Y 23								
	15	14,17	14	31	23	10	12	15	
2	14	10	11	20	14	14	26	11	
	12	13	19	16		21	12	11	
MLXQMY-5876	PowerPlex® Y 23								
	15	14,17	14	31	23	10	12	15	
2	14	10	11	20	14	14	26	11	
	12	13	19	16		21	12	11	
NHTHVU-5876	Yfiler® Plus								
	37	15	14,17	14	31	23	10	12	15
2	14	10	11	20	27	14	14	11	26
	40	12		19	16	22	21		11
NNMFKK-5871	Yfiler®								
	15	14,17	14	31	23	10	12	15	
2	14	10	11	20	14	14	21	11	
P2MGXL-5871	Yfiler®								
	15	14,17	14	31	23	10	12	15	
2	14	10	11	20	14	14	21	11	
PHBKL3-5876	Yfiler® Plus								
	37	15	14,17	14	31	23	10	12	15
2	14	10	11	20	27	14	14	11	26
	40	12		19	16	22	21		11
PKH9HK-5871	PowerPlex® Y 23								
	15	14,17	14	31	23	10	12	15	
2	14	10	11	20	14	14	26	11	
	12	13	19	16		21	12	11	
QLNQEU-5871	Yfiler®								
	15	14,17	14	31	23	10	12	15	
2	14	10	11	20	14	14	21	11	



TABLE 3

WebCode-Test		Amplification Kit							
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
<b>Item 2 - YSTR Results</b>									
R3847R-5876	Yfiler®								
		15	14,17	14	31	23	10	12	15
2	14	10	11	20		14	14		
							21		11
R3QQ3N-5876	Yfiler® PLUS								
	37	15	14,17	14	31	23	10	12	15
2	14	10	11	20	27	14	14	11	26
	40	12		19	16	22	21		11
RPLUJL-5871	PowerPlex® Y 23								
	-	15	14,17	14	31	23	10	12	15
2	14	10	11	20	-	14	14	-	26
	-	12	13	19	16	-	21	12	11
TG86HT-5871	Yfiler®								
		15	14,17	14	31	23	10	12	15
2	14	10	11	20		14	14		
							21		11
UTYEGL-5876	Yfiler® Plus								
	37	15	14,17	14	31	23	10	12	15
2	14	10	11	20	27	14	14	11	26
	40	12		19	16	22	21		11
V26FGC-5876	PowerPlex® Y 23								
		15	14,17	14	31	23	10	12	15
2	14	10	11	20		14	14		26
		12	13	19	16		21	12	11
WX6M2M-5871	Yfiler® Plus								
	37,37	15	14,17	14	31	23	10	12	15
2	14	10	11	20	27	14	14	11	26
	40	12		19	16	22	21		11
XVT9RK-5871	PowerPlex® Y 23								
		15	14,17	14	31	23	10	12	15
2	14	10	11	20		14	14		26
		12	13	19	16		21	12	11
YG7J7M-5871	Yfiler®								
		15	14,17	14	31	23	10	12	15
2	14	10	11	20		14	14		
							21		11
ZHV3VR-5876	Yfiler® Plus								
	37	15	14,17	14	31	23	10	12	15
2	14	10	11	20	27	14	14	11	26
	40	12		19	16	22	21		11

TABLE 3

WebCode-Test		Amplification Kit							
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
<b>Item 3 - YSTR Results</b>									
49FKPP-5876	Yfiler® Plus								
	37	15	14,17	14	31	23	10	12	15
3	14	10	11	20	27	14	14	11	26
	40	12		19	16	22	21		11
76TL9C-5871	Yfiler® Plus								
	37,37	15	14,17	14	31	23	10	12	15
3	14	10	11	20	27	14	14	11	26
	40	12		19	16	22	21		11
7RZATD-5871	PowerPlex® Y 23								
	--	15	14,17	14	31	23	10	12	15
3	14	10	11	20	--	14	14	--	26
	--	12	13	19	16	--	21	12	11
8C63FC-5876	Goldeneye Y Plus								
	37	15	14,17	14	31	23	10	12	15
3	14	10	11	20	27	14	14	11	26
	40	12	13	19	16	22	21	12	11
9NVAR8-5871	Yfiler® Plus								
	37	15	14,17	14	31	23	10	12	15
3	14	10	11	20	27	14	14	11	26
	40	12		19	16	22	21		11
AHLDLC-5871	Yfiler® Plus								
	37,37	15	14,17	14	31	23	10	12	15
3	14	10	11	20	27	14	14	11	26
	40	12		19	16	22	21		11
AVVTRG-5876	Yfiler® Plus								
	37	15	14,17	14	31	23	10	12	15
3	14	10	11	20	27	14	14	11	26
	40	12		19	16	22	21		11
BV73C2-5871	Yfiler®								
		15	14,17	14	31	23	10	12	15
3	14	10	11	20		14	14		
							21		11
D4UP4A-5871	Yfiler® Plus								
	37	15	14,17	14	31	23	10	12	15
3	14	10	11	20	27	14	14	11	26
	40	12		19	16	22	21		11
DKDPQY-5876	PowerPlex® Y 23								
		15	14,17	14	31	23	10	12	15
3	14	10	11	20		14	14		26
		12	13	19	16		21	12	11

TABLE 3

WebCode-Test		Amplification Kit							
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
<b>Item 3 - YSTR Results</b>									
ELNU23-5876	Yfiler® Plus								
	37	15	14,17	14	31	23	10	12	15
3	14	10	11	20	27	14	14	11	26
	40	12		19	16	22	21		11
G36VP4-5871	PowerPlex® Y 23								
		15	14,17	14	31	23	10	12	15
3	14	10	11	20		14	14		26
		12	13	19	16		21	12	11
HR3UUB-5876	Yfiler® Plus								
	37	15	14,17	14	31	23	10	12	15
3	14	10	11	20	27	14	14	11	26
	40	12		19	16	22	21		11
HZV8KX-5876	Yfiler® Plus								
	37	15	14,17	14	31	23	10	12	15
3	14	10	11	20	27	14	14	11	26
	40	12		19	16	22	21		11
JGZX3T-5871	PowerPlex® Y 23 SYSTEM								
		15	14,17	14	31	23	10	12	15
3	14	10	11	20		14	14		26
		12	13	19	16		21	12	11
K3WUGY-5871	PowerPlex® Y 23								
		15	14,17	14	31	23	10	12	15
3	14	10	11	20		14	14		26
		12	13	19	16		21	12	11
KFJ2EZ-5871	Investigator Argus Y-12 QS								
		15	14,17	14	31	23	10	12	15
3	14	10	11						
KWQZJX-5871	Yfiler® Plus, PowerPlex® Y 23								
	37	15	14,17	14	31	23	10	12	15
3	14	10	11	20	27	14	14	11	26
	40	12	13	19	16	22	21	12	11
KZA9QW-5871	Yfiler® Plus								
	37,37	15	14,17	14	31	23	10	12	15
3	14	10	11	20	27	14	14	11	26
	40	12		19	16	22	21		11
LKQRDZ-5871	Yfiler®								
		15	14,17	14	31	23	10	12	15
3	14	10	11	20		14	14		
							21		11

TABLE 3

WebCode-Test		Amplification Kit								
		DYF387S1	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
Item		DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
		DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	Y GATA H4
<b>Item 3 - YSTR Results</b>										
M9U4WQ-5871										
			15	14,17	14	31	23	10	12	15
3		14	10	11	20		14	14		26
			12	13	19	16		21	12	11
MHYD2U-5871 PowerPlex® Y 23										
			15	14,17	14	31	23	10	12	15
3		14	10	11	20		14	14		26
			12	13	19	16		21	12	11
MLXQMY-5876 PowerPlex® Y 23										
			15	14,17	14	31	23	10	12	15
3		14	10	11	20		14	14		26
			12	13	19	16		21	12	11
NHTHVU-5876 Yfiler® Plus										
		37	15	14,17	14	31	23	10	12	15
3		14	10	11	20	27	14	14	11	26
		40	12		19	16	22	21		11
NNMFKK-5871 Yfiler®										
			15	14,17	14	31	23	10	12	15
3		14	10	11	20		14	14		
								21		11
P2MGXL-5871 Yfiler®										
			15	14,17	14	31	23	10	12	15
3		14	10	11	20		14	14		
								21		11
PHBKL3-5876 Yfiler® Plus										
		37	15	14,17	14	31	23	10	12	15
3		14	10	11	20	27	14	14	11	26
		40	12		19	16	22	21		11
PKH9HK-5871 PowerPlex® Y 23										
			15	14,17	14	31	23	10	12	15
3		14	10	11	20		14	14		26
			12	13	19	16		21	12	11
QLNQEU-5871 Yfiler®										
			15	14,17	14	31	23	10	12	15
3		14	10	11	20		14	14		
								21		11
R3847R-5876 Yfiler®										
			15	14,17	14	31	23	10	12	15
3		14	10	11	20		14	14		
								21		11

TABLE 3

WebCode-Test		Amplification Kit							
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

Item 3 - YSTR Results

R3QQ3N-5876		Yfiler® PLUS							
	37	15	14,17	14	31	23	10	12	15
3	14	10	11	20	27	14	14	11	26
	40	12		19	16	22	21		11
RPLUJL-5871		PowerPlex® Y 23							
	-	15	14,17	14	31	23	10	12	15
3	14	10	11	20	-	14	14	-	26
	-	12	13	19	16	-	21	12	11
TG86HT-5871		Yfiler®							
		15	14,17	14	31	23	10	12	15
3	14	10	11	20		14	14		
							21		11
UTYEGL-5876		Yfiler® Plus							
	37	15	14,17	14	31	23	10	12	15
3	14	10	11	20	27	14	14	11	26
	40	12		19	16	22	21		11
V26FGC-5876		PowerPlex® Y 23							
		15	14,17	14	31	23	10	12	15
3	14	10	11	20		14	14		26
		12	13	19	16		21	12	11
WX6M2M-5871		Yfiler® Plus							
	37,37	15	14,17	14	31	23	10	12	15
3	14	10	11	20	27	14	14	11	26
	40	12		19	16	22	21		11
XVT9RK-5871		PowerPlex® Y 23							
		15	14,17	14	31	23	10	12	15
3	14	10	11	20		14	14		26
		12	13	19	16		21	12	11
YG7J7M-5871		Yfiler®							
		15	14,17	14	31	23	10	12	15
3	14	10	11	20		14	14		
							21		11
ZHV3VR-5876		Yfiler® Plus							
	37	15	14,17	14	31	23	10	12	15
3	14	10	11	20	27	14	14	11	26
	40	12		19	16	22	21		11

TABLE 3

WebCode-Test		Amplification Kit								
		DYF387S1	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
Item		DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
		DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	Y GATA H4
<b>Item 4 - YSTR Results</b>										
49FKPP-5876		Yfiler® Plus								
		35	14	11,14	13	29	24	11	13	13
4		14	12	12	18	32	14	17	11	23
		37	12		15	18	24	23		11
76TL9C-5871		Yfiler® Plus								
		35,35	14	11,14	13	29	24	11	13	13
4		14	12	12	18	32	14	17	11	23
		37	12		15	18	24	23		11
7RZATD-5871		PowerPlex® Y 23								
		--	14	11,14	13	29	24	11	13	13
4		14	12	12	18	--	14	17	--	23
		--	12	13	15	18	--	23	10	11
8C63FC-5876		Goldeneye Y Plus								
		35	14	11,14	13	29	24	11	13	13
4		14	12	12	18	32	14	17	11	23
		37	12	13	15	18	24	23	10	11
9NVAR8-5871		Yfiler® Plus								
		35	14	11,14	13	29	24	11	13	13
4		14	12	12	18	32	14	17	11	23
		37	12		15	18	24	23		11
AHL DLC-5871		Yfiler® Plus								
		35,35	14	11,14	13	29	24	11	13	13
4		14	12	12	18	32	14	17	11	23
		37	12		15	18	24	23		11
AVVTRG-5876		Yfiler® Plus								
		35	14	11,14	13	29	24	11	13	13
4		14	12	12	18	32	14	17	11	23
		37	12		15	18	24	23		11
BV73C2-5871		Yfiler®								
			14	11,14	13	29	24	11	13	13
4		14	12	12	18		14	17		
								23		11
D4UP4A-5871		Yfiler® Plus								
		35	14	11,14	13	29	24	11	13	13
4		14	12	12	18	32	14	17	11	23
		37	12		15	18	24	23		11
DKDPQY-5876		PowerPlex® Y 23								
			14	11,14	13	29	24	11	13	13
4		14	12	12	18		14	17		23
			12	13	15	18		23	10	11

TABLE 3

WebCode-Test		Amplification Kit							
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
<b>Item 4 - YSTR Results</b>									
ELNU23-5876		Yfiler® Plus							
	35	14	11,14	13	29	24	11	13	13
4	14	12	12	18	32	14	17	11	23
	37	12		15	18	24	23		11
G36VP4-5871		PowerPlex® Y 23							
		14	11,14	13	29	24	11	13	13
4	14	12	12	18		14	17		23
		12	13	15	18		23	10	11
HR3UUB-5876		Yfiler® Plus							
	35	14	11,14	13	29	24	11	13	13
4	14	12	12	18	32	14	17	11	23
	37	12		15	18	24	23		11
HZV8KX-5876		Yfiler® Plus							
	35	14	11,14	13	29	24	11	13	13
4	14	12	12	18	32	14	17	11	23
	37	12		15	18	24	23		11
JGZX3T-5871		PowerPlex® Y 23 SYSTEM							
		14	11,14	13	29	24	11	13	13
4	14	12	12	18		14	17		23
		12	13	15	18		23	10	11
K3WUGY-5871		PowerPlex® Y 23							
		14	11,14	13	29	24	11	13	13
4	14	12	12	18		14	17		23
		12	13	15	18		23	10	11
KFJ2EZ-5871		Investigator Argus Y-12 QS							
		14	11,14	13	29	24	11	13	13
4	14	12	12						
KWQZJX-5871		Yfiler® Plus, PowerPlex® Y 23							
	35	14	11,14	13	29	24	11	13	13
4	14	12	12	18	32	14	17	11	23
	37	12	13	15	18	24	23	10	11
KZA9QW-5871		Yfiler® Plus							
	35,35	14	11,14	13	29	24	11	13	13
4	14	12	12	18	32	14	17	11	23
	37	12		15	18	24	23		11
LKQRDZ-5871		Yfiler®							
		14	11,14	13	29	24	11	13	13
4	14	12	12	18		14	17		
							23		11

TABLE 3

WebCode-Test		Amplification Kit							
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

Item 4 - YSTR Results

M9U4WQ-5871	PowerPlex® Y 23								
		14	11,14	13	29	24	11	13	13
4	14	12	12	18		14	17		23
		12	13	15	18		23	10	11
MHYD2U-5871	PowerPlex® Y 23								
		14	11,14	13	29	24	11	13	13
4	14	12	12	18		14	17		23
		12	13	15	18		23	10	11
MLXQMY-5876	PowerPlex® Y 23								
		14	11,14	13	29	24	11	13	13
4	14	12	12	18		14	17		23
		12	13	15	18		23	10	11
NHTHVU-5876	Yfiler® Plus								
	35	14	11,14	13	29	24	11	13	13
4	14	12	12	18	32	14	17	11	23
	37	12		15	18	24	23		11
NNMFKK-5871	Yfiler®								
		14	11,14	13	29	24	11	13	13
4	14	12	12	18		14	17		23
							23		11
P2MGXL-5871	Yfiler®								
		14	11,14	13	29	24	11	13	13
4	14	12	12	18		14	17		23
							23		11
PHBKL3-5876	Yfiler® Plus								
	35	14	11,14	13	29	24	11	13	13
4	14	12	12	18	32	14	17	11	23
	37	12		15	18	24	23		11
PKH9HK-5871	PowerPlex® Y 23								
		14	11,14	13	29	24	11	13	13
4	14	12	12	18		14	17		23
		12	13	15	18		23	10	11
QLNQEU-5871	Yfiler®								
		14	11,14	13	29	24	11	13	13
4	14	12	12	18		14	17		23
							23		11
R3847R-5876									
		14	11,14	13	29	24	11	13	13
4	14	12	12	18		14	17		23
							23		11



TABLE 3

WebCode-Test 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
<b>Item 4 - YSTR Results</b>									
R3QQ3N-5876	Yfiler® PLUS								
	35	14	11,14	13	29	24	11	13	13
4	14	12	12	18	32	14	17	11	23
	37	12		15	18	24	23		11
RPLUJL-5871	PowerPlex® Y 23								
	-	14	11,14	13	29	24	11	13	13
4	14	12	12	18	-	14	17	-	23
	-	12	13	15	18	-	23	10	11
TG86HT-5871	Yfiler®								
		14	11,14	13	29	24	11	13	13
4	14	12	12	18		14	17		
							23		11
UTYEGL-5876	Yfiler® Plus								
	35	14	11,14	13	29	24	11	13	13
4	14	12	12	18	32	14	17	11	23
	37	12		15	18	24	23		11
V26FGC-5876	PowerPlex® Y 23								
		14	11,14	13	29	24	11	13	13
4	14	12	12	18		14	17		23
		12	13	15	18		23	10	11
WX6M2M-5871	Yfiler® Plus								
	35,35	14	11,14	13	29	24	11	13	13
4	14	12	12	18	32	14	17	11	23
	37	12		15	18	24	23		11
XVT9RK-5871	PowerPlex® Y 23								
		14	11,14	13	29	24	11	13	13
4	14	12	12	18		14	17		23
		12	13	15	18		23	10	11
YG7J7M-5871	Yfiler®								
		14	11,14	13	29	24	11	13	13
4	14	12	12	18		14	17		
							23		11
ZHV3VR-5876	Yfiler® Plus								
	35	14	11,14	13	29	24	11	13	13
4	14	12	12	18	32	14	17	11	23
	37	12		15	18	24	23		11

# Additional DNA & PI Results

## TABLE 4

Locus	WebCode-Test	Item 1	Item 2	Item 3	Item 3 PI	Item 4	Item 4 PI
D10S1435	NHTHVU-5876	11,12	11,13	13,13	3.9810	13,14	
D10S2325	MLXQMY-5876	7,13	13,14	10,14	7.6923	7,11	0
	NHTHVU-5876	7,13	13,14	10,14	9.2593	7,11	
D11S2368	NHTHVU-5876	18,20	18,20	19,20	1.3861	18,21	
D13S325	NHTHVU-5876	19,23	18,19	18,21	8.7500	19,22	
D14S1434	NHTHVU-5876	13,14	10,14	10,14	2.7451	13,13	
D15S659	NHTHVU-5876	16,17	14,17	14,16	7.9245	11,12	
D17S1301	NHTHVU-5876	9,11	9,11	11,12	1.3166	11,11	
D18S1364	NHTHVU-5876	14,15	12,15	12,13	84.0000	14,19	
D19S253	NHTHVU-5876	12,13	11,12	7,11	4.8276	7,13	
D20S482	NHTHVU-5876	13,14	14,15	15,15	4.8837	12,15	
D21S2055	MLXQMY-5876	25,34	19.1,25	19.1,26	1.8248	19.1,31	1.8248
D21S2055	NHTHVU-5876	25,34	19.1,25	19.1,26	2.0161	19.1,31	
D22GATA198B05	NHTHVU-5876	16,21	16,16	16,22	4.1584	16,18	
D2S1360	MLXQMY-5876	22,24	19,24	19,20	71.4285	22,22	0
	NHTHVU-5876	22,24	19,24	19,20	31.4000	22,22	
D3S1744	MLXQMY-5876	15,18	17,18	17,17	3.1347	17,18	1.5673
	NHTHVU-5876	15,18	17,18	17,17	2.9326	17,18	
D3S3045	NHTHVU-5876	11,13	12,13	12,13	2.9371	9,13	
D4S2366	MLXQMY-5876	9,11	10,11	9,10	2.7932	9,10	2.7932
	NHTHVU-5876	9,11	10,11	9,10	3.4965	9,10	
D5S2500	MLXQMY-5876	12,15	15,17	15,17	55.5555	14,16	0
	NHTHVU-5876	12,15	15,17	15,17	20.0000	14,16	
D5S2800	NHTHVU-5876	14,17	14,14	14,14	3.5443	14,23	
D6S474	MLXQMY-5876	13,13	13,16	16,16	3.5087	14,16	1.7543
	NHTHVU-5876	13,13	13,16	16,16	3.6101	14,16	
D6S477	NHTHVU-5876	10.2,12	12,15	14,15	1.6867	11.2,13	
D7S1517	MLXQMY-5876	24,25	22,24	22,25	6.0975	20,22	6.0975
	NHTHVU-5876	24,25	22,24	22,25	4.3478	20,22	
D7S3048	NHTHVU-5876	23,25	23,23	23,24	3.3871	22,23	
D8S1132	MLXQMY-5876	22,22	18,22	18,19	2.2624	17,21	0
	NHTHVU-5876	22,22	18,22	18,19	2.3474	17,21	
D9S1122	NHTHVU-5876	11,13	12,13	11,12	1.2883	12,13	
F13A01	DKDPQY-5876	3.2,6	3.2,13	6,13	72.4638	6,7	0
	NHTHVU-5876	3.2,6	3.2,13	6,13	31.4000	6,7	
	R3847R-5876	3.2,6	3.2,13	6,13	357.142857	6,7	0.000000

TABLE 4

<b>Locus</b>	<b>WebCode-Test</b>	<b>Item 1</b>	<b>Item 2</b>	<b>Item 3</b>	<b>Item 3 PI</b>	<b>Item 4</b>	<b>Item 4 PI</b>
<b>F13B</b>	DKDPQY-5876	9,10	10	8,10	1.2755	10	2.5510
	NHTHVU-5876	9,10	10,10	8,10	1.0893	10,10	
	R3847R-5876	9,10	10,10	8,10	1.284687	10,10	2.569373
<b>FESFPS</b>	DKDPQY-5876	9,11	11,12	10,12	2.1115	11,12	2.1115
	NHTHVU-5876	9,11	11,12	10,12	1.8450	11,12	
	R3847R-5876	9,11	11,12	10,12	2.123142	11,12	2.123142
<b>LPL</b>	DKDPQY-5876	10,12	9,12	9,12	12.8866	12	0
	NHTHVU-5876	10,12	9,12	9,12	11.1111	12,12	
	R3847R-5876	10,12	9,12	9,12	12.886598	12,12	0.000000
<b>PENTA C</b>	DKDPQY-5876	12	11,12	9,11	1.2623	11	2.5246
	R3847R-5876	12,12	11,12	9,11	1.266785	11,11	2.533570
<b>PENTA_C</b>	NHTHVU-5876	12,12	11,12	9,11	1.1390	11,11	

# Paternity DNA Statistics & Conclusions

TABLE 5

WebCode-Test	Chosen Biological Father	Combined Paternity Index	Probability of Paternity	Population Database Used
2GF6WZ-5876	Item 3 - Alleged Father A	32 trillion		NIST-STRBASE
2MKYXM-5871	Item 3 - Alleged Father A	2.245E+13	Not reported	NIST-STRBASE
2TBJUC-5871	Item 3 - Alleged Father A	5.96775E+13	99.99999999998300	NIST-STRBASE
49FKPP-5876	Item 3 - Alleged Father A	285,300,000,000	> 99.99%	FBI PopStats
4E637L-5871	Item 3 - Alleged Father A	2.245E+013	N/A	NIST-STRBASE
6D9Q27-5876	Item 3 - Alleged Father A	1.1E+10	99.999999%	NIST-STRBASE
6GAPJQ-5871	Item 3 - Alleged Father A	480,500,000,000	99.999999999791	FBI PopStats
6V6GXZ-5876	Item 3 - Alleged Father A	862,000,000,000	n/a	FBI PopStats
76TL9C-5871	Item 3 - Alleged Father A	565,370,000,000,000,000,000	99.999999 %	[Location Identifying Database]
7EC4YX-5876	Item 3 - Alleged Father A	862,200,000,000	N/A	FBI PopStats
7RZATD-5871	Item 3 - Alleged Father A	8980000000000	99.99999999	FBI PopStats, Promega/NIST
8C63FC-5876	Item 3 - Alleged Father A	1.8611E+15	0.999999999999999	NIST-STRBASE
8N4YHE-5871	Item 3 - Alleged Father A	1.4630E+13	>99.99	FBI PopStats
9NVAR8-5871	Item 3 - Alleged Father A	22 425 220 410 989		NIST-STRBASE
9Z8NQZ-5876	Item 3 - Alleged Father A	1.49e12	99.99999999%	NIST-STRBASE
AHLDLC-5871	Item 3 - Alleged Father A	862,200,000,000	99.99999999884	FBI PopStats
AVVTRG-5876	Item 3 - Alleged Father A	285,300,000,000	>99.99%	FBI PopStats
BV73C2-5871	Item 3 - Alleged Father A	19,935,677,465,117	99.9999999999%	[Location Identifying Database]
BWLEYD-5871	Item 3 - Alleged Father A	10,112,097,602,908	99.99%	[Location Identifying Database]
C7KGUU-5876	Item 3 - Alleged Father A	862,200,000,000	n/a	FBI PopStats

TABLE 5 - Paternity DNA Statistics &amp; Conclusions

WebCode-Test	Chosen Biological Father	Combined Paternity Index	Probability of Paternity	Population Database Used
D3VNVW-5876	Item 3 - Alleged Father A	44,208,892	N/A	Local survey data
D4UP4A-5871	Item 3 - Alleged Father A	862,200,000,000	99.999999998840	FBI PopStats
DF4AJW-5871	Item 3 - Alleged Father A	242 974 387 856 328	99.999999999996	STRidER2.0
DKDPQY-5876	Item 3 - Alleged Father A	199,503,790,236,860,000	99.9999	Promega
E4NVX9-5871	Item 3 - Alleged Father A	948 billion	N/A	[Location Identifying Database]
ELNU23-5876	Item 3 - Alleged Father A	512,300,000,000	99.99999999804	FBI PopStats
F79BKL-5871	Item 3 - Alleged Father A	480,500,000,000	>99.99%	FBI PopStats
G36VP4-5871	Item 3 - Alleged Father A	3.79e13	99.99999999%	LOCAL
HAKVHL-5876	Item 3 - Alleged Father A	6.2570E+12		FBI PopStats
HFCXRD-5871	Item 3 - Alleged Father A			FBI PopStats
HR3UUB-5876	Item 3 - Alleged Father A	285,300,000,000	>99.99%	FBI PopStats
HZV8KX-5876	Item 3 - Alleged Father A	512,300,000,000	>99.9	FBI PopStats
JGZX3T-5871	Item 3 - Alleged Father A	1,098E+10	99,999	NIST-STRBASE
K3WUGY-5871	Item 3 - Alleged Father A	52,598,856,604,668	99.9999999999%	[Location Identifying Database]
KFJ2EZ-5871	Item 3 - Alleged Father A	164364257098755.00	99.99999%	NIST-STRBASE
KWQZJX-5871	Item 3 - Alleged Father A	162470785819785	99,99999999999	NIST-STRBASE
KZA9QW-5871	Item 3 - Alleged Father A	6,579,436,469,539	100%	local DNA database
LKQRDZ-5871	Item 3 - Alleged Father A	32.8 trillion	99.9%	NIST-STRBASE
M843TN-5876	Item 3 - Alleged Father A	3,608,454,000	99.99%	Life Technologies Database
M9U4WQ-5871	Item 3 - Alleged Father A	1185707659981177	0,9999999999999911 2	[Location Identifying Database]

TABLE 5 - Paternity DNA Statistics &amp; Conclusions

WebCode-Test	Chosen Biological Father	Combined Paternity Index	Probability of Paternity	Population Database Used
MG6PKK-5871	Item 3 - Alleged Father A	862,200,000,000	99.999999998840	FBI PopStats
MGN9QR-5871	Item 3 - Alleged Father A	1.39e10	99.9999999%	[Location Identifying Database]
MH4M28-5871	Item 3 - Alleged Father A		7.18546 E+11	FBI PopStats
MHYD2U-5871	Item 3 - Alleged Father A	1.5010E+14	>99.999999999	NIST-STRBASE
MLXQMY-5876	Item 3 - Alleged Father A	4.5E+23	99,9999%	[Location Identifying Database]
NHTHVU-5876	Item 3 - Alleged Father A	1456254291547270000000 000000000000.00	99.99999999999990	Laboratory specific database
NHXTV8-5871	Item 3 - Alleged Father A	1.1540E+13	>99.99	NIST-STRBASE
NNMFKK-5871	Item 3 - Alleged Father A	2.5118E+10	99.9999%	NIST-STRBASE
P2MGXL-5871	Item 3 - Alleged Father A	6,648,000,000,000	99.999999999	FBI PopStats
PHBKL3-5876	Item 3 - Alleged Father A	285.3 billion	> 99.99%	FBI PopStats
PHDJDJ-5871	Item 3 - Alleged Father A	5.64E+13	99.999999999982%	NIST-STRBASE, NIST1036 Caucasian
PKH9HK-5871	Item 3 - Alleged Father A	29,958,799,319,905.1000	99.9999%	FBI PopStats
PLDKLZ-5871	Item 3 - Alleged Father A	6.261E+013	N/A	NIST-STRBASE
PLFAQW-5871	Item 3 - Alleged Father A	1.1540E+13	>99.999999999	FBI PopStats
Q3V4UQ-5876	Item 3 - Alleged Father A	~700 billion	>99.999%	Globalfiler local database
QLNQEU-5871	Item 3 - Alleged Father A	32.8 trillion	99.9%	NIST-STRBASE
R3847R-5876	Item 3 - Alleged Father A	7.83260150864585E19	99.999999999999%	NIST-STRBASE
R3QQ3N-5876	Item 3 - Alleged Father A	74304541832448.75	99.99%	NIST-STRBASE
RPLUJL-5871	Item 3 - Alleged Father A	1028987932659470.00	0.999999999999990	NIST-STRBASE
T9FPVA-5871	Item 3 - Alleged Father A	480,500,000,000	>99.99%	NIST-STRBASE

TABLE 5 - Paternity DNA Statistics &amp; Conclusions

WebCode-Test	Chosen Biological Father	Combined Paternity Index	Probability of Paternity	Population Database Used
TG86HT-5871	Item 3 - Alleged Father A	32.8 trillion	99.9%	NIST-STRBASE
TGAVPB-5876	Item 3 - Alleged Father A	6,250,000,000,000		FBI PopStats
TXUJ2Q-5876	Item 3 - Alleged Father A	25117966024	99.999999996%	NIST-STRBASE
UTYEGL-5876	Item 3 - Alleged Father A	512,300,000,000	99.99999999804	FBI PopStats
V26FGC-5876	Item 3 - Alleged Father A	7828232228362710.00	100.00000000000000	in house database
VBAK89-5876	Item 3 - Alleged Father A	862,200,000,000	n/a	FBI PopStats
VWTKJU-5876	Item 3 - Alleged Father A	862,200,000,000	NA	FBI PopStats
VYYT49-5871	Item 3 - Alleged Father A	39,690,000,000	99.99	NIST-STRBASE
WDTYB9-5876	Item 3 - Alleged Father A	862,200,000,000	n/a	FBI PopStats
WLPPZP-5871	Item 3 - Alleged Father A	1.1540E+13	>99.99%	FBI PopStats
WLTCDW-5871	Item 3 - Alleged Father A	1.4780E+13	>99.999999999	FBI PopStats
WM42WA-5876	Item 3 - Alleged Father A	8.62E11	N/A	FBI PopStats
WX6M2M-5871	Item 3 - Alleged Father A	1,737,293,933,790.1	99.99%	Nacional
X4RRDN-5871	Item 3 - Alleged Father A	1.1540E+13	>99.99%	FBI PopStats
XVT9RK-5871	Item 3 - Alleged Father A	4.8E+11		NIST-STRBASE
YAAJXL-5876	Item 3 - Alleged Father A			
YG7J7M-5871	Item 3 - Alleged Father A	3.28 x 10 <sup>13</sup>	99.9%	NIST-STRBASE
YG8AKH-5871	Item 3 - Alleged Father A	1.863297211e+015	>99.99999999%	NIST-STRBASE
ZFQGYE-5871	Item 3 - Alleged Father A			
ZHV3VR-5876	Item 3 - Alleged Father A	285.3 billion	>99.99%	FBI PopStats

<b>Paternity DNA Statistics Response Summary</b>		<b>Participants: 80</b>
<i>Which of the alleged fathers cannot be excluded as the biological parent of Item 2?</i>		
<b>Responses</b>	Item 3 - Alleged Father A	80
	Item 4 - Alleged Father B	0
	Inconclusive	0
	No Response	0



# Kinship Likelihood Ratio Results

TABLE 6

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D1S1656	6D9Q27-5876	$(1+4p)/8p$	$p=15$	1.3355
	7RZATD-5871	$(1+4s)/8s$	$s=15$	1.3356
	8C63FC-5876	$(1+4p)/8p$	$p=15$	1.3356
	9NVAR8-5871	$(Z1/4Pp)+Z0$	$p = 15$	1.335
	9Z8NQZ-5876	$(1+4p)/8p$	15	1.336
	AHL DLC-5871	$(0.25+a)/2a$	$a=15$	1.3356
	BV73C2-5871	$(1+4P)/8P$	$P = 15$	1.3356
	D4UP4A-5871	$(0.25+a)/2a$	$a=15$	1.335
	DF4AJW-5871	$(0.25+p)/2p$	$p=15$	1.3356
	DKDPQY-5876	$1+4q/8q$	$q=15$	1.3356
	ELNU23-5876	$(1+4p)/8p$	$p=15$	1.3356
	G36VP4-5871	$(1+4p)/8p$	15	1.3355
	HZV8KX-5876	$(1+4p)/8p$	$p=15$	1.335
	K3WUGY-5871	N/A	N/A	1.3356
	KFJ2EZ-5871	$((1/4p)+1)/2$	$p=15$	1.335
	KWQZJX-5871	$c(k1)+2ac(k0)/2ac$	$a=15$	1.335561
	KZA9QW-5871	$(1+4p)/8p$	$p = 15$	1.335561497
	M9U4WQ-5871	$(1+4p)/8p$	$p=15$	1.336
	MHYD2U-5871	$(K1+2K0a)/2a$	15	1.3356
	MLXQMY-5876	$(1+4*p)/8*p$	$p=15$	1.33556
	NHTHVU-5876	$(1+4p)/8p$	$p=15$	1.3356
NNMFKK-5871	$(1+4s)/8s$	$s=15$	1.3356	
PHDJDP-5871	$0.5+1/(8*p)$	15	1.35	

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D1S1656	PKH9HK-5871	$((1/8)(1+4q))/q$	q=15	1.3356
	R3847R-5876	$(1+4p)/8p$	p=0.1496	1.335561497
	R3QQ3N-5876	$R=C(K1)+2AC(K0)U=2ACLR=R/U$	A=15 C=12 K1=0.25 K0=0.5	1.336
	RPLUJL-5871	$(1+4p)/8p$	p = 15	1.3356
	TXUJ2Q-5876	$(1+4p)/8p$	p=15	1.336
	UTYEGL-5876	$(1+4p)/8p$	p=15	1.3356
	V26FGC-5876	$(1+4p)/8p$	p = 15	1.335561497
	XVT9RK-5871	$(1+4p)/8p$	p=15	1.336
	YG8AKH-5871	$k1+2k0a/2a$	a = 15 b = 15.3 c = 12	1.3356

**Statistical Analysis Summary of D1S1656**
**Likelihood Ratio Mode: 1.3356**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D2S1338	6D9Q27-5876	$(1+4p)/8p$	$p=20$	1.2987
	7RZATD-5871	$(1+4r)/8r$	$r=20$	1.2987
	8C63FC-5876	$(1+4p)/8p$	$p=20$	1.2987
	9NVAR8-5871	$(Z1/4Pp)+Z0$	$p = 20$	1.298
	9Z8NQZ-5876	$(1+4p)/8p$	20	1.299
	AHL DLC-5871	$(0.25+a)/2a$	$a=20$	1.2987
	BV73C2-5871	$(1+4P)/8P$	$P = 20$	1.2987
	D4UP4A-5871	$(0.25+a)/2a$	$a=20$	1.298
	DF4AJW-5871	$(0.25+p)/2p$	$p=20$	1.2987
	DKDPQY-5876	$1+4q/8q$	$q=20$	1.2987
	ELNU23-5876	$(1+4p)/8p$	$p=20$	1.2987
	G36VP4-5871	$(1+4p)/8p$	20	1.2987
	HZV8KX-5876	$(1+4p)/8p$	$p=20$	1.298
	K3WUGY-5871	N/A	N/A	1.2987
	KFJ2EZ-5871	$((1/4p)+1)/2$	$p=20$	1.298
	KWQZJX-5871	$c(k1)+2ac(k0)/2ac$	$a=20$	1.298722
	KZA9QW-5871	$(1+4p)/8p$	$p = 20$	1.298722045
	M9U4WQ-5871	$(1+4p)/8p$	$p=20$	1.987
	MHYD2U-5871	$(K1+2K0a)/2a$	20	1.2987
	MLXQMY-5876	$(1+4*p)/8*p$	$p=20$	1.29872
	NHTHVU-5876	$(1+4p)/8p$	$p=20$	1.2987
	NNMFKK-5871	$(1+4r)/8r$	$r=20$	1.2987
	PHDJDP-5871	$0.5+1/(8*p)$	20	1.30
	PKH9HK-5871	$((1/8)(1+4q))/q$	$q=20$	1.2987

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D2S1338	R3847R-5876	$(1+4p)/8p$	$p=0.1565$	1.298722045
	R3QQ3N-5876	$R=C(K1)+2AC(K0)U=2ACLR=R/U$	$A=20 C=24 K1=0.25 K0=0.5$	1.299
	RPLUJL-5871	$(1+4p)/8p$	$p = 20$	1.2987
	TXUJ2Q-5876	$(1+4p)/8p$	$p=20$	1.299
	UTYEGL-5876	$(1+4p)/8p$	$p=20$	1.2987
	V26FGC-5876	$(1+4p)/8p$	$p = 20$	1.298722045
	XVT9RK-5871	$(1+4p)/8p$	$p=20$	1.299
	YG8AKH-5871	$k1+2k0a/2a$	$a = 20 b = 18 c = 24$	1.2987

**Statistical Analysis Summary of D2S1338**
**Likelihood Ratio Mode: 1.2987**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D2S441	6D9Q27-5876	$(1+2p)/4p$	$p=11$	1.2278
	7RZATD-5871	$(1+2q)/4q$	$q=11$	1.2278
	8C63FC-5876	$(1+2p)/4p$	$p=11$	1.2278
	9NVAR8-5871	$(Z1/2Pp)+Z0$	$p = 11$	1.227
	9Z8NQZ-5876	$(1+2p)/4p$	11	1.228
	AHLDLC-5871	$(0.25+(b/2))/b$	$b=11$	1.2278
	BV73C2-5871	$(1+2P)/4P$	$P = 11$	1.2278
	D4UP4A-5871	$(0.5+a)/2a$	$a=11$	1.227
	DF4AJW-5871	$0.5+(0.25/p)$	$p=11$	1.2278
	DKDPQY-5876	$1+2q/4q$	$q=11$	1.2279
	ELNU23-5876	$(1+2p)/4p$	$p=11$	1.2278
	G36VP4-5871	$(1+2p)/4p$	11	1.2278
	HZV8KX-5876	$(1+2p)/4p$	$p=11$	1.227
	K3WUGY-5871	N/A	N/A	1.2278
	KFJ2EZ-5871	$((1/2p)+1)/2$	$p=11$	1.227
	KWQZJX-5871	$b(k1)+b(k1)+2ab(k0)/2ab$	$a=11$	1.227802
	KZA9QW-5871	$(1+2p)/4p$	$p = 11$	1.227802038
	M9U4WQ-5871	$(1+2p)/4p$	$p=11$	1.228
	MHYD2U-5871	$(K1+K0a)/a$	11	1.2278
	MLXQMY-5876	$(1+2*p)/4*p$	$p=11$	1.22780
	NHTHVU-5876	$(1+2p)/4p$	$p=11$	1.2278
	NNMFKK-5871	$(1+2q)/4q$	$q=11$	1.2278
	PHDJDP-5871	$0.5+1/(4*p)$	11	1.23
	PKH9HK-5871	$((1/4)(1+2q))/q$	$q=11$	1.2278

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D2S441	R3847R-5876	$(1+2p)/4p$	$p=0.3435$	1.227802038
	R3QQ3N-5876	$R=B(K1)+B(K1)+2AB(K0)U=2A$ $BLR=R/U$	$A=11 B=10 K1=0.25 K0=0.5$	1.227
	RPLUJL-5871	$(1+2p)/4p$	$p = 11$	1.2278
	TXUJ2Q-5876	$(1+2p)/4p$	$p=11$	1.228
	UTYEGL-5876	$(1+2p)/4p$	$p=11$	1.2278
	V26FGC-5876	$(1+2p)/4p$	$p = 11$	1.227802038
	XVT9RK-5871	$(1+2p)/4p$	$p=11$	1.228
	YG8AKH-5871	$k1+k0a/a$	$a = 11 b = 10$	1.2278

**Statistical Analysis Summary of D2S441**
**Likelihood Ratio Mode: 1.2278**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D3S1358	6D9Q27-5876	1/2		0.5
	7RZATD-5871	1/2	--	0.5000
	8C63FC-5876	1/2		0.5000
	9NVAR8-5871	Z0		0.5
	9Z8NQZ-5876	1/2		0.5
	AHLDLC-5871	cd/2cd	c=14 d=17	0.50000
	BV73C2-5871	1/2		0.5000
	D4UP4A-5871	cd/2cd	c=14 d=15	0.5000
	DF4AJW-5871	0.5		0.5
	DKDPQY-5876	1/2		0.5
	ELNU23-5876	1/2		0.50000
	G36VP4-5871	1/2	-	0.5
	HZV8KX-5876	1/2		0.5000
	K3WUGY-5871	N/A	N/A	0.5
	KFJ2EZ-5871	-	-	0.5
	KWQZJX-5871	2cd(k0)/2cd	c=15 d=18	0.50
	KZA9QW-5871	2/4		0.5000
	M9U4WQ-5871	2:4		0.5
	MHYD2U-5871	K0		0.5000
	MLXQMY-5876	2/4	-	0.5
	NHTHVU-5876	0.5		0.5000
	NNMFKK-5871	1/2		0.5000
	PHDJDP-5871	0.5		0.5
PKH9HK-5871	1/2		0.5	

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D3S1358	R3847R-5876	0.5		0.5
	R3QQ3N-5876	$R=2CD(K0)U=2CDLR=R/U$	C=15 D=18 K1=0.25 K0=0.5	0.5
	RPLUJL-5871	1/2	-	0.5
	TXUJ2Q-5876	1/2		0.5
	UTYEGL-5876	1/2	N/A	0.5000
	V26FGC-5876	2/4		0.5
	XVT9RK-5871	1/2		0.5
	YG8AKH-5871	k0	a = 14 b = 17 c = 15 d = 18	0.5

**Statistical Analysis Summary of D3S1358**
**Likelihood Ratio Mode: 0.5**



TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D5S818	6D9Q27-5876	$(1+2p)/4p$	$p=12$	1.1446
	7RZATD-5871	$(1+2q)/4q$	$q=12$	1.1447
	8C63FC-5876	$(1+2p)/4p$	$p=12$	1.1447
	9NVAR8-5871	$(Z1/2Pp)+Z0$	$p = 12$	1.144
	9Z8NQZ-5876	$(1+2p)/4p$	12	1.145
	AHL DLC-5871	$(0.25+(b/2))/b$	$b=12$	1.1447
	BV73C2-5871	$(1+2P)/4P$	$P = 12$	1.1447
	D4UP4A-5871	$(0.5+a)/2a$	$a=12$	1.144
	DF4AJW-5871	$0.5+(0.25/p)$	$p=12$	1.1447
	DKDPQY-5876	$1+4q/8q$	$q=12$	1.1447
	ELNU23-5876	$(1+2p)/4p$	$p=12$	1.1447
	G36VP4-5871	$(1+2p)/4p$	12	1.1446
	HZV8KX-5876	$(1+2p)/4p$	$p=12$	1.144
	K3WUGY-5871	N/A	N/A	1.1447
	KFJ2EZ-5871	$((1/2p)+1)/2$	$p=12$	1.144
	KWQZJX-5871	$b(k1)+b(k1)+2ab(k0)/2ab$	$a=12$	1.144662
	KZA9QW-5871	$(1+2p)/4p$	$p = 12$	1.144662197
	M9U4WQ-5871	$(1+2p)/4p$	$p=12$	1.145
	MHYD2U-5871	$(K1+K0a)/a$	12	1.1447
	MLXQMY-5876	$(1+2*p)/4*p$	$p=12$	1.14466
	NHTHVU-5876	$(1+2p)/4p$	$p=12$	1.1447
	NNMFKK-5871	$(1+2q)/4q$	$q=12$	1.1447
	PHDJDP-5871	$0.5+1/(4*p)$	12	1.14
	PKH9HK-5871	$((1/4)(1+2q))/q$	$q=12$	1.1447

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D5S818	R3847R-5876	$(1+2p)/4p$	$p=0.3878$	1.144662197
	R3QQ3N-5876	$R=B(K1)+B(K1)+2AB(K0)U=2A$ $BLR=R/U$	$A=12 B=11 K1=0.25 K0=0.5$	1.145
	RPLUJL-5871	$(1+2p)/4p$	$p = 12$	1.1447
	TXUJ2Q-5876	$(1+2p)/4p$	$p=12$	1.145
	UTYEGL-5876	$(1+2p)/4p$	$p=12$	1.1447
	V26FGC-5876	$(1+2p)/4p$	$p = 12$	1.144662197
	XVT9RK-5871	$(1+2p)/4p$	$p=12$	1.145
	YG8AKH-5871	$k1+k0a/a$	$a = 12 b = 11$	1.1447

**Statistical Analysis Summary of D5S818**
**Likelihood Ratio Mode: 1.1447**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D7S820	6D9Q27-5876	$(1+4p)/8p$	$p=12$	1.2846
	7RZATD-5871	$(1+4t)/8t$	$t=12$	1.2847
	8C63FC-5876	$(1+4p)/8p$	$p=12$	1.2847
	9NVAR8-5871	$(Z1/4Pp)+Z0$	$p=12$	1.284
	9Z8NQZ-5876	$(1+4p)/8p$	12	1.285
	AHLDLC-5871	$(0.25+a)/2a$	$a=12$	1.2847
	BV73C2-5871	$(1+4P)/8P$	$P=12$	1.2847
	D4UP4A-5871	$(0.25+a)/2a$	$a=12$	1.284
	DF4AJW-5871	$(0.25+p)/2p$	$p=12$	1.2847
	DKDPQY-5876	$1+4q/8q$	$q=12$	1.2847
	ELNU23-5876	$(1+4p)/8p$	$p=12$	1.2847
	G36VP4-5871	$(1+4p)/8p$	12	1.3375
	HZV8KX-5876	$(1+4p)/8p$	$p=12$	1.284
	K3WUGY-5871	N/A	N/A	1.2847
	KFJ2EZ-5871	$((1/4p)+1)/2$	$p=12$	1.284
	KWQZJX-5871	$c(k1)+2ac(k0)/2ac$	$a=12$	1.284683
	KZA9QW-5871	$(1+4p)/8p$	$p=12$	1.284682988
	M9U4WQ-5871	$(1+4p)/8p$	$p=12$	1.285
	MHYD2U-5871	$(K1+2K0a)/2a$	12	1.2847
	MLXQMY-5876	$(1+4*p)/8*p$	$p=12$	1.28468
	NHTHVU-5876	$(1+4p)/8p$	$p=12$	1.2847
	NNMFKK-5871	$(1+4t)/8t$	$t=12$	1.2847
	PHDJDP-5871	$0.5+1/(8*p)$	12	1.28
	PKH9HK-5871	$((1/8)(1+4q))/q$	$q=12$	1.2847

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D7S820	R3847R-5876	$(1+4p)/8p$	$p=0.1593$	1.284682988
	R3QQ3N-5876	$R=C(K1)+2AC(K0)U=2ACLR=R/U$	$A=12 C=8 K1=0.25 K0=0.5$	1.285
	RPLUJL-5871	$(1+4p)/8p$	$p = 12$	1.2847
	TXUJ2Q-5876	$(1+4p)/8p$	$p=12$	1.285
	UTYEGL-5876	$(1+4p)/8p$	$p=12$	1.2847
	V26FGC-5876	$(1+4p)/8p$	$p = 12$	1.284682988
	XVT9RK-5871	$(1+4p)/8p$	$p=12$	1.285
	YG8AKH-5871	$k1+2k0a/2a$	$a = 12 b = 10 c = 8$	1.2847

**Statistical Analysis Summary of D7S820**
**Likelihood Ratio Mode: 1.2847**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D8S1179	6D9Q27-5876	$(1+2p)/4p$	$p=11$	2.8214
	7RZATD-5871	$(1+2p)/4p$	$p=11$	3.7808
	8C63FC-5876	$(1+2p)/4p$	$p=11$	3.7808
	9NVAR8-5871	$(Z1/2Pp)+Z0$	$p = 11$	3.780
	9Z8NQZ-5876	$(1+2p)/4p$	11	3.781
	AHL DLC-5871	$(0.25+(b/2))/b$	$b=11$	3.7808
	BV73C2-5871	$(1+2P)/4P$	$P = 11$	3.7808
	D4UP4A-5871	$(0.5+a)/2a$	$a=11$	3.780
	DF4AJW-5871	$0.5+(0.25/p)$	$p=11$	3.7808
	DKDPQY-5876	$1+2p/4p$	$p=11$	3.7808
	ELNU23-5876	$(1+2p)/4p$	$p=11$	3.7808
	G36VP4-5871	$(1+2p)/4p$	11	3.7808
	HZV8KX-5876	$(1+2p)/4p$	$p=11$	3.780
	K3WUGY-5871	N/A	N/A	3.7632
	KFJ2EZ-5871	$((1/2p)+1)/2$	$p=11$	3.780
	KWQZJX-5871	$b(k1)+b(k1)+2ab(k0)/2ab$	$a=11$	3.780839
	KZA9QW-5871	$(1+2p)/4p$	$p = 11$	3.780839895
	M9U4WQ-5871	$(1+2p)/4p$	$p=11$	3.781
	MHYD2U-5871	$(K1+K0a)/a$	11	3.7808
	MLXQMY-5876	$(1+2*p)/4*p$	$p=11$	3.78083
	NH THVU-5876	$(1+2p)/4p$	$p=11$	3.7808
	NNMFKK-5871	$(1+2p)/4p$	$p=11$	4.2808
	PHDJDP-5871	$0.5+1/(4*p)$	11	3.78
	PKH9HK-5871	$((1/4)(1+2q))/q$	$q=11$	3.7808

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D8S1179	R3847R-5876	$(1+2p)/4p$	$p=0.0762$	3.780839895
	R3QQ3N-5876	$R=B(K1)+B(K1)+2AB(K0)U=2A$ $BLR=R/U$	$A=11 B=16 K1=0.25 K0=0.5$	3.781
	RPLUJL-5871	$(1+2p)/4p$	$p = 11$	3.7808
	TXUJ2Q-5876	$(1+2p)/4p$	$p=11$	3.781
	UTYEGL-5876	$(1+2p)/4p$	$p=11$	3.7808
	V26FGC-5876	$(1+2p)/4p$	$p = 11$	3.780839895
	XVT9RK-5871	$(1+2p)/4p$	$p=11$	3.781
	YG8AKH-5871	$k1+k0a/a$	$a = 11 b = 16$	3.7808

**Statistical Analysis Summary of D8S1179**
**Likelihood Ratio Mode: 3.7808**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D10S1248	6D9Q27-5876	$(1+2p)/4p$	$p=13$	1.313
	7RZATD-5871	$(1+2p)/4p$	$p=13$	1.3130
	8C63FC-5876	$(1+2p)/4p$	$p=13$	1.3130
	9NVAR8-5871	$(Z1/2Pp)+Z0$	$p = 13$	1.313
	9Z8NQZ-5876	$(1+2p)/4p$	13	1.313
	AHL DLC-5871	$(0.5+a)/2a$	$a=13$	1.3130
	BV73C2-5871	$(1+2P)/4P$	$P = 13$	1.3130
	D4UP4A-5871	$(0.5+a)/2a$	$a=13$	1.313
	DF4AJW-5871	$0.5+(0.25/p)$	$p=13$	1.3130
	DKDPQY-5876	$1+2p/4p$	$p=13$	1.3132
	ELNU23-5876	$(1+2p)/4p$	$p=13$	1.3130
	G36VP4-5871	$(1+2p)/4p$	13	1.3130
	HZV8KX-5876	$(1+2p)/4p$	$p=13$	1.313
	K3WUGY-5871	N/A	N/A	1.3130
	KFJ2EZ-5871	$((1/2p)+1)/2$	$p=13$	1.313
	KWQZJX-5871	$a(k1)+aa(k0)/aa$	$a=13$	1.313008
	KZA9QW-5871	$(1+2p)/4p$	$p = 13$	1.31300813
	M9U4WQ-5871	$(1+2p)/4p$	$p=13$	1.313
	MHYD2U-5871	$(K1+K0a)/a$	13	1.3130
	MLXQMY-5876	$(1+2*p)/4*p$	$p=13$	1.31300
	NHTHVU-5876	$(1+2p)/4p$	$p=13$	1.3130
	NNMFKK-5871	$(1+2p)/4p$	$p=13$	0.6565
	PHDJDP-5871	$0.5+1/(4*p)$	13	1.31
	PKH9HK-5871	$((1/4)(1+2q))/q$	$q=13$	1.3130

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D10S1248	R3847R-5876	$(1+2p)/4p$	$p=0.3075$	1.31300813
	R3QQ3N-5876	$R=B(K1)+B(K1)+2AB(K0)U=2A$ $BLR=R/U$	$A=13 B=14 K1=0.25 K0=0.5$	1.313
	RPLUJL-5871	$(1+2p)/4p$	$p = 13$	1.3130
	TXUJ2Q-5876	$(1+2p)/4p$	$p=13$	1.313
	UTYEGL-5876	$(1+2p)/4p$	$p=13$	1.3130
	V26FGC-5876	$(1+2p)/4p$	$p = 13$	1.31300813
	XVT9RK-5871	$(1+2p)/4p$	$p=13$	1.313
	YG8AKH-5871	$k1+k0a/a$	$a = 13 b = 14$	1.3130

**Statistical Analysis Summary of D10S1248**
**Likelihood Ratio Mode: 1.3130**



TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D12S391	6D9Q27-5876	1/2		0.5
	7RZATD-5871	1/2	--	0.5000
	8C63FC-5876	1/2		0.5000
	9NVAR8-5871	Z0		0.5
	9Z8NQZ-5876	1/2	NA	0.5
	AHLDLC-5871	cd/2cd	c=18 d=18.3	0.50000
	BV73C2-5871	1/2		0.5000
	D4UP4A-5871	cd/2cd	c=15 d=18	0.5000
	DF4AJW-5871	0.5		0.5
	DKDPQY-5876	1/2		0.5
	ELNU23-5876	1/2		0.50000
	G36VP4-5871	1/2	-	0.5
	HZV8KX-5876	1/2		0.5000
	K3WUGY-5871	N/A	N/A	0.5
	KFJ2EZ-5871	-	-	0.5
	KWQZJX-5871	2cd(k0)/2cd	c=15 d=23	0.50
	KZA9QW-5871	2/4		0.5000
	M9U4WQ-5871	2:4		0.5
	MHYD2U-5871	K0		0.5000
	MLXQMY-5876	2/4	-	0.5
	NHTHVU-5876	0.5		0.5000
	NNMFKK-5871	1/2		0.5000
	PHDJDP-5871	0.5		0.5
PKH9HK-5871	1/2		0.5	

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D12S391	R3847R-5876			0.5
	R3QQ3N-5876	$R=2CD(K0)U=2CDLR=R/U$	$C=15 D=23 K1=0.25 K0=0.5$	0.5
	RPLUJL-5871	1/2	-	0.5
	TXUJ2Q-5876	1/2		0.5
	UTYEGL-5876	1/2	N/A	0.5000
	V26FGC-5876	2/4		0.5
	XVT9RK-5871	1/2		0.5
	YG8AKH-5871	k0	$a = 18 b = 18.3 c = 15 d = 23$	0.5

**Statistical Analysis Summary of D12S391**
**Likelihood Ratio Mode: 0.5**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D13S317	6D9Q27-5876	$(1+4p)/8p$	$p=8$	1.5373
	7RZATD-5871	$(1+4p)/8p$	$p=8$	1.5373
	8C63FC-5876	$(1+4p)/8p$	$p=8$	1.5373
	9NVAR8-5871	$(Z1/4Pp)+Z0$	$p = 8$	1.537
	9Z8NQZ-5876	$(1+4p)/8p$	8	1.537
	AHL DLC-5871	$(0.25+a)/2a$	$a=8$	1.5373
	BV73C2-5871	$(1+4P)/8P$	$P = 8$	1.5373
	D4UP4A-5871	$(0.25+a)/2a$	$a=8$	1.537
	DF4AJW-5871	$(0.25+p)/2p$	$p=8$	1.5373
	DKDPQY-5876	$1+4r/8r$	$r=8$	1.5373
	ELNU23-5876	$(1+4p)/8p$	$p=8$	1.5373
	G36VP4-5871	$(1+4p)/8p$	8	1.5373
	HZV8KX-5876	$(1+4p)/8p$	$p=8$	1.537
	K3WUGY-5871	N/A	N/A	1.5373
	KFJ2EZ-5871	$((1/4p)+1)/2$	$p=8$	1.537
	KWQZJX-5871	$c(k1)+2ac(k0)/2ac$	$a=8$	1.537344
	KZA9QW-5871	$(1+4p)/8p$	$p = 8$	1.537344398
	M9U4WQ-5871	$(1+4p)/8p$	$p=8$	1.537
	MHYD2U-5871	$(K1+2K0a)/2a$	8	1.5373
	MLXQMY-5876	$(1+4*p)/8*p$	$p=8$	1.53734
	NHTHVU-5876	$(1+4p)/8p$	$p=8$	1.5373
	NNMFKK-5871	$(1+4p)/8p$	$p=8$	1.5373
	PHDJDP-5871	$0.5+1/(8*p)$	8	1.54
	PKH9HK-5871	$((1/8)(1+4q))/q$	$q=8$	1.5373

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D13S317	R3847R-5876	$(1+4p)/8p$	$p=0.1205$	1.537344398
	R3QQ3N-5876	$R=C(K1)+2AC(K0)U=2ACLR=R/U$	$A=8 C=12 K1=0.25 K0=0.5$	1.537
	RPLUJL-5871	$(1+4p)/8p$	$p = 8$	1.5373
	TXUJ2Q-5876	$(1+4p)/8p$	$p=8$	1.537
	UTYEGL-5876	$(1+4p)/8p$	$p=8$	1.5373
	V26FGC-5876	$(1+4p)/8p$	$p = 8$	1.537344398
	XVT9RK-5871	$(1+4p)/8p$	$p=8$	1.537
	YG8AKH-5871	$k1+2k0a/2a$	$a = 8 b = 11 c = 12$	1.5373

**Statistical Analysis Summary of D13S317**
**Likelihood Ratio Mode: 1.5373**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D16S539	6D9Q27-5876	1/2		0.5
	7RZATD-5871	1/2	--	0.5000
	8C63FC-5876	1/2		0.5000
	9NVAR8-5871	Z0		0.5
	9Z8NQZ-5876	1/2	NA	0.5
	AHLDLC-5871	cd/2cd	c=12 d=12	0.50000
	BV73C2-5871	1/2		0.5000
	D4UP4A-5871	cd/2cd	c=10 d=11	0.5000
	DF4AJW-5871	0.5		0.5
	DKDPQY-5876	1/2		0.5
	ELNU23-5876	1/2		0.50000
	G36VP4-5871	1/2	-	0.5
	HZV8KX-5876	1/2		0.5000
	K3WUGY-5871	N/A	N/A	0.5
	KFJ2EZ-5871	-	-	0.5
	KWQZJX-5871	2bc(k0)/2bc	b=10 c=11	0.50
	KZA9QW-5871	2/4		0.5000
	M9U4WQ-5871	2:4		0.5
	MHYD2U-5871	K0		0.5000
	MLXQMY-5876	2/4	-	0.5
	NHTHVU-5876	0.5		0.5000
	NNMFKK-5871	1/2		0.5000
	PHDJDP-5871	0.5		0.5
	PKH9HK-5871	1/2		0.5

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D16S539	R3847R-5876			0.5
	R3QQ3N-5876	$R=2BC(KO)U=2BCLR=R/U$	B=10 C=11 K1=0.25 KO=0.5	0.5
	RPLUJL-5871	1/2	-	0.5
	TXUJ2Q-5876	1/2		0.5
	UTYEGL-5876	1/2	N/A	0.5000
	V26FGC-5876	2/4		0.5
	XVT9RK-5871	1/2		0.5
	YG8AKH-5871	k0	a = 12 b = 10 c = 11	0.5

**Statistical Analysis Summary of D16S539**
**Likelihood Ratio Mode: 0.5**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D18S51	6D9Q27-5876	$(1+4p)/8p$	$p=14$	1.4307
	7RZATD-5871	$(1+4p)/8p$	$p=14$	1.4308
	8C63FC-5876	$(1+4p)/8p$	$p=14$	1.4308
	9NVAR8-5871	$(Z1/4Pp)+Z0$	$p=14$	1.430
	9Z8NQZ-5876	$(1+4p)/8p$	14	1.431
	AHLDLC-5871	$(0.25+a)/2a$	$a=14$	1.4308
	BV73C2-5871	$(1+4P)/8P$	$P=14$	1.4308
	D4UP4A-5871	$(0.25+a)/2a$	$a=14$	1.430
	DF4AJW-5871	$(0.25+p)/2p$	$p=14$	1.4308
	DKDPQY-5876	$1+4p/8p$	$p=15$	1.4308
	ELNU23-5876	$(1+4p)/8p$	$p=14$	1.4308
	G36VP4-5871	$(1+4p)/8p$	14	1.4307
	HZV8KX-5876	$(1+4p)/8p$	$p=14$	1.430
	K3WUGY-5871	N/A	N/A	1.4308
	KFJ2EZ-5871	$((1/4p)+1)/2$	$p=14$	1.430
	KWQZJX-5871	$c(k1)+2ac(k0)/2ac$	$a=14$	1.430752
	KZA9QW-5871	$(1+4p)/8p$	$p=14$	1.430752048
	M9U4WQ-5871	$(1+4p)/8p$	$p=14$	1.431
	MHYD2U-5871	$(K1+2K0a)/2a$	14	1.4308
	MLXQMY-5876	$(1+4*p)/8*p$	$p=14$	1.43075
	NHTHVU-5876	$(1+4p)/8p$	$p=14$	1.4308
	NNMFKK-5871	$(1+4p)/8p$	$p=14$	1.4308
	PHDJDP-5871	$0.5+1/(8*p)$	14	1.43
	PKH9HK-5871	$((1/8)(1+4q))/q$	$q=14$	1.4308

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D18S51	R3847R-5876	$(1+4p)/8p$	$p=0.1343$	1.430752048
	R3QQ3N-5876	$R=C(K1)+2AC(K0)U=2ACLR=R/U$	$A=14 C=15 K1=0.25 K0=0.5$	1.431
	RPLUJL-5871	$(1+4p)/8p$	$p = 14$	1.4308
	TXUJ2Q-5876	$(1+4p)/8p$	$p=14$	1.431
	UTYEGL-5876	$(1+4p)/8p$	$p=14$	1.4308
	V26FGC-5876	$(1+4p)/8p$	$p = 14$	1.430752048
	XVT9RK-5871	$(1+4p)/8p$	$p=14$	1.431
	YG8AKH-5871	$k1+2k0a/2a$	$a = 14 b = 19 c = 15$	1.4308

**Statistical Analysis Summary of D18S51**
**Likelihood Ratio Mode: 1.4308**



TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D19S433	6D9Q27-5876	$(1+2p)/4p$	$p=15$	2.0974
	7RZATD-5871	$(1+2r)/4r$	$r=15$	2.0974
	8C63FC-5876	$(1+2p)/4p$	$p=15$	2.0974
	9NVAR8-5871	$(Z1/2Pp)+Z0$	$p = 15$	2.097
	9Z8NQZ-5876	$(1+2p)/4p$	15	2.097
	AHL DLC-5871	$(0.5+a)/2a$	$a=15$	2.0974
	BV73C2-5871	$(1+2P)/4P$	$P = 15$	2.0974
	D4UP4A-5871	$(0.5+a)/2a$	$a=15$	2.097
	DF4AJW-5871	$0.5+(0.25/p)$	$p=15$	2.0974
	DKDPQY-5876	$1+2q/4q$	$q=15$	2.0974
	ELNU23-5876	$(1+2p)/4p$	$p=15$	2.0974
	G36VP4-5871	$(1+2p)/4p$	15	2.0974
	HZV8KX-5876	$(1+2p)/4p$	$p=15$	2.097
	K3WUGY-5871	N/A	N/A	2.0974
	KFJ2EZ-5871	$((1/2p)+1)/2$	$p=15$	2.097
	KWQZJX-5871	$a(k1)+aa(k0)/aa$	$a=15$	2.097444
	KZA9QW-5871	$(1+2p)/4p$	$p = 15$	2.097444089
	M9U4WQ-5871	$(1+2p)/4p$	$p=15$	2.097
	MHYD2U-5871	$(K1+K0a)/a$	15	2.0974
	MLXQMY-5876	$(1+2*p)/4*p$	$p=15$	2.09744
	NHTHVU-5876	$(1+2p)/4p$	$p=15$	2.0974
	NNMFKK-5871	$(1+2r)/4r$	$r=15$	2.0974
	PHDJDP-5871	$0.5+1/(4*p)$	15	2.10
PKH9HK-5871	$((1/4)(1+2q))/q$	$q=15$	2.0974	

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D19S433	R3847R-5876	$(1+2p)/4p$	$p=0.1565$	2.097444089
	R3QQ3N-5876	$R=A(K1)+A^2(K0)U=A^2LR=R/U$	$A=15 K1=0.25 K0=0.5$	2.097
	RPLUJL-5871	$(1+2p)/4p$	$p = 15$	2.0974
	TXUJ2Q-5876	$(1+2p)/4p$	$p=15$	2.097
	UTYEGL-5876	$(1+2p)/4p$	$p=15$	2.0974
	V26FGC-5876	$(1+2p)/4p$	$p = 15$	2.097444089
	XVT9RK-5871	$(1+2p)/4p$	$p=15$	2.097
	YG8AKH-5871	$k1+k0a/a$	$a = 15 b = 13$	2.0974

**Statistical Analysis Summary of D19S433**
**Likelihood Ratio Mode: 2.0974**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D21S11	6D9Q27-5876	$(1+4p)/8p$	$p=29$	1.1182
	7RZATD-5871	$(1+4q)/8q$	$q=29$	1.1182
	8C63FC-5876	$(1+4p)/8p$	$p=29$	1.1182
	9NVAR8-5871	$(Z1/4Pp)+Z0$	$p = 29$	1.118
	9Z8NQZ-5876	$(1+4p)/8p$	29	1.118
	AHLDLC-5871	$(0.25+a)/2a$	$a=29$	1.1182
	BV73C2-5871	$(1+4P)/8P$	$P = 29$	1.1182
	D4UP4A-5871	$(0.25+a)/2a$	$a=29$	1.118
	DF4AJW-5871	$(0.25+p)/2p$	$p=29$	1.1182
	DKDPQY-5876	$1+4q/8q$	$q=29$	1.1182
	ELNU23-5876	$(1+4p)/8p$	$p=29$	1.1182
	G36VP4-5871	$(1+4p)/8p$	29	1.1181
	HZV8KX-5876	$(1+4p)/8p$	$p=29$	1.118
	K3WUGY-5871	N/A	N/A	1.1182
	KFJ2EZ-5871	$((1/4p)+1)/2$	$p=29$	1.118
	KWQZJX-5871	$c(k1)+2ac(k0)/2ac$	$a=29$	1.118199
	KZA9QW-5871	$(1+4p)/8p$	$p = 29$	1.118199802
	M9U4WQ-5871	$(1+4p)/8p$	$p=29$	1.118
	MHYD2U-5871	$(K1+2K0a)/2a$	29	1.1182
	MLXQMY-5876	$(1+4*p)/8*p$	$p=29$	1.11819
	NHTHVU-5876	$(1+4p)/8p$	$p=29$	1.1182
	NNMFKK-5871	$(1+4q)/8q$	$q=29$	1.1182
	PHDJDP-5871	$0.5+1/(8*p)$	29	1.12
	PKH9HK-5871	$((1/8)(1+4q))/q$	$q=29$	1.1182

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D21S11	R3847R-5876	$(1+4p)/8p$	$p=0.2022$	1.118199802
	R3QQ3N-5876	$R=C(K1)+2AC(K0)U=2ACLR=R/U$	$A=29 C=28 K1=0.25 K0=0.5$	1.118
	RPLUJL-5871	$(1+4p)/8p$	$p = 29$	1.1182
	TXUJ2Q-5876	$(1+4p)/8p$	$p=29$	1.118
	UTYEGL-5876	$(1+4p)/8p$	$p=29$	1.1182
	V26FGC-5876	$(1+4p)/8p$	$p = 29$	1.118199802
	XVT9RK-5871	$(1+4p)/8p$	$p=29$	1.118
	YG8AKH-5871	$k1+2k0a/2a$	$a = 29 b = 30 c = 28$	1.1182

**Statistical Analysis Summary of D21S11**
**Likelihood Ratio Mode: 1.1182**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D22S1045	6D9Q27-5876	$(1+4p)/8p$	$p=16$	0.8269
	7RZATD-5871	$(1+4r)/8r$	$r=16$	0.8270
	8C63FC-5876	$(1+4p)/8p$	$p=16$	0.8270
	9NVAR8-5871	$(Z1/4Pp)+Z0$	$p=16$	0.826
	9Z8NQZ-5876	$(1+4p)/8p$	$16$	0.8270
	AHL DLC-5871	$(0.25+a)/2a$	$a=16$	0.82697
	BV73C2-5871	$(1+4P)/8P$	$P=16$	0.8270
	D4UP4A-5871	$(0.25+a)/2a$	$a=16$	0.8269
	DF4AJW-5871	$(0.25+p)/2p$	$p=16$	0.8270
	DKDPQY-5876	$1+4r/8r$	$r=10$	0.827
	ELNU23-5876	$(1+4p)/8p$	$p=16$	0.82697
	G36VP4-5871	$(1+4p)/8p$	$16$	0.8269
	HZV8KX-5876	$(1+4p)/8p$	$p=16$	0.8269
	K3WUGY-5871	N/A	N/A	0.8270
	KFJ2EZ-5871	$((1/4p)+1)/2$	$p=16$	0.826
	KWQZJX-5871	$c(k1)+2ac(k0)/2ac$	$a=16$	0.826968
	KZA9QW-5871	$(1+4p)/8p$	$p=16$	0.826968349
	M9U4WQ-5871	$(1+4p)/8p$	$p=16$	0.827
	MHYD2U-5871	$(K1+2K0a)/2a$	$16$	0.82697
	MLXQMY-5876	$(1+4*p)/8*p$	$p=16$	0.82696
	NH THVU-5876	$(1+4p)/8p$	$p=16$	0.8270
	NNMFKK-5871	$(1+4r)/8r$	$r=16$	0.8270
	PHDJDP-5871	$0.5+1/(8*p)$	$16$	0.83
	PKH9HK-5871	$((1/8)(1+4q))/q$	$q=16$	0.8270

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D22S1045	R3847R-5876	$(1+4p)/8p$	$p=0.3823$	0.826968349
	R3QQ3N-5876	$R=C(K1)+2AC(K0)U=2ACLR=R/U$	$A=16 C=15 K1=0.25 K0=0.5$	0.827
	RPLUJL-5871	$(1+4p)/8p$	$p = 16$	0.8270
	TXUJ2Q-5876	$(1+4p)/8p$	$p=16$	0.827
	UTYEGL-5876	$(1+4p)/8p$	$p=16$	0.82697
	V26FGC-5876	$(1+4p)/8p$	$p = 16$	0.826968349
	XVT9RK-5871	$(1+4p)/8p$	$p=16$	0.8270
	YG8AKH-5871	$k1+2k0a/2a$	$a = 16 b = 14 c = 15$	0.8270

**Statistical Analysis Summary of D22S1045**
**Likelihood Ratio Mode: 0.8270**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
CSF1PO	6D9Q27-5876	$(1+4p)/8p$	$p=10$	1.0676
	7RZATD-5871	$(1+4p)/8p$	$p=10$	1.0677
	8C63FC-5876	$(1+4p)/8p$	$p=10$	1.0677
	9NVAR8-5871	$(Z1/4Pp)+Z0$	$p=10$	1.067
	9Z8NQZ-5876	$(1+4p)/8p$	10	1.068
	AHL DLC-5871	$(0.25+a)/2a$	$a=10$	1.0677
	BV73C2-5871	$(1+4P)/8P$	$P=10$	1.0677
	D4UP4A-5871	$(0.25+a)/2a$	$a=10$	1.067
	DF4AJW-5871	$(0.25+p)/2p$	$p=10$	1.0677
	DKDPQY-5876	$1+4p/8p$	$p=10$	1.0677
	ELNU23-5876	$(1+4p)/8p$	$p=10$	1.0677
	G36VP4-5871	$(1+4p)/8p$	10	1.0676
	HZV8KX-5876	$(1+4p)/8p$	$p=10$	1.067
	K3WUGY-5871	N/A	N/A	1.0677
	KFJ2EZ-5871	$((1/4p)+1)/2$	$p=10$	1.067
	KWQZJX-5871	$c(k1)+2ac(k0)/2ac$	$a=10$	1.067666
	KZA9QW-5871	$(1+4p)/8p$	$p=10$	1.067665758
	M9U4WQ-5871	$(1+4p)/8p$	$p=10$	1.118
	MHYD2U-5871	$(K1+2K0a)/2a$	10	1.0677
	MLXQMY-5876	$(1+4*p)/8*p$	$p=10$	1.06766
	NHTHVU-5876	$(1+4p)/8p$	$p=10$	1.0677
	NNMFKK-5871	$(1+4p)/8p$	$p=10$	1.0677
	PHDJDP-5871	$0.5+1/(8*p)$	10	1.07
	PKH9HK-5871	$((1/8)(1+4q))/q$	$q=10$	1.0677

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
CSF1PO	R3847R-5876	$(1+4p)/8p$	$p=0.2202$	1.067665758
	R3QQ3N-5876	$R=C(K1)+2AC(K0)U=2ACLR=R/U$	$A=10 C=11 K1=0.25 K0=0.5$	1.066
	RPLUJL-5871	$(1+4p)/8p$	$p =$	1.0677
	TXUJ2Q-5876	$(1+4p)/8p$	$p=10$	1.068
	UTYEGL-5876	$(1+4p)/8p$	$p=10$	1.0677
	V26FGC-5876	$(1+4p)/8p$	$p = 10$	1.067665758
	XVT9RK-5871	$(1+4p)/8p$	$p=10$	1.068
	YG8AKH-5871	$k1+2k0a/2a$	$a = 10 b = 12 c = 11$	1.0677

**Statistical Analysis Summary of CSF1PO**
**Likelihood Ratio Mode: 1.0677**



TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
FGA	6D9Q27-5876	1/2		0.5
	7RZATD-5871	1/2	--	0.5000
	8C63FC-5876	1/2		0.5000
	9NVAR8-5871	Z0		0.5
	9Z8NQZ-5876	1/2	NA	0.5
	AHLDLC-5871	cd/2cd	c=22 d=25	0.50000
	BV73C2-5871	1/2		0.5000
	D4UP4A-5871	cd/2cd	c=22 d=23	0.5000
	DF4AJW-5871	0.5		0.5
	DKDPQY-5876	1/2		0.5
	ELNU23-5876	1/2		0.50000
	G36VP4-5871	1/2	-	0.5
	HZV8KX-5876	1/2		0.5000
	K3WUGY-5871	N/A	N/A	0.5
	KFJ2EZ-5871	-	-	0.5
	KWQZJX-5871	2cd(k0)/2cd	c=23 d=24	0.50
	KZA9QW-5871	2/4		0.5000
	M9U4WQ-5871	2:4		0.5
	MHYD2U-5871	K0		0.5000
	MLXQMY-5876	2/4	-	0.5
	NHTHVU-5876	0.5		0.5000
	NNMFKK-5871	1/2		0.5000
	PHDJDP-5871	0.5		0.5
PKH9HK-5871	1/2		0.5	

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
FGA	R3847R-5876			0.5
	R3QQ3N-5876	$R=2CD(K0)U=2CDLR=R/U$	$C=23 D=24 K1=0.25 K0=0.5$	0.5
	RPLUJL-5871	$1/2$	-	0.5
	TXUJ2Q-5876	$1/2$		0.5
	UTYEGL-5876	$1/2$	N/A	0.5000
	V26FGC-5876	$2/4$		0.5
	XVT9RK-5871	$1/2$		0.5
	YG8AKH-5871	k0	$a = 22 b = 25 c = 23 d = 24$	0.5

**Statistical Analysis Summary of FGA**
**Likelihood Ratio Mode: 0.5**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
PentaD	6D9Q27-5876	$(p+q+4pq)/8pq$	$p=9 \ q=11$	2.0561
	7RZATD-5871	$(p+r+4pr)/8pr$	$p=9 \ r=11$	2.0561
	8C63FC-5876	$(p+q+4pq)/8pq$	$p=9 \ q=11$	2.0561
	9NVAR8-5871	$2Z2+Z1(Pp+Pq)/4PpPq+Z0$	$p=9 \ q=11$	2.056
	9Z8NQZ-5876	$(p+q+4pq)/8pq$	9,11	2.056
	AHL DLC-5871	$(0.25a+0.25b+ab)/2ab$	$a=9 \ b=11$	2.0561
	BV73C2-5871	$(p+q+4pq)/8pq$	$p=9 \ q=11$	2.0561
	D4UP4A-5871	$(0.25a+0.25b+ab)/2ab$	$a=9 \ b=11$	2.056
	DF4AJW-5871	$(0.25(p+q)+(pq))/2pq$	$p=9 \ q=11$	2.0561
	DKDPQY-5876	$(p+q)+4pq/8pq$	$p=9 \ q=11$	2.0561
	ELNU23-5876	$(p+q+4pq)/8pq$	$p=9 \ q=11$	2.0561
	G36VP4-5871	$(p+q+4pq)/8pq$	9,11	2.0561
	HZV8KX-5876	$(p+q+4pq)/8pq$	$p=9 \ q=11$	2.056
	K3WUGY-5871	N/A	N/A	2.0561
	KFJ2EZ-5871	$((p+q)/(4*p*q))+1)/2$	$p=9 \ q=11$	2.056
	KWQZJX-5871	$a(k1)+b(k1)+2ab(k0)/2ab$	$a=9 \ b=11$	2.056142
	KZA9QW-5871	$(p+q+4pq)/8pq$	$p=9, \ q=11$	2.056142914
	M9U4WQ-5871	$(p+q+4pq)/8pq$	$p=9 \ q=11$	2.056
	MHYD2U-5871	$(K1a+K1b+K02ab)/2ab$	9,11	2.0561
	MLXQMY-5876	$(p+q+4*p*q)/8*p*q$	$p=9, \ q=11$	2.05614
	NHTHVU-5876	$(p+q+4pq)/8pq$	$p=9 \ q=11$	2.0561
	NNMFKK-5871	$(p+r+4pr)/8pr$	$p=9 \ r=11$	2.0561
	PHDJDP-5871	$0.5+(p+q)/(8*p*q)$	9,11	2.06
	PKH9HK-5871	$((1/8)(p+q+4pq))/pq$	$p=11 \ q=9$	2.0561

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
PentaD	R3847R-5876	$(p+q+4pq)/8pq$	$p=0.2216$ $q=0.1260$	2.056142914
	R3QQ3N-5876	$R=A(K1)+B(K1)+2AB(K0)U=2A$ $BLR=R/U$	$A=9$ $B=11$ $K1=0.25$ $K0=0.5$	2.057
	RPLUJL-5871	$(p+q+4pq)/8pq$	$p = 9$ $q = 11$	2.0561
	TXUJ2Q-5876	$(p+q+4pq)/8pq$	$p=9$ $q=11$	2.056
	UTYEGL-5876	$(p+q+4pq)/8pq$	$p=9$ $q=11$	2.0561
	V26FGC-5876	$(p+q+4pq)/8pq$	$p = 9$ $q = 11$	2.056142914
	XVT9RK-5871	$(p+q+4pq)/8pq$	$p=9$ $q=11$	2.056
	YG8AKH-5871	$k2+k1a+k1b+k02ab/2ab$	$a = 9$ $b = 11$	2.0561

**Statistical Analysis Summary of PentaD**
**Likelihood Ratio Mode: 2.0561**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
PentaE	6D9Q27-5876	$(1+4p)/8p$	$p=17$	3.0773
	7RZATD-5871	$(1+4z)/8z$	$z=17$	3.0773
	8C63FC-5876	$(1+4p)/8p$	$p=17$	3.0773
	9NVAR8-5871	$(Z1/4Pp)+Z0$	$p = 17$	3.077
	9Z8NQZ-5876	$(1+4p)/8p$	17	3.077
	AHL DLC-5871	$(0.25+c)/2c$	$c=17$	3.0773
	BV73C2-5871	$(1+4P)/8P$	$P = 17$	3.0773
	D4UP4A-5871	$(0.25+a)/2a$	$a=17$	3.077
	DF4AJW-5871	$(0.25+p)/2p$	$p=17$	3.0773
	DKDPQY-5876	$1+4q/8q$	$q=17$	3.0773
	ELNU23-5876	$(1+4p)/8p$	$p=17$	3.0773
	G36VP4-5871	$(1+4p)/8p$	17	3.0773
	HZV8KX-5876	$(1+4p)/8p$	$p=17$	3.077
	K3WUGY-5871	N/A	N/A	3.0773
	KFJ2EZ-5871	$((1/4p)+1)/2$	$p=17$	3.077
	KWQZJX-5871	$c(k1)+2ac(k0)/2ac$	$a=17$	3.077319
	KZA9QW-5871	$(1+4p)/8p$	$p = 17$	3.077319588
	M9U4WQ-5871	$(1+4p)/8p$	$p=17$	3.077
	MHYD2U-5871	$(K1+2K0a)/2a$	17	3.0773
	MLXQMY-5876	$(1+4*p)/8*p$	$p=17$	3.07731
	NHTHVU-5876	$(1+4p)/8p$	$p=17$	3.0773
	NNMFKK-5871	$(1+4p)/8p$	$p=17$	3.0773
	PHDJDP-5871	$0.5+1/(8*p)$	17	3.08
	PKH9HK-5871	$((1/8)(1+4q))/q$	$q=17$	3.0773

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
PentaE	R3847R-5876	$(1+4p)/8p$	$p=0.0485$	3.077319588
	R3QQ3N-5876	$R=C(K1)+2AC(K0)U=2ACLR=R/U$	$A=17 C=5 K1=0.25 K0=0.5$	3.067
	RPLUJL-5871	$(1+4p)/8p$	$p = 17$	3.0773
	TXUJ2Q-5876	$(1+4p)/8p$	$p=17$	3.077
	UTYEGL-5876	$(1+4p)/8p$	$p=17$	3.0773
	V26FGC-5876	$(1+4p)/8p$	$p = 17$	3.077319588
	XVT9RK-5871	$(1+4p)/8p$	$p=17$	3.077
	YG8AKH-5871	$k1+2k0a/2a$	$a = 17 b = 12 c = 5$	3.0773

**Statistical Analysis Summary of PentaE**
**Likelihood Ratio Mode: 3.0773**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
SE33	6D9Q27-5876	1/2		0.5
	7RZATD-5871	1/2	--	0.5000
	8C63FC-5876	1/2		0.5000
	9NVAR8-5871	Z0		0.5
	9Z8NQZ-5876	1/2	NA	0.5
	AHLDLC-5871	cd/2cd	c=27.2 d=29.2	0.50000
	BV73C2-5871	1/2		0.5000
	D4UP4A-5871	cd/2cd	c=19 d=20	0.5000
	DF4AJW-5871	0.5		0.5
	DKDPQY-5876	1/2		0.5
	ELNU23-5876	1/2		0.50000
	G36VP4-5871	1/2	-	0.5
	HZV8KX-5876	1/2		0.5000
	K3WUGY-5871	N/A	N/A	0.5
	KFJ2EZ-5871	-	-	0.5
	KWQZJX-5871	2cd(k0)/2cd	c=19 d=20	0.50
	KZA9QW-5871	2/4		0.5000
	M9U4WQ-5871	2:4		0.5
	MHYD2U-5871	K0		0.5000
	MLXQMY-5876	2/4	-	0.5
	NHTHVU-5876	0.5		0.5000
	NNMFKK-5871	1/2		0.5000
	PHDJDP-5871	0.5		0.5
	PKH9HK-5871	1/2		0.5

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
SE33	R3847R-5876			0.5
	R3QQ3N-5876	$R=2CD(K0)U=2CDLR=R/U$	$C=19 D=20 K1=0.25 K0=0.5$	0.5
	RPLUJL-5871	1/2	-	0.5
	TXUJ2Q-5876	1/2		0.5
	UTYEGL-5876	1/2	N/A	0.5000
	V26FGC-5876	2/4		0.5
	XVT9RK-5871	1/2		0.5
	YG8AKH-5871	k0	$a = 27.2 b = 29.2 c = 19 d = 20$	0.5

**Statistical Analysis Summary of SE33**
**Likelihood Ratio Mode: 0.5**



TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
TH01	6D9Q27-5876	$(p+q+4pq)/8pq$	$p=7 \ q=9.3$	1.507
	7RZATD-5871	$(a+p+4ap)/8ap$	$p=7 \ a=9.3$	1.5071
	8C63FC-5876	$(p+q+4pq)/8pq$	$p=7 \ q=9.3$	1.5071
	9NVAR8-5871	$2Z2+Z1(Pp+Pq)/4PpPq+Z0$	$p=7 \ q=9.3$	1.507
	9Z8NQZ-5876	$(p+q+4pq)/8pq$	7, 9.3	1.507
	AHL DLC-5871	$(0.25a+0.25b+ab)/2ab$	$a=7 \ b=9.3$	1.5071
	BV73C2-5871	$(p+q+4pq)/8pq$	$p=7 \ q=9.3$	1.5071
	D4UP4A-5871	$(0.25a+0.25b+ab)/2ab$	$a=7 \ b=9.3$	1.507
	DF4AJW-5871	$(0.25(p+q)+(pq))/2pq$	$p=7 \ q=9.3$	1.5071
	DKDPQY-5876	$(p+q)+4pq/8pq$	$p=7 \ q=9.3$	1.507
	ELNU23-5876	$(p+q+4pq)/8pq$	$p=7 \ q=9.3$	1.5071
	G36VP4-5871	$(p+q+4pq)/8pq$	7,9.3	1.5070
	HZV8KX-5876	$(p+q+4pq)/8pq$	$p=7 \ q=9.3$	1.507
	K3WUGY-5871	N/A	N/A	1.5071
	KFJ2EZ-5871	$((p+q)/(4*p*q))+1)/2$	$p=7 \ q=9.3$	1.507
	KWQZJX-5871	$a(k1)+b(k1)+2ab(k0)/2ab$	$a=7 \ b=9.3$	1.507086
	KZA9QW-5871	$(p+q+4pq)/8pq$	$p=7, \ q=9.3$	1.507086088
	M9U4WQ-5871	$(p+q+4pq)/8pq$	$p=7 \ q=9.3$	1.507
	MHYD2U-5871	$(K1a+K1b+K02ab)/2ab$	7,9.3	1.5071
	MLXQMY-5876	$(p+q+4*p*q)/8*p*q$	$p=7, \ q=9.3$	1.50708
	NHTHVU-5876	$(p+q+4pq)/8pq$	$p=7 \ q=9.3$	1.5071
	NNMFKK-5871	$(a+p+4ap)/8ap$	$a=9.3 \ p=7$	1.1809
	PHDJDP-5871	$0.5+(p+q)/(8*p*q)$	7,9.3	1.51
	PKH9HK-5871	$((1/8)(p+q+4pq))/pq$	$p=7 \ q=9.3$	1.5071

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
TH01	R3847R-5876	$(p+q+4pq)/8pq$	$p=0.1939$ $q=0.3449$	1.507086088
	R3QQ3N-5876	$R=A(K1)+B(K1)+2AB(K0)U=2A$ $BLR=R/U$	$A=7$ $B=9.3$ $K1=0.25$ $K0=0.5$	1.508
	RPLUJL-5871	$(p+q+4pq)/8pq$	$p = 7$ $q = 9$	1.5071
	TXUJ2Q-5876	$(p+q+4pq)/8pq$	$p=7$ $q=9.3$	1.507
	UTYEGL-5876	$(p+q+4pq)/8pq$	$p=7$ $q=9.3$	1.5071
	V26FGC-5876	$(p+q+4pq)/8pq$	$p = 7$ $q = 9.3$	1.507086088
	XVT9RK-5871	$(p+q+4pq)/8pq$	$p=7$ $q=9.3$	1.507
	YG8AKH-5871	$k2+k1a+k1b+k02ab/2ab$	$a = 7$ $b = 9.3$	1.5071

**Statistical Analysis Summary of TH01**
**Likelihood Ratio Mode: 1.5071**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
TPOX	6D9Q27-5876	$(1+4p)/8p$	$p=8$	0.7302
	7RZATD-5871	$(1+4p)/8p$	$p=8$	0.7302
	8C63FC-5876	$(1+4p)/8p$	$p=8$	0.7302
	9NVAR8-5871	$(Z1/4Pp)+Z0$	$p = 8$	0.730
	9Z8NQZ-5876	$(1+4p)/8p$	8	0.7302
	AHL DLC-5871	$(0.25+a)/2a$	$a=8^*$	0.7302
	BV73C2-5871	$(1+4P)/8P$	$p = 8$	0.7302
	D4UP4A-5871	$(0.25+a)/2a$	$a=8$	0.7302
	DF4AJW-5871	$(0.25+p)/2p$	$p=8$	0.7302
	DKDPQY-5876	$1+4q/8q$	$q=8$	0.7302
	ELNU23-5876	$(1+4p)/8p$	$p=8$	0.73024
	G36VP4-5871	$(1+4p)/8p$	8	0.7302
	HZV8KX-5876	$(1+4p)/8p$	$p=8$	0.7302
	K3WUGY-5871	N/A	N/A	0.7302
	KFJ2EZ-5871	$((1/4p)+1)/2$	$p=8$	0.730
	KWQZJX-5871	$c(k1)+2ac(k0)/2ac$	$a=8$	0.730244
	KZA9QW-5871	$(1+4p)/8p$	$p = 8$	0.730244981
	M9U4WQ-5871	$(1+4p)/8p$	$p=8$	0.730
	MHYD2U-5871	$(K1+2K0a)/2a$	8	0.73814
	MLXQMY-5876	$(1+4^*p)/8^*p$	$p=8$	0.73024
	NH THVU-5876	$(1+4p)/8p$	$p=8$	0.7302
	NNMFKK-5871	$(1+4p)/8p$	$p=8$	0.7381
	PHDJDP-5871	$0.5+1/(8^*p)$	8	0.73
	PKH9HK-5871	$((1/8)(1+4q))/q$	$q=8$	0.7302

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
TPOX	R3847R-5876	$(1+4p)/8p$	$p=0.5429$	0.73024498
	R3QQ3N-5876	$R=C(K1)+2AC(K0)U=2ACLR=R/U$	$A=8 C=9 K1=0.25 K0=0.5$	0.73
	RPLUJL-5871	$(1+4p)/8p$	$p = 8$	0.7302
	TXUJ2Q-5876	$(1+4p)/8p$	$p=8$	0.730
	UTYEGL-5876	$(1+4p)/8p$	$p=8$	0.7302
	V26FGC-5876	$(1+4p)/8p$	$p = 8$	0.730244981
	XVT9RK-5871	$(1+4p)/8p$	$p=8$	0.7302
	YG8AKH-5871	$k1+2k0a/2a$	$a = 8 b = 10 c = 9$	0.7302

**Statistical Analysis Summary of TPOX**
**Likelihood Ratio Mode: 0.7302**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
vWA	6D9Q27-5876	1/2		0.5
	7RZATD-5871	1/2	--	0.5000
	8C63FC-5876	1/2		0.5000
	9NVAR8-5871	Z0		0.5
	9Z8NQZ-5876	1/2	NA	0.5
	AHLDLC-5871	cd/2cd	c=17 d=18	0.50000
	BV73C2-5871	1/2		0.5000
	D4UP4A-5871	cd/2cd	c=17 d=18	0.5000
	DF4AJW-5871	0.5		0.5
	DKDPQY-5876	1/2		0.5
	ELNU23-5876	1/2		0.50000
	G36VP4-5871	1/2	-	0.5
	HZV8KX-5876	1/2		0.5000
	K3WUGY-5871	N/A	N/A	0.5
	KFJ2EZ-5871	-	-	0.5
	KWQZJX-5871	cc(k0)/cc	c=19	0.50
	KZA9QW-5871	2/4		0.5000
	M9U4WQ-5871	2:4		0.5
	MHYD2U-5871	K0		0.5000
	MLXQMY-5876	2/4	-	0.5
	NHTHVU-5876	0.5		0.5000
	NNMFKK-5871	1/2		0.5000
	PHDJDP-5871	0.5		0.5
	PKH9HK-5871	1/2		0.5

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
vWA	R3847R-5876			0.5
	R3QQ3N-5876	$R=2BC(KO)U=2BCLR=R/U$	B=17 C=18 K1=0.25 K0=0.5	0.5
	RPLUJL-5871	1/2	-	0.5
	TXUJ2Q-5876	1/2		0.5
	UTYEGL-5876	1/2	N/A	0.5000
	V26FGC-5876	2/4		0.5
	XVT9RK-5871	1/2		0.5
	YG8AKH-5871	k0	a = 17 b = 18 c = 19	0.5

**Statistical Analysis Summary of vWA**
**Likelihood Ratio Mode: 0.5**

## Kinship DNA Statistics

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

TABLE 7

WebCode-Test	Kinship Index	Claim Supported?
6D9Q27-5876	7.704	Yes
7RZATD-5871	7.7048	Inconclusive
8C63FC-5876	7.7048	Inconclusive
9NVAR8-5871	7	Yes
9Z8NQZ-5876	7.705	Inconclusive
AHLDLC-5871	7.788	Yes
BV73C2-5871	7.70487813758	Yes
D4UP4A-5871	7.788	Yes
DF4AJW-5871	7.7048	Inconclusive
DKDPQY-5876	7.7048	Inconclusive
ELNU23-5876	7.705	Yes
G36VP4-5871	7.6996	Inconclusive
HZV8KX-5876	7.665	Inconclusive
K3WUGY-5871	7.6687	Yes
KFJ2EZ-5871	7.655	Yes
KWQZJX-5871	7.70473583732	No
KZA9QW-5871	7.700	Yes
M9U4WQ-5871	12.345	Yes
MHYD2U-5871	7.788	No
MLXQMY-5876	LR=7.70477, Probability=88,5120%	Inconclusive
NHTHVU-5876	7.7048	Yes
NNMFKK-5871	3.4548	Inconclusive
PHDJDP-5871	7.84	Yes
PKH9HK-5871	15.4095	Yes
R3847R-5876	7,704768349	No
R3QQ3N-5876	7.673	No
RPLUJL-5871	7.7048	Yes
TXUJ2Q-5876	7.70958918	Inconclusive
UTYEGL-5876	7.788	Inconclusive

TABLE 7 - Kinship DNA Statistics

WebCode-Test	Kinship Index	Claim Supported?
V26FGC-5876	7.704768367	Inconclusive
XVT9RK-5871	7.7	Yes
YG8AKH-5871	7.7049	Inconclusive

Response Summary	Participants: 32
<i>Is the relationship claim of Aunt and Niece supported?</i>	
Yes	15
No	4
Inconclusive	13



# Additional Kinship Statistical Results

TABLE 8

WebCode-Test	Additional Statistical Results
7RZATD-5871	Combined Relationship Index: 7.7048. Probability of relationship = 88.5% (50% prior probability). AABB RT Standard 5.3.8.3 states that likelihood ratios of 0.1 through 10 shall be considered inconclusive for the tested relationship.
9Z8NQZ-5876	Note 1-Kinship. We are using four significant figures based on CTS instructions. Typically [Laboratory] reports only 3 significant figures. Note 2-Kinship. We are reporting the LR of TPOX as 0.7302 based on the CTS allele frequency (0.5429); however using the published NIST TPOX frequency the LR for TPOX is 0.738 based on the NIST TPOX allele frequency of 0.5249. The cumulative LR for all loci using the CTS frequencies is 7.705, Using the published NIST frequencies, the cumulative LR is 7.79.
AHL DLC-5871	Discrepancy noted with TPOX and the NIST LR calculated by popstats vs the one calculated manually using the provided frequencies; NIST allele frequency in CODIS shows 8 allele as 0.5249 which would result in 0.73814; For answer 1, the NIST calculations from Popstats are entered with the correct allele frequencies at TPOX.
AVVTRG-5876	Our laboratory does not calculate or determine the relationship between aunt and niece.
BV73C2-5871	CLR = 7.70487813758. Posterior Prob = 0.885121884052. Probability = 88.5121884052%.
D4UP4A-5871	For TPOX the allele frequency of 0.5429 provided above for the 8 allele is different than the allele frequency listed for the 8 allele in Popstats for NIST. The allele frequency given in the Popstats NIST database is 0.5249 and would yield a value of 0.7381. The above listed calculation for TPOX is using the allele frequency provided, however the kinship index statistic provided for Statement 1 uses the Popstats NIST database frequency.
DKDPQY-5876	AABB requires that the following statement be added to the report: Pu and Linacre have shown at a likelihood ratio less than 33 that the predictive value of test results in second degree relationships is less than 99%. (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.)
HZV8KX-5876	Our laboratory requires a higher index
K3WUGY-5871	The relationship of aunt and niece is slightly supported by the genetic evidence, however we recommend additional testing before reporting a definite conclusion. For example; additional markers or including the mother of the child. The formulas were not provided by the software and therefore not included.
M9U4WQ-5871	Regarding to linkage between: vWA and D12S391, D2S441 and TPOX, Penta D and D21S11, vWA or D12S391 and D2S441 or TPOX and Penta D or D21S11 should be excluded from the calculations.
MHYD2U-5871	To complete the kinship relationship with genetic evidence, it is suggested to include more relatives to complement the information, putting together pedigrees with calculations, using for example, the families software. On the other hand, if it is a maternal aunt, it is possible to make an X chromosome.
MLXQMY-5876	Hypothesis 1: Caucasian Aunt (C) and Niece (D) are related in relationship aunt-niece. Hypothesis 2: Caucasian Aunt (C) and Niece (D) are unrelated. Probability of kinship equals 88,5120%. LR equal 7,70477 is a weak support for hipotesis H1 versus hipotesis H2.
NHTHVU-5876	This kinship index is below the threshold for us to report a conclusive result.
NNMFKK-5871	On comparison of the DNA profiles provided, I found that the relationship between the potential Caucasian Aunt (C) and Niece (D) cannot be conclusively determined.
PKH9HK-5871	vWA was ignored due to its linkage with D12S391. These results assume that the aunt is a full sibling to the alleged parent.

TABLE 8

<b>WebCode-Test</b>	<b>Additional Statistical Results</b>
RPLUJL-5871	The two DNA profiles cannot be excluded as a potential Caucasian Aunt and Niece relationship.
UTYEGL-5876	Kinship index is $> 1$ indicating a relationship. [Laboratory] requires a higher threshold be met before conclusively stating kinship.
YG8AKH-5871	The results are inconclusive as to whether Person C and Person D are related as aunt and niece rather than being unrelated (Combined Kinship Index $> 0.1$ but $< 10$ ). This means that the DNA results obtained do not provide evidence for or against the proposed relationship of aunt and niece.

# Additional Comments

## TABLE 9

WebCode-Test	Additional Comments
2MKYXM-5871	NIST-STRbase All used for statistics
49FKPP-5876	For Part II [Table 5: Paternity DNA Statistics & Conclusions]: 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. Assuming prior probabilities of 10%, 50%, and 90%, the probability of paternity in this case is greater than 99.99%. The following loci were not used in the statistical calculation: vWA and SE33. For Part III [Tables 6-8: Kinship DNA Statistics]: Our laboratory does not evaluate relationships between aunt and niece or perform statistical calculations.
6GAPJQ-5871	The computation of the Combined Parentage Index did not include the SE33 STR locus due to the presence of a tri-allelic pattern in the DNA profile obtained from the known child.
6V6GXZ-5876	Our laboratory protocols do not include the use of the Probability of Paternity statistic; therefore, it was not reported here. We have no laboratory policies on the calculation of parentage indices with triallelic genotypes. Parentage index at SE33 locus not reported. Our laboratory protocols include truncating the combined paternity index to three significant figures; therefore, that was reported here. Item 4 was manually excluded, so no parentage indices were reported.
76TL9C-5871	Due to our laboratory policies we were not able to use the NIST STR population database nor the FBI popstats, nevertheless we used the [Location Identifying Population] database from [Identifying Location] for paternity analysis. Our laboratory does not test for half siblings and/or aunt-niece/nephew relationships, thus that part of the test was not carried out (Kinship DNA test).
7EC4YX-5876	No laboratory policies on the calculation of parentage indices with tri-allelic genotypes. Parentage index at SE33 locus not reported. Our laboratory protocols do not include the use of the Probability of Paternity statistic; therefore, it was not reported here.

TABLE 9

WebCode-Test	Additional Comments
AHL DLC-5871	<p>Item 001.A.01.a: Biological stain cutting of blood FTA card described as coming from Victim Victim; ~ 5x5mm cutting consumed; DNA Number E0893. AUTOSOMAL STRs: The DNA profile is single source. Item 001.A.02.a: Biological stain cutting of blood FTA card described as coming from Victim Child; ~ 5x5mm cutting consumed; DNA Number E0894. AUTOSOMAL STRs: The DNA profile is single source. Y-STRs: The DNA profile is single source. Item 001.A.03.a: Biological stain cutting of blood FTA card described as coming from Subject. Subject A; ~ 5x5mm cutting consumed; DNA Number E0895. AUTOSOMAL STRs: The DNA profile is single source. The alleged father, Subject Subject A, cannot be excluded as the potential biological father of the child, Victim Child using Autosomal STRs. These profiles are "X" times more likely to occur if Victim Child is the child of Victim Victim and Subject Subject A than if Victim Child is the child of Victim Victim and a random person from the reference populations listed where "X" equals: African American – 680 billion, Caucasian – 860 billion, Hispanic – 2.9 trillion. Y-STRs: The DNA profile is single source. The alleged father, Subject Subject A, cannot be excluded as the potential biological father of Victim Child using Y-STRs. These profiles are "X" times more likely to occur if the above-referenced individuals (or their patrilineal relative(s)) are the contributors than if the source of the evidence is a random, unrelated person from the reference populations listed where "X" equals*: African American – 2080, Caucasian – 2422, Hispanic – 1795. *Numbers are based upon the YHRD database and a 95% confidence limit. Item 001.A.04.a: Biological stain cutting of blood FTA card described as coming from Subject. Subject B; ~ 5x5mm cutting consumed; DNA Number E0896. AUTOSOMAL STRs: The DNA profile is single source. The alleged father, Subject Subject B, is excluded as the potential biological father of the child, Victim Child using Autosomal STRs. Y-STRs: The DNA profile is single source. The alleged father, Subject Subject B, is excluded as the potential biological father of Victim Child using Y-STRs. Item 001.B: Profile C - Aunt. AUTOSOMAL STRs: The DNA profile is single source. The kinship index supports the hypothesis that Profile C is the Aunt of Profile D using the reference populations listed. The genotype observed for Profile C is "X" times more likely to occur in an aunt of Profile D than in someone unrelated to Profile D from the reference populations listed where "X" equals: African American – 1600, Caucasian – 9.9, Hispanic – 19. Item 001.C: Profile D - Niece. AUTOSOMAL STRs: The DNA profile is single source. *** Note - stats reported here reflect current SOPs and use the FBI database for kinship and paternity ***</p>
AVVTRG-5876	<p>Part II [Table 5: Paternity DNA Statistics &amp; Conclusions]: 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. Assuming prior probabilities of 10%, 50%, and 90%, the probability of paternity in this case is greater than 99.99%. The following loci were not used in the statistical calculation: vWA and SE33. Per laboratory policy, the vWA locus will not be used for statistical evaluations when complete profiles are used for kinship comparisons. Tri-allelic patterns will not be used for kinship calculations which is present at SE33 in item 2. Part III [Tables 6-8: Kinship DNA Statistics]: Our laboratory does not calculate or determine the relationship between aunt and niece.</p>
BV73C2-5871	<p>For Part 1 [Tables 1-4: STR, YSTR, and Additional DNA Results]: The genetic data for Item2 shows a tri allelic at the SE33 locus. The probability of paternity was calculated with the SE33 locus excluded, at 99.9999999999%. Conclusions : The genetic data of the alleged father (Item3) and mother (Item1) can not be excluded as the biological parent of the child (Item2). And Item4 was not the biological parent of the child (Item2).</p>
C7KGUU-5876	<p>Our laboratory protocols do not include the use of the Probability of Paternity statistic; therefore, it was not reported here. And, no laboratory policies on the calculation of parentage indices with tri-allelic genotypes. Parentage index at SE33 locus not reported.</p>
D3VNW-5876	<p>A trisomy was present in the SE33 locus of the child's (item 2) profile. Alleged father A (item 3) is not excluded as the father at the locus however this locus was excluded from the calculations. Our laboratory does not report a probability of paternity. We report our results as a likelihood ratio.</p>

TABLE 9

WebCode-Test	Additional Comments
D4UP4A-5871	<p>Item 001.A.01.a: Biological stain cutting from FTA card labeled as Test No. 22-5871, Item 1 identified as coming from the Known Parent (Asian Mother) described as - Victim Victim; DNA Number E0949 AUTOSOMAL STRs. The DNA profile is single source. Item 001.A.02.a: Biological stain cutting from FTA card labeled as Test No. 22-5871, Item 2 identified as coming from Known Child (Son) described as - Victim Child; DNA Number E0950 AUTOSOMAL STRs. The DNA profile is single source. Y-STRs: The DNA profile is single source. Item 001.A.03.a: Biological stain cutting from FTA card labeled as Test No. 22-5871, Item 3 identified as coming from Alleged Father A (Caucasian) described as - Subject Subject A; DNA Number E0951 AUTOSOMAL STRs. The DNA profile is single source. The alleged father, Subject Subject A, cannot be excluded as the potential biological father of the child, Victim Child, using Autosomal STRs. These profiles are "X" times more likely to occur if Victim Child is the child of Victim Victim and Subject Subject A than if Victim Child is the child of Victim Victim and a random person from the reference populations listed where "X" equals: African American - 680 BILLION; Caucasian - 860 BILLION; Hispanic - 2.9 TRILLION. Y-STRs: The DNA profile is single source. The alleged father, Subject Subject A, cannot be excluded as the potential biological father of Victim Child using Y-STRs. These profiles are "X" times more likely to occur if the above-references individuals (or their patrilineal relatives) are the contributors than if the source of the evidence is a random, unrelated person from the reference populations listed where "X" equals: African American - 2080; Caucasian - 2422; Hispanic - 1795. *Numbers are based upon the YHRD Database and a 95% confidence limit. Item 001.A.04.a: Biological stain cutting from FTA card labeled as Test No. 22-5871, Item 4 identified as coming from Alleged Father B (Caucasian) described as - Subject Subject B; DNA Number E0952 AUTOSOMAL STRs. The DNA profile is single source. The alleged father, Subject Subject B, is excluded as the potential biological father of the child, Victim Child using Autosomal STRs. Y-STRs: The DNA profile is single source. The alleged father, Subject Subject B, is excluded as the potential biological father of Victim Child using Y-STRs. Item 001.B: Profile C - Aunt. AUTOSOMAL STRs: The DNA profile is single source. Item 001.C: Profile D - Niece. AUTOSOMAL STRs: The DNA profile is single source. Th kinship index supports the hypothesis that Profile D is the Niece of Profile C using the reference populations listed. The genotype observed for Profile D is "X" times more likely to occur in a Niece of Profile C than in someone unrelated to Profile C from the reference populations listed where "X" equals: African American - 190; Caucasian - 2.1; Hispanic - 3.0. Note - The verbiage and statistics (for parentage and kinship) reported here are according to current [Laboratory] SOPs and the use of the FBI database.</p>
E4NVX9-5871	Probability of paternity not calculated by out laboratory.
F79BKL-5871	<p>Lab reports out population group with the most conservative statistic, which is the Hispanic group. Note: Tri-allele (12,13,17) was noted at SE33 on sample 2 (child). Therefore, statistic was not calculated at this system.</p>
HAKVHL-5876	<p>All parentage trio calculations omitted SE33 due to tri-allele in item 2. The reported Combined Paternity Index value omitted vWA due to linkage with D12S391 (both loci listed with per-locus PI) and uses the Caucasian database. Crime Lab report wording would be as follows: "The STR DNA profile detected from Item 2 is consistent with being the STR DNA profile of a biological child of Item 1 and Item 3. Item 3 is included as a possible biological father of Item 2. Given that Item 1 is the biological mother of Item 2, it is at least 6 trillion times more likely to observe the profile from Item 2 if Item 3 is their biological father than if a random, unrelated male is the father."</p>

TABLE 9

WebCode-Test	Additional Comments
HFCXRD-5871	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 (16), vWA (16,18), D16 (9), CSF (12), TPOX (11), D8 (8), D21 (29), D18 (18), D2S441 (10), D19 (12.2), TH01 (6), FGA (21), D22 (15), D5 (12), D13 (12), D7 (10), D10 (13,14), D1 (16.3), D12 (18), and D2S1338 (26). Note: Per our SOP and a tri-allele at SE33, SE33 is not used in the statistic. RMNE report statement: The expected frequency of males who could be the father of son (item #2) is less than 1 in 100 billion in the general population. NR=No Results
HR3UUB-5876	For Part II [Table 5: Paternity DNA Statistics & Conclusions]: Paternity DNA Statistics, assuming prior probabilities of 10%, 50%, and 90%, the probability of paternity in this case is >99.99%. Per laboratory policy, the vWA locus and the SE33 locus were 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 Popstats of the selected population groups/ethnicities. For Part III [Tables 6-8: Kinship DNA Statistics]: Not applicable to this laboratory.
K3WUGY-5871	A tri-allelic pattern was observed in marker SE33 of item 2. Therefore there are no PI calculations done for marker SE33 in part 1. Our statistics programme (Genoproof) does not calculate with tri-allelic patterns. This does not influence the conclusion of the test because alleged father A (item 3) is not excluded as the father in this locus due to allele 17, shared with the child (item 2). [Laboratory] cannot give formulas and allele legends for the paper challenge (part 2) used by the software.
KWQZJX-5871	For ITEM 2 in the marker SE33 triallelic expression is reported.
LKQRDZ-5871	NR = No Results. The allele call at DYS391 was found to be concordant in the Yfiler and PowerPlex Fusion kits for Items 2, 3, and 4.
M843TN-5876	A tri-allelic pattern was detected in the SE33 locus of sample 22-5876-2 (child). This was confirmed by a second extraction of the sample.
MG6PKK-5871	SE33 not used in calculation of PI or Probability of Paternity due to trisomy. SE33 also not used as a loci for stats in the lab as we do not have population data available for all racial groups for that loci.
MH4M28-5871	NR = No results. 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: D3S1358 (16), vWA (16, 18), D16S539 (9), CSF1PO (12), TPOX (11), D8S1179 (8), D21S11 (29), D18S51 (18), D2S441 (10), D19S433 (12.2), TH01 (6), FGA (21), D22S1045 (15), D5S818 (12), D13S317 (12), D7S820 (10), D10S1248 (13, 14), D1S1656 (16.3), D12S391 (18), D2S1338 (26). RMNE Report statement: The expected frequency of individuals who could be the father of known child (son) is less than 1 in 100 billion in the general male population.
MHYD2U-5871	For ITEM 2, three alleles are recorded for the SE33 marker (12,13,17); using ESX17 and Global Filer systems. This marker was not included in the calculation, therefore it is only reported.

TABLE 9

WebCode-Test	Additional Comments
NNMFKK-5871	Extraction: Item 1, Item 2, Item 3 and Item 4 were extracted using in-situ and Automate Express extraction methods. Quantification: DNA quantitation for Item 1, Item 2, Item 3 and Item 4 were carried out using the Quantifiler Human DNA Quantification kit with Applied Biosystem Real Time Polymerase Chain Reaction (PCR) 7500 system. Amplification: Item 1, Item 2, Item 3 and Item 4 were amplified using AmFISTR Identifiler Direct and AmFISTR Identifiler Plus kit on 9700 GeneAmp PCR System. Y-STR (Y-Short Tandem Repeat) amplification was carried out on Item 2, Item 3 and Item 4 using AmFISTR Y-File 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 (Identifiler Direct and Identifiler Plus). Electrophoresis for Y Filer was carried out on Genetic Analyzer 3500xl for Item 2, Item 3 and Item 4. Quality Control: Reagent blank, Positive Control and Negative Control were carried out through analysis and all gave intended results.
P2MGXL-5871	The laboratory policy is to report either the applicable race set or the race set with the most conservative value for a paternity statistical calculation. Since the paternity trio used for the calculation were not all of the same race, the analyst followed the laboratory policy to report the race set with the most conservative value. This was the Trinidadian race set in the FBI Popstats database and these were the numbers submitted to CTS.
PHBKL3-5876	For Part II [Table 5: Paternity DNA Statistics & Conclusions], per Laboratory policy: The vWA locus will not be used for statistical calculations when complete profiles are used for kinship comparisons. Tri-allelic patterns will not be used for kinship statistical calculations and therefore the SE33 locus was not used. For the Locus and Combined Paternity Index values, the smallest CPI calculated in Popstats for the selected population groups/ethnicities is reported. Assuming prior probabilities of 10%, 50%, and 90%, the probability of paternity in this case is greater than 99.99%. For Part III [Tables 6-8: Kinship DNA Statistics], our Laboratory does not evaluate aunt/niece relationships.
QLNQEU-5871	NR = No Results. Item 2 - Concordance between Fusion and Yfiler at overlapping locus, DYS391. Item 3 - Concordance between Fusion and Yfiler at overlapping locus, DYS391. Item 4 - Concordance between Fusion and Yfiler at overlapping locus, DYS391.
R3QQ3N-5876	ITEM 2: SE33: Three allele pattern and we considered only the allele inherited from mother and alleged father (A). PI FOR ITEM 3: vWA: We considered the allele 16 inherited from mother (asian) and allele 18 from father (Caucasian).
T9FPVA-5871	Lab reports out population group with most conservative statistics: Hispanic population group used. SE33 dropped out of all calculations due to tri-allele observed in item 2.
TG86HT-5871	NR=no results. Items 2,3,4 tested in PPF and YF. Items 2 concordant in PPF and YF, Items 3 concordant in PPF and YF, Items 4 concordant in PPF and YF.
TGAVPB-5876	It is our laboratory's policy to report the most conservative number when using multiple databases. Also, the vWA and D12S391 loci are not used together for the same statistical calculation. The locus selected provides the most discriminating potential. The CPI value reported in Part II [Table 5: Paternity DNA Statistics & Conclusions] is from the Caucasian database using the D12S391 data without the vWA locus due to linkage with D12S391. Additionally, the reported calculation did not use the SE33 location as one of the samples of interest contained a tri-allelic pattern. We do not report the Probability of Paternity.
TXUJ2Q-5876	Because of 7 genotypes incompatible with paternity between Son(item2) and Alleged Father B(item4) we did not produce PI calculations for this hypothesis.
UTYEGL-5876	The statistical software program used for kinship does not allow for the input of tri-alleles; therefore, SE33 was not used in the statistical interpretation of these samples.

TABLE 9

WebCode-Test	Additional Comments
V26FGC-5876	The database used for the paternity statistics has been published in: AA Westen et al. Forensic Sci Int Genet 2014; 10: 55-63.
VBAK89-5876	Our laboratory protocols do not include the use of the Probability of Paternity statistic; therefore, it was not reported here. No laboratory policies on the calculation of parentage indices with triallelic genotypes. Parentage index at SE33 locus not reported.
VWTKJU-5876	No laboratory policies on the calculation of parentage indices with triallelic genotypes. Parentage index at SE33 locus not reported. Our laboratory protocols do not include the use of the Probability of Paternity statistic; therefore, it was not reported here. Our laboratory protocols do not require calculation of parentage indices if a reference can be manually excluded, so no indices were calculated for Item 4 (AF B).
VYYT49-5871	PI is not calculated when an individual is excluded as the biological father of the offspring. Our laboratory does not use vWA or D12S391 when calculating statistics for parentage or kinship cases because analysis of the CEPH pedigree families demonstrated a degree of linkage between vWA and D12S391 that does not support the assumption of independent linkage. The confirmed tri-allele at SE33 will not be used for calculating the statistic either. Part III [Tables 6-8: Kinship DNA Statistics] is not applicable to our laboratory.
WDTYB9-5876	Laboratory protocols do not include the use of the Probability of Paternity statistic; therefore, it was not reported here. Laboratory protocols also do not require the calculation of paternity indices for manual exclusions; therefore, no parentage indices listed in relation to Item 4. No laboratory policies on the calculation of parentage indices with triallelic genotypes; therefore parentage index at SE33 locus not reported for Item 3.
WLPPZP-5871	SE33 was left out of the paternity statistics because of a possible tri-allele in the known child's profile.
WM42WA-5876	No laboratory policies on the calculation of parentage indices with triallelic genotypes. Parentage index at SE33 locus not reported. Our laboratory protocols do not include the use of the Probability of Paternity statistic; therefore, it was not reported here. Our laboratory protocol, do not require statistical calculations for standards that are excluded from being the biological. Therefore, no statistics were calculated or reported for item 4.
WX6M2M-5871	Population Database Used is National Frequencies. Only the statistical calculation of Paternity (IP) is performed for the alleles of item #3 due to compability. The database of the [Location Identifying Population] does not include the frequency for locus D6S1043 so it excludes from the statistical.
X4RRDN-5871	SE33 locus was not used in the parentage calculations due to a possible tri-allele in the child's DNA typing results.
YG7J7M-5871	NR = No results. PowerPlex Fusion and Yfiler were performed on Item 2, Item 3 and Item 4. Results were concordant at DYS391.
ZH3V3R-5876	For part II [Table 5: Paternity DNA Statistics & Conclusions], the loci vWA and SE33 were 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 [Tables 6-8: Kinship DNA Statistics] was not completed as our laboratory does not calculate aunt-niece relationship statistics.

-End of Report-  
(Appendix may follow)



Collaborative Testing Services ~ Forensic Testing Program

**Test No. 22-5871: DNA Parentage**

DATA MUST BE SUBMITTED BY **Aug. 1, 2022, 11:59 p.m.** TO BE INCLUDED IN THE REPORT

Participant Code: U1234A

WebCode: 3GDTXB

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 DPF2 - FTA Microcards):**

Item 1: Blood Sample from Known Parent (Asian 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 - 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	10.27
vWA	14, 15	14, 17	14: 0.0928	15: 0.1053	$(1+4p)/8p$	p = 14	1.847
			17: 0.1053				

**Scenario:**

The two DNA profiles below are presented as a potential Caucasian Aunt (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	15,15.3	12,15	12: 0.1163	15: 0.1496	<input type="text"/>	<input type="text"/>	<input type="text"/>
			15.3: 0.0582				
D2S1338	18,20	20,24	18: 0.0734	20: 0.1565	<input type="text"/>	<input type="text"/>	<input type="text"/>
			24: 0.1150				
D2S441	11,11	10,11	10: 0.2105	11: 0.3435	<input type="text"/>	<input type="text"/>	<input type="text"/>
D3S1358	14,17	15,18	14: 0.1066	15: 0.2729	<input type="text"/>	<input type="text"/>	<input type="text"/>
			17: 0.2105	18: 0.1510			
D5S818	12,12	11,12	11: 0.3560	12: 0.3878	<input type="text"/>	<input type="text"/>	<input type="text"/>



Locus	C	D	Allele Frequencies		Formula Used	Allele Legend	Likelihood Ratio
D7S820	10,12	8,12	8: 0.1440	10: 0.2562	<input type="text"/>	<input type="text"/>	<input type="text"/>
			12: 0.1593				
D8S1179	11,11	11,16	11: 0.0762	16: 0.0332	<input type="text"/>	<input type="text"/>	<input type="text"/>
D10S1248	13,14	13,13	13: 0.3075	14: 0.2978	<input type="text"/>	<input type="text"/>	<input type="text"/>
D12S391	18,18.3	15,23	15: 0.0319	18: 0.1717	<input type="text"/>	<input type="text"/>	<input type="text"/>
			18.3: 0.0249	23: 0.0693			
D13S317	8,11	8,12	8: 0.1205	11: 0.3255	<input type="text"/>	<input type="text"/>	<input type="text"/>
			12: 0.2687				
D16S539	12,12	10,11	10: 0.0568	11: 0.3144	<input type="text"/>	<input type="text"/>	<input type="text"/>
			12: 0.3144				
D18S51	14,19	14,15	14: 0.1343	15: 0.1704	<input type="text"/>	<input type="text"/>	<input type="text"/>
			19: 0.0402				
D19S433	13,15	15,15	13: 0.2548	15: 0.1565	<input type="text"/>	<input type="text"/>	<input type="text"/>
D21S11	29,30	28,29	28: 0.1593	29: 0.2022	<input type="text"/>	<input type="text"/>	<input type="text"/>
			30: 0.2825				
D22S1045	14,16	15,16	14: 0.0568	15: 0.3213	<input type="text"/>	<input type="text"/>	<input type="text"/>
			16: 0.3823				

Locus	C	D	Allele Frequencies		Formula Used	Allele Legend	Likelihood Ratio
CSF1PO	10,12	10,11	10: 0.2202	11: 0.3089	<input type="text"/>	<input type="text"/>	<input type="text"/>
			12: 0.3601				
FGA	22,25	23,24	22: 0.2050	23: 0.1524	<input type="text"/>	<input type="text"/>	<input type="text"/>
			24: 0.1343	25: 0.0789			
PentaD	9,11	9,11	9: 0.2216	11: 0.1260	<input type="text"/>	<input type="text"/>	<input type="text"/>
PentaE	12,17	5,17	5: 0.0762	12: 0.1994	<input type="text"/>	<input type="text"/>	<input type="text"/>
			17: 0.0485				
SE33	27.2,29.2	19,20	19: 0.0720	20: 0.0582	<input type="text"/>	<input type="text"/>	<input type="text"/>
			27.2: 0.0942	29.2: 0.0554			
TH01	7,9.3	7,9.3	7: 0.1939	9.3: 0.3449	<input type="text"/>	<input type="text"/>	<input type="text"/>
TPOX	8,10	8,9	8: 0.5429	9: 0.1274	<input type="text"/>	<input type="text"/>	<input type="text"/>
			10: 0.0499				
vWA	17,18	19,19	17: 0.2839	18: 0.2022	<input type="text"/>	<input type="text"/>	<input type="text"/>
			19: 0.1039				

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

2. Is the relationship of Aunt 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)