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FORENSIC TESTING PROGRAM

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DNA Parentage
Test No. 21-5872/7 Summary Report

Each participant received a sample pack consisting of four blood samples representing a paternity case. Samples were collected from a mother, a son, and two potential fathers. Participants were requested to analyze the samples using their existing protocols. The test also included a paper kinship exercise where participants were requested to evaluate the provided DNA profiles and determine if a grandmother and grandson relationship was supported. Data were returned from 88 participants and are compiled into the following tables:

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

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

Manufacturer's Information

Each sample set was a collection of known blood samples, provided on 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 a grandmother-grandson 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 not the biological father of the Item 2 male, and Item 4 was blood from a male donor who was 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 August 25th, 2021.

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 a grandmother-grandson relationship.

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

Key to Test Substrates

5872 - FTA Microcards

5877 - 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	16,16.3	17,24	14,14	16,16	11,13	*
	9,11	13,14	15,16	22,22	10,12	11,11
	14,14	13,13	31.2,32.2	16,16	X,X	12,13
	20,24	9,13	7,10	15,19	9,9	8,11
	15,16	NM	NM	NM	NM	
2	16.3,19.3	20,24	12,14	16,16	12,13	*
	9,10	11,14	14,15	18.3,22	10,13	11,11
	14,15	12,13	30.2,32.2	16,16	X,Y	12,13
	20,23	9,10	5,10	15,26.2	6,9	8,10
	15,18	11	18	17	2	
3	14,16	17,17	11,14	14,18	10,11	*
	10,11	10,11	13,14	18,19	11,11	12,13
	16,17	13,15	29,30	15,17	X,Y	11,12
	20,20	11,12	8,9	14,18	9,9.3	8,8
	18,19	11	16	19	2	
4	15,19.3	20,25	11,12	15,16	10,12	*
	9,10	11,14	13,14	18,18.3	8,13	11,12
	12,15	12,12	30.2,31	16,16	X,Y	12,13
	23,24	9,10	5,5	26.2,27.2	6,7	8,10
	18,18	11	18	17	2	

YSTR Results

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

Item	DYF387S1	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
	DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
	DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	Y GATA H4
2	35,37	14	12,14	13	29	23	11	13	14
	15	12	13	19	29	15	17	11	23
	37	12	*	18	17	22	25	*	12
3	36,36	14	12,14	13	29	24	11	13	13
	15	12	13	19	29	14	17	11	22
	38	12	*	16	19	24	23	*	12
4	35,37	14	12,14	13	29	23	11	13	14
	15	12	13	19	29	15	17	11	23
	37	12	*	18	17	22	25	*	12

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

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

Paternity Indices

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

Item - Database						
	D1S1656	**D2S1338**	**D2S441**	**D3S1358**	**D5S818**	**D6S1043**
	D7S820	**D8S1179**	**D10S1248**	**D12S391**	**D13S317**	**D16S539**
	D18S51	**D19S433**	**D21S11**	**D22S1045**	**Amelogenin**	**CSF1PO**
	FGA	**Penta D**	**Penta E**	**SE33**	**TH01**	**TPOX**
	vWA					
3PI - Grand Mean ±3STD Range**						
	0-0.003	0-0.001	0-0.004	0-0.002	0-0.002	*
	1.554-2.208	4.183-9.700	1.486-1.873	0-0.003	0-0.002	0-0.004
	0-0.005	0-0.002	0-0.001	0-0.003	-	0.979-1.344
	0-0.005	0-0.002	0	0-0.008	0	0
	1.706-3.151					
4PI - Grand Mean ±3STD Range**						
	6.015-65.483	2.692-3.799	1.909-19.844	1.721-2.398	1.145-1.523	*
	1.596-2.199	4.300-9.321	1.489-1.872	1.793-42.151	3.732-4.862	1.236-2.064
	2.174-4.017	7.850-18.501	7.163-24.667	1.900-3.579	-	1.885-2.797
	2.844-3.752	3.593-4.955	8.939-16.922	5.751-16.091	1.810-2.495	5.109-14.611
	4.121-5.698					
4PI - NIST STRBASE						
	32.89	3.194	10.61	2.099	1.289	*
	1.951	6.561	1.679	20.08	4.299	1.590
	2.934	14.16	17.18	2.615	-	2.263
	3.280	4.347	13.12	12.01	2.123	10.02
	4.945					

* 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 21-5872/7 DNA Parentage test was designed to allow participants to assess their proficiency in the analysis and interpretation of four known blood samples. Item 1 was blood collected from a female donor (mother), Item 2 was blood collected from a male donor (son of the Item 1 female), Item 3 was blood collected from a male donor who is not the biological father of the Item 2 male, and Item 4 was blood collected from a male donor who is the biological father of the Item 2 male. Participants were requested to analyze the samples and provide allelic and statistical results as well as relationship conclusions. The test also included a paper kinship exercise where participants were requested to evaluate the provided DNA profiles and report the kinship index and relationship conclusions (Refer to the Manufacturer's Information for preparation details).

DNA Analysis:
All 88 participants who returned data reported STR results for all four items. For Item 1, all participants reported consistent data. For Items 2-4, one participant did not meet consensus at DYS319, reporting "11,11" whereas consensus was "11". Additionally for Item 2, one participant reported "X,X" at Amelogenin whereas the consensus was "X,Y". For Item 3, all participants reported consistent data except for one, who reported "14,15" at D3S1358 whereas consensus was "14,18". For Item 4, other than previously mentioned, no additional participants reported inconsistent results.

For YSTR results, the individual profiles for all items were consistent among all reporting participants.

Paternity DNA Statistics:
All 88 participants reported that the source of Item 4 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 NIST STRBASE.

Kinship DNA Statistics
There were 39 participants who responded for the paper kinship exercise. For the loci likelihood ratio (LR) data, five participants consistently reported lower values than the consensus. Of the 39 participants, 28 (71%) reported a combined Kinship Index (KI) between 490,000 and 500,000. Nine participants reported values below 490,000 and two participants reported values over 500,000. All 39 participants reported that the claim of a grandmother and grandson relationship was supported.

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

227FXV-5872 GlobalFiler™						
	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X,X	12,13
	20,24			15,19	9	8,11
	15,16					
3KHENB-5872 PowerPlex® Fusion						
	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24	9,13	7,10		9	8,11
	15,16					
49Z23Z-5872 PowerPlex® 5C						
	16,16.3	17,24	14	16	11,13	--
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24	9,13	7,10	--	9	8,11
	15,16	--	--	--	--	
66BCVT-5877 GlobalFiler™						
	16,16.3	17,24	14,14	16,16	11,13	
	9,11	13,14	15,16	22,22	10,12	11,11
1	14,14	13,13	31.2,32.2	16,16	X,X	12,13
	20,24			15,19	9,9	8,11
	15,16					
6FE8EX-5872 PowerPlex® Fusion						
	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24	9,13	7,10		9	8,11
	15,16	NR				
6HKL4C-5872 PowerPlex® Fusion 6C						
	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24	9,13	7,10	15,19	9	8,11
	15,16					

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

6LMT3U-5877	GlobalFiler™					
	16,16.3	17,24	14,14	16,16	11,13	
	9,11	13,14	15,16	22,22	10,12	11,11
1	14,14	13,13	31.2,32.2	16,16	X,X	12,13
	20,24			15,19	9,9	8,11
	15,16	-			-	
6PZPQ6-5872	GlobalFiler™ express					
	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24			15,19	9	8,11
	15,16	NR			NR	
6TM4EE-5872	GlobalFiler™					
	16,16.3	17,24	14,14	16,16	11,13	
	9,11	13,14	15,16	22,22	10,12	11,11
1	14,14	13,13	31.2,32.2	16,16	X,X	12,13
	20,24			15,19	9,9	8,11
	15,16					
6YPAW3-5872	GlobalFiler™					
	16,16.3	17,24	14,14	16,16	11,13	
	9,11	13,14	15,16	22,22	10,12	11,11
1	14,14	13,13	31.2,32.2	16,16	X,X	12,13
	20,24			15,19	9,9	8,11
	15,16					
7JFQXB-5872	PowerPlex® Fusion 6C					
	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24	9,13	7,10	15,19	9	8,11
	15,16					
7K9EG7-5872	GlobalFiler™					
	16,16.3	17,24	14,14	16,16	11,13	
	9,11	13,14	15,16	22,22	10,12	11,11
1	14,14	13,13	31.2,32.2	16,16	X,X	12,13
	20,24			15,19	9,9	8,11
	15,16					

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

7QF9B3-5872 PowerPlex® pp21						
	16,16.3	17,24		16,16	11,13	11,12
	9,11	13,14		22,22	10,12	11,11
1	14,14	13,13	31.2,32.2		X,X	12,13
	20,24	9,13	7,10		9,9	8,11
	15,16					
7WLNZP-5877 PowerPlex® PP21						
	16,16.3	17,24		16	11,13	11,12
	9,11	13,14		22	10,12	11
1	14	13	31.2,32.2		X	12,13
	20,24	9,13	7,10		9	8,11
	15,16					
82MKWV-5872 PowerPlex® Fusion						
	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24	9,13	7,10		9	8,11
	15,16	NR				
82PA2R-5872 PowerPlex® FUSION, POWER PLEX ESX 17						
	16,16.3	17,24	14,14	16,16	11,13	
	9,11	13,14	15,16	22,22	10,12	11,11
1	14,14	13,13	31.2,32.2	16,16	X,X	12,13
	20,24	9,13	7,10	15,19	9,9	8,11
	15,16					
8D43XE-5877 GlobalFiler™						
	16,16.3	17,24	14,14	16,16	11,13	
	9,11	13,14	15,16	22,22	10,12	11,11
1	14,14	13,13	31.2,32.2	16,16	X,X	12,13
	20,24			15,19	9,9	8,11
	15,16	No Result			No Result	
8HW7KQ-5877 GlobalFiler™						
	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24			15,19	9	8,11
	15,16	No Results			No 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

8RMRQP-5877 PowerPlex® Fusion 6C

	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24	9,13	7,10	15,19	9	8,11
	15,16	NR	NR	NR		

8U9NZ2-5872 PowerPlex® 21

	16,16.3	17,24		16,16	11,13	11,12
	9,11	13,14		22,22	10,12	11,11
1	14,14	13,13	31.2,32.2		X,X	12,13
	20,24	9,13	7,10		9,9	8,11
	15,16					

8WW4PB-5872 PowerPlex® Fusion

	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24	9,13	7,10		9	8,11
	15,16	Inconclusive				

AGTGDY-5872 GlobalFiler™

	16,16.3	17,24	14,14	16,16	11,13	
	9,11	13,14	15,16	22,22	10,12	11,11
1	14,14	13,13	31.2,32.2	16,16	X,X	12,13
	20,24			15,19	9,9	8,11
	15,16					

AL77UM-5872 Identifiler® Direct

		17,24		16	11,13	
	9,11	13,14			10,12	11
1	14	13	31.2,32.2		X,X	12,13
	20,24				9	8,11
	15,16					

AX4ZA7-5877 PowerPlex® Fusion 6C

	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24	9,13	7,10	15,19	9	8,11
	15,16					

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

BUBNM6-5872 GlobalFiler™						
	16,16.3	17,24	14,14	16,16	11,13	
	9,11	13,14	15,16	22,22	10,12	11,11
1	14,14	13,13	31.2,32.2	16,16	X,X	12,13
	20,24			15,19	9,9	8,11
	15,16					
BY7KAB-5872 vfplus, cs7,esx17 (genemapper)						
	16,16.3	17,24	14	16	11,13	11,12
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24	9,13	7,10	15,19	9	8,11
	15,16					
C442M6-5872 GlobalFiler™						
	16,16.3	17,24	14,14	16,16	11,13	
	9,11	13,14	15,16	22,22	10,12	11,11
1	14,14	13,13	31.2,32.2	16,16	X,X	12,13
	20,24			15,19	9,9	8,11
	15,16					
C4JK83-5872 GlobalFiler™						
	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24			15,19	9	8,11
	15,16					
C6V4AK-5877 PowerPlex® Fusion 6C						
	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24	9,13	7,10	15,19	9	8,11
	15,16	NR	NR	NR		
CKQJF7-5877 GlobalFiler™						
	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24			15,19	9	8,11
	15,16					

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

CQCJPR-5872 GlobalFiler™ Express

	16,16.3	17,24	14,14	16,16	11,13	
	9,11	13,14	15,16	22,22	10,12	11,11
1	14,14	13,13	31.2,32.2	16,16	X,X	12,13
	20,24			15,19	9,9	8,11
	15,16					

D37AUV-5872 PowerPlex® 21

	16,16.3	17,24		16,16	11,13	11,12
	9,11	13,14		22,22	10,12	11,11
1	14,14	13,13	31.2,32.2		X,X	12,13
	20,24	9,13	7,10		9,9	8,11
	15,16					

D6TPH7-5872 GlobalFiler™ Express

	16,16.3	17,24	14	16	11,13	-
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X,X	12,13
	20,24	-	-	15,19	9	8,11
	15,16	NM	-	-	NM	

DHFZNN-5877 PowerPlex® Fusion (Gene Analysen)

	16,16.3	17,24	14,14	16,16	11,13	
	9,11	13,14	15,16	22,22	10,12	11,11
1	14,14	13,13	31.2,32.2		X,X	12,13
	20,24	9,13	7,10		9,9	8,11
	15,16					

DQPMHA-5872 GlobalFiler™

	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24			15,19	9	8,11
	15,16					

DQRCM7-5877 GlobalFiler™

	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24			15,19	9	8,11
	15,16					

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

E2PD2W-5872 GlobalFiler™						
	16,16.3	17,24	14,14	16,16	11,13	
	9,11	13,14	15,16	22,22	10,12	11,11
1	14,14	13,13	31.2,32.2	16,16	X,X	12,13
	20,24			15,19	9,9	8,11
	15,16					
EAZWXZ-5872 PowerPlex® Fusion						
	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24	9,13	7,10		9	8,11
	15,16					
EVFGV2-5872 PowerPlex® Fusion 6C						
	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24	9,13	7,10	15,19	9	8,11
	15,16					
FXXYN7-5877 GlobalFiler™						
	16,16.3	17,24	14,14	16,16	11,13	
	9,11	13,14	15,16	22,22	10,12	11,11
1	14,14	13,13	31.2,32.2	16,16	X,X	12,13
	20,24			15,19	9,9	8,11
	15,16	no results			no results	
G62ZNZ-5872 GlobalFiler™						
	16,16.3	17,24	14,14	16,16	11,13	
	9,11	13,14	15,16	22,22	10,12	11,11
1	14,14	13,13	31.2,32.2	16,16	X,X	12,13
	20,24			15,19	9,9	8,11
	15,16	NA			NA	
G6WHQ2-5877 GlobalFiler™						
	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24			15,19	9	8,11
	15,16					

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

GMFGVY-5877 NGMselect

	16,16.3	17,24	14,14	16,16		
		13,14	15,16	22,22		11,11
1	14,14	13,13	31.2,32.2	16,16	X,X	
	20,24			15,19	9,9	
	15,16					

H6EXCG-5877 Identifiler®

		17,24		16,16	11,13	
	9,11	13,14			10,12	11,11
1	14,14	13,13	31.2,32.2		X,X	12,13
	20,24				9,9	8,11
	15,16					

HCF7ZX-5872 GlobalFiler™

	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24			15,19	9	8,11
	15,16	---			---	

HEGFMK-5872 Qiagen Investigator ESSplex SE QS

	16,16.3	17,24	14,14	16,16		
		13,14	15,16	22,22		11,11
1	14,14	13,13	31.2,32.2	16,16	X,X	
	20,24			15,19	9,9	
	15,16					

HHGPUF-5872 PowerPlex® Fusion

	16,16.3	17,24	14,14	16,16	11,13	
	9,11	13,14	15,16	22,22	10,12	11,11
1	14,14	13,13	31.2,32.2	16,16	X,X	12,13
	20,24	9,13	7,10		9,9	8,11
	15,16					

HLHQZ6-5872 GlobalFiler™ Express

	16,16.3	17,24	14	16	11,13	-
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X,X	12,13
	20,24	-	-	15,19	9	8,11
	15,16	NM	-	-	NM	

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

HXT3BD-5872 PowerPlex® Fusion 6C (GeneMapper ID-X)

	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24	9,13	7,10	15,19	9	8,11
	15,16					

JGG2W3-5877 GlobalFiler™

	16,16.3	17,24	14,14	16,16	11,13	
	9,11	13,14	15,16	22,22	10,12	11,11
1	14,14	13,13	31.2,32.2	16,16	X,X	12,13
	20,24			15,19	9,9	8,11
	15,16	no result			no result	

JQR4H3-5872 GlobalFiler™

	16,16.3	17,24	14,14	16,16	11,13	
	9,11	13,14	15,16	22,22	10,12	11,11
1	14,14	13,13	31.2,32.2	16,16	X,X	12,13
	20,24			15,19	9,9	8,11
	15,16	Not detected			Not detected	

KM676W-5872 PowerPlex® Fusion 5C

	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24	9,13	7,10		9	8,11
	15,16					

LMH24A-5877 GlobalFiler™

	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24			15,19	9	8,11
	15,16					

M6CXEC-5877 PowerPlex® FUSION

	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24	9,13	7,10		9	8,11
	15,16					

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 1 - STR Results

M6VY6K-5872 PowerPlex® 21

	16,16.3	17,24		16,16	11,13	11,12
	9,11	13,14		22,22	10,12	11,11
1	14,14	13,13	31.2,32.2		X,X	12,13
	20,24	9,13	7,10		9,9	8,11
	15,16					

MHMK9V-5872 GlobalFiler™ Express

	16,16.3	17,24	14	16	11,13	-
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X,X	12,13
	20,24	-	-	15,19	9	8,11
	15,16	NM	-	-	NM	

MQWWJ8-5872 GlobalFiler™ Express

	16,16.3	17,24	14,14	16,16	11,13	
	9,11	13,14	15,16	22,22	10,12	11,11
1	14,14	13,13	31.2,32.2	16,16	X,X	12,13
	20,24			15,19	9,9	8,11
	15,16	0			0	

MWKGP9-5872 PowerPlex® fusion

	16,16.3	17,24	14,14	16,16	11,13	
	9,11	13,14	15,16	22,22	10,12	11,11
1	14,14	13,13	31.2,32.2	16,16	X,X	12,13
	20,24	9,13	7,10		9,9	8,11
	15,16					

NEZ7KK-5872 GlobalFiler™

	16,16.3	17,24	14,14	16,16	11,13	
	9,11	13,14	15,16	22,22	10,12	11,11
1	14,14	13,13	31.2,32.2	16,16	X,X	12,13
	20,24			15,19	9,9	8,11
	15,16					

NUDLJA-5872 GlobalFiler™ Express (Genemapper ID-x)

	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24			15,19	9	8,11
	15,16					

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

P8WNE8-5872 GlobalFiler™

	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X,X	12,13
	20,24			15,19	9	8,11
	15,16					

PJRUEX-5872 Identifiler® NGMSElect, PowerPlex® Fusion, Y23, PP21, ESX17, CS7

	16,16.3	17,24	14	16	11,13	11,12
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24	9,13	7,10	15,19	9	8,11
	15,16					

PK6927-5872 PowerPlex® Fusion 6C, GlobalFiler™, NGM SElect

	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24	9,13	7,10	15,19	9	8,11
	15,16					

PPFMJ6-5877 GlobalFiler™

	16,16.3	17,24	14	16	11,13	Not Tested
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24	Not Tested	Not Tested	15,19	9	8,11
	15,16	No Results	Not Tested	Not Tested	No Results	

PTGLZP-5872 PowerPlex® Fusion

	16,16.3	17,24	14,14	16,16	11,13	
	9,11	13,14	15,16	22,22	10,12	11,11
1	14,14	13,13	31.2,32.2	16,16	X,X	12,13
	20,24	9,13	7,10		9,9	8,11
	15,16	N/A				

PZVCHB-5872 PowerPlex® Fusion System; ESX17 System; CS7 System, GlobalFiler™, Verifiler Plus

	16,16.3	17,24	14,14	16,16	11,13	11,12
	9,11	13,14	15,16	22,22	10,12	11,11
1	14,14	13,13	31.2,32.2	16,16	X,X	12,13
	20,24	9,13	7,10	15,19	9,9	8,11
	15,16					

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

QBTRPQ-5877 GlobalFiler™						
	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24			15,19	9	8,11
	15,16					
QF6KX6-5872 PowerPlex® 18						
		17,24		16,16	11,13	
	9,11	13,14			10,12	11,11
1	14,14	13,13	31.2,32.2		X,X	12,13
	20,24	9,13	7,10		9,9	8,11
	15,16					
RUGFQ7-5877 GlobalFiler™						
	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24			15,19	9	8,11
	15,16					
TFDB26-5877 PowerPlex® Fusion 6C						
	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24	9,13	7,10	15,19	9	8,11
	15,16					
TGTQDL-5872 PowerPlex® Fusion						
	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24	9,13	7,10		9	8,11
	15,16					
THMEVG-5872 GlobalFiler™						
	16,16.3	17,24	14,14	16,16	11,13	
	9,11	13,14	15,16	22,22	10,12	11,11
1	14,14	13,13	31.2,32.2	16,16	X,X	12,13
	20,24			15,19	9,9	8,11
	15,16					

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

U3L4GA-5872 PowerPlex® Fusion5C

	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24	9,13	7,10		9	8,11
	15,16	NR				

U8HTZ3-5877 Verifiler Plus (GeneMapper ID-X v.1.5)

	16,16.3	17,24	14	16	11,13	11,12
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X,X	12,13
	20,24	9,13	7,10	-	9	8,11
	15,16	-	-	-	-	

UHGJPF-5872 GlobalFiler™

	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24			15,19	9	8,11
	15,16	NR			NR	

UJV9NL-5872 PowerPlex® F6C

	16,16.3	17,24	14,14	16,16	11,13	
	9,11	13,14	15,16	22,22	10,12	11,11
1	14,14	13,13	31.2,32.2	16,16	X,X	12,13
	20,24	9,13	7,10	15,19	9,9	8,11
	15,16					

UL6XEQ-5872 GlobalFiler™

	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X,X	12,13
	20,24			15,19	9	8,11
	15,16					

VCB87N-5872 GlobalFiler™ Express

	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X,X	12,13
	20,24			15,19	9	8,11
	15,16	NM			NM	

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

W7FZ2K-5877 GlobalFiler™						
	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24			15,19	9	8,11
	15,16					
WJMNEN-5872 PowerPlex® Fusion 5C (eDNA)						
	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X,X	12,13
	20,24	9,13	7,10		9	8,11
	15,16					
WVHWWQ-5877 GlobalFiler™						
	16,16.3	17,24	14,14	16,16	11,13	
	9,11	13,14	15,16	22,22	10,12	11,11
1	14,14	13,13	31.2,32.2	16,16	X,X	12,13
	20,24			15,19	9,9	8,11
	15,16	no result			no result	
X7A37F-5872 PowerPlex® Fusion 5C						
	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24	9,13	7,10		9	8,11
	15,16					
XC38YJ-5877 GlobalFiler™						
	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24			15,19	9	8,11
	15,16					
XNAWUZ-5877 GlobalFiler™						
	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24			15,19	9	8,11
	15,16					

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

XXJGZG-5872 PowerPlex® Fusion 5C

	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24	9,13	7,10		9	8,11
	15,16					

Z2TGAD-5872 PowerPlex® Fusion

	16,16.3	17,24	14	16	11,13	
	9,11	13,14	15,16	22	10,12	11
1	14	13	31.2,32.2	16	X	12,13
	20,24	9,13	7,10		9	8,11
	15,16					

ZBH8UK-5877 GlobalFiler™

	16,16.3	17,24	14,14	16,16	11,13	
	9,11	13,14	15,16	22,22	10,12	11,11
1	14,14	13,13	31.2,32.2	16,16	X,X	12,13
	20,24			15,19	9,9	8,11
	15,16	no results			no results	

ZPY8HX-5877 GlobalFiler™

	16,16.3	17,24	14,14	16,16	11,13	
	9,11	13,14	15,16	22,22	10,12	11,11
1	14,14	13,13	31.2,32.2	16,16	X,X	12,13
	20,24			15,19	9,9	8,11
	15,16					

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

227FXV-5872 GlobalFiler™						
	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	
3KHENB-5872 PowerPlex® Fusion						
	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23	9,10	5,10		6,9	8,10
	15,18	11				
49Z23Z-5872 PowerPlex® 5C						
	16.3,19.3	20,24	12,14	16	12,13	--
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23	9,10	5,10	--	6,9	8,10
	15,18	11	--	--	--	
66BCVT-5877 GlobalFiler™						
	16.3,19.3	20,24	12,14	16,16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11,11
2	14,15	12,13	30.2,32.2	16,16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	
6FE8EX-5872 PowerPlex® Fusion						
	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23	9,10	5,10		6,9	8,10
	15,18	11				
6HKL4C-5872 PowerPlex® Fusion 6C						
	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23	9,10	5,10	15,26.2	6,9	8,10
	15,18	11	18	17		

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 2 - STR Results

6LMT3U-5877	GlobalFiler™					
	16.3,19.3	20,24	12,14	16,16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11,11
2	14,15	12,13	30.2,32.2	16,16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	
6PZPQ6-5872	GlobalFiler™ express					
	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	
6TM4EE-5872	GlobalFiler™					
	16.3,19.3	20,24	12,14	16,16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11,11
2	14,15	12,13	30.2,32.2	16,16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	
6YPAW3-5872	GlobalFiler™					
	16.3,19.3	20,24	12,14	16,16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11,11
2	14,15	12,13	30.2,32.2	16,16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	
7JFQXB-5872	PowerPlex® Fusion 6C					
	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23	9,10	5,10	15,26.2	6,9	8,10
	15,18	11	18	17		
7K9EG7-5872	GlobalFiler™					
	16.3,19.3	20,24	12,14	16,16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11,11
2	14,15	12,13	30.2,32.2	16,16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	

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 2 - STR Results

7QF9B3-5872 PowerPlex® pp21						
	16.3,19.3	20,24		16,16	12,13	11,12
	9,10	11,14		18.3,22	10,13	11,11
2	14,15	12,13	30.2,32.2		X,Y	12,13
	20,23	9,10	5,10		6,9	8,10
	15,18					
7WLNZP-5877 PowerPlex® PP21						
	16.3,19.3	20,24		16	12,13	11,12
	9,10	11,14		18.3,22	10,13	11
2	14,15	12,13	30.2,32.2		X,Y	12,13
	20,23	9,10	5,10		6,9	8,10
	15,18					
82MKWV-5872 PowerPlex® Fusion						
	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23	9,10	5,10		6,9	8,10
	15,18	11				
82PA2R-5872 PowerPlex® FUSION, POWER PLEX ESX 17						
	16.3,19.3	20,24	12,14	16,16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11,11
2	14,15	12,13	30.2,32.2	16,16	X,Y	12,13
	20,23	9,10	5,10	15,26.2	6,9	8,10
	15,18	11				
8D43XE-5877 GlobalFiler™						
	16.3,19.3	20,24	12,14	16,16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11,11
2	14,15	12,13	30.2,32.2	16,16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	
8HW7KQ-5877 GlobalFiler™						
	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	

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 2 - STR Results

8RMRQP-5877	PowerPlex® Fusion 6C					
	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23	9,10	5,10	15,26.2	6,9	8,10
	15,18	11	18	17		
8U9NZ2-5872	PowerPlex® 21 (Kinship using NIST-STRBASE Caucasian dataset)					
	16.3,19.3	20,24		16,16	12,13	11,12
	9,10	11,14		18.3,22	10,13	11,11
2	14,15	12,13	30.2,32.2		X,Y	12,13
	20,23	9,10	5,10		6,9	8,10
	15,18					
8WW4PB-5872	PowerPlex® Fusion					
	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23	9,10	5,10		6,9	8,10
	15,18	Inconclusive				
AGTGDY-5872	GlobalFiler™					
	16.3,19.3	20,24	12,14	16,16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11,11
2	14,15	12,13	30.2,32.2	16,16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	
AL77UM-5872	Identifiler® Direct					
		20,24		16	12,13	
	9,10	11,14			10,13	11
2	14,15	12,13	30.2,32.2		X,Y	12,13
	20,23				6,9	8,10
	15,18					
AX4ZA7-5877	PowerPlex® Fusion 6C					
	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23	9,10	5,10	15,26.2	6,9	8,10
	15,18	11	18	17		

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 2 - STR Results

BUBNM6-5872 GlobalFiler™						
	16.3,19.3	20,24	12,14	16,16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11,11
2	14,15	12,13	30.2,32.2	16,16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	
BY7KAB-5872 vfplus, cs7, esx17 (genemapper)						
	16.3,19.3	20,24	12,14	16	12,13	11,12
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23	9,10	5,10	15,26.2	6,9	8,10
	15,18				2	
C442M6-5872 GlobalFiler™						
	16.3,19.3	20,24	12,14	16,16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11,11
2	14,15	12,13	30.2,32.2	16,16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	
C4JK83-5872 GlobalFiler™						
	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	
C6V4AK-5877 PowerPlex® Fusion 6C						
	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23	9,10	5,10	15,26.2	6,9	8,10
	15,18	11	18	17		
CKQJF7-5877 GlobalFiler™						
	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	

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 2 - STR Results

CQCJPR-5872 GlobalFiler™ Express

	16.3,19.3	20,24	12,14	16,16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11,11
2	14,15	12,13	30.2,32.2	16,16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	

D37AUV-5872 PowerPlex® 21

	16.3,19.3	20,24		16,16	12,13	11,12
	9,10	11,14		18.3,22	10,13	11,11
2	14,15	12,13	30.2,32.2		X,Y	12,13
	20,23	9,10	5,10		6,9	8,10
	15,18					

D6TPH7-5872 GlobalFiler™ Express

	16.3,19.3	20,24	12,14	16	12,13	-
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23	-	-	15,26.2	6,9	8,10
	15,18	11	-	-	2	

DHFZNN-5877 PowerPlex® Fusion (Gene Analysen)

	16.3,19.3	20,24	12,14	16,16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11,11
2	14,15	12,13	30.2,32.2		X,Y	12,13
	20,23	9,10	5,10		6,9	8,10
	15,18	11				

DQPMHA-5872 GlobalFiler™

	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	

DQRCM7-5877 GlobalFiler™

	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	

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 2 - STR Results

E2PD2W-5872 GlobalFiler™						
	16.3,19.3	20,24	12,14	16,16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11,11
2	14,15	12,13	30.2,32.2	16,16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	
EAZWXZ-5872 PowerPlex® Fusion						
	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23	9,10	5,10		6,9	8,10
	15,18	11				
EVFGV2-5872 PowerPlex® Fusion 6C						
	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23	9,10	5,10	15,26.2	6,9	8,10
	15,18	11	18	17		
FXXYN7-5877 GlobalFiler™						
	16.3,19.3	20,24	12,14	16,16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11,11
2	14,15	12,13	30.2,32.2	16,16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	
G62ZNZ-5872 GlobalFiler™						
	16.3,19.3	20,24	12,14	16,16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11,11
2	14,15	12,13	30.2,32.2	16,16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	
G6WHQ2-5877 GlobalFiler™						
	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	

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 2 - STR Results

GMFGVY-5877 NGMSelect						
	16.3,19.3	20,24	12,14	16,16		
		11,14	14,15	18.3,22		11,11
2	14,15	12,13	30.2,32.2	16,16	X,Y	
	20,23			15,26.2	6,9	
	15,18					
H6EXCG-5877 Identifiler®, NGMSElect						
	16.3,19.3	20,24	12,14	16,16	12,13	
	9,10	11,14	14,15		10,13	11,11
2	14,15	12,13	30.2,32.2	16,16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18					
HCF7ZX-5872 GlobalFiler™						
	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	
HEGFMK-5872 Qiagen Investigator ESSplex SE QS						
	16.3,19.3	20,24	12,14	16,16		
		11,14	14,15	18.3,22		11,11
2	14,15	12,13	30.2,32.2	16,16	X,X	
	20,23			15,26.2	6,9	
	15,18					
HHGPUF-5872 PowerPlex® Fusion						
	16.3,19.3	20,24	12,14	16,16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11,11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23	9,10	5,10		6,9	8,10
	15,18	11				
HLHQZ6-5872 GlobalFiler™ Express						
	16.3,19.3	20,24	12,14	16	12,13	-
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23	-	-	15,26.2	6,9	8,10
	15,18	11	-	-	2	

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 2 - STR Results

HXT3BD-5872 PowerPlex® Fusion 6C (GeneMapper ID-X)

	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23	9,10	5,10	15,26.2	6,9	8,10
	15,18	11	18	17		

JGG2W3-5877 GlobalFiler™

	16.3,19.3	20,24	12,14	16,16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11,11
2	14,15	12,13	30.2,32.2	16,16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	

JQR4H3-5872 GlobalFiler™

	16.3,19.3	20,24	12,14	16,16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11,11
2	14,15	12,13	30.2,32.2	16,16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	

KM676W-5872 PowerPlex® Fusion 5C

	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23	9,10	5,10		6,9	8,10
	15,18	11				

LMH24A-5877 GlobalFiler™

	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	

M6CXEC-5877 PowerPlex® FUSION

	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23	9,10	5,10		6,9	8,10
	15,18	11				

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 2 - STR Results

M6VY6K-5872 PowerPlex® 21

	16.3,19.3	20,24		16,16	12,13	11,12
	9,10	11,14		18.3,22	10,13	11,11
2	14,15	12,13	30.2,32.2		X,Y	12,13
	20,23	9,10	5,10		6,9	8,10
	15,18					

MHMK9V-5872 GlobalFiler™ Express

	16.3,19.3	20,24	12,14	16	12,13	-
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23	-	-	15,26.2	6,9	8,10
	15,18	11	-	-	2	

MQWWJ8-5872 GlobalFiler™ Express

	16.3,19.3	20,24	12,14	16,16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11,11
2	14,15	12,13	30.2,32.2	16,16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	

MWKGP9-5872 PowerPlex® fusion

	16.3,19.3	20,24	12,14	16,16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11,11
2	14,15	12,13	30.2,32.2	16,16	X,Y	12,13
	20,23	9,10	5,10		6,9	8,10
	15,18	11,11				

NEZ7KK-5872 GlobalFiler™

	16.3,19.3	20,24	12,14	16,16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11,11
2	14,15	12,13	30.2,32.2	16,16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	

NUDLJA-5872 GlobalFiler™ Express (Genemapper ID-x)

	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	

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 2 - STR Results

P8WNE8-5872 GlobalFiler™

	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	

PJRUEX-5872 Identifiler® NGMSElect, PowerPlex® FUSION, PP21, ESX17, Y23, CS7

	16.3,19.3	20,24	12,14	16	12,13	11,12
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23	9,10	5,10	15,26.2	6,9	8,10
	15,18	11	18	17		

PK6927-5872 PowerPlex® Fusion 6C, GlobalFiler™, NGM SElect

	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23	9,10	5,10	15,26.2	6,9	8,10
	15,18	11	18	17	2	

PPFMJ6-5877 GlobalFiler™

	16.3,19.3	20,24	12,14	16	12,13	Not Tested
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23	Not Tested	Not Tested	15,26.2	6,9	8,10
	15,18	11	Not Tested	Not Tested	2	

PTGLZP-5872 PowerPlex® Fusion

	16.3,19.3	20,24	12,14	16,16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11,11
2	14,15	12,13	30.2,32.2	16,16	X,Y	12,13
	20,23	9,10	5,10		6,9	8,10
	15,18	11				

PZVCHB-5872 PowerPlex® Fusion System; ESX17 System; CS7 System, GlobalFiler™, Verifiler Plus

	16.3,19.3	20,24	12,14	16,16	12,13	11,12
	9,10	11,14	14,15	18.3,22	10,13	11,11
2	14,15	12,13	30.2,32.2	16,16	X,Y	12,13
	20,23	9,10	5,10	15,26.2	6,9	8,10
	15,18	11			2	

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 2 - STR Results

QBTRPQ-5877 GlobalFiler™						
	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	
QF6KX6-5872 PowerPlex® 18						
		20,24		16,16	12,13	
	9,10	11,14			10,13	11,11
2	14,15	12,13	30.2,32.2		X,Y	12,13
	20,23	9,10	5,10		6,9	8,10
	15,18					
RUGFQ7-5877 GlobalFiler™						
	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	
TFDB26-5877 PowerPlex® Fusion 6C						
	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23	9,10	5,10	15,26.2	6,9	8,10
	15,18	11	18	17		
TGTQDL-5872 PowerPlex® Fusion						
	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23	9,10	5,10		6,9	8,10
	15,18	11				
THMEVG-5872 GlobalFiler™						
	16.3,19.3	20,24	12,14	16,16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11,11
2	14,15	12,13	30.2,32.2	16,16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	

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 2 - STR Results

U3L4GA-5872 PowerPlex® Fusion5C						
	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23	9,10	5,10		6,9	8,10
	15,18	11				
U8HTZ3-5877 Verifiler Plus (GeneMapper ID-X v.1.5)						
	16.3,19.3	20,24	12,14	16	12,13	11,12
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23	9,10	5,10	-	6,9	8,10
	15,18	-	-	-	2	
UHGJPF-5872 GlobalFiler™						
	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	
UJV9NL-5872 PowerPlex® F6C						
	16.3,19.3	20,24	12,14	16,16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11,11
2	14,15	12,13	30.2,32.2	16,16	X,Y	12,13
	20,23	9,10	5,10	15,26.2	6,9	8,10
	15,18	11	18	17		
UL6XEQ-5872 GlobalFiler™						
	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	
VCB87N-5872 GlobalFiler™ Express						
	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	

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 2 - STR Results

W7FZ2K-5877 GlobalFiler™						
	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	
WJMNEN-5872 PowerPlex® Fusion 5C (eDNA)						
	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23	9,10	5,10		6,9	8,10
	15,18	11				
WVHWWQ-5877 GlobalFiler™						
	16.3,19.3	20,24	12,14	16,16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11,11
2	14,15	12,13	30.2,32.2	16,16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	
X7A37F-5872 PowerPlex® Fusion 5C						
	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23	9,10	5,10		6,9	8,10
	15,18	11				
XC38YJ-5877 GlobalFiler™						
	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	
XNAWUZ-5877 GlobalFiler™						
	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	

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 2 - STR Results

XXJGZG-5872 PowerPlex® Fusion 5C

	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23	9,10	5,10		6,9	8,10
	15,18	11				

Z2TGAD-5872 PowerPlex® Fusion

	16.3,19.3	20,24	12,14	16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11
2	14,15	12,13	30.2,32.2	16	X,Y	12,13
	20,23	9,10	5,10		6,9	8,10
	15,18	11				

ZBH8UK-5877 GlobalFiler™

	16.3,19.3	20,24	12,14	16,16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11,11
2	14,15	12,13	30.2,32.2	16,16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	11			2	

ZPY8HX-5877 GlobalFiler™

	16.3,19.3	20,24	12,14	16,16	12,13	
	9,10	11,14	14,15	18.3,22	10,13	11,11
2	14,15	12,13	30.2,32.2	16,16	X,Y	12,13
	20,23			15,26.2	6,9	8,10
	15,18	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 3 - STR Results

227FXV-5872	GlobalFiler™ (eDNA)					
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20			14,18	9,9.3	8
	18,19	11			2	
3KHENB-5872	PowerPlex® Fusion					
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20	11,12	8,9		9,9.3	8
	18,19	11				
49Z23Z-5872	PowerPlex® 5C					
	14,16	17	11,14	14,18	10,11	--
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20	11,12	8,9	--	9,9.3	8
	18,19	11	--	--	--	
66BCVT-5877	GlobalFiler™					
	14,16	17,17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11,11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20,20			14,18	9,9.3	8,8
	18,19	11			2	
6FE8EX-5872	PowerPlex® Fusion					
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20	11,12	8,9		9,9.3	8
	18,19	11				
6HKL4C-5872	PowerPlex® Fusion 6C					
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20	11,12	8,9	14,18	9,9.3	8
	18,19	11	16	19		

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 3 - STR Results

6LMT3U-5877	GlobalFiler™					
	14,16	17,17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11,11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20,20			14,18	9,9.3	8,8
	18,19	11			2	
6PZPQ6-5872	GlobalFiler™ express					
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20			14,18	9,9.3	8
	18,19	11			2	
6TM4EE-5872	GlobalFiler™					
	14,16	17,17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11,11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20,20			14,18	9,9.3	8,8
	18,19	11			2	
6YPAW3-5872	GlobalFiler™					
	14,16	17,17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11,11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20,20			14,18	9,9.3	8,8
	18,19	11			2	
7JFQXB-5872	PowerPlex® Fusion 6C					
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20	11,12	8,9	14,18	9,9.3	8
	18,19	11	16	19		
7K9EG7-5872	GlobalFiler™					
	14,16	17,17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11,11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20,20			14,18	9,9.3	8,8
	18,19	11			2	

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 3 - STR Results

7QF9B3-5872	PowerPlex® pp21					
	14,16	17,17		14,18	10,11	11,19
	10,11	10,11		18,19	11,11	12,13
3	16,17	13,15	29,30		X,Y	11,12
	20,20	11,12	8,9		9,9.3	8,8
	18,19					
7WLNZP-5877	PowerPlex® PP21					
	14,16	17		14,18	10,11	11,19
	10,11	10,11		18,19	11	12,13
3	16,17	13,15	29,30		X,Y	11,12
	20	11,12	8,9		9,9.3	8
	18,19					
82MKWV-5872	PowerPlex® Fusion					
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20	11,12	8,9		9,9.3	8
	18,19	11				
82PA2R-5872	PowerPlex® FUSION, POWER PLEX ESX 17					
	14,16	17,17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11,11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20,20	11,12	8,9	14,18	9,9.3	8,8
	18,19	11				
8D43XE-5877	GlobalFiler™					
	14,16	17,17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11,11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20,20			14,18	9,9.3	8,8
	18,19	11			2	
8HW7KQ-5877	GlobalFiler™					
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20			14,18	9,9.3	8
	18,19	11			2	

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 3 - STR Results

8RMRQP-5877	PowerPlex® Fusion 6C					
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20	11,12	8,9	14,18	9,9.3	8
	18,19	11	16	19		
8U9NZ2-5872	PowerPlex® 21 (Kinship using NIST-STRBASE Caucasian dataset)					
	14,16	17,17		14,18	10,11	11,19
	10,11	10,11		18,19	11,11	12,13
3	16,17	13,15	29,30		X,Y	11,12
	20,20	11,12	8,9		9,9.3	8,8
	18,19					
8WW4PB-5872	PowerPlex® Fusion					
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20	11,12	8,9		9,9.3	8
	18,19	Inconclusive				
AGTGDY-5872	GlobalFiler™					
	14,16	17,17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11,11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20,20			14,18	9,9.3	8,8
	18,19	11			2	
AL77UM-5872	Identifiler® Direct					
		17		14,18	10,11	
	10,11	10,11			11	12,13
3	16,17	13,15	29,30		X,Y	11,12
	20				9,9.3	8
	18,19					
AX4ZA7-5877	PowerPlex® Fusion 6C					
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20	11,12	8,9	14,18	9,9.3	8
	18,19	11	16	19		

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 3 - STR Results

BUBNM6-5872	GlobalFiler™					
	14,16	17,17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11,11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20,20			14,18	9,9.3	8,8
	18,19	11			2	
BY7KAB-5872	vfplus, cs7, esx17 (genemapper)					
	14,16	17	11,14	14,18	10,11	11,19
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20	11,12	8,9	14,18	9,9.3	8
	18,19				2	
C442M6-5872	GlobalFiler™					
	14,16	17,17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11,11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20,20			14,18	9,9.3	8,8
	18,19	11			2	
C4JK83-5872	GlobalFiler™					
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20			14,18	9,9.3	8
	18,19	11			2	
C6V4AK-5877	PowerPlex® Fusion 6C					
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20	11,12	8,9	14,18	9,9.3	8
	18,19	11	16	19		
CKQJF7-5877	GlobalFiler™					
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20			14,18	9,9.3	8
	18,19	11			2	

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 3 - STR Results

CQCJPR-5872	GlobalFiler™ Express					
	14,16	17,17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11,11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20,20			14,18	9,9.3	8,8
	18,19	11			2	
D37AUV-5872	PowerPlex® 21					
	14,16	17,17		14,18	10,11	11,19
	10,11	10,11		18,19	11,11	12,13
3	16,17	13,15	29,30		X,Y	11,12
	20,20	11,12	8,9		9,9.3	8,8
	18,19					
D6TPH7-5872	GlobalFiler™ Express					
	14,16	17	11,14	14,18	10,11	-
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20	-	-	14,18	9,9.3	8
	18,19	11	-	-	2	
DHFZNN-5877	PowerPlex® Fusion (Gene Analysen)					
	14,16	17,17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11,11	12,13
3	16,17	13,15	29,30		X,Y	11,12
	20,20	11,12	8,9		9,9.3	8,8
	18,19	11				
DQPMHA-5872	GlobalFiler™					
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20			14,18	9,9.3	8
	18,19	11			2	
DQRCM7-5877	GlobalFiler™					
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20			14,18	9,9.3	8
	18,19	11			2	

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 3 - STR Results

E2PD2W-5872	GlobalFiler™					
	14,16	17,17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11,11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20,20			14,18	9,9.3	8,8
	18,19	11			2	
EAZWXZ-5872	PowerPlex® Fusion					
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20	11,12	8,9		9,9.3	8
	18,19	11				
EVFGV2-5872	PowerPlex® Fusion 6C					
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20	11,12	8,9	14,18	9,9.3	8
	18,19	11	16	19		
FXXYN7-5877	GlobalFiler™					
	14,16	17,17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11,11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20,20			14,18	9,9.3	8,8
	18,19	11			2	
G62ZNZ-5872	GlobalFiler™					
	14,16	17,17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11,11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20,20			14,18	9,9.3	8,8
	18,19	11			2	
G6WHQ2-5877	GlobalFiler™					
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20			14,18	9,9.3	8
	18,19	11			2	

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 3 - STR Results

GMFGVY-5877 NGMSelect						
	14,16	17,17	11,14	14,18		
		10,11	13,14	18,19		12,13
3	16,17	13,15	29,30	15,17	X,Y	
	20,20			14,18	9,9.3	
	18,19					
H6EXCG-5877 Identifiler®, NGMSElect						
	14,16	17,17	11,14	14,18	10,11	
	10,11	10,11	13,14		11,11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20,20			14,18	9,9.3	8,8
	18,19					
HCF7ZX-5872 GlobalFiler™						
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20			14,18	9,9.3	8
	18,19	11			2	
HEGFMK-5872 Qiagen Investigator ESSplex SE QS						
	14,16	17,17	11,14	14,18		
		10,11	13,14	18,19		12,13
3	16,17	13,15	29,30	15,17	X,Y	
	20,20			14,18	9,9.3	
	18,19					
HHGPUF-5872 PowerPlex® Fusion						
	14,16	17,17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11,11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20,20	11,12	8,9		9,9.3	8,8
	18,19	11				
HLHQZ6-5872 GlobalFiler™ Express						
	14,16	17	11,14	14,18	10,11	-
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20	-	-	14,18	9,9.3	8
	18,19	11	-	-	2	

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 3 - STR Results

HXT3BD-5872 PowerPlex® Fusion 6C (GeneMapper ID-X)

	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20	11,12	8,9	14,18	9,9.3	8
	18,19	11	16	19		

JGG2W3-5877 GlobalFiler™

	14,16	17,17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11,11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20,20			14,18	9,9.3	8,8
	18,19	11			2	

JQR4H3-5872 GlobalFiler™

	14,16	17,17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11,11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20,20			14,18	9,9.3	8,8
	18,19	11			2	

KM676W-5872 PowerPlex® Fusion 5C

	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20	11,12	8,9		9,9.3	8
	18,19	11				

LMH24A-5877 GlobalFiler™

	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20			14,18	9,9.3	8
	18,19	11			2	

M6CXEC-5877 PowerPlex® FUSION

	14,16	17	11,14	14,15	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20	11,12	8,9		9,9.3	8
	18,19	11				

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 3 - STR Results

M6VY6K-5872 PowerPlex® 21 (Kinship (Paternity Trio Module))

	14,16	17,17		14,18	10,11	11,19
	10,11	10,11		18,19	11,11	12,13
3	16,17	13,15	29,30		X,Y	11,12
	20,20	11,12	8,9		9,9.3	8,8
	18,19					

MHMK9V-5872 GlobalFiler™ Express

	14,16	17	11,14	14,18	10,11	-
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20	-	-	14,18	9,9.3	8
	18,19	11	-	-	2	

MQWWJ8-5872 GlobalFiler™ Express

	14,16	17,17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11,11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20,20			14,18	9,9.3	8,8
	18,19	11			2	

MWKGP9-5872 PowerPlex® fusion

	14,16	17,17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11,11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20,20	11,12	8,9		9,9.3	8,8
	18,19	11,11				

NEZ7KK-5872 GlobalFiler™

	14,16	17,17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11,11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20,20			14,18	9,9.3	8,8
	18,19	11			2	

NUDLJA-5872 GlobalFiler™ Express (Genemapper ID-x)

	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20			14,18	9,9.3	8
	18,19	11			2	

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 3 - STR Results

P8WNE8-5872	GlobalFiler™					
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20			14,18	9,9.3	8
	18,19	11			2	
PJRUEX-5872	Identifiler® NGMSElect, PowerPlex® FUSION, PP21, ESX17, Y23, CS7 (Familias 3.2.2)					
	14,16	17	11,14	14,18	10,11	11,19
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20	11,12	8,9	14,18	9,9.3	8
	18,19	11	16	19		
PK6927-5872	PowerPlex® Fusion 6C, GlobalFiler™, NGM SElect					
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20	11,12	8,9	14,18	9,9.3	8
	18,19	11	16	19	2	
PPFMJ6-5877	GlobalFiler™					
	14,16	17	11,14	14,18	10,11	Not Tested
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20	Not Tested	Not Tested	14,18	9,9.3	8
	18,19	11	Not Tested	Not Tested	2	
PTGLZP-5872	PowerPlex® Fusion					
	14,16	17,17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11,11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20,20	11,12	8,9		9,9.3	8,8
	18,19	11				
PZVCHB-5872	PowerPlex® Fusion System; ESX17 System; CS7 System, GlobalFiler™, Verifiler Plus					
	14,16	17,17	11,14	14,18	10,11	11,19
	10,11	10,11	13,14	18,19	11,11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20,20	11,12	8,9	14,18	9,9.3	8,8
	18,19	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 3 - STR Results

QBTRPQ-5877	GlobalFiler™					
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20			14,18	9,9.3	8
	18,19	11			2	
QF6KX6-5872	PowerPlex® 18					
		17,17		14,18	10,11	
	10,11	10,11			11,11	12,13
3	16,17	13,15	29,30		X,Y	11,12
	20,20	11,12	8,9		9,9.3	8,8
	18,19					
RUGFQ7-5877	GlobalFiler™					
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20			14,18	9,9.3	8
	18,19	11			2	
TFDB26-5877	PowerPlex® Fusion 6C					
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20	11,12	8,9	14,18	9,9.3	8
	18,19	11	16	19		
TGTQDL-5872	PowerPlex® Fusion					
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20	11,12	8,9		9,9.3	8
	18,19	11				
THMEVG-5872	GlobalFiler™					
	14,16	17,17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11,11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20,20			14,18	9,9.3	8,8
	18,19	11			2	

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 3 - STR Results

U3L4GA-5872 PowerPlex® Fusion5C						
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20	11,12	8,9		9,9.3	8
	18,19	11				
U8HTZ3-5877 Verifiler Plus (GeneMapper ID-X v.1.5)						
	14,16	17	11,14	14,18	10,11	11,19
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20	11,12	8,9	-	9,9.3	8
	18,19	-	-	-	2	
UHGJPF-5872 GlobalFiler™						
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20			14,18	9,9.3	8
	18,19	11			2	
UJV9NL-5872 PowerPlex® F6C						
	14,16	17,17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11,11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20,20	11,12	8,9	14,18	9,9.3	8,8
	18,19	11	16	19		
UL6XEQ-5872 GlobalFiler™ (eDNA Brutus)						
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20			14,18	9,9.3	8
	18,19	11			2	
VCB87N-5872 GlobalFiler™ Express						
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20			14,18	9,9.3	8
	18,19	11			2	

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 3 - STR Results

W7FZ2K-5877 GlobalFiler™						
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20			14,18	9,9.3	8
	18,19	11			2	
WJMNEN-5872 PowerPlex® Fusion 5C (eDNA)						
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20	11,12	8,9		9,9.3	8
	18,19	11				
WVHWWQ-5877 GlobalFiler™						
	14,16	17,17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11,11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20,20			14,18	9,9.3	8,8
	18,19	11			2	
X7A37F-5872 PowerPlex® Fusion 5C						
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20	11,12	8,9		9,9.3	8
	18,19	11				
XC38YJ-5877 GlobalFiler™						
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20			14,18	9,9.3	8
	18,19	11			2	
XNAWUZ-5877 GlobalFiler™						
	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20			14,18	9,9.3	8
	18,19	11			2	

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 3 - STR Results

XXJGZG-5872 PowerPlex® Fusion 5C

	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20	11,12	8,9		9,9.3	8
	18,19	11				

Z2TGAD-5872 PowerPlex® Fusion

	14,16	17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20	11,12	8,9		9,9.3	8
	18,19	11				

ZBH8UK-5877 GlobalFiler™

	14,16	17,17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11,11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20,20			14,18	9,9.3	8,8
	18,19	11			2	

ZPY8HX-5877 GlobalFiler™ (Genoproof)

	14,16	17,17	11,14	14,18	10,11	
	10,11	10,11	13,14	18,19	11,11	12,13
3	16,17	13,15	29,30	15,17	X,Y	11,12
	20,20			14,18	9,9.3	8,8
	18,19	11			2	

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 4 - STR Results

227FXV-5872 GlobalFiler™ (eDNA)						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18	11			2	
3KHENB-5872 PowerPlex® Fusion						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24	9,10	5		6,7	8,10
	18	11				
49Z23Z-5872 PowerPlex® 5C						
	15,19.3	20,25	11,12	15,16	10,12	--
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24	9,10	5	--	6,7	8,10
	18	11	--	--	--	
66BCVT-5877 GlobalFiler™						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12,12	30.2,31	16,16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18,18	11			2	
6FE8EX-5872 PowerPlex® Fusion						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24	9,10	5		6,7	8,10
	18	11				
6HKL4C-5872 PowerPlex® Fusion 6C						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24	9,10	5	26.2,27.2	6,7	8,10
	18	11	18	17		

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 4 - STR Results

6LMT3U-5877	GlobalFiler™					
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12,12	30.2,31	16,16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18,18	11			2	
6PZPQ6-5872	GlobalFiler™ express					
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18	11			2	
6TM4EE-5872	GlobalFiler™					
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12,12	30.2,31	16,16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18,18	11			2	
6YPAW3-5872	GlobalFiler™					
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12,12	30.2,31	16,16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18,18	11			2	
7JFQXB-5872	PowerPlex® Fusion 6C					
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24	9,10	5	26.2,27.2	6,7	8,10
	18	11	18	17		
7K9EG7-5872	GlobalFiler™					
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12,12	30.2,31	16,16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18,18	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

7QF9B3-5872 PowerPlex® PP21						
	15,19.3	20,25		15,16	10,12	11,20
	9,10	11,14		18,18.3	8,13	11,12
4	12,15	12,12	30.2,31		X,Y	12,13
	23,24	9,10	5,5		6,7	8,10
	18,18					
7WLNZP-5877 PowerPlex® PP21						
	15,19.3	20,25		15,16	10,12	11,20
	9,10	11,14		18,18.3	8,13	11,12
4	12,15	12	30.2,31		X,Y	12,13
	23,24	9,10	5		6,7	8,10
	18					
82MKWV-5872 PowerPlex® Fusion						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24	9,10	5		6,7	8,10
	18	11				
82PA2R-5872 PowerPlex® FUSION, POWER PLEX ESX17						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12,12	30.2,31	16,16	X,Y	12,13
	23,24	9,10	5,5	26.2,27.2	6,7	8,10
	18,18	11				
8D43XE-5877 GlobalFiler™						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12,12	30.2,31	16,16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18,18	11			2	
8HW7KQ-5877 GlobalFiler™						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18	11			2	

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 4 - STR Results

8RMRQP-5877	PowerPlex® Fusion 6C					
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24	9,10	5	26.2,27.2	6,7	8,10
	18	11	18	17		
8U9NZ2-5872	PowerPlex® 21 (Kinship using NIST-STRBASE Caucasian dataset)					
	15,19.3	20,25		15,16	10,12	11,20
	9,10	11,14		18,18.3	8,13	11,12
4	12,15	12,12	30.2,31		X,Y	12,13
	23,24	9,10	5,5		6,7	8,10
	18,18					
8WW4PB-5872	PowerPlex® Fusion					
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24	9,10	5		6,7	8,10
	18	Inconclusive				
AGTGDY-5872	GlobalFiler™					
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12,12	30.2,31	16,16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18,18	11			2	
AL77UM-5872	Identifiler® Direct					
		20,25		15,16	10,12	
	9,10	11,14			8,13	11,12
4	12,15	12	30.2,31		X,Y	12,13
	23,24				6,7	8,10
	18					
AX4ZA7-5877	PowerPlex® Fusion 6C					
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24	9,10	5	26.2,27.2	6,7	8,10
	18	11	18	17		

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 4 - STR Results

BUBNM6-5872 GlobalFiler™						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12,12	30.2,31	16,16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18,18	11			2	
BY7KAB-5872 vfplus, cs7, esx17 (genemapper)						
	15,19.3	20,25	11,12	15,16	10,12	11,20
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24	9,10	5	26.2,27.2	6,7	8,10
	18				2	
C442M6-5872 GlobalFiler™						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12,12	30.2,31	16,16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18,18	11			2	
C4JK83-5872 GlobalFiler™						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18	11			2	
C6V4AK-5877 PowerPlex® Fusion 6C						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24	9,10	5	26.2,27.2	6,7	8,10
	18	11	18	17		
CKQJF7-5877 GlobalFiler™						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18	11			2	

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 4 - STR Results

CQCJPR-5872 GlobalFiler™ Express						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12,12	30.2,31	16,16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18,18	11			2	
D37AUV-5872 PowerPlex® 21						
	15,19.3	20,25		15,16	10,12	11,20
	9,10	11,14		18,18.3	8,13	11,12
4	12,15	12,12	30.2,31		X,Y	12,13
	23,24	9,10	5,5		6,7	8,10
	18,18					
D6TPH7-5872 GlobalFiler™ Express						
	15,19.3	20,25	11,12	15,16	10,12	-
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24	-	-	26.2,27.2	6,7	8,10
	18	11	-	-	2	
DHFZNN-5877 PowerPlex® Fusion (Gene Analysen)						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12,12	30.2,31		X,Y	12,13
	23,24	9,10	5,5		6,7	8,10
	18,18	11				
DQPMHA-5872 GlobalFiler™						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18	11			2	
DQRCM7-5877 GlobalFiler™						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18	11			2	

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 4 - STR Results

E2PD2W-5872 GlobalFiler™						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12,12	30.2,31	16,16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18,18	11			2	
EAZWXZ-5872 PowerPlex® Fusion						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24	9,10	5		6,7	8,10
	18	11				
EVFGV2-5872 PowerPlex® Fusion 6C						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24	9,10	5	26.2,27.2	6,7	8,10
	18	11	18	17		
FXXYN7-5877 GlobalFiler™						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12,12	30.2,31	16,16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18,18	11			2	
G62ZNZ-5872 GlobalFiler™						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12,12	30.2,31	16,16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18,18	11			2	
G6WHQ2-5877 GlobalFiler™						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18	11			2	

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 4 - STR Results

GMFGVY-5877 NGMselect						
	15,19.3	20,25	11,12	15,16		
		11,14	13,14	18,18.3		11,12
4	12,15	12,12	30.2,31	16,16	X,Y	
	23,24			26.2,27.2	6,7	
	18,18					
H6EXCG-5877 Identifiler®, NGMSElect						
		20,25		15,16	10,12	
	9,10	11,14			8,13	11,12
4	12,15	12,12	30.2,31		X,Y	12,13
	23,24				6,7	8,10
	18,18					
HCF7ZX-5872 GlobalFiler™						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18	11			2	
HEGFMK-5872 Qiagen Investigator ESSplex SE QS						
	15,19.3	20,25	11,12	15,16		
		11,14	13,14	18,18.3		11,12
4	12,15	12,12	30.2,31	16,16	X,Y	
	23,24			26.2,27.2	6,7	
	18,18					
HHGPUF-5872 PowerPlex® Fusion						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12,12	30.2,31	16,16	X,Y	12,13
	23,24	9,10	5,5		6,7	8,10
	18,18	11				
HLHQZ6-5872 GlobalFiler™ Express						
	15,19.3	20,25	11,12	15,16	10,12	-
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24	-	-	26.2,27.2	6,7	8,10
	18	11	-	-	2	

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 4 - STR Results

HXT3BD-5872 PowerPlex® Fusion 6C (GeneMapper ID-X)

	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24	9,10	5	26.2,27.2	6,7	8,10
	18	11	18	17		

JGG2W3-5877 GlobalFiler™

	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12,12	30.2,31	16,16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18,18	11			2	

JQR4H3-5872 GlobalFiler™

	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12,12	30.2,31	16,16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18,18	11			2	

KM676W-5872 PowerPlex® Fusion 5C

	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24	9,10	5		6,7	8,10
	18	11				

LMH24A-5877 GlobalFiler™

	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18	11			2	

M6CXEC-5877 PowerPlex® FUSION

	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24	9,10	5		6,7	8,10
	18	11				

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 4 - STR Results

M6VY6K-5872 PowerPlex® 21 (Kinship (Paternity Trio Module))

	15,19.3	20,25		15,16	10,12	11,20
	9,10	11,14		18,18.3	8,13	11,12
4	12,15	12,12	30.2,31		X,Y	12,13
	23,24	9,10	5,5		6,7	8,10
	18,18					

MHMK9V-5872 GlobalFiler™ Express

	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18	11			2	

MQWWJ8-5872 GlobalFiler™ Express

	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12,12	30.2,31	16,16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18,18	11			2	

MWKGP9-5872 PowerPlex® fusion

	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12,12	30.2,31	16,16	X,Y	12,13
	23,24	9,10	5,5		6,7	8,10
	18,18	11,11				

NEZ7KK-5872 GlobalFiler™

	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12,12	30.2,31	16,16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18,18	11			2	

NUDLJA-5872 GlobalFiler™ Express (Genemapper ID-x)

	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18	11			2	

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 4 - STR Results

P8WNE8-5872 GlobalFiler™						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18	11			2	
PJRUEX-5872 Identifiler® NGMSElect, PowerPlex® FUSION, PP21, ESX17, Y23, CS7 (Familias 3.2.2)						
	15,19.3	20,25	11,12	15,16	10,12	11,20
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24	9,10	5	26.2,27.2	6,7	8,10
	18	11	18	17		
PK6927-5872 PowerPlex® Fusion 6C, GlobalFiler™, NGM SElect						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24	9,10	5	26.2,27.2	6,7	8,10
	18	11	18	17	2	
PPFMJ6-5877 GlobalFiler™						
	15,19.3	20,25	11,12	15,16	10,12	Not Tested
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24	Not Tested	Not Tested	26.2,27.2	6,7	8,10
	18	11	Not Tested	Not Tested	2	
PTGLZP-5872 PowerPlex® Fusion						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12,12	30.2,31	16,16	X,Y	12,13
	23,24	9,10	5,5		6,7	8,10
	18,18	11				
PZVCHB-5872 PowerPlex® Fusion System; ESX17 System; CS7 System, GlobalFiler™, Verifiler Plus						
	15,19.3	20,25	11,12	15,16	10,12	11,20
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12,12	30.2,31	16,16	X,Y	12,13
	23,24	9,10	5,5	26.2,27.2	6,7	8,10
	18,18	11			2	

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 4 - STR Results

QBTRPQ-5877 GlobalFiler™						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18	11			2	
QF6KX6-5872 PowerPlex® 18						
		20,25		15,16	10,12	
	9,10	11,14			8,13	11,12
4	12,15	12,12	30.2,31		X,Y	12,13
	23,24	9,10	5,5		6,7	8,10
	18,18					
RUGFQ7-5877 GlobalFiler™						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18	11			2	
TFDB26-5877 PowerPlex® Fusion 6C						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24	9,10	5	26.2,27.2	6,7	8,10
	18	11	18	17		
TGTQDL-5872 PowerPlex® Fusion						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24	9,10	5		6,7	8,10
	18	11				
THMEVG-5872 GlobalFiler™						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12,12	30.2,31	16,16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18,18	11			2	

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 4 - STR Results

U3L4GA-5872 PowerPlex® Fusion5C

	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24	9,10	5		6,7	8,10
	18	11				

U8HTZ3-5877 Verifiler Plus (GeneMapper ID-X v.1.5)

	15,19.3	20,25	11,12	15,16	10,12	11,20
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24	9,10	5	-	6,7	8,10
	18	-	-	-	2	

UHGJPF-5872 GlobalFiler™

	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18	11			2	

UJV9NL-5872 PowerPlex® F6C

	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12,12	30.2,31	16,16	X,Y	12,13
	23,24	9,10	5,5	26.2,27.2	6,7	8,10
	18,18	11	18	17		

UL6XEQ-5872 GlobalFiler™ (eDNA Brutus)

	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18	11			2	

VCB87N-5872 GlobalFiler™ Express

	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18	11			2	

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 4 - STR Results

W7FZ2K-5877 GlobalFiler™						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18	11			2	
WJMNEN-5872 PowerPlex® Fusion 5C (eDNA)						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24	9,10	5		6,7	8,10
	18	11				
WVHWWQ-5877 GlobalFiler™						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12,12	30.2,31	16,16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18,18	11			2	
X7A37F-5872 PowerPlex® Fusion 5C						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24	9,10	5		6,7	8,10
	18	11				
XC38YJ-5877 GlobalFiler™						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18	11			2	
XNAWUZ-5877 GlobalFiler™						
	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18	11			2	

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 4 - STR Results

XXJGZG-5872 PowerPlex® Fusion 5C

	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24	9,10	5		6,7	8,10
	18	11				

Z2TGAD-5872 PowerPlex® Fusion

	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12	30.2,31	16	X,Y	12,13
	23,24	9,10	5		6,7	8,10
	18	11				

ZBH8UK-5877 GlobalFiler™

	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12,12	30.2,31	16,16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18,18	11			2	

ZPY8HX-5877 GlobalFiler™

	15,19.3	20,25	11,12	15,16	10,12	
	9,10	11,14	13,14	18,18.3	8,13	11,12
4	12,15	12,12	30.2,31	16,16	X,Y	12,13
	23,24			26.2,27.2	6,7	8,10
	18,18	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

227FXV-5872 NIST-STRBASE

	0.0000	0.0000	0.0000	0.0000	0.0000	
	1.9516	6.5617	1.6790	0.0000	0.0000	0.0000
3PI	0.0000	0.0000	0.0000	0.0000		1.1317
	0.0000			0.0000	0.0000	0.0000
	2.4728					

49Z23Z-5872 FBI PopStats, Promega/NIST

	--	--	--	--	--	--
	1.72	8.19	1.62	--	--	--
3PI	--	--	--	--		1.24
	--	--	--	--	--	--
	2.23					

6PZPQ6-5872 FBI PopStats

	0	0	0	0	0	
	1.7265	8.4175	1.8195	N/A	0	0
3PI	0	0	0	0		1.2547
	0			0	0	0
	2.2957					

6TM4EE-5872 [Country-specific] Caucasian Frequency Database

	0.0	0.0	0.0	0.0	0.0	
	1.86	5.05	1.69	0.0	0.0	0.0
3PI	0.0	0.0	0.0	0.0		1.11
	0.0			0.0	0.0	0.0
	2.70					

7WLNZP-5877 Promega

	0	0		0	0	0.9377
	1.9516	6.5617		0	0	0
3PI	0	0	0			1.1317
	0	0	0		0	0
	2.4728					

82PA2R-5872 NIST-STRBASE

	1.6276	9.4340	1.4749			
3PI						1.1513
	2.7762					

8D43XE-5877 NIST-STRBASE

	0	0	0	0	0	
	1.95	6.03	1.69	0	0	0
3PI	0	0	0	0		1.10
	0			0	0	0
	2.45					

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

8RMRQP-5877	Laboratory Specific Database					
	0.000	0.000	0.000	0.000	0.000	
	1.727	8.418	1.820	0.000	0.000	0.000
3PI	0.000	0.000	0.000	0.000		1.255
	0.000	0.000	0.000	0.000	0.000	0.000
	2.296					
8U9NZ2-5872	NIST-STRBASE					
	0.0000	0.0000		0.0000	0.0000	0.9377
	1.9516	6.5617		0.0000	0.0000	0.0000
3PI	0.0000	0.0000	0.0000			1.1317
	0.0000	0.0000	0.0000		0.0000	0.0000
	2.4728					
8WW4PB-5872	FBI PopStats, laboratory specific database					
		0.00100		0.00200	0.00100	
	1.71	8.19			0.00200	0.00400
3PI	0.00300	0.00100	0.00100			1.25
	0.00598	0.00100	0.00100		0.00100	0.000140
	2.23					
AGTGDY-5872	FBI PopStats, NIST 2017					
	1.95	6.56	1.67			
3PI						1.13
				N/A		
	N/A					
BUBNM6-5872	FBI PopStats, NIST Population					
	NA	NA	NA	NA	NA	
	1.95	6.56	1.67	NA	NA	NA
3PI	NA	NA	NA	NA		1.13
	NA			NA	NA	NA
	NA					
BY7KAB-5872	NIST-STRBASE					
	0	0	0	0	0	0.9400
	1.952	6.562	1.679	0	0	0
3PI	0	0	0	0		1.132
	0	0	0	0	0	0
	2.473					
C442M6-5872	FBI PopStats, NIST Population					
	NA	NA	NA	NA	NA	
	1.95	6.56	1.67	NA	NA	NA
3PI	NA	NA	NA	NA		1.13
	NA			NA	NA	NA
	NA					

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

C6V4AK-5877 Laboratory Specific Database

	0.000	0.000	0.000	0.000	0.000	
	1.727	8.418	1.820	0.000	0.000	0.000
3PI	0.000	0.000	0.000	0.000		1.255
	0.000	0.000	0.000	0.000	0.000	0.000
	2.296					

D6TPH7-5872 NIST-STRBASE

	0.0028	0.0010	0.0028	0.0020	0.0010	-
	1.9516	6.5616	1.6789	0.0028	0.0020	0.0040
3PI	0.0030	0.0010	0.0010	0.0028		1.1317
	0.0041	-	-	0.0064	0.0000	0.0001
	2.4727					

DHFZNN-5877 NIST-STRBASE

	0.000000	0.000100	0.000114	0.000441	0.003084	
	1.951351	6.563636	1.679070	0.000000	0.000860	0.001662
3PI	0.004843	0.001189	0.000000			1.131661
	0.000151	0.002153	0.000077		0.000004	0.000401
	2.472603					

DQRCM7-5877 Life Technologies Database

		0		0	0	
	1.84	8.31			0	0
3PI	0	0	0			1.25
	0				0	0
	2.22					

E2PD2W-5872 FBI PopStats, NIST Population

	0	0	0	0	0	
	1.95	6.56	1.67	0	0	0
3PI	0	0	0	0		1.13
	0			N/A	0	0
	N/A					

FXXYN7-5877 NIST-STRBASE

	0.00	0.00	0.00	0.00	0.00	
	1.95	6.03	1.69	N/A	0.00	0.00
3PI	0.00	0.00	0.00	0.00		1.10
	0.00			0.00	0.00	0.00
	2.45					

G62ZNZ-5872 FBI PopStats, NIST Population

	NA	NA	NA	NA	NA	
	1.95	6.56	1.67	NA	NA	NA
3PI	NA	NA	NA	NA		1.13
	NA			NA	NA	NA
	NA					

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

H6EXCG-5877	NIST-STRBASE					
	0	0	1.037	0	0	
	1.951	6.561	0.839		0	0
3PI	0	0	0	0		1.131
	0			0	0	0
	2.472					
HEGFMK-5872	national database					
	0	0	0	0		
		6.15130688	1.789104833	0		0
3PI	0	0	0	0		
	0			0	0	
	7.02113364					
HLHQZ6-5872	NIST-STRBASE					
	0.0028	0.0010	0.0028	0.0020	0.0010	-
	1.9516	6.5616	1.6789	0.0028	0.0020	0.0040
3PI	0.0030	0.0010	0.0010	0.0028		1.1317
	0.0041	-	-	0.0064	0.0000	0.0001
	2.4727					
HXT3BD-5872	NIST-STRBASE					
	0	0	0	0	0	
	1.9514E+00	6.5636E+00	1.6791E+00	0	0	0
3PI	0	0	0	0		1.1317E+00
	0	0	0	0	0	0
	2.4726E+00					
JGG2W3-5877	NIST-STRBASE					
	0	0	0	0	0	
	1.955	6.027	1.691	0	0	0
3PI	0	0	0	0		1.102
	0			0	0	0
	2.452					
LMH24A-5877	NIST-STRBASE					
	0	0	0	0	0	
	1.9514	6.5634	1.6791	0	0	0
3PI	0	0	0	0		1.1317
	0			0	0	0
	2.4726					
M6CXEC-5877	NIST-STRBASE					
	0	0	0	0	0	
	1.9514E+00	6.5636E+00	1.6791E+00	0	0	0
3PI	0	0	0	0		1.1317E+00
	0	0	0		0	0
	2.4726E+00					

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

M6VY6K-5872 NIST-STRBASE

	0	0		0	0	1.1812
	1.6984	7.4516		0	0	0
3PI	0	0	0			1.2189
	0	0	0		0	0
	2.7778					

MHMK9V-5872 NIST-STRBASE

	0.0028	0.0010	0.0028	0.0020	0.0010	-
	1.9516	6.5616	1.6789	0.0028	0.0020	0.0040
3PI	0.0030	0.0010	0.0010	0.0028		1.1317
	0.0041	-	-	0.0064	0.0000	0.0001
	2.4727					

MQWWJ8-5872 NIST-STRBASE

	0.0000	0.0000	0.0000	0.0000	0.0000	
	1.9514	6.5636	1.6791	0.0000	0.0000	0.0000
3PI	0.0000	0.0000	0.0000	0.0000		1.1317
	0.0000			0.0000	0.0000	0.0000
	2.4726					

P8WNE8-5872 NIST-STRBASE

	0.000	0.000	0.000	0.000	0.000	
	1.9516	6.5617	1.6790	0.000	0.000	0.000
3PI	0.000	0.000	0.000	0.000		1.1317
	0.000			0.000	0.000	0.000
	2.4728					

PJRUEX-5872 NIST-STRBASE

	EXCLUSION	EXCLUSION	1.0373	EXCLUSION	EXCLUSION	0.8434
	0.9756	3.2817	0.8395	EXCLUSION	EXCLUSION	EXCLUSION
3PI	EXCLUSION	0.9809	EXCLUSION	EXCLUSION		0.6942
	4.0561	EXCLUSION	EXCLUSION	EXCLUSION	2.0989	0.9525
	1.2362					

PK6927-5872 Local Database

	1.74	8.49	1.49			
3PI						1.34
	2.40					

PPFMJ6-5877 NIST-STRBASE

	0.0000	0.0000	0.0000	0.0000	0.0000	
	1.9516	6.5617	1.6790	0.0000	0.0000	0.0000
3PI	0.0000	0.0000	0.0000	0.0000		1.1317
	0.0000			0.0000	0.0000	0.0000
	2.4728					

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

PTGLZP-5872 NIST-STRBASE

	2.01	6.43	1.65			
3PI						1.09
	2.42					

RUGFQ7-5877 FBI PopStats

	1.6955	7.4516	1.6903			
3PI						1.2189
	2.7778					

THMEVG-5872 FBI PopStats

	N/A	N/A	N/A	N/A	N/A	
	1.95	6.56	1.67	N/A	N/A	N/A
3PI	N/A	N/A	N/A	N/A		1.13
	N/A			N/A	N/A	N/A
	N/A					

UJV9NL-5872 FBI PopStats

	1.72	8.51				
3PI						1.25
	2.25					

UL6XEQ-5872 NIST-STRBASE

	0.00	0.00	0.00	0.00	0.00	
	1.9516	6.5617	1.6790	0.00	0.00	0.00
3PI	0.00	0.00	0.00	0.00		1.1317
	0.00			0.00	0.00	0.00
	2.4728					

VCB87N-5872 NIST-STRBASE

	0.0028	0.0010	0.0028	0.0020	0.0010	
	1.9516	6.5616	1.6789	0.0028	0.0020	0.0040
3PI	0.0030	0.0010	0.0010	0.0028		1.1317
	0.0041			0.0064	0.0000	0.0001
	2.4727					

WJMNEN-5872 eDNA

	0.0000	0.0000	0.0000	0.0000	0.0000	
	1.7265	8.5179	1.6790	0.0000	0.0000	0.0000
3PI	0.0000	0.0000	0.0000	0.0000		1.2547
	0.0000	0.0000	0.0000		0.0000	0.0000
	2.2533					

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

WVHWWQ-5877 NIST-STRBASE

	0	0	0	0	0	
	1.955	6.027	1.691	0	0	0
3PI	0	0	0	0		1.102
	0			0	0	0
	2.452					

XNAWUZ-5877 FBI PopStats

	1.6955	7.4516	1.6903			
3PI						1.2189
	2.778					

ZBH8UK-5877 NIST-STRBASE

	0	0	0	0	0	
	1.95	6.03	1.69	0	0	0
3PI	0	0	0	0		1.10
	0			0	0	0
	2.45					

ZPY8HX-5877 [Country-specific] database Westen et al 2014

	0.0003	0.0001	0.0052	0.0002	0.0011	
	1.9287	6.4549	1.6276	0.0113	0.0011	0.0008
3PI	0.0044	0.0028	0.0130	0.0006		1.2590
	0.0002			0.0001	0.0001	0.0001
	2.5030					

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 4PI - Paternity Index Results

227FXV-5872	NIST-STRBASE					
	32.8947	3.1949	10.6157	2.0991	1.2893	
	1.9516	6.5617	1.6790	20.0803	4.2992	1.5903
4PI	2.9343	14.1643	17.1821	2.6157		2.2635
	3.2808			12.0192	2.1231	10.0200
	4.9456					
3KHENB-5872	NIST-STRBASE					
	32.895	3.1949	10.616	2.0991	1.2893	
	1.9516	6.5617	1.6790		4.2992	1.5903
4PI	2.9343	14.164	17.182	2.6157		2.2635
	3.2808	4.3478	13.123		2.1231	10.020
	4.9456					
49Z23Z-5872	FBI PopStats, Promega/NIST					
	74.3	7.61	2.99	1.62	1.4	--
	1.54	12.9	1.83	89.1	3.9	1.69
4PI	2.94	8.59	35.9	5.21		2.79
	3.92	4.81	6.98	--	4.48	5.24
	7.22					
66BCVT-5877	NIST-STRBASE					
		3.432		1.974	1.302	
	2.054	6.04			4.027	1.557
4PI	3.146	12.326	17.762			2.188
	3.728				2.157	8.883
	4.992					
6FE8EX-5872	NIST-STRBASE					
	32.8947	3.1948	10.6157	2.0990	1.2893	
	1.9516	6.5616	1.6789	20.0803	4.2992	1.5903
4PI	2.9342	14.1643	17.1821	2.6157		2.2634
	3.2808	4.3478	13.1233		2.1231	10.0200
	4.9455					
6HKL4C-5872	FBI PopStats					
	32.895	3.1949	10.616	2.0991	1.2893	
	1.9516	6.5617	1.6790	20.080	4.2992	1.5903
4PI	2.9343	14.164	17.182	2.6157		2.2635
	3.2808	4.3478	13.123	12.019	2.1231	10.020
	4.9456					
6LMT3U-5877						
	50.00	2.77	9.96	1.66	1.66	
	1.66	8.33	1.21	50.00	3.84	1.51
4PI	2.77	20.00	16.66	2.46		2.17
	2.77			50.00	1.25	9.80
	5.55					

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 4PI - Paternity Index Results

6PZPQ6-5872 FBI PopStats

	40.323	3.670	10.101	2.1487	1.4225	
	1.7265	8.4175	1.8195	N/A	4.4883	1.8362
4PI	3.7397	10.363	12.626	3.1566		2.5094
	3.1566			13.477	2.2202	13.477
	4.5914					

6TM4EE-5872 [Country-specific] Caucasian Frequency Database

	12.30	3.06	7.31	1.54	1.42	
	1.86	5.05	1.69	10.76	3.86	1.38
4PI	3.58	9.05	8.19	2.24		2.08
	3.27			6.87	2.30	5.92
	4.67					

6YPAW3-5872 [Country-specific] Caucasian database (Taylor, D. et al., 2017) DOI: 10.1016/j.fsigen.2017.02.012

	47.8182	3.4065	14.2703	1.9628	1.409	
	2.0230	7.6522	1.5086	24.0000	4.9811	1.6049
4PI	3.6923	14.2703	11.2340	3.1712		2.5472
	3.6414			11.4783	2.0230	8.5000
	5.2020					

7JFQXB-5872 FBI PopStats

	32.895	3.1949	10.616	2.0991	1.2893	
	1.9516	6.5617	1.6790	20.080	4.2992	1.5903
4PI	2.9343	14.164	17.182	2.6157		2.2635
	3.2808	4.3478	13.123	12.019	2.1231	10.020
	4.9456					

7K9EG7-5872 NIST-STRBASE

	20.5605	3.1224	9.0943	1.9374	1.3074	
	1.9534	6.0278	1.6895	14.8625	4.1155	1.5091
4PI	2.8820	11.4579	13.2701	2.4613		2.1576
	3.2012			10.0617	2.1181	8.6699
	4.6780					

7QF9B3-5872 [Country-specific] Caucasian population database

	19.1	3.53		1.72	1.48	0.84
	1.85	5.86		13.3	4.61	1.54
4PI	3.47	9.40	10.4			2.30
	3.22	3.82	8.88		2.13	6.72
	4.34					

7WLNZP-5877 Promega

	32.8947	3.1949		2.0991	1.2893	0.9377
	1.9516	6.5617		20.0803	4.2992	1.5903
4PI	2.9343	14.1643	17.1821			2.2635
	3.2808	4.3478	13.1234		2.1231	10.0200
	4.9456					

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					

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82MKWV-5872	NIST-STRBASE					
	32.8947	3.1948	10.6157	2.0990	1.2893	
	1.9516	6.5616	1.6789	20.0803	4.2992	1.5903
4PI	2.9342	14.1643	17.1821	2.6157		2.2634
	3.2808	4.3478	13.1233		2.1231	10.0200
	4.9455					
82PA2R-5872	NIST-STRBASE					
	47.170	3.9339	13.889	1.7876	1.4749	
	1.6276	9.4340	1.4749	39.370	4.7214	1.8882
4PI	3.1466	15.221	21.459	2.8604		2.3026
	4.1391	3.0525	27.778	6.7385	2.0886	10.267
	5.5525					
8D43XE-5877	NIST-STRBASE					
	20.5	3.12	9.09	1.94	1.31	
	1.95	6.03	1.69	14.8	4.11	1.51
4PI	2.88	11.5	13.3	2.46		2.16
	3.20			10.1	2.12	8.66
	4.68					
8HW7KQ-5877	NIST-STRBASE					
	32.8	3.19	10.6	2.1	1.29	
	1.95	6.56	1.68	20.1	4.3	1.59
4PI	2.93	14.2	17.2	2.62		2.26
	3.28			12	2.12	10
	4.95					
8RMRQP-5877	Laboratory Specific Database					
	40.323	3.367	10.101	2.149	1.422	
	1.727	8.418	1.820	25.253	4.488	1.836
4PI	3.740	10.363	12.626	3.157		2.509
	3.157	4.299	12.626	13.477	2.220	13.477
	4.591					
8U9NZ2-5872	NIST-STRBASE					
	32.8947	3.1949		2.0991	1.2893	0.9377
	1.9516	6.5617		20.0803	4.2992	1.5903
4PI	2.9343	14.1643	17.1821			2.2635
	3.2808	4.3478	13.1234		2.1231	10.0200
	4.9456					
8WW4PB-5872	FBI PopStats, laboratory specific database					
		3.18		2.14	1.41	
	1.71	8.19			4.47	1.82
4PI	3.85	8.97	12.3			2.50
	3.12	4.21	14.4		2.19	12.7
	4.47					

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					

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AGTGDY-5872	FBI PopStats, NIST 2017					
	32.89	3.19	10.61	2.09	1.28	
	1.95	6.56	1.67	20.08	4.29	1.59
4PI	2.93	14.16	17.18	2.61		2.26
	3.28			N/A	2.12	10.02
	N/A					
AL77UM-5872	NIST-STRBASE					
		3.1949		2.0991	1.2893	
	1.9516	6.5617			4.2992	1.5903
4PI	2.9343	14.1643	17.1821			2.2635
	3.2808				2.1231	10.0200
	4.9456					
AX4ZA7-5877	FBI PopStats					
	52.63	3.05	18.79	2.13	1.42	
	1.87	5.97	1.65	18.79	4.04	2.00
4PI	3.16	15.03	13.85	2.82		2.64
	3.50	3.41	14.62	9.07	2.00	8.22
	5.31					
BUBNM6-5872	FBI PopStats, NIST Population					
	32.89	3.19	10.61	2.09	1.28	
	1.95	6.56	1.67	20.08	4.29	1.59
4PI	2.93	14.16	17.18	2.61		2.26
	3.28			NA	2.12	10.02
	NA					
BY7KAB-5872	NIST-STRBASE					
	32.90	3.195	10.62	2.099	1.289	0.9400
	1.952	6.562	1.679	20.08	4.299	1.590
4PI	2.934	14.16	17.18	2.616		2.264
	3.281	4.348	13.12	12.02	2.123	10.02
	4.946					
C442M6-5872	FBI PopStats, NIST Population					
	32.89	3.19	10.61	2.09	1.28	
	1.95	6.56	1.67	20.08	4.29	1.59
4PI	2.93	14.16	17.18	2.61		2.26
	3.28			NA	2.12	10.02
	NA					
C6V4AK-5877	Laboratory Specific Database					
	40.323	3.367	10.101	2.149	1.422	
	1.727	8.418	1.820	25.253	4.488	1.836
4PI	3.740	10.363	12.626	3.157		2.509
	3.157	4.299	12.626	13.477	2.220	13.477
	4.591					

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 4PI - Paternity Index Results

CKQJF7-5877 FBI PopStats

	52.632	3.0581	18.797	2.1386	1.4217	
	1.8783	5.9737	1.6540	18.797	4.0453	2.0080
4PI	3.1686	15.038	13.850	2.8281		2.6434
	3.5063			9.0744	2.0080	8.2237

CQCJPR-5872 NIST-STRBASE

	32.818	3.195	10.618	2.099	1.289	
	1.951	6.564	1.679	20.056	4.298	1.590
4PI	2.935	14.157	17.190	2.616		2.263
	3.282			12.033	2.124	10.028
	4.945					

D37AUV-5872 NIST-STRBASE

	32.818	3.195		2.099	1.289	0.940
	1.951	6.564		20.056	4.298	1.590
4PI	2.935	14.157	17.190			2.263
	3.282	4.349	13.127		2.124	10.028
	4.945					

D6TPH7-5872 NIST-STRBASE

	32.8947	3.1948	10.6157	2.0990	1.2893	-
	1.9516	6.5616	1.6789	20.0803	4.2992	1.5903
4PI	2.9342	14.1643	17.1821	2.6157		2.2634
	3.2808	-	-	12.0192	2.1231	10.0200
	4.9455					

DHFZNN-5877 NIST-STRBASE

	32.818182	3.194690	10.617647	2.098837	1.289286	
	1.951351	6.563636	1.679070	20.055556	4.297619	1.590308
4PI	2.934959	14.156863	17.190476			2.263323
	3.281818	4.349398	13.127273		2.123529	10.027778
	4.945205					

DQPMHA-5872 FBI PopStats

	40.323	3.3670	10.101	2.1487	1.4225	
	1.7265	8.4175	1.8195	25.253	4.4883	1.8362
4PI	3.7397	10.363	12.626	3.1566		2.5094
	3.1566			13.477	2.2202	13.477
	4.5914					

DQRCM7-5877 Life Technologies Database

		3.42		2.19	1.42	
	1.84	8.31			4.48	1.56
4PI	3.67	12.92	15.15			2.49
	3.29				2.44	11.63
	4.45					

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					

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E2PD2W-5872 FBI PopStats, NIST Population

	32.89	3.19	10.61	2.09	1.28	
	1.95	6.56	1.67	20.08	4.29	1.59
4PI	2.93	14.16	17.18	2.61		2.26
	3.28			N/A	2.12	10.02
	N/A					

EAZWXZ-5872 NIST-STRBASE

	32.895	3.1949	10.616	2.0991	1.2893	
	1.9516	6.5617	1.679		4.2992	1.5903
4PI	2.9343	14.164	17.182	2.6157		2.2635
	3.2808	4.3478	13.123		2.1231	10.02
	4.9456					

EVFGV2-5872 FBI PopStats

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

FXXYN7-5877 NIST-STRBASE

	20.5	3.12	9.09	1.94	1.31	
	1.95	6.03	1.69	N/A	4.11	1.51
4PI	2.88	11.5	13.3	2.46		2.16
	3.20			10.1	2.12	8.66
	4.68					

G62ZNZ-5872 FBI PopStats, NIST Population

	32.89	3.19	10.61	2.09	1.28	
	1.95	6.56	1.67	20.08	4.29	1.59
4PI	2.93	14.16	17.18	2.61		2.26
	3.28			NA	2.12	10.02
	NA					

G6WHQ2-5877 FBI PopStats

	52.6	3.06	18.8	2.14	1.42	
	1.88	5.97	1.65	18.8	4.05	2.01
4PI	3.17	15.0	13.9	2.83		2.64
	3.51			9.07	2.01	8.22

GMFGVY-5877 [Country-specific] Population Database

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

H6EXCG-5877 NIST-STRBASE

		3.194		2.099	1.289	
	1.951	6.561			4.299	1.590
4PI	2.934	14.164	17.182			2.263
	3.280				2.123	10.02
	4.945					

HCF7ZX-5872 NIST-STRBASE

	32.895	3.1949	10.616	2.0991	1.2893	
	1.9516	6.5617	1.6790		4.2992	1.5903
4PI	2.9343	14.164	17.182	2.6157		2.2635
	3.2808			12.019	2.1231	10.020

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					

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HEGFMK-5872 national database

	68.17283176	3.253977825	14.5284234	1.968374717		
		5.586106462	1.741989115	31.07520199		1.759875894
4PI	3.298847845	11.36163517	10.53632186	3.469623966		
	3.71870247			10.00199601	2.136617	
	5.224818725					

HHGPUF-5872 FBI PopStats

	40.323	3.3670	10.101	2.1486	1.4225	
	1.7265	8.4175	1.8195	25.253	4.4883	1.8362
4PI	3.7397	10.363	12.626	3.1566		2.5094
	3.1566	4.2992	12.626		2.2202	13.477
	4.5914					

HLHQZ6-5872 NIST-STRBASE

	32.8947	3.1948	10.6157	2.0990	1.2893	-
	1.9516	6.5616	1.6789	20.0803	4.2992	1.5903
4PI	2.9342	14.1643	17.1821	2.6157		2.2634
	3.2808	-	-	12.0192	2.1231	10.0200
	4.9455					

HXT3BD-5872 NIST-STRBASE

	3.2818E+01	3.1947E+00	1.0618E+01	2.0988E+00	1.2893E+00	
	1.9514E+00	6.5636E+00	1.6791E+00	2.0056E+01	4.2976E+00	1.5903E+00
4PI	2.9350E+00	1.4157E+01	1.7190E+01	2.6159E+00		2.2633E+00
	3.2818E+00	4.3494E+00	1.3127E+01	1.2033E+01	2.1235E+00	1.0028E+01
	4.9452E+00					

JGG2W3-5877 NIST-STRBASE

	20.474	3.124	9.086	1.938	1.309	
	1.955	6.027	1.691	14.827	4.114	1.510
4PI	2.885	11.454	13.259	2.464		2.158
	3.204			10.076	2.120	8.660
	4.681					

JQR4H3-5872 NIST-STRBASE

	32.8947	3.1949	10.6157	2.0991	1.2893	
	1.9516	6.5617	1.6790	-	4.2992	1.5903
4PI	2.9343	14.1643	17.1821	2.6157		2.2635
	3.2808			12.0192	2.1231	10.0200
	4.9456					

KM676W-5872 NIST-STRBASE

	54.348	3.7679	5.0302	1.7680	1.4152	
	1.6955	7.4516	1.6903	38.462	4.2992	1.7153
4PI	2.9940	11.976	23.041	3.3636		2.4378
	3.2072	3.9216	13.717		2.5523	8.3472

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 4PI - Paternity Index Results

LMH24A-5877 NIST-STRBASE

	32.8084	3.1947	10.618	2.0988	1.2893	
	1.9514	6.5634	1.6791	20.0562	4.2977	1.5903
4PI	2.935	14.1563	17.188	2.616		2.2633
	3.2819			12.0337	2.1235	10.0281
	4.9451					

M6CXEC-5877 NIST-STRBASE

	3.2818E+01	3.1947E+00	1.0618E+01	2.0988E+00	1.2893E+00	
	1.9514E+00	6.5636E+00	1.6791E+00	2.0056E+01	4.2976E+00	1.5903E+00
4PI	2.9350E+00	1.4157E+01	1.7190E+01	2.6159E+00		2.2633E+00
	3.2818E+00	4.3494E+00	1.3127E+01		2.1235E+00	1.0028E+01
	4.9452E+00					

M6VY6K-5872 NIST-STRBASE

	54.3478	3.7679		1.7680	1.4132	1.1812
	1.6984	7.4516		38.4615	4.2992	1.7153
4PI	2.9940	11.9760	23.0415			2.4378
	3.2072	3.9683	13.7174		2.5523	8.4175
	5.5556					

MHMK9V-5872 NIST-STRBASE

	32.8947	3.1948	10.6157	2.0990	1.2893	
	1.9516	6.5616	1.6789	20.0803	4.2992	1.5903
4PI	2.9342	14.1643	17.1821	2.6157		2.2634
	3.2808			12.0192	2.1231	10.0200
	4.9455					

MQWWJ8-5872 NIST-STRBASE

	32.8182	3.1947	10.6177	2.0988	1.2893	
	1.9514	6.5636	1.6791	20.0556	4.2976	1.5903
4PI	2.9350	14.1569	17.1905	2.6159		2.2633
	3.2818			12.0333	2.1235	10.0278
	4.9452					

MWKGP9-5872 FBI PopStats

	40.32	3.37	10.10	2.15	1.42	
	1.73	8.42	1.82	25.3	4.49	1.84
4PI	3.74	10.36	12.62	3.16		2.51
	3.16	4.3	12.63		2.22	13.48
	4.59					

NEZ7KK-5872 Local/state database

	25.000	3.406	14.286	1.963	1.431	
	2.023	7.657	1.509	24.039	4.980	1.605
4PI	3.693	14.265	11.236	3.172		2.548
	3.642			11.468	2.023	8.503
	5.203					

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 4PI - Paternity Index Results

NUDLJA-5872	NIST-STRBASE					
	32.895	3.195	10.616	2.099	1.289	
	1.952	6.562	1.679	20.080	4.299	1.590
4PI	2.934	14.164	17.182	2.616		2.263
	3.281			12.019	2.123	10.020
	4.946					
P8WNE8-5872	NIST-STRBASE					
	32.8947	3.1949	10.6157	2.0991	1.2893	
	1.9516	6.5617	1.6790	20.0803	4.2992	1.5903
4PI	2.9343	14.1643	17.1821	2.6157		2.2635
	3.2808			12.0192	2.1231	10.0200
	4.9456					
PJRUEX-5872	NIST-STRBASE					
	32.8181	3.1946	10.6176	2.0988	1.2892	0.9401
	1.9513	6.5663	1.6790	20.0555	4.2976	1.5903
4PI	2.9349	14.1568	17.1904	2.6159		2.2633
	3.2818	4.3493	13.1272	12.0333	2.1235	10.0277
	4.9452					
PK6927-5872	Local Database					
	34.01	3.51	6.73	2.24	1.39	
	1.74	8.49	1.49	25.51	5.62	1.74
4PI	2.77	10.41	8.08	3.68		2.68
	4.46	4.31	14.10	8.56	2.20	8.22
	4.79					
PPFMJ6-5877	NIST-STRBASE					
	32.8947	3.1949	10.6157	2.0991	1.2893	
	1.9516	6.5617	1.6790	20.0803	4.2992	1.5903
4PI	2.9343	14.1643	17.1821	2.6157		2.2635
	3.2808			12.0192	2.1231	10.0200
	Not Reported					
PTGLZP-5872	NIST-STRBASE					
	32.25	3.13	10.41	2.06	1.26	
	2.03	6.82	1.65	19.69	4.21	1.56
4PI	2.88	13.89	16.85	2.70		2.45
	3.46	4.46	12.87		2.08	10.01
	4.85					
PZVCHB-5872	NIST-STRBASE					
	32.8947	3.1949	10.6157	2.0991	1.2893	0.9400
	1.9516	6.5617	1.6790	20.0803	4.2992	1.5903
4PI	2.9343	14.1643	17.1821	2.6157		2.2635
	3.2808	4.3478	13.1234	12.0192	2.1231	10.0200
	4.9456					

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 4PI - Paternity Index Results

QBTRPQ-5877 FBI PopStats

	52.632	3.0581	18.797	2.1386	1.4217	
	1.8783	5.9737	1.6540	18.797	4.0453	2.0080
4PI	3.1686	15.038	13.850	2.8281		2.6434
	3.5063			9.0744	2.0080	8.2237

QF6KX6-5872 [Country] DATABASE

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

RUGFQ7-5877 FBI PopStats

	54.348	3.7679	5.0302	1.768	1.4152	
	1.6955	7.4516	1.6903	38.462	4.2992	1.7153
4PI	2.994	11.976	23.041	3.3636		2.4378
	3.2072			8.489	2.5523	8.3472
	5.5556					

TFDB26-5877 NIST-STRBASE

	32.82	3.195	10.62	2.099	1.289	
	1.951	6.564	1.679	20.06	4.298	1.59
4PI	2.935	14.16	17.19	2.616		2.263
	3.282	4.349	13.13	12.03	2.124	10.03

TGTQDL-5872 NIST-STRBASE

	32.895	3.1949	10.616	2.0991	1.2893	
	1.9516	6.5617	1.6790		4.2992	1.5903
4PI	2.9343	14.164	17.182	2.6157		2.2635
	3.2808	4.3478	13.123		2.1231	10.020
	4.9456					

THMEVG-5872 FBI PopStats

	32.89	3.19	10.61	2.09	1.28	
	1.95	6.56	1.67	20.08	4.29	1.59
4PI	2.93	14.16	17.18	2.61		2.26
	3.28			N/A	2.12	10.02
	N/A					

U3L4GA-5872 NIST-STRBASE

	32.8947	3.1948	10.6157	2.0990	1.2893	
	1.9516	6.5616	1.6789	20.0803	4.2992	1.5903
4PI	2.9342	14.1643	17.1821	2.6157		2.2634
	3.2808	4.3478	13.1233		2.1231	10.0200
	4.9455					

U8HTZ3-5877 NIST-STRBASE

	32.89473684	3.194888179	10.61571125	2.099076406	1.289324394	0.940026321
	1.951600312	6.56167979	1.678979181	20.08032129	4.299226139	1.590330789
4PI	2.9342723	14.16430595	17.18213058	2.615746796		2.263467632
	3.280839895	4.347826087	13.12335958		2.123142251	10.02004008
	4.945598417					

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 4PI - Paternity Index Results

UJV9NL-5872	FBI PopStats					
		3.23		2.14	1.41	
	1.72	8.51			4.55	1.82
4PI	3.91	9.20	13.0			2.50
	3.16				2.22	13.4
	4.50					
UL6XEQ-5872	NIST-STRBASE					
	32.8947	3.1949	10.6157	2.0991	1.2893	
	1.9516	6.5617	1.6790	20.0803	4.2992	1.5903
4PI	2.9343	14.1643	17.1821	2.6157		2.2635
	3.2808			12.0192	2.1231	10.0200
	4.9456					
VCB87N-5872	NIST-STRBASE					
	32.8947	3.1948	10.6157	2.0990	1.2893	
	1.9516	6.5616	1.6789	20.0803	4.2992	1.5903
4PI	2.9342	14.1643	17.1821	2.6157		2.2634
	3.2808			12.0192	2.1231	10.0200
	4.9455					
W7FZ2K-5877	FBI PopStats					
	52.632	3.0581	18.797	2.1386	1.4217	
	1.8783	5.9737	1.6540	18.797	4.0453	2.0080
4PI	3.1686	15.038	13.850	2.8281		2.6434
	3.5063			9.0744	2.0080	8.2237
WJMNEN-5872	eDNA					
	32.8947	3.2342	10.6157	2.1487	1.4128	
	1.7265	8.5179	1.6790	20.0803	4.5579	1.8275
4PI	3.9185	9.2081	13.0548	2.6157		2.5094
	3.1606	3.8462	14.0845		2.2202	13.4771
	4.5065					
WVHWWQ-5877	NIST-STRBASE					
	20.474	3.124	9.086	1.938	1.309	
	1.955	6.027	1.691	14.827	4.114	1.510
4PI	2.885	11.454	13.259	2.464		2.158
	3.204			10.076	2.120	8.660
	4.681					
X7A37F-5872	NIST-STRBASE					
	32.8	3.19	10.6	2.09	1.28	
	1.95	6.56	1.67		4.29	1.59
4PI	2.93	14.1	17.1	2.61		2.26
	3.28	4.34	13.1		2.12	10.0
	4.94					

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 4PI - Paternity Index Results

XC38YJ-5877	FBI PopStats					
	52.632	3.0581	18.797	2.1386	1.4217	
	1.8783	5.9737	1.6540	18.797	4.0453	2.0080
4PI	3.1686	15.038	13.850	2.8281		2.6434
	3.5063			9.0744	2.0080	8.2237
XNAWUZ-5877	FBI PopStats					
	54.348	3.7679	5.0302	1.7680	1.4152	
	1.6955	7.4516	1.6903	38.462	4.2992	1.7153
4PI	2.9940	11.976	23.041	3.3636		2.4378
	3.2072			8.4890	2.5523	8.3472
	5.5556					
XXJGZG-5872	NIST-STRBASE					
	32.895	3.1949	10.616	2.0991	1.2893	
	1.9516	6.5617	1.6790		4.2992	1.5903
4PI	2.9343	14.164	17.182	2.6157		2.2635
	3.2808	4.3478	13.123		2.1231	10.020
	4.9456					
Z2TGAD-5872	NIST-STRBASE					
	32.895	3.1949	10.616	2.0991	1.2893	
	1.9516	6.5617	1.6790		4.2992	1.5903
4PI	2.9343	14.164	17.182	2.6157		2.2635
	3.2808	4.3478	13.123		2.1231	10.020
	4.9456					
ZBH8UK-5877	NIST-STRBASE					
	20.5	3.12	9.09	1.94	1.31	
	1.95	6.03	1.69	14.8	4.11	1.51
4PI	2.88	11.5	13.3	2.46		2.16
	3.20			10.1	2.12	8.66
	4.68					
ZPY8HX-5877	[Country-specific] database Westen et al 2014					
	36.5764	3.2990	10.5307	2.0684	1.3271	
	1.9287	6.4549	1.6276	22.6654	4.4551	1.5548
4PI	3.4982	14.9454	15.2207	2.6973		2.5181
	3.3958			7.8678	2.3828	8.7244
	5.0060					

YSTR Amplification Kit(s) & Results

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									
66BCVT-5877	Yfiler® YFiler Plus								
	35,37	14	12,14	13	29	23	11	13	14
2	15	12	13	19	29	15	17	11	23
	37	12		18	17	22	25		12
6FE8EX-5872	Yfiler®								
		14	12,14	13	29	23	11	13	14
2	15	12	13	19		15	17		
							25		12
7K9EG7-5872	Yfiler® Plus								
	35,37	14	12,14	13	29	23	11	13	14
2	15	12	13	19	29	15	17	11	23
	37	12		18	17	22	25		12
7WLNZP-5877	PowerPlex® Y Y23								
		14	12,14	13	29	23	11	13	14
2	15	12	13	19		15	17		23
		12	13	18	17		25	10	12
82MKWV-5872	Yfiler®								
		14	12,14	13	29	23	11	13	14
2	15	12	13	19		15	17		
							25		12
82PA2R-5872									
		14	12,14	13	29	23	11	13	14
2	15	12	13	19		15	17		23
		12	13	18	17		25	10	12
AL77UM-5872	Yfiler®								
		14	12,14	13	29	23	11	13	14
2	15	12	13	19		15	17		
							25		12
BY7KAB-5872	PowerPlex® Y23								
		14	12-14	13	29	23	11	13	14
2	15	12	13	19		15	17		23
		12	13	18	17		25	10	12
CKQJF7-5877	Yfiler® Plus								
	35,37	14	12,14	13	29	23	11	13	14
2	15	12	13	19	29	15	17	11	23
	37	12		18	17	22	25		12

TABLE 3

Item 2 - YSTR Results

Item	WebCode-Test / 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
CQCJPR-5872	PowerPlex® Y 23		14	12,14	13	29	23	11	13	14
2		15	12	13	19		15	17		23
			12	13	18	17		25	10	12
D6TPH7-5872	Yfiler®									
		-	14	12,14	13	29	23	11	13	14
2		15	12	13	19	-	15	17	-	-
		-	-	-	-	-	-	25	-	12
G6WHQ2-5877	Yfiler® Plus									
		35,37	14	12,14	13	29	23	11	13	14
2		15	12	13	19	29	15	17	11	23
		37	12		18	17	22	25		12
H6EXCG-5877	Yfiler®									
			14	12,14	13	29	23	11	13	14
2		15	12	13	19		15	17		
								25		12
HLHQZ6-5872	Yfiler®									
		-	14	12,14	13	29	23	11	13	14
2		15	12	13	19	-	15	17	-	-
		-	-	-	-	-	-	25	-	12
JGG2W3-5877	Yfiler®									
			14	12,14	13	29	23	11	13	14
2		15	12	13	19		15	17		
								25		12
MHMK9V-5872	Yfiler®									
			14	12,14	13	29	23	11	13	14
2		15	12	13	19		15	17		
								25		12
MQWWJ8-5872	Yfiler® Plus									
		35,37	14	12,14	13	29	23	11	13	14
2		15	12	13	19	29	15	17	11	23
		37	12		18	17	22	25		12
MWKGP9-5872	Yfiler® plus									
		35,37	14	12,14	13	29	23	11	13	14
2		15	12	13	19	29	15	17	11	23
		37	12		18	17	22	25		12
PJRUEX-5872	PowerPlex® Y 23									
			14	12,14	13	29	23	11	13	14
2		15	12	13	19		15	17		23
			12	13	18	17		25	10	12

TABLE 3

Item 2 - YSTR Results

Item	WebCode-Test / 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
PK6927-5872	PowerPlex® Y 23 System		14	12,14	13	29	23	11	13	14
2		15	12	13	19		15	17		23
			12	13	18	17		25	10	12
PZVCHB-5872	PowerPlex® Y 23 System		14	12,14	13	29	23	11	13	14
2		15	12	13	19		15	17		23
			12	13	18	17		25	10	12
QBTRPQ-5877	Yfiler® plus	35,37	14	12,14	13	29	23	11	13	14
2		15	12	13	19	29	15	17	11	23
		37	12		18	17	22	25		12
RUGFQ7-5877	Yfiler® Plus	35,37	14	12,14	13	29	23	11	13	14
2		15	12	13	19	29	15	17	11	23
		37	12		18	17	22	25		12
TGTQDL-5872	Yfiler®		14	12,14	13	29	23	11	13	14
2		15	12	13	19		15	17		
								25		12
U3L4GA-5872	Yfiler®		14	12,14	13	29	23	11	13	14
2		15	12	13	19		15	17		
								25		12
U8HTZ3-5877	Yfiler® Plus	35,37	14	12,14	13	29	23	11	13	14
2		15	12	13	19	29	15	17	11	23
		37	12	-	18	17	22	25	-	12
VCB87N-5872	Yfiler®		14	12,14	13	29	23	11	13	14
2		15	12	13	19		15	17		
								25		12
W7FZ2K-5877	Yfiler® Plus	35,37	14	12,14	13	29	23	11	13	14
2		15	12	13	19	29	15	17	11	23
		37	12		18	17	22	25		12
WJMNEN-5872	PowerPlex® Y 23		14	12,14	13	29	23	11	13	14
2		15	12	13	19		15	17		23
			12	13	18	17		25	10	12

TABLE 3

Item 2 - YSTR Results

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
XC38YJ-5877		Yfiler® Plus							
	35,37	14	12,14	13	29	23	11	13	14
2	15	12	13	19	29	15	17	11	23
	37	12		18	17	22	25		12
XNAWUZ-5877		Yfiler® Plus							
	35,37	14	12,14	13	29	23	11	13	14
2	15	12	13	19	29	15	17	11	23
	37	12		18	17	22	25		12
Z2TGAD-5872		Yfiler® Yfiler							
		14	12,14	13	29	23	11	13	14
2	15	12	13	19		15	17		
							25		12
ZPY8HX-5877		PowerPlex® Y 23							
		14	12,14	13	29	23	11	13	14
2	15	12	13	19		15	17		23
		12	13	18	17		25	10	12

TABLE 3

Item 3 - YSTR Results

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
66BCVT-5877		Yfiler® YFiler Plus							
	36,36	14	12,14	13	29	24	11	13	13
3	15	12	13	19	29	14	17	11	22
	38	12		16	19	24	23		12
6FE8EX-5872		Yfiler®							
		14	12,14	13	29	24	11	13	13
3	15	12	13	19		14	17		
							23		12
7K9EG7-5872		Yfiler® Plus							
	36	14	12,14	13	29	24	11	13	13
3	15	12	13	19	29	14	17	11	22
	38	12		16	19	24	23		12
7WLNZP-5877		PowerPlex® Y Y23							
		14	12,14	13	29	24	11	13	13
3	15	12	13	19		14	17		22
		12	15	16	19		23	10	12
82MKWV-5872		Yfiler®							
		14	12,14	13	29	24	11	13	13
3	15	12	13	19		14	17		
							23		12
82PA2R-5872									
		14	12,14	13	29	24	11	13	13
3	15	12	13	19		14	17		22
		12	15	16	19		23	10	12
AL77UM-5872		Yfiler®							
		14	12,14	13	29	24	11	13	13
3	15	12	13	19		14	17		
							23		12
BY7KAB-5872		PowerPlex® Y23							
		14	12-14	13	29	24	11	13	13
3	15	12	13	19		14	17		22
		12	15	16	19		23	10	12
CKQJF7-5877		Yfiler® Plus							
	36	14	12,14	13	29	24	11	13	13
3	15	12	13	19	29	14	17	11	22
	38	12		16	19	24	23		12
CQCJPR-5872		PowerPlex® Y 23							
		14	12,14	13	29	24	11	13	13
3	15	12	13	19		14	17		22
		12	15	16	19		23	10	12

TABLE 3

Item 3 - YSTR Results

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
D6TPH7-5872		Yfiler®							
	-	14	12,14	13	29	24	11	13	13
3	15	12	13	19	-	14	17	-	-
	-	-	-	-	-	-	23	-	12
G6WHQ2-5877		Yfiler® Plus							
	36	14	12,14	13	29	24	11	13	13
3	15	12	13	19	29	14	17	11	22
	38	12		16	19	24	23		12
H6EXCG-5877		Yfiler®							
		14	12,14	13	29	24	11	13	13
3	15	12	13	19		14	17		
							23		12
HLHQZ6-5872		Yfiler®							
	-	14	12,14	13	29	24	11	13	13
3	15	12	13	19	-	14	17	-	-
	-	-	-	-	-	-	23	-	12
JGG2W3-5877		Yfiler®							
		14	12,14	13	29	24	11	13	13
3	15	12	13	19		14	17		
							23		12
MHMK9V-5872		Yfiler®							
		14	12,14	13	29	24	11	13	13
3	15	12	13	19		14	17		
							23		12
MQWWJ8-5872		Yfiler® Plus							
	36,36	14	12,14	13	29	24	11	13	13
3	15	12	13	19	29	14	17	11	22
	38	12		16	19	24	23		12
MWKGP9-5872		Yfiler® plus							
	36	14	12,14	13	29	24	11	13	13
3	15	12	13	19	29	14	17	11	22
	38	12		16	19	24	23		12
PJRUEX-5872		PowerPlex® Y 23							
		14	12,14	13	29	24	11	13	13
3	15	12	13	19		14	17		22
		12	15	16	19		23	10	12
PK6927-5872		PowerPlex® Y 23 System							
		14	12,14	13	29	24	11	13	13
3	15	12	13	19		14	17		22
		12	15	16	19		23	10	12

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									
PZVCHB-5872		PowerPlex® Y 23 System							
		14	12,14	13	29	24	11	13	13
3	15	12	13	19		14	17		22
		12	15	16	19		23	10	12
QBTRPQ-5877		Yfiler® plus							
	36	14	12,14	13	29	24	11	13	13
3	15	12	13	19	29	14	17	11	22
	38	12		16	19	24	23		12
RUGFQ7-5877		Yfiler® Plus							
	36	14	12,14	13	29	24	11	13	13
3	15	12	13	19	29	14	17	11	22
	38	12		16	19	24	23		12
TGTQDL-5872		Yfiler®							
		14	12,14	13	29	24	11	13	13
3	15	12	13	19		14	17		
							23		12
U3L4GA-5872		Yfiler®							
		14	12,14	13	29	24	11	13	13
3	15	12	13	19		14	17		
							23		12
U8HTZ3-5877		Yfiler® Plus							
	36	14	12,14	13	29	24	11	13	13
3	15	12	13	19	29	14	17	11	22
	38	12	-	16	19	24	23	-	12
VCB87N-5872		Yfiler®							
		14	12,14	13	29	24	11	13	13
3	15	12	13	19		14	17		
							23		12
W7FZ2K-5877		Yfiler® Plus							
	36	14	12,14	13	29	24	11	13	13
3	15	12	13	19	29	14	17	11	22
	38	12		16	19	24	23		12
WJMNEN-5872		PowerPlex® Y 23							
		14	12,14	13	29	24	11	13	13
3	15	12	13	19		14	17		22
		12	15	16	19		23	10	12
XC38YJ-5877		Yfiler® Plus							
	36	14	12,14	13	29	24	11	13	13
3	15	12	13	19	29	14	17	11	22
	38	12		16	19	24	23		12

TABLE 3

Item 3 - YSTR Results

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
XNAWUZ-5877		Yfiler® Plus							
	36	14	12,14	13	29	24	11	13	13
3	15	12	13	19	29	14	17	11	22
	38	12		16	19	24	23		12
Z2TGAD-5872		Yfiler®							
		14	12,14	13	29	24	11	13	13
3	15	12	13	19		14	17		
							23		12
ZPY8HX-5877		PowerPlex® Y 23							
		14	12,14	13	29	24	11	13	13
3	15	12	13	19		14	17		22
		12	15	16	19		23	10	12

TABLE 3

Item 4 - YSTR Results

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
66BCVT-5877		Yfiler® YFiler Plus							
	35,37	14	12,14	13	29	23	11	13	14
4	15	12	13	19	29	15	17	11	23
	37	12		18	17	22	25		12
6FE8EX-5872		Yfiler®							
		14	12,14	13	29	23	11	13	14
4	15	12	13	19		15	17		
							25		12
7K9EG7-5872		Yfiler® Plus							
	35,37	14	12,14	13	29	23	11	13	14
4	15	12	13	19	29	15	17	11	23
	37	12		18	17	22	25		12
7WLNZP-5877		PowerPlex® Y Y23							
		14	12,14	13	29	23	11	13	14
4	15	12	13	19		15	17		23
		12	13	18	17		25	10	12
82MKWV-5872		Yfiler®							
		14	12,14	13	29	23	11	13	14
4	15	12	13	19		15	17		
							25		12
82PA2R-5872									
		14	12,14	13	29	23	11	13	14
4	15	12	13	19		15	17		23
		12	13	18	17		25	10	12
AL77UM-5872		Yfiler®							
		14	12,14	13	29	23	11	13	14
4	15	12	13	19		15	17		
							25		12
BY7KAB-5872		PowerPlex® Y23							
		14	12-14	13	29	23	11	13	14
4	15	12	13	19		15	17		23
		12	13	18	17		25	10	12
CKQJF7-5877		Yfiler® Plus							
	35,37	14	12,14	13	29	23	11	13	14
4	15	12	13	19	29	15	17	11	23
	37	12		18	17	22	25		12
CQCJPR-5872		PowerPlex® Y 23							
		14	12,14	13	29	23	11	13	14
4	15	12	13	19		15	17		23
		12	13	18	17		25	10	12

TABLE 3

Item 4 - YSTR Results

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
D6TPH7-5872		Yfiler®							
	-	14	12,14	13	29	23	11	13	14
4	15	12	13	19	-	15	17	-	-
	-	-	-	-	-	-	25	-	12
G6WHQ2-5877		Yfiler® Plus							
	35,37	14	12,14	13	29	23	11	13	14
4	15	12	13	19	29	15	17	11	23
	37	12		18	17	22	25		12
H6EXCG-5877		Yfiler®							
		14	12,14	13	29	23	11	13	14
4	15	12	13	19		15	17		
							25		12
HLHQZ6-5872		Yfiler®							
	-	14	12,14	13	29	23	11	13	14
4	15	12	13	19	-	15	17	-	-
	-	-	-	-	-	-	25	-	12
JGG2W3-5877		Yfiler®							
		14	12,14	13	29	23	11	13	14
4	15	12	13	19		15	17		
							25		12
MHMK9V-5872		Yfiler®							
		14	12,14	13	29	23	11	13	14
4	15	12	13	19		15	17		
							25		12
MQWWJ8-5872		Yfiler® Plus							
	35,37	14	12,14	13	29	23	11	13	14
4	15	12	13	19	29	15	17	11	23
	37	12		18	17	22	25		12
MWKGP9-5872		Yfiler® plus							
	35,37	14	12,14	13	29	23	11	13	14
4	15	12	13	19	29	15	17	11	23
	37	12		18	17	22	25		12
PJRUEX-5872		PowerPlex® Y 23							
		14	12,14	13	29	23	11	13	14
4	15	12	13	19		15	17		23
		12	13	18	17		25	10	12
PK6927-5872		PowerPlex® Y 23 System							
		14	12,14	13	29	23	11	13	14
4	15	12	13	19		15	17		23
		12	13	18	17		25	10	12

TABLE 3

Item 4 - YSTR Results

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
PZVCHB-5872		PowerPlex® Y 23 System							
		14	12,14	13	29	23	11	13	14
4	15	12	13	19		15	17		23
		12	13	18	17		25	10	12
QBTRPQ-5877		Yfiler® plus							
	35,37	14	12,14	13	29	23	11	13	14
4	15	12	13	19	29	15	17	11	23
	37	12		18	17	22	25		12
RUGFQ7-5877		Yfiler® Plus							
	35,37	14	12,14	13	29	23	11	13	14
4	15	12	13	19	29	15	17	11	23
	37	12		18	17	22	25		12
TGTQDL-5872		Yfiler®							
		14	12,14	13	29	23	11	13	14
4	15	12	13	19		15	17		
							25		12
U3L4GA-5872		Yfiler®							
		14	12,14	13	29	23	11	13	14
4	15	12	13	19		15	17		
							25		12
U8HTZ3-5877		Yfiler® Plus							
	35,37	14	12,14	13	29	23	11	13	14
4	15	12	13	19	29	15	17	11	23
	37	12	-	18	17	22	25	-	12
VCB87N-5872		Yfiler®							
		14	12,14	13	29	23	11	13	14
4	15	12	13	19		15	17		
							25		12
W7FZ2K-5877		Yfiler® Plus							
	35,37	14	12,14	13	29	23	11	13	14
4	15	12	13	19	29	15	17	11	23
	37	12		18	17	22	25		12
WJMNEN-5872		PowerPlex® Y 23							
		14	12,14	13	29	23	11	13	14
4	15	12	13	19		15	17		23
		12	13	18	17		25	10	12
XC38YJ-5877		Yfiler® Plus							
	35,37	14	12,14	13	29	23	11	13	14
4	15	12	13	19	29	15	17	11	23
	37	12		18	17	22	25		12

TABLE 3

Item 4 - YSTR Results

Item	WebCode-Test / 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
XNAWUZ-5877		Yfiler® Plus							
	35,37	14	12,14	13	29	23	11	13	14
4	15	12	13	19	29	15	17	11	23
	37	12		18	17	22	25		12
Z2TGAD-5872		Yfiler®							
		14	12,14	13	29	23	11	13	14
4	15	12	13	19		15	17		
							25		12
ZPY8HX-5877		PowerPlex® Y 23							
		14	12,14	13	29	23	11	13	14
4	15	12	13	19		15	17		23
		12	13	18	17		25	10	12

Additional DNA & PI Results

TABLE 4

Locus	WebCode-Test	Item 1	Item 2	Item 3	Item 3 PI	Item 4	Item 4 PI
DXS10074	ZPY8HX-5877	19,19	19	7	n.a.	17	n.a.
DXS10079	ZPY8HX-5877	20,21	20	18	n.a.	21	n.a.
DXS10101	ZPY8HX-5877	27.2,32	27.2	32	n.a.	31	n.a.
DXS10103	ZPY8HX-5877	17,19	19	18	n.a.	17	n.a.
DXS10134	ZPY8HX-5877	35,40.3	40.3	37	n.a.	37	n.a.
DXS10135	ZPY8HX-5877	21,29	29	21	n.a.	25	n.a.
DXS10146	ZPY8HX-5877	27,39.2	39.2	26	n.a.	26	n.a.
DXS10148	ZPY8HX-5877	24.1,26.1	24.1	25.1	n.a.	18	n.a.
DXS7132	ZPY8HX-5877	13,14	14	15	n.a.	14	n.a.
DXS7423	ZPY8HX-5877	14,17	17	13	n.a.	17	n.a.
DXS8378	ZPY8HX-5877	11,12	11	9	n.a.	11	n.a.
F13A	7WLNZP-5877	6,7	5,7	3.2,7	0	5,7	2.5974
F13A01	BY7KAB-5872	6,7	5,7	3.2,7	0	5,7	2.579
	HXT3BD-5872	6,7	5,7	3.2,7	0	5,7	2.5786E+00
	PZVCHB-5872	6,7	5,7	3.2,7		5,7	2.5786
F13A1	PJRUEX-5872	6,7	5,7	3.2,7	0.7916	5,7	2.5785
F13B	7WLNZP-5877	7,10	7,10	8,10	1.2237	10	2.4474
	BY7KAB-5872	7,10	7,10	8,10	1.2321	10	2.464
	HXT3BD-5872	7,10	7,10	8,10	1.2321E+00	10	2.4642E+00
	PJRUEX-5872	7,10	7,10	8,10	0.6423	10	2.4641
	PZVCHB-5872	7,10	7,10	8,10		10,10	2.4643
FESFPS	7WLNZP-5877	10	10,12	11,12	2.1115	12	4.2230
	BY7KAB-5872	10	10,12	11,12	2.1231	12	4.246
	HXT3BD-5872	10	10,12	11,12	2.1235E+00	12	4.2471E+00
	PJRUEX-5872	10	10,12	11,12	1.0617	12	4.2470
	PZVCHB-5872	10,10	10,12	11,12		12,12	4.2463
HPRTB	ZPY8HX-5877	11,13	11	13	n.a.	14	n.a.
LPL	7WLNZP-5877	11,13	11,13	11,12	1.6869	12,13	1.6869
	BY7KAB-5872	11,13	11,13	11,12	1.6717	12,13	1.672
	HXT3BD-5872	11,13	11,13	11,12	1.6713E+00	12,13	1.6713E+00
	PJRUEX-5872	11,13	11,13	11,12	0.9450	12,13	1.6712
	PZVCHB-5872	11,13	11,13	11,12		12,13	1.6717
PENTA C	7WLNZP-5877	11,12	11	10,12	0	11,13	1.2623
	BY7KAB-5872	11,12	11	10,12	0	11,13	1.267
	HXT3BD-5872	11,12	11	10,12	0	11,13	1.2667E+00
	PJRUEX-5872	11,12	11	10,12	EXCLUSION	11,13	1.2666
	PZVCHB-5872	11,12	11,11	10,12		11,13	1.2668

Paternity DNA Statistics & Conclusions

TABLE 5

WebCode-Test	Chosen Biological Father	Combined Paternity Index	Probability of Paternity	Population Database Used
227FXV-5872	Item 4 - Alleged Father B	156,348,273,382,238.0000	99.9999%	NIST-STRBASE
3KHENB-5872	Item 4 - Alleged Father B	36,000,000,000,000	99.9999	NIST-STRBASE
49Z23Z-5872	Item 4 - Alleged Father B	23900000000000000	99.99999999	FBI PopStats, Promega/NIST
66BCVT-5877	Item 4 - Alleged Father B	368717189.213	99.999%	NIST-STRBASE
6FE8EX-5872	Item 4 - Alleged Father B	742 trillion	99.9%	NIST-STRBASE
6HKL4C-5872	Item 4 - Alleged Father B	8.92 quadrillion	99.99	FBI PopStats
6LMT3U-5877	Item 4 - Alleged Father B	855,461,308,385,586.00	99.99%	
6PZPQ6-5872	Item 4 - Alleged Father B	2.069 E13	>99.999999999	FBI PopStats
6TM4EE-5872	Item 4 - Alleged Father B	9.73e+011	99.999999999%	[Country-specific] Caucasian Frequency Database
6YPAW3-5872	Item 4 - Alleged Father B	522,891,856,188,893	99.9999999999998%	[Country-specific] Caucasian database (Taylor, D. et al., 2017) DOI: 10.1016/j.fsigen.2017.02.012
7JFQXB-5872	Item 4 - Alleged Father B	8.92 quadrillion	99.99%	FBI PopStats
7K9EG7-5872	Item 4 - Alleged Father B	4.3723e12	0.999998594	NIST-STRBASE
7QF9B3-5872	Item 4 - Alleged Father B	7.9E+11	N/A	[Country-specific] Caucasian population database
7WLNZP-5877	Item 4 - Alleged Father B	853,374,259,558,887.0	99.9999%	Promega
82MKWV-5872	Item 4 - Alleged Father B	742 trillion	99.9%	NIST-STRBASE
82PA2R-5872	Item 4 - Alleged Father B	1.0300E+17	>99,9999999999	NIST-STRBASE
8D43XE-5877	Item 4 - Alleged Father B	1,200,000,000,000	N/A	NIST-STRBASE
8HW7KQ-5877	Item 4 - Alleged Father B	156 trillion	>99.9999%	NIST-STRBASE

TABLE 5 - Paternity DNA Statistics & Conclusions

WebCode-Test	Chosen Biological Father	Combined Paternity Index	Probability of Paternity	Population Database Used
8RMRQP-5877	Item 4 - Alleged Father B	28 quadrillion	99.99%	Laboratory Specific Database
8U9NZ2-5872	Item 4 - Alleged Father B	1.493E+13	N/A	NIST-STRBASE
8WW4PB-5872	Item 4 - Alleged Father B	27,000,000,000	99.99%	FBI PopStats, laboratory specific database
AGTGDY-5872	Item 4 - Alleged Father B	2.6300E+12	99.9999%	FBI PopStats, NIST 2017
AL77UM-5872	Item 4 - Alleged Father B	4.2241e8	99.9999%	NIST-STRBASE
AX4ZA7-5877	Item 4 - Alleged Father B	3 quadrillion		FBI PopStats
BUBNM6-5872	Item 4 - Alleged Father B	2.63 E+12	99.9999%	FBI PopStats, NIST Population
BY7KAB-5872	Item 4 - Alleged Father B	479177046700000000	99.999999999	NIST-STRBASE
C442M6-5872	Item 4 - Alleged Father B	2.63 E+12	99.9999%	FBI PopStats, NIST Population
C4JK83-5872	Item 4 - Alleged Father B	1.52650329e+14	0.999999999	NIST-STRBASE
C6V4AK-5877	Item 4 - Alleged Father B	28 quadrillion	99.99%	Laboratory Specific Database
CKQJF7-5877	Item 4 - Alleged Father B	67.57 trillion	>99.99%	FBI PopStats
CQCJPR-5872	Item 4 - Alleged Father B	1.6E+14		NIST-STRBASE
D37AUV-5872	Item 4 - Alleged Father B	>100 BILLION		NIST-STRBASE
D6TPH7-5872	Item 4 - Alleged Father B	1.5634e14	99.9999%	NIST-STRBASE
DHFZNN-5877	Item 4 - Alleged Father B	353029114033480	99.9999999999997	NIST-STRBASE
DQPMHA-5872	Item 4 - Alleged Father B	522,500,000,000,000	99.9999999999	FBI PopStats
DQRCM7-5877	Item 4 - Alleged Father B	847,930,100	99.99%	Life Technologies Database
E2PD2W-5872	Item 4 - Alleged Father B	2,630,000,000,000	99.9999%	FBI PopStats, NIST Population

TABLE 5 - Paternity DNA Statistics & Conclusions

WebCode-Test	Chosen Biological Father	Combined Paternity Index	Probability of Paternity	Population Database Used
EAZWXZ-5872	Item 4 - Alleged Father B	36 trillion	99.9999%	NIST-STRBASE
EVFGV2-5872	Item 4 - Alleged Father B	8.92 quadrillion	99.99	FBI PopStats
FXXYN7-5877	Item 4 - Alleged Father B	1.2E12 or 1.2 trillion	N/A	NIST-STRBASE
G62ZNZ-5872	Item 4 - Alleged Father B	2.63 E+12	99.9999%	FBI PopStats, NIST Population
G6WHQ2-5877	Item 4 - Alleged Father B	67,570,000,000,000	>99.99%	FBI PopStats
GMFGVY-5877	Item 4 - Alleged Father B	Not accredited for CPI	Not accredited for Probability of Paternity	[Country-specific] Population Database
H6EXCG-5877	Item 4 - Alleged Father B	421,555,049	99.999%	NIST-STRBASE
HCF7ZX-5872	Item 4 - Alleged Father B	1.57 trillion	>99.9999999999	NIST-STRBASE
HEGFMK-5872	Item 4 - Alleged Father B	1.920672928e+012	0.9999999999	national database
HHGPUF-5872	Item 4 - Alleged Father B	2.1050e+15	>99.9999999999	FBI PopStats
HLHQZ6-5872	Item 4 - Alleged Father B	1.5634e14	99.9999%	NIST-STRBASE
HXT3BD-5872	Item 4 - Alleged Father B	5.0939E+17	>99.99999999 %	NIST-STRBASE
JGG2W3-5877	Item 4 - Alleged Father B	1.2 trillion	N/A	NIST-STRBASE
JQR4H3-5872	Item 4 - Alleged Father B	7,786,144,014,435	99.9999%	NIST-STRBASE
KM676W-5872	Item 4 - Alleged Father B	3.887e+14		NIST-STRBASE
LMH24A-5877	Item 4 - Alleged Father B	156,107,603,799,710	>99.9999%	NIST-STRBASE
M6CXEC-5877	Item 4 - Alleged Father B	5.0939E+17	>99.999999999999 %	NIST-STRBASE
M6VY6K-5872	Item 4 - Alleged Father B	9.105E+13	N/A	NIST-STRBASE
MHMK9V-5872	Item 4 - Alleged Father B	1.5634e14	99.9999%	NIST-STRBASE
MQWWJ8-5872	Item 4 - Alleged Father B	1.5616 E+14	99.99999999%	NIST-STRBASE
MWKGP9-5872	Item 4 - Alleged Father B	2.12265214*10^15	99.99 %	FBI PopStats

TABLE 5 - Paternity DNA Statistics & Conclusions

WebCode-Test	Chosen Biological Father	Combined Paternity Index	Probability of Paternity	Population Database Used
NEZ7KK-5872	Item 4 - Alleged Father B	2.742E+14	Not calculated	Local/state database
NUDLJA-5872	Item 4 - Alleged Father B	1.5635e+14	99.99999999	NIST-STRBASE
P8WNE8-5872	Item 4 - Alleged Father B	156348273382238.00	99.9999%	NIST-STRBASE
PJRUEX-5872	Item 4 - Alleged Father B	478854975592456770	99.9999999999999999999999999%	NIST-STRBASE
PK6927-5872	Item 4 - Alleged Father B	6.312E+15	>99.999999%	Local Database
PPFMJ6-5877	Item 4 - Alleged Father B	31,613,620,877,888.6000	99.9999%	NIST-STRBASE
PTGLZP-5872	Item 4 - Alleged Father B	719 trillion	99.99%	NIST-STRBASE
PZVCHB-5872	Item 4 - Alleged Father B	479177046690172000	>99.99999999	NIST-STRBASE
QBTRPQ-5877	Item 4 - Alleged Father B	67,570,000,000,000	>99.99%	FBI PopStats
QF6KX6-5872	Item 4 - Alleged Father B	305148.668	0.999996	[Country] DATABASE
RUGFQ7-5877	Item 4 - Alleged Father B	3.408E+14	>99.9999999999	FBI PopStats
TFDB26-5877	Item 4 - Alleged Father B	1.8X10^15		NIST-STRBASE
TGTQDL-5872	Item 4 - Alleged Father B	36,000,000,000,000	99.9999	NIST-STRBASE
THMEVG-5872	Item 4 - Alleged Father B	2.63E+12	>99.9999	FBI PopStats
U3L4GA-5872	Item 4 - Alleged Father B	742 trillion	99.9%	NIST-STRBASE
U8HTZ3-5877	Item 4 - Alleged Father B	697,707,871,132,390	99.9999999999%	NIST-STRBASE
UHGJPF-5872	Item 4 - Alleged Father B	N/A	See Comments	FBI PopStats
UJV9NL-5872	Item 4 - Alleged Father B	606,000,000	99.9999998350	FBI PopStats
UL6XEQ-5872	Item 4 - Alleged Father B	156,350,000,000,000	99.9999%	NIST-STRBASE
VCB87N-5872	Item 4 - Alleged Father B	1.5634e14	99.9999%	NIST-STRBASE
W7FZ2K-5877	Item 4 - Alleged Father B	67.57 trillion	>99.99%	FBI PopStats

TABLE 5 - Paternity DNA Statistics & Conclusions

WebCode-Test	Chosen Biological Father	Combined Paternity Index	Probability of Paternity	Population Database Used
WJMNEN-5872	Item 4 - Alleged Father B	1010732704181720	99.9999	eDNA
WVHWWQ-5877	Item 4 - Alleged Father B	1.2 trillion	N/A	NIST-STRBASE
X7A37F-5872	Item 4 - Alleged Father B	36 trillion	99.9999%	NIST-STRBASE
XC38YJ-5877	Item 4 - Alleged Father B	6.7570E+13	>99.99%	FBI PopStats
XNAWUZ-5877	Item 4 - Alleged Father B	340,800,000,000,000	>99.9999999999	FBI PopStats
XXJGZG-5872	Item 4 - Alleged Father B	36 trillion	99.9999%	NIST-STRBASE
Z2TGAD-5872	Item 4 - Alleged Father B	36,000,000,000,000	99.9999%	NIST-STRBASE
ZBH8UK-5877	Item 4 - Alleged Father B	1.2 trillion	n/a	NIST-STRBASE
ZPY8HX-5877	Item 4 - Alleged Father B	166,798,351,240,695	99.9999999999%	[Country-specific] database Westen et al 2014

Response Summary	Participants: 88
Which of the alleged fathers cannot be excluded as the biological parent of Item 2?	
Responses Item 3 - Alleged Father A	0
Item 4 - Alleged Father B	88
Inconclusive	0
No Response	0

Kinship Likelihood Ratio Results

TABLE 6

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D1S1656	227FXV-5872	((1/4)*(1+2*p))/p	p=15	2.3155
	49Z23Z-5872	(1+2p)/4p	p=15	2.3155
	66BCVT-5877	R=b(k1)+b(k1)+2ab(k0),U=2a b,LR=R/U	a=15, b=16, k1=0.25, kO=0.5	2.316
	7K9EG7-5872	1/4p+1/2	p=15	2.3155
	7QF9B3-5872	2p+1/4p	p=15	2.316
	7WLNZP-5877	1+2p/4p	p=15	2.3155
	82PA2R-5872	(k1+k0a)/a	a=15	2.3155
	8D43XE-5877	*	*	2.13
	8HW7KQ-5877	(1+2p)/4p	p=15, q=16	2.316
	AL77UM-5872	(1+2p)/4p	p=15	2.3155
	BY7KAB-5872	(2p+1)/4p	q=16, p=15	2.316
	C4JK83-5872	(2p+1)/4p	p=15, q=16	2.315541031
	CQCJPR-5872	(1+2p)/4p	p = 15	2.3155
	D37AUV-5872	(0.5/2p)+0.5	p=15	2.316
	D6TPH7-5872	(1+2p)/4p	p=15	2.3155
	FXXYN7-5877	N/A	N/A	2.133
	H6EXCG-5877	(1+2p)/4p	p = 15	2.315
	HEGFMK-5872	(1+2p)/4p	p=15	2.315541031
	HLHQZ6-5872	(1+2p)/4p	p=15	2.3155
	HXT3BD-5872	(1+2p)/4p	p=15	2.3155
	JGG2W3-5877	*	*	2.133
	LMH24A-5877	((1/2p)+(((1)+(1))/2))/2	p=15, q=16	2.3155
	M6CXEC-5877	(1+2p)/4p	p=15	2.3155

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D1S1656	MHMK9V-5872	(1+2p)/4p	p=15	2.31554
	MQWWJ8-5872	(1+2p)/4p	p=15	2.3155
	MWKGP9-5872	(1+2a)/4a	15	2.32
	P8WNE8-5872	(1+2p)/4p	p=15	2.3155
	PJRUEX-5872	LR=(p.q+q/2)/2.p.q	p=15, q=16	2.3155
	PK6927-5872	(2+4p)/8p	p=15	2.3155
	PTGLZP-5872	((1/4)x(1+2p))/p	p=15, q=16	2.32
	PZVCHB-5872	(k1+k0a)/a	a=15	2.3155
	RUGFQ7-5877	(1+2p)/4p	p=15, q=16	2.3155
	UL6XEQ-5872	(1+2p)/4p	p=15	2.3155
	VCB87N-5872	(1+2p)/4p	p=15	2.3155
	WJMNEN-5872	((1/2p)+(((1)+(1))/2))/2	p=15	2.3155
	WVHWWQ-5877	*	*	2.133
	XNAWUZ-5877	(1+2p)/4p	p=15	2.3155
	ZBH8UK-5877	*	*	2.133
	ZPY8HX-5877			2.3174

Statistical Analysis Summary of D1S1656 **Likelihood Ratio Mode: 2.3155**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D2S1338	227FXV-5872	((1/8)*(p+q+4*p*q))/p*q	p=17, q=19	1.8858
	49Z23Z-5872	(p+r+4pr)/8pr	p=17, r=19	1.8858
	66BCVT-5877	(p+q+4pq)/8pq	p=17, q=19	1.886
	7K9EG7-5872	(p+q)/8pq+1/2	p = 17, q=19	1.8858
	7QF9B3-5872	p+q+4pq/8pq	p=17 q=19	1.886
	7WLNZP-5877	p+q+4pq/8pq	p=17, q=19	1.8858
	82PA2R-5872	(k1a+k1b+k02ab)/2ab	a=17, b=19	1.8858
	8D43XE-5877	*	*	1.85
	8HW7KQ-5877	p+q+4pq)/(8pq)	p=17, q=19	1.886
	AL77UM-5872	(p+r+4pr)/8pr	p=17, r=19	1.8858
	BY7KAB-5872	(p+q+4pq)/8pq	p=17, q=19	1.886
	C4JK83-5872	1/2+(p+q)/8pq	p=17, q=19	1.885803375
	CQCJPR-5872	(p+q+4pq)/8pq	p = 17, q = 19	1.8858
	D37AUV-5872	(0.5(p+q)/4pq)+0.5	p=17, q=19	1.886
	D6TPH7-5872	(p+r+4pr)/8pr	p=17, r=19	1.8858
	FXXYN7-5877	N/A	N/A	1.853
	H6EXCG-5877	(p+q+4pq)/8pq	p = 17, q = 19	1.885
	HEGFMK-5872	(p+q+4pq)/8pq	p=17, q=19	1.885803376
	HLHQZ6-5872	(p+r+4pr)/8pr	p=17, r=19	1.8858
	HXT3BD-5872	(p+q+4pq)/8pq	p=17, q=19	1.8858
	JGG2W3-5877	*	*	1.853
	LMH24A-5877	(((p+q)/4pq)+(((1)+(1))/2))/2	p=17, q=19	1.8858
	M6CXEC-5877	(p+q+4pq)/8pq	p=17, q=19	1.8858
	MHMK9V-5872	(p+q+4pq)/8pq	p=17, q=19	1.88580

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D2S1338	MQWWJ8-5872	(p+q+4pq)/8pq	p=17, q=19	1.8858
	MWKGP9-5872	(a+b+4ab)/8ab	a=17, b=19	1.88
	P8WNE8-5872	(p+q+4pq)/8pq	p=17, q=19	1.8858
	PJRUEX-5872	LR=(p.q+p/4+q/4)/2.p.q	p=17, q=19	1.8858
	PK6927-5872	(p+q+4pq)/8pq	p=17, q=19	1.8858
	PTGLZP-5872	((1/8)x(p+q+4pq))/pq	p=17, q=19	1.89
	PZVCHB-5872	(k1a+k1b+k02ab)/2ab	a=17, b=19	1.8858
	RUGFQ7-5877	(p+q+4pq)/8pq	p=17, q=19	1.8858
	UL6XEQ-5872	(p+q+4pq)/8pq	p=17, q=19	1.8858
	VCB87N-5872	(p+r+4pr)/8pr	p=17, r=19	1.8858
	WJMNEN-5872	(((p+q)/4pq)+(((1)+(1))/2))/2	p=17, q=19	1.8858
	WVHWWQ-5877	*	*	1.853
	XNAWUZ-5877	(p+q+4pq)/8pq	p=17, q=19	1.8858
	ZBH8UK-5877	*	*	1.853
	ZPY8HX-5877			1.8872

Statistical Analysis Summary of D2S1338 **Likelihood Ratio Mode: 1.8858**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D2S441	227FXV-5872	((1/8)*(p+q+4*p*q))/p*q	p=10, q=11	1.2895
	49Z23Z-5872	(p+q+4pq)/8pq	p=10, q=11	1.2895
	66BCVT-5877	(p+q+4pq)/8pq	p=10, q=11	1.290
	7K9EG7-5872	(p+q)/8pq+1/2	p=10, q=11	1.2895
	7QF9B3-5872	p+q+4pq/8pq	p=10 q=11	1.290
	7WLNZP-5877	p+q+4pq/8pq	p=10, q=11	1.2895
	82PA2R-5872	(k1a+k1b+k02ab)/2ab	a=10, b=11	1.2895
	8D43XE-5877	*	*	1.29
	8HW7KQ-5877	(p+q+4pq)/(8pq)	p=10, q=11	1.290
	AL77UM-5872	(p+q+4pq)/8pq	p=10, q=11	1.2895
	BY7KAB-5872	(p+q+4pq)/8pq	p=10, q=11	1.290
	C4JK83-5872	1/2+(p+q)/8pq	p=10, q=11	1.289510059
	CQCJPR-5872	(p+q+4pq)/8pq	p = 10, q = 11	1.2895
	D37AUV-5872	(0.5(p+q)/4pq)+0.5	p=10, q=11	1.290
	D6TPH7-5872	(p+q+4pq)/8pq	p=10, q=11	1.2895
	FXXYN7-5877	N/A	N/A	1.289
	H6EXCG-5877	(p+q+4pq)/8pq	p = 10, q = 11	1.289
	HEGFMK-5872	(p+q+4pq)/8pq	p=10, q=11	1.28951006
	HLHQZ6-5872	(p+q+4pq)/8pq	p=10,q=11	1.2895
	HXT3BD-5872	(p+q+4pq)/8pq	p=10, q=11	1.2895
	JGG2W3-5877	*	*	1.289
	LMH24A-5877	(((p+q)/4pq)+(((1)+(1))/2))/2	p=10, q=11	1.2895
	M6CXEC-5877	(p+q+4pq)/8pq	p=10, q=11	1.2895
	MHMK9V-5872	(p+q+4pq)/8pq	p=10, q=11	1.28951

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D2S441	MQWWJ8-5872	(p+q+4pq)/8pq	p=10, q=11	1.2895
	MWKGP9-5872	(a+b+4ab)/8ab	a=10, b=11	1.29
	P8WNE8-5872	(p+q+4pq)/8pq	p=10, q=11	1.2895
	PJRUEX-5872	LR=(p.q+p/4+q/4)/2.p.q	p=10, q=11	1.3025
	PK6927-5872	(p+q+4pq)/8pq	p=10, q=11	1.2895
	PTGLZP-5872	((1/8)x(p+q+4pq))/pq	p=10, q=11	1.29
	PZVCHB-5872	(k1a+k1b+k02ab)/2ab	a=10, b=11	1.2895
	RUGFQ7-5877	(p+q+4pq)/8pq	p=10, q=11	1.2895
	UL6XEQ-5872	(p+q+4pq)/8pq	p=10, q=11	1.2895
	VCB87N-5872	(p+q+4pq)/8pq	p=10, q=11	1.2895
	WJMNEN-5872	(((p+q)/4pq)+(((1)+(1))/2))/2	p=10, q=11	1.2895
	WVHWWQ-5877	*	*	1.289
	XNAWUZ-5877	(p+q+4pq)/8pq	p=10, q=11	1.2895
	ZBH8UK-5877	*	*	1.289
	ZPY8HX-5877			1.2894

Statistical Analysis Summary of D2S441 **Likelihood Ratio Mode: 1.2895**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D3S1358	227FXV-5872	((1/8)*(p+q+4*p*q))/p*q	p=14, q=16	2.5413
	49Z23Z-5872	(p+r+4pr)/8pr	p=14, r=16	2.5413
	66BCVT-5877	(p+q+4pq)/8pq	p=14, q=16	2.541
	7K9EG7-5872	(p+q)/8pq+1/2	p=14, q=16	2.5413
	7QF9B3-5872	p+q+4pq/8pq	p=14 q=16	2.542
	7WLNZP-5877	p+q+4pq/8pq	p=14, q=16	2.5413
	82PA2R-5872	(k1a+k1b+k02ab)/2ab	a=14, b=16	2.5413
	8D43XE-5877	*	*	2.40
	8HW7KQ-5877	(p+q+4pq)/(8pq)	p=14, q=16	2.549
	AL77UM-5872	(p+r+4pr)/8pr	p=14, r=16	2.5413
	BY7KAB-5872	(p+q+4pq)/8pq	p=14, q=16	2.541
	C4JK83-5872	1/2+(p+q)/8pq	p=14, q=16	2.541295155
	CQCJPR-5872	(p+q+4pq)/8pq	p = 14, q = 16	2.5413
	D37AUV-5872	(0.5(p+q)/4pq)+0.5	p=14, q=16	2.541
	D6TPH7-5872	(p+r+4pr)/8pr	p=14, r=16	2.5412
	FXXYN7-5877	N/A	N/A	2.399
	H6EXCG-5877	(p+q+4pq)/8pq	p = 14, q = 16	2.541
	HEGFMK-5872	(p+q+4pq)/8pq	p=14, q=16	2.541295156
	HLHQZ6-5872	(p+r+4pr)/8pr	p=14,r=16	2.5412
	HXT3BD-5872	(p+q+4pq)/8pq	p=14, q=16	2.5413
	JGG2W3-5877	*	*	2.399
	LMH24A-5877	(((p+q)/4pq)+(((1)+(1))/2))/2	p=14, q=16	2.5413
	M6CXEC-5877	p+q+4pq)/8pq	p=14, q=16	2.5413
	MHMK9V-5872	(p+q+4pq)/8pq	p=14, q=16	2.54129

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D3S1358	MQWWJ8-5872	(p+q+4pq)/8pq	p=14, q=16	2.5413
	MWKGP9-5872	(a+b+4ab)/8ab	a=14, b=16	2.54
	P8WNE8-5872	(p+q+4pq)/8pq	p=14, q=16	2.5413
	PJRUEX-5872	LR=(p.q+p/4+q/4)/2.p.q	p=14, q=16	2.5412
	PK6927-5872	(p+q+4pq)/8pq	p=14, q=16	2.5413
	PTGLZP-5872	((1/8)x(p+q+4pq))/pq	p=14, q=16	2.54
	PZVCHB-5872	(k1a+k1b+k02ab)/2ab	a=14, b=16	2.5413
	RUGFQ7-5877	(p+q+4pq)/8pq	p=14, q=16	2.5413
	UL6XEQ-5872	(p+q+4pq)/8pq	p=14, q=16	2.5413
	VCB87N-5872	(p+r+4pr)/8pr	p=14, r=16	2.5412
	WJMNEN-5872	(((p+q)/4pq)+(((1)+(1))/2))/2	p=14, q=16	2.5413
	WVHWWQ-5877	*	*	2.399
	XNAWUZ-5877	(p+q+4pq)/8pq	p=14, q=16	2.5413
	ZBH8UK-5877	*	*	2.399
	ZPY8HX-5877			2.5411

Statistical Analysis Summary of D3S1358 **Likelihood Ratio Mode: 2.5413**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D5S818	227FXV-5872	((1/8)*(p+q+4*p*q))/p*q	p=11, q=9	3.1792
	49Z23Z-5872	(p+r+4pr)/8pr	p=9, r=11	3.1792
	66BCVT-5877	(p+q+4pq)/8pq	p=9, q=11	3.179
	7K9EG7-5872	(p+q)/8pq+1/2	p=9, q=11	3.1792
	7QF9B3-5872	p+q+4pq/8pq	p=9 q=11	3.179
	7WLNZP-5877	p+q+4pq/8pq	p=9, q=11	3.1792
	82PA2R-5872	(k1a+k1b+k02ab)/2ab	a=9, b=11	3.1792
	8D43XE-5877	*	*	2.86
	8HW7KQ-5877	(p+q+4pq)/(8pq)	p=9, q=11	
	AL77UM-5872	(p+r+4pr)/8pr	p=9, r=11	3.1792
	BY7KAB-5872	(p+q+4pq)/8pq	p=9, q=11	3.179
	C4JK83-5872	1/2+(p+q)/8pq	p=9, q=11	3.179167836
	CQCJPR-5872	(p+q+4pq)/8pq	p = 9, q = 11	3.1792
	D37AUV-5872	(0.5(p+q)/4pq)+0.5	p=9, q=11	3.179
	D6TPH7-5872	(p+r+4pr)/8pr	p=9, r=11	3.1791
	FXXYN7-5877	N/A	N/A	2.861
	H6EXCG-5877	(p+q+4pq)/8pq	p = 9, q = 11	3.179
	HEGFMK-5872	(p+q+4pq)/8pq	p=9, q=11	3.179167836
	HLHQZ6-5872	(p+r+4pr)8pr	p=9,r=11	3.1791
	HXT3BD-5872	(p+q+4pq)/8pq	p=9, q=11	3.1792
	JGG2W3-5877	*	*	2.861
	LMH24A-5877	(((p+q)/4pq)+(((1)+(1))/2))/2	p=9, q=11	3.1792
	M6CXEC-5877	(p+q+4pq)/8pq	p=9, q=11	3.1792
	MHMK9V-5872	(p+q+4pq)/8pq	p=9, q=11	3.17916

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D5S818	MQWWJ8-5872	(p+q+4pq)/8pq	p=9, q=11	3.1792
	MWKGP9-5872	(a+b+4ab)/8ab	a=9, b=11	3.18
	P8WNE8-5872	(p+q+4pq)/8pq	p=11, q=9	3.1792
	PJRUEX-5872	LR=(p.q+p/4+q/4)/2.p.q	p=9, q=11	3.1791
	PK6927-5872	(p+q+4pq)/8pq	p=9, q=11	3.1792
	PTGLZP-5872	((1/8)x(p+q+4pq))/pq	p=11, q=9	3.18
	PZVCHB-5872	(k1a+k1b+k02ab)/2ab	a=11, b=11	3.1792
	RUGFQ7-5877	(p+q+4pq)/8pq	p=9, q=11	3.1792
	UL6XEQ-5872	(p+q+4pq)/8pq	p=9, q=11	3.1792
	VCB87N-5872	(p+r+4pr)/8pr	p=9, r=11	3.1791
	WJMNEN-5872	(((p+q)/4pq)+(((1)+(1))/2))/2	p=9, q=11	3.1792
	WVHWWQ-5877	*	*	2.861
	XNAWUZ-5877	(p+q+4pq)/8pq	p=9, q=11	3.1792
	ZBH8UK-5877	*	*	2.861
	ZPY8HX-5877			3.1794

Statistical Analysis Summary of D5S818 **Likelihood Ratio Mode: 3.1792**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D7S820	227FXV-5872	((1/8)*(1+4*p))/p	p=10	.9069
	49Z23Z-5872	(1+4r)/8r	r=10	0.9069
	66BCVT-5877	(1+4P)/8P	p= 10	0.907
	7K9EG7-5872	1/8p+1/2	p=10	0.9069
	7QF9B3-5872	1+4p/8p	p=10	0.907
	7WLNZP-5877	1+4p/8p	p=10	0.9069
	82PA2R-5872	(k1+2k0a)/2a	a=10	0.9069
	8D43XE-5877	*	*	.906
	8HW7KQ-5877	(1+4r)/8r	p=8, q=9, r=10	0.9069
	AL77UM-5872	(1+4r)/8r	r=10	0.9069
	BY7KAB-5872	(4p+1)/8p	p=10, q=8	0.907
	C4JK83-5872	(4p+1)/8p	p=10, q=9, r=8	0.906901041
	CQCJPR-5872	(1+4p)/8p	p = 10	0.9069
	D37AUV-5872	(0.5/4p)+0.5	p=10	0.907
	D6TPH7-5872	(1+4r)/8r	r=10	0.9069
	FXXYN7-5877	N/A	N/A	0.9064
	H6EXCG-5877	(1+4p)/8p	p = 10	0.9069
	HEGFMK-5872	(1+4p)/8p	p=10	0.9069010417
	HLHQZ6-5872	(1+4r)/8r	r=10	0.9069
	HXT3BD-5872	(1+4p)/8p	p=10	0.90690
	JGG2W3-5877	*	*	0.906
	LMH24A-5877	((1/4q)+(((1)+(1))/2))/2	p=8, q=10, z=9	0.9069
	M6CXEC-5877	(1+4p)/8p	p=10	0.90690
	MHMK9V-5872	(1+4p)/8p	p=10	0.90690

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D7S820	MQWWJ8-5872	(1+4r)/8r	r=10	0.9069
	MWKGP9-5872	(1+4a)/8a	a=10	0.907
	P8WNE8-5872	(1+4p)/8p	p=10	0.9069
	PJRUEX-5872	LR=(2p+1/2)/4p	p=10, q=8	0.9069
	PK6927-5872	(1+4p)/8p	p=10	0.9069
	PTGLZP-5872	((1/8)x(1+4p))/p	p=10, q=8, r=9	0.91
	PZVCHB-5872	(k1+2k0a)/2a	a=10	0.9069
	RUGFQ7-5877	(1+4p)/8p	p=10	.9069
	UL6XEQ-5872	(1+4p)/8p	p=10	.9069
	VCB87N-5872	(1+4r)/8r	r=10	0.9069
	WJMNEN-5872	((1/4q)+(((1)+(1))/2))/2	q=10	0.9069
	WVHWWQ-5877	*	*	0.906
	XNAWUZ-5877	(1+4p)/8p	p=10	0.90690
	ZBH8UK-5877	*	*	0.9064
	ZPY8HX-5877			0.9106

Statistical Analysis Summary of D7S820 **Likelihood Ratio Mode: 0.9069**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D8S1179	227FXV-5872	((1/4)*(1+2*p))/p	p=13	1.4147
	49Z23Z-5872	(1+2p)/4p	p=13	1.4147
	66BCVT-5877	R=a(k1)+((a*a)*(k0)),U=(a*a),LR=R/U	a=13, k1=0.25, kO=0.5	1.415
	7K9EG7-5872	1/4p+1/2	p=13	1.4147
	7QF9B3-5872	2p+1/4p	p=13	1.415
	7WLNZP-5877	1+2p/4p	p=13	1.4147
	82PA2R-5872	(k1+k0a)/a	a=13	1.4147
	8D43XE-5877	*	*	1.38
	8HW7KQ-5877	(1+2p)/4p	p=13, q=14	1.415
	AL77UM-5872	(1+2p)/4p	p=13	1.4147
	BY7KAB-5872	(2p+1)/4p	p=13	1.415
	C4JK83-5872	(2p+1)/4p	p=13, q=14	1.4147457
	CQCJPR-5872	(1+2p)/4p	p = 13	1.4147
	D37AUV-5872	(0.5/2p)+0.5	p=13	1.415
	D6TPH7-5872	(1+2p)/4p	p=13	1.4147
	FXXYN7-5877	N/A	N/A	1.379
	H6EXCG-5877	(1+2p)/4p	p = 13	1.414
	HEGFMK-5872	(1+2p)/4p	p=13	1.414745701
	HLHQZ6-5872	(1+2p)/4p	p=13	1.4147
	HXT3BD-5872	(1+2p)/4p	p=13	1.4147
	JGG2W3-5877	*	*	1.379
	LMH24A-5877	((1/2p)+(((1)+(1))/2))/2	p=13, z=14	1.4147
	M6CXEC-5877	(1+2p)/4p	p=13	1.4147
	MHMK9V-5872	(1+2p)/4p	p=13	1.41474

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D8S1179	MQWWJ8-5872	(1+2p)/4p	p=13	1.4147
	MWKGP9-5872	(1+2a)/4a	a=13	1.42
	P8WNE8-5872	(1+2p)/4p	p=13	1.4147
	PJRUEX-5872	LR=(q2+(q/2))/2q2	p=13, q=13	1.4147
	PK6927-5872	(2+4p)/8p	p=13	1.4147
	PTGLZP-5872	((1/4)x(1+2p))/p	p=13, q=14	1.41
	PZVCHB-5872	(k1+k0a)/a	a=13	1.4147
	RUGFQ7-5877	(1+2p)/4p	p=13	1.4147
	UL6XEQ-5872	(1+2p)4p	p=13	1.4147
	VCB87N-5872	(1+2p)/4p	p=13	1.4147
	WJMNEN-5872	((1/2p)+(((1)+(1))/2))/2	p=13	1.4147
	WVHWWQ-5877	*	*	1.379
	XNAWUZ-5877	(1+2p)/4p	p=13	1.4147
	ZBH8UK-5877	*	*	1.379
	ZPY8HX-5877			1.4147

Statistical Analysis Summary of D8S1179 **Likelihood Ratio Mode: 1.4147**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D10S1248	227FXV-5872	((1/4)*(2+2*p))/p	p=14	1.9749
	49Z23Z-5872	(1+p)/2p	p=14	1.9749
	66BCVT-5877	R=a(k1)+a(k1)+((a*a)(k0)),U=a*a,LR=R/U	a=14, k1=0.25, kO=0.5	1.975
	7K9EG7-5872	1/2p+1/2	p=14	1.9749
	7QF9B3-5872	p+1/2p	p=14	1.975
	7WLNZP-5877	2+2p/4p	p=14	1.9749
	82PA2R-5872	(2k1+k0a)/a	a=14	1.9749
	8D43XE-5877	*	*	1.90
	8HW7KQ-5877	(1+p)/2p	p=14	1.975
	AL77UM-5872	(1+p)/2p	p=14	1.9749
	BY7KAB-5872	(p+1)/2p	p=14	1.975
	C4JK83-5872	(p+1)/2p	p=14	1.974926253
	CQCJPR-5872	(1+p)/2p	p = 14	1.9749
	D37AUV-5872	(0.5/p)+0.5	p=14	1.975
	D6TPH7-5872	(1+p)/2p	p=14	1.9749
	FXXYN7-5877	N/A	N/A	1.897
	H6EXCG-5877	(1+p)/2p	p = 14	1.974
	HEGFMK-5872	2p(1+p)/(2p)^2	p=14	1.974926254
	HLHQZ6-5872	(1+p)/2p	p=14	1.9749
	HXT3BD-5872	(1+p)/2p	p=14	1.9749
	JGG2W3-5877	*	*	1.897
	LMH24A-5877	((1/p)+(((1)+(1))/2))/2	p=14	1.9749
	M6CXEC-5877	(1+p)/2p	p=14	1.9749
	MHMK9V-5872	(1+p)/2p	p=14	1.97492

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D10S1248	MQWWJ8-5872	(1+p)/2p	p=14	1.9749
	MWKGP9-5872	(1+a)/2a	a=14	1.96
	P8WNE8-5872	(2+2p)/4p	p=14	1.9749
	PJRUEX-5872	LR=(p.q+p/2+q/2)/2.p.q	p=14, q=14	1.9749
	PK6927-5872	(2+4p)/8p	p=14	1.2375
	PTGLZP-5872	((1/4)x(2+2p))/p	p=14	1.97
	PZVCHB-5872	(2k1+k0a)/a	a=14	1.9749
	RUGFQ7-5877	(1+p)/2p	p=14	1.9749
	UL6XEQ-5872	(2+2p)/4p	p=14	1.9749
	VCB87N-5872	(1+p)/2p	p=14	1.9749
	WJMNEN-5872	((1/p)+(((1)+(1))/2))/2	p=14	1.9749
	WVHWWQ-5877	*	*	1.897
	XNAWUZ-5877	(1+p)/2p	p=14	1.9749
	ZBH8UK-5877	*	*	1.897
	ZPY8HX-5877			1.9882

Statistical Analysis Summary of D10S1248 **Likelihood Ratio Mode: 1.9749**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D12S391	227FXV-5872	((1/8)*(1+4*r))/r	r=23	2.6853
	49Z23Z-5872	(1+4v)/8v	v=23	2.6853
	66BCVT-5877	(1+4P)/8P	p=23	2.685
	7K9EG7-5872	1/8p+1/2	p=23	2.6853
	7QF9B3-5872	1+4p/8p	p=23	2.685
	7WLNZP-5877	1+4r/8r	r=23	2.6853
	82PA2R-5872	(k1+2k0a)/2a	a=23	2.6853
	8D43XE-5877	*	*	2.41
	8HW7KQ-5877	(1+4r)/8r	p=15, q=16, r=23	2.685
	AL77UM-5872	(1+4v)/8v	v=23	2.6853
	BY7KAB-5872	(4p+1)/8p	q=15, p=23	2.685
	C4JK83-5872	(4p+1)/8p	p=23, q=16, r=15	2.685314685
	CQCJPR-5872	(1+4p)/8p	p = 23	2.6853
	D37AUV-5872	(0.5/4p)+0.5	p=23	2.685
	D6TPH7-5872	(1+4v)/8v	v=23	2.6853
	FXXYN7-5877	N/A	N/A	
	H6EXCG-5877	(1+4p)/8p	p = 23	
	HEGFMK-5872	(1+4p)/8p	p=23	2.685314685
	HLHQZ6-5872	(1+4v)/8v	v=23	2.6853
	HXT3BD-5872	(1+4p)/8p	p=23	2.6853
	JGG2W3-5877	*	*	2.414
	LMH24A-5877	((1/4q)+(((1)+(1))/2))/2	p=15, q=23, z=16	2.6853
	M6CXEC-5877	(1+4p)/8p	p=23	2.6853
	MHMK9V-5872	(1+4p)/8p	p=23	2.68531

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D12S391	MQWWJ8-5872	(1+4r)/8r	r=23	2.6853
	MWKGP9-5872	(1+4a)/8a	a=23	2.69
	P8WNE8-5872	(1+4p)/8p	p=23	2.6853
	PJRUEX-5872	LR=(2q+1/2)/4q	p=15, q=23	2.6853
	PK6927-5872	(1+4p)/8p	p=23	2.6853
	PTGLZP-5872	((1/8)x(1+4r))/r	p=15, q=16, r=23	2.69
	PZVCHB-5872	(k1+2k0a)/2a	a=23	2.6853
	RUGFQ7-5877	(1+4p)/8p	p=23	2.6853
	UL6XEQ-5872	(1+4p)/8p	p=23	2.6853
	VCB87N-5872	(1+4v)/8v	v=23	2.6853
	WJMNEN-5872	((1/4q)+(((1)+(1))/2))/2	q=23	2.6853
	WVHWWQ-5877	*	*	2.414
	XNAWUZ-5877	(1+4p)/8p	p=23	2.6853
	ZBH8UK-5877	*	*	2.414
	ZPY8HX-5877			2.6853

Statistical Analysis Summary of D12S391 **Likelihood Ratio Mode: 2.6853**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D13S317	227FXV-5872	((1/8)*(p+q+4*p*q))/p*q	p=11, q=12	1.6043
	49Z23Z-5872	(p+q+4pq)/8pq	p=11, q=12	1.6043
	66BCVT-5877	(p+q+4pq)/8pq	P=11, q=12	1.604
	7K9EG7-5872	(p+q)/8pq+1/2	p=11, q=12	1.6043
	7QF9B3-5872	p+q+4pq/8pq	p=11 q=12	1.604
	7WLNZP-5877	p+q+4pq/8pq	p=11, q=12	1.6043
	82PA2R-5872	(k1a+k1b+k02ab)/2ab	a=11, b=12	1.6043
	8D43XE-5877	*	*	1.59
	8HW7KQ-5877	(p+q+4pq)/(8pq)	p=11, q=12	1.605
	AL77UM-5872	(p+q+4pq)/8pq	p=11, q=12	1.6043
	BY7KAB-5872	(p+q+4pq)/8pq	p=11, q=12	1.604
	C4JK83-5872	1/2+(p+q)/8pq	p=11, q=12	1.604331512
	CQCJPR-5872	(p+q+4pq)/8pq	p = 11, q = 12	1.6043
	D37AUV-5872	(0.5(p+q)/4pq)+0.5	p=11, q=12	1.604
	D6TPH7-5872	(p+q+4pq)/8pq	p=11, q=12	1.6043
	FXXYN7-5877	N/A	N/A	1.590
	H6EXCG-5877	(p+q+4pq)/8pq	p = 11, q = 12	1.604
	HEGFMK-5872	(p+q+4pq)/8pq	p=11, q=12	1.604331513
	HLHQZ6-5872	(p+q+4pq)/8pq	p=11,q=12	1.6043
	HXT3BD-5872	(p+q+4pq)/8pq	p=11, q=12	1.6043
	JGG2W3-5877	*	*	1.590
	LMH24A-5877	(((p+q)/4pq)+(((1)+(1))/2))/2	p=11, q=12	1.6043
	M6CXEC-5877	(p+q+4pq)/8pq	p=11, q=12	1.6043
	MHMK9V-5872	(p+q+4pq)/8pq	p=11, q=12	1.60433

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D13S317	MQWWJ8-5872	(p+q+4pq)/8pq	p=11, q=12	1.6043
	MWKGP9-5872	(a+b+4ab)/8ab	a=11, b=12	1.604
	P8WNE8-5872	(p+q+4pq)/8pq	p=11, q=12	1.6043
	PJRUEX-5872	LR=(p.q+p/4+q/4)/2.p.q	p=11, q=12	1.6043
	PK6927-5872	(p+q+4pq)/8pq	p=11, q=12	1.6043
	PTGLZP-5872	((1/8)x(p+q+4pq))/pq	p=11, q=12	1.60
	PZVCHB-5872	(k1a+k1b+k02ab)/2ab	a=11, b=12	1.6043
	RUGFQ7-5877	(p+q+4pq)/8pq	p=11, q=12	1.6043
	UL6XEQ-5872	(p+q+4pq)/8pq	p=11, q=12	1.6043
	VCB87N-5872	(p+q+4pq)/8pq	p=11, q=12	1.6043
	WJMNEN-5872	(((p+q)/4pq)+(((1)+(1))/2))/2	p=11, q=12	1.6043
	WVHWWQ-5877	*	*	1.590
	XNAWUZ-5877	(p+q+4pq)/8pq	p=11, q=12	1.6043
	ZBH8UK-5877	*	*	1.590
	ZPY8HX-5877			1.6147

Statistical Analysis Summary of D13S317 **Likelihood Ratio Mode: 1.6043**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D16S539	227FXV-5872	((1/8)*(1+4*q))/q	q=11	.9721
	49Z23Z-5872	(1+4q)/8q	q=11	0.9721
	66BCVT-5877	(1+4P)/8P	p=11	0.972
	7K9EG7-5872	1/8p+1/2	p=11	0.9721
	7QF9B3-5872	1+4p/8p	p=11	0.9721
	7WLNZP-5877	1+4q/8q	q=11	0.9721
	82PA2R-5872	(k1+2k0a)/2a	a=11	0.9720
	8D43XE-5877	*	*	.969
	8HW7KQ-5877	(1+4q)/8q	p=10, q=11, r=13	0.9721
	AL77UM-5872	(1+4q)/8q	q=11	0.9721
	BY7KAB-5872	(4p+1)/8p	p=11, q=13	0.972
	C4JK83-5872	(4p+1)/8p	p=11, q=10, r=13	0.97205438
	CQCJPR-5872	(1+4p)/8p	p = 11	0.9721
	D37AUV-5872	(0.5/4p)+0.5	p=11	0.972
	D6TPH7-5872	(1+4q)/8q	q=11	0.9720
	FXXYN7-5877	N/A	N/A	0.9689
	H6EXCG-5877	(1+4p)/8p	p = 11	0.9720
	HEGFMK-5872	(1+4p)/8p	p=11	0.9720543807
	HLHQZ6-5872	(1+4q)/8q	q=11	0.9720
	HXT3BD-5872	(1+4p)/8p	p=11	0.97200
	JGG2W3-5877	*	*	0.969
	LMH24A-5877	((1/4p)+(((1)+(1))/2))/2	p=11, q=13, z=10	0.9721
	M6CXEC-5877	(1+4p)/8p	p=11	0.97205
	MHMK9V-5872	(1+4p)/8p	p=11	0.97205

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D16S539	MQWWJ8-5872	(1+4q)/8q	q=11	0.9721
	MWKGP9-5872	(1+4a)/8a	a=11	0.97
	P8WNE8-5872	(1+4p)/8p	p=11	0.9721
	PJRUEX-5872	LR=(2p+1/2)/4p	p=11, q=13	0.9720
	PK6927-5872	(1+4p)/8p	p=11	0.9721
	PTGLZP-5872	((1/8)x(1+4q))/q	p=10, q=11, r=13	0.97
	PZVCHB-5872	(k1+2k0a)/2a	a=11	0.9721
	RUGFQ7-5877	(1+4p)/8p	p=11	0.97205
	UL6XEQ-5872	(1+4p)/8p	p=11	.9721
	VCB87N-5872	(1+4q)/8q	q=11	0.9720
	WJMNEN-5872	((1/4p)+(((1)+(1))/2))/2	p=11	0.9721
	WVHWWQ-5877	*	*	0.969
	XNAWUZ-5877	(1+4p)/8p	p=11	0.97205
	ZBH8UK-5877	*	*	0.9689
	ZPY8HX-5877			0.9766

Statistical Analysis Summary of D16S539 **Likelihood Ratio Mode: 0.9721**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D18S51	227FXV-5872	((1/8)*(1+4*p))/p	p=12	1.5927
	49Z23Z-5872	(1+4p)/8p	p=12	1.5927
	66BCVT-5877	(1+4P)/8P	p=12	1.593
	7K9EG7-5872	1/8p+1/2	p=12	1.5927
	7QF9B3-5872	1+4p/8p	p=12	1.593
	7WLNZP-5877	1+4p/8p	p=12	1.5927
	82PA2R-5872	(k1+2k0a)/2a	a=12	1.5927
	8D43XE-5877	*	*	1.54
	8HW7KQ-5877	(1+4p)/8p	p=12, q=13, r=16	1.593
	AL77UM-5872	(1+4p)/8p	p=12	1.5927
	BY7KAB-5872	(4p+1)/8p	p=12, q=13	1.593
	C4JK83-5872	(4p+1)/8p	p=12, q=16, r=13	1.592657342
	CQCJPR-5872	(1+4p)/8p	p = 12	1.5927
	D37AUV-5872	(0.5/4p)+0.5	p=12	1.593
	D6TPH7-5872	(1+4p)/8p	p=12,	1.5926
	FXXYN7-5877	N/A	N/A	1.535
	H6EXCG-5877	(1+4p)/8p	p = 12	1.592
	HEGFMK-5872	(1+4p)/8p	p=12	1.592657343
	HLHQZ6-5872	(1+4p)/8p	p=12	1.5926
	HXT3BD-5872	(1+4p)/8p	p=12	1.5927
	JGG2W3-5877	*	*	1.535
	LMH24A-5877	((1/4p)+(((1)+(1))/2))/2	p=12, q=13, z=16	1.5927
	M6CXEC-5877	(1+4p)/8p	p=12	1.5927
	MHMK9V-5872	(1+4p)/8p	p=12	1.59265

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D18S51	MQWWJ8-5872	(1+4p)/8p	p=12	1.5927
	MWKGP9-5872	(1+4a)/8a	a=12	1.59
	P8WNE8-5872	(1+4p)/8p	p=12	1.5927
	PJRUEX-5872	LR=(2p+1/2)/4p	p=12, q=13	1.5926
	PK6927-5872	(1+4p)/8p	p=12	1.5927
	PTGLZP-5872	((1/8)x(1+4p))/p	p=12, q=13, r=16	1.59
	PZVCHB-5872	(k1+2k0a)/2a	a=12	1.5927
	RUGFQ7-5877	(1+4p)/8p	p=12	1.5927
	UL6XEQ-5872	(1+4p)/8p	p=12	1.5927
	VCB87N-5872	(1+4p)/8p	p=12	1.5926
	WJMNEN-5872	((1/4p)+(((1)+(1))/2))/2	p=12	1.5927
	WVHWWQ-5877	*	*	1.535
	XNAWUZ-5877	(1+4p)/8p	p=12	1.5927
	ZBH8UK-5877	*	*	1.535
	ZPY8HX-5877			1.6017

Statistical Analysis Summary of D18S51 **Likelihood Ratio Mode: 1.5927**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D19S433	227FXV-5872	((1/4)*(1+2*q))/q	q=14	1.2066
	49Z23Z-5872	(1+2q)/4q	q=14	1.2066
	66BCVT-5877	R=a(k1)+((a*a)*(k0)),U=a*a,LR=R/U	a=14, k1=O.25, kO=0.5	1.207
	7K9EG7-5872	1/4p+1/2	p=14	1.2066
	7QF9B3-5872	2p+1/4p	p=14	1.207
	7WLNZP-5877	1+2q/4q	q=14	1.2066
	82PA2R-5872	(k1+k0a)/a	a=14	1.2066
	8D43XE-5877	*	*	1.19
	8HW7KQ-5877	(1+2q)/4q	p=13, q=14	1.207
	AL77UM-5872	(1+2q)/4q	q=14	1.2066
	BY7KAB-5872	(2p+1)/4p	p=14	1.207
	C4JK83-5872	(2p+1)/4p	p=14, q=13	1.206613906
	CQCJPR-5872	(1+2p)/4p	p = 14	1.2066
	D37AUV-5872	(0.5/2p)+0.5	p=14	1.207
	D6TPH7-5872	(1+2q)/4q	q=14	1.2066
	FXXYN7-5877	N/A	N/A	1.190
	H6EXCG-5877	(1+2p)/4p	p = 14	1.206
	HEGFMK-5872	(1+2p)/4p	p=14	1.206613906
	HLHQZ6-5872	(1+2q)/4q	q=14	1.2066
	HXT3BD-5872	(1+2p)/4p	p=14	1.2066
	JGG2W3-5877	*	*	1.190
	LMH24A-5877	((1/2p)+(((1)+(1))/2))/2	p=14, z=13	1.2066
	M6CXEC-5877	(1+2p)/4p	p=14	1.2066
	MHMK9V-5872	(1+2p)/4p	p=14	1.20661

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D19S433	MQWWJ8-5872	(1+2q)/4q	q=14	1.2066
	MWKGP9-5872	(1+2a)/4a	a=14	1.21
	P8WNE8-5872	(1+2p)/4p	p=14	1.2066
	PJRUEX-5872	LR=(p.q+p/4+q/4)/2.p.q	p=14, q=14	1.2066
	PK6927-5872	(2+4p)/8p	p=14	1.2066
	PTGLZP-5872	((1/4)x(1+2q))/q	p=13, q=14	1.21
	PZVCHB-5872	(k1+k0a)/a	a=14	1.2066
	RUGFQ7-5877	(1+2p)/4p	p=14	1.2066
	UL6XEQ-5872	(1+2p)4p	p=14	1.2066
	VCB87N-5872	(1+2q)/4q	q=14	1.2066
	WJMNEN-5872	((1/2p)+(((1)+(1))/2))/2	p=14	1.2066
	WVHWWQ-5877	*	*	1.190
	XNAWUZ-5877	(1+2p)/4p	p=14	1.2066
	ZBH8UK-5877	*	*	1.190
	ZPY8HX-5877			1.2068

Statistical Analysis Summary of D19S433 **Likelihood Ratio Mode: 1.2066**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D21S11	227FXV-5872	((1/8)*(1+4*r))/r	r=31	2.1383
	49Z23Z-5872	(1+4r)/8r	r=31	2.1383
	66BCVT-5877	(1+4P)/8P	p=31	2.138
	7K9EG7-5872	1/8p+1/2	p=31	2.1383
	7QF9B3-5872	1+4p/8p	p=31	2.138
	7WLNZP-5877	1+4r/8r	r=31	2.1383
	82PA2R-5872	(k1+2k0a)/2a	a=31	2.1383
	8D43XE-5877	*	*	1.99
	8HW7KQ-5877	(1+4r)/8r	p=29, q=30, r=31	2.138
	AL77UM-5872	(1+4r)/8r	r=31	2.1383
	BY7KAB-5872	(4p+1)/8p	p=31, q=30	2.138
	C4JK83-5872	(4p+1)/8p	p=31, q=29, r=30	2.138269986
	CQCJPR-5872	(1+4p)/8p	p = 31	2.1383
	D37AUV-5872	(0.5/4p)+0.5	p=31	2.138
	D6TPH7-5872	(1+4r)/8r	r=31	2.1382
	FXXYN7-5877	N/A	N/A	1.992
	H6EXCG-5877	(1+4p)/8p	p = 31	2.138
	HEGFMK-5872	(1+4p)/8p	p=31	2.138269987
	HLHQZ6-5872	(1+4r)/8r	r=31	2.1382
	HXT3BD-5872	(1+4p)/8p	p=31	2.1383
	JGG2W3-5877	*	*	1.992
	LMH24A-5877	((1/4q)+(((1)+(1))/2))/2	p=30, q=31, z=29	2.1383
	M6CXEC-5877	(1+4p)/8p	p=31	2.1383
	MHMK9V-5872	(1+4p)/8p	p=31	2.13826

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D21S11	MQWWJ8-5872	(1+4r)/8r	r=31	2.1383
	MWKGP9-5872	(1+4a)/8a	a=31	2.14
	P8WNE8-5872	(1+4p)/8p	p=31	2.1383
	PJRUEX-5872	LR=(2p+1/2)/4p	p=31, q=30	2.1382
	PK6927-5872	(1+4p)/8p	p=31	2.1383
	PTGLZP-5872	((1/8)x(1+4r))/r	p=29, q=30, r=31	2.14
	PZVCHB-5872	(k1+2k0a)/2a	a=31	2.1383
	RUGFQ7-5877	(1+4p)/8p	p=31	2.1383
	UL6XEQ-5872	(1+4p)/8p	p=31	2.1383
	VCB87N-5872	(1+4r)/8r	r=31	2.1382
	WJMNEN-5872	((1/4q)+(((1)+(1))/2))/2	q=31	2.1383
	WVHWWQ-5877	*	*	1.992
	XNAWUZ-5877	(1+4p)/8p	p=31	2.1383
	ZBH8UK-5877	*	*	1.992
	ZPY8HX-5877			2.1383

Statistical Analysis Summary of D21S11 **Likelihood Ratio Mode: 2.1383**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D22S1045	227FXV-5872	((1/4)*(1+2*p))/p	p=15	1.0871
	49Z23Z-5872	(1+2p)/4p	p=15	1.0871
	66BCVT-5877	R=b(k1)+b(k1)+2ab(k0),U=2ab,LR=R/U	a=15, b=16,, k1=0.25, kO=0.5	1.087
	7K9EG7-5872	1/4p+1/2	p=15	1.0871
	7QF9B3-5872	2p+1/4p	p=15	1.087
	7WLNZP-5877	1+2p/4p	p=15	1.0871
	82PA2R-5872	(k1+k0a)/a	a=15	1.0871
	8D43XE-5877	*	*	1.08
	8HW7KQ-5877	(1+2p)/4p	p=15, q=16	1.087
	AL77UM-5872	(1+2p)/4p	p=15	1.0871
	BY7KAB-5872	(2p+1)/4p	p=15, q=16	1.087
	C4JK83-5872	(2p+1)/4p	p=15, q=16	1.087130108
	CQCJPR-5872	(1+2p)/4p	p = 15	1.0871
	D37AUV-5872	(0.5/2p)+0.5	p=15	1.087
	D6TPH7-5872	(1+2p)/4p	p=15	1.0871
	FXXYN7-5877	N/A	N/A	1.078
	H6EXCG-5877	(1+2p)/4p	p = 15	1.087
	HEGFMK-5872	(1+2p)/4p	p=15	1.087130108
	HLHQZ6-5872	(1+2p)/4p	p=15	1.0871
	HXT3BD-5872	(1+2p)/4p	p=15	1.0871
	JGG2W3-5877	*	*	1.078
	LMH24A-5877	((1/2p)+(((1)+(1))/2))/2	p=15, q=16	1.0871
	M6CXEC-5877	(1+2p)/4p	p=15	1.0871
	MHMK9V-5872	(1+2p)/4p	p=15	1.08713

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
D22S1045	MQWWJ8-5872	(1+2p)/4p	p=15	1.0871
	MWKGP9-5872	(1+2a)/4a	a=15	1.09
	P8WNE8-5872	(1+2p)/4p	p=15	1.0871
	PJRUEX-5872	LR=(p.q+q/2)/2.p.q	p=15, q=16	1.0871
	PK6927-5872	(2+4p)/8p	p=15	1.0871
	PTGLZP-5872	((1/4)x(1+2p))/p	p=15, q=16	1.09
	PZVCHB-5872	(k1+k0a)/a	a=15	1.0871
	RUGFQ7-5877	(1+2p)/4p	p=15	1.0871
	UL6XEQ-5872	(1+2p)4p	p=15	1.0871
	VCB87N-5872	(1+2p)/4p	p=15	1.0871
	WJMNEN-5872	((1/2p)+(((1)+(1))/2))/2	p=15	1.0871
	WVHWWQ-5877	*	*	1.078
	XNAWUZ-5877	(1+2p)/4p	p=15	1.0871
	ZBH8UK-5877	*	*	1.078
	ZPY8HX-5877			1.0870

Statistical Analysis Summary of D22S1045 **Likelihood Ratio Mode: 1.0871**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
CSF1PO	227FXV-5872	((1/8)*(1+4*r))/r	r=12	.8333
	49Z23Z-5872	(1+4r)/8r	r=12	0.8333
	66BCVT-5877	(1+4P)/8P	p=12	0.833
	7K9EG7-5872	1/8p+1/2	p=12	0.8333
	7QF9B3-5872	1+4p/8p	p=12	0.8333
	7WLNZP-5877	1+4r/8r	r=12	0.8333
	82PA2R-5872	(k1+2k0a)/2a	a=12	0.8333
	8D43XE-5877	*	*	0.835
	8HW7KQ-5877	(1+4r)/8r	p=10, q=11, r=12	0.8333
	AL77UM-5872	(1+4r)/8r	r=12	0.8333
	BY7KAB-5872	(4p+1)/8p	p=12, q=10	0.833
	C4JK83-5872	(4p+1)/8p	p=12, q=11, r=10	0.833333333
	CQCJPR-5872	(1+4p)/8p	p = 12	0.8333
	D37AUV-5872	(0.5/4p)+0.5	p=12	0.833
	D6TPH7-5872	(1+4r)/8r	r=12	0.8333
	FXXYN7-5877	N/A	N/A	0.8349
	H6EXCG-5877	(1+4p)/8p	p = 12	0.8333
	HEGFMK-5872	(1+4p)/8p	p=12	0.8333333333
	HLHQZ6-5872	(1+4r)/8r	r=12	0.8333
	HXT3BD-5872	(1+4p)/8p	p=12	0.83333
	JGG2W3-5877	*	*	0.835
	LMH24A-5877	((1/4q)+(((1)+(1))/2))/2	p=10, q=12, z=11	0.8333
	M6CXEC-5877	(1+4p)/8p	p=12	0.83333
	MHMK9V-5872	(1+4p)/8p	p=12	0.83333

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
CSF1PO	MQWWJ8-5872	(1+4r)/8r	r=12	0.8333
	MWKGP9-5872	(1+4a)/8a	a=12	0.83
	P8WNE8-5872	(1+4p)/8p	p=12	.8333
	PJRUEX-5872	LR=(2q+1/2)/4q	p=10, q=12	0.8333
	PK6927-5872	(1+4p)/8p	p=12	0.8333
	PTGLZP-5872	((1/8)x(1+4r))/r	p=10, q=11, r=12	0.83
	PZVCHB-5872	(k1+2k0a)/2a	a=12	0.8333
	RUGFQ7-5877	(1+4p)/8p	p=12	0.83333
	UL6XEQ-5872	(1+4p)/8p	p=12	.8333
	VCB87N-5872	(1+4r)/8r	r=12	0.8333
	WJMNEN-5872	((1/4q)+(((1)+(1))/2))/2	q=12	0.8333
	WVHWWQ-5877	*	*	0.835
	XNAWUZ-5877	(1+4p)/8p	p=12	0.83333
	ZBH8UK-5877	*	*	0.8349
	ZPY8HX-5877			0.8340

Statistical Analysis Summary of CSF1PO **Likelihood Ratio Mode: 0.8333**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
FGA	227FXV-5872	((1/4)*(1+2*q))/q	q=23	2.5695
	49Z23Z-5872	(1+2q)/4q	q=23	2.5695
	66BCVT-5877	R=b(k1)+b(k1)+2ab(k0),U=2a b	a=23, b=22,, k1=0.25, kO=0.5	2.570
	7K9EG7-5872	1/4p+1/2	p=23	2.5695
	7QF9B3-5872	2p+1/4p	p=23	2.570
	7WLNZP-5877	1+2q/4q	q=23	2.5695
	82PA2R-5872	(k1+k0a)/a	a=23	2.5695
	8D43XE-5877	*	*	2.33
	8HW7KQ-5877	(1+2q)/4q	p=22, q=23	2.570
	AL77UM-5872	(1+2q)/4q	q=23	2.5695
	BY7KAB-5872	(2p+1)/4p	p=23, q=22	2.570
	C4JK83-5872	(2p+1)/4p	p=23, q=22	2.569536423
	CQCJPR-5872	(1+2p)/4p	p = 23	2.5695
	D37AUV-5872	(0.5/2p)+0.5	p=23	2.570
	D6TPH7-5872	(1+2q)/4q	q=23	2.5695
	FXXYN7-5877	N/A	N/A	2.329
	H6EXCG-5877	(1+2p)/4p	p = 23	2.569
	HEGFMK-5872	(1+2p)/4p	p=23	2.569536424
	HLHQZ6-5872	(1+2q)/4q	q=23	2.5695
	HXT3BD-5872	(1+2p)/4p	p=23	2.5695
	JGG2W3-5877	*	*	2.329
	LMH24A-5877	((1/2q)+(((1)+(1))/2))/2	p=22, q=23	2.5695
	M6CXEC-5877	(1+2p)/4p	p=23	2.5695
	MHMK9V-5872	(1+2p)/4p	p=23	2.56953

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
FGA	MQWWJ8-5872	(1+2q)/4q	q=23	2.5695
	MWKGP9-5872	(1+2a)/4a	a=23	2.57
	P8WNE8-5872	(1+2p)/4p	p=23	2.5695
	PJRUEX-5872	LR=(p.q+q/2)/2.p.q	p=23, q=22	2.5695
	PK6927-5872	(2+4p)/8p	p=23	2.5695
	PTGLZP-5872	((1/4)x(1+2q))/q	p=22, q=23	2.57
	PZVCHB-5872	(k1+k0a)/a	a=23	2.5695
	RUGFQ7-5877	(1+2p)/4p	p=23	2.5695
	UL6XEQ-5872	(1+2p)4p	p=23	2.5695
	VCB87N-5872	(1+2q)/4q	q=23	2.5695
	WJMNEN-5872	((1/2q)+(((1)+(1))/2))/2	q=23	2.5695
	WVHWWQ-5877	*	*	2.329
	XNAWUZ-5877	(1+2p)/4p	p=23	2.5695
	ZBH8UK-5877	*	*	2.329
	ZPY8HX-5877			2.5822

Statistical Analysis Summary of FGA **Likelihood Ratio Mode: 2.5695**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
PentaD	227FXV-5872	((1/8)*(1+4*q))/q	q=13	1.3639
	49Z23Z-5872	(1+4t)/8t	t=13	1.3639
	66BCVT-5877	(1+4P)/8P	p=13	1.364
	7K9EG7-5872	1/8p+1/2	p=13	1.3639
	7QF9B3-5872	1+4p/8p	p=13	1.364
	7WLNZP-5877	1+4q/8q	q=13	1.3639
	82PA2R-5872	(k1+2k0a)/2a	a=13	1.3639
	8D43XE-5877	N/A	N/A	
	8HW7KQ-5877	(1+4r)/8r	p=9, q=11, r=13	1.364
	AL77UM-5872	(1+4t)/8t	t=13	1.3639
	BY7KAB-5872	(4p+1)/8p	p=13, q=9	1.364
	C4JK83-5872	(4p+1)/8p	p=13, q-11, r=9	1.363856254
	CQCJPR-5872	(1+4p)/8p	p = 13	1.3639
	D37AUV-5872	(0.5/4p)+0.5	p=13	1.364
	D6TPH7-5872	(1+4r)/8r	r=13	1.3638
	FXXYN7-5877	N/A	N/A	
	H6EXCG-5877	(1+4p)/8p	p = 13	1.363
	HEGFMK-5872	(1+4p)/8p	p=13	1.363856254
	HLHQZ6-5872	(1+4t)/8t	t=13	1.3638
	HXT3BD-5872	(1+4p)/8p	p=13	1.3639
	JGG2W3-5877	*	*	
	LMH24A-5877	((1/4q)+(((1)+(1))/2))/2	p=9, q=13, z=11	1.3639
	M6CXEC-5877	(1+4p)/8p	p=13	1.3639
	MHMK9V-5872	(1+4p)/8p	p=13	1.36385

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
PentaD	MQWWJ8-5872	(1+4r)/8r	r=13	1.3639
	MWKGP9-5872	(1+4a)/8a	a=13	1.36
	P8WNE8-5872	(1+4p)/8p	p=13	1.3639
	PJRUEX-5872	LR=(2p+1/2)/4p	p=13, q=9	1.3638
	PK6927-5872	(1+4p)/8p	p=13	1.3639
	PTGLZP-5872	((1/8)x(1+4q))/q	p=11, q=13, r=9	1.36
	PZVCHB-5872	(k1+2k0a)/2a	a=13	1.3639
	RUGFQ7-5877	(1+4p)/8p	p=13	1.3639
	UL6XEQ-5872	(1+4p)/8p	p=13	1.3639
	VCB87N-5872	(1+4t)/8t	t=13	1.3638
	WJMNEN-5872	((1/4q)+(((1)+(1))/2))/2	q=13	1.3639
	WVHWWQ-5877	*	*	
	XNAWUZ-5877	(1+4p)/8p	p=13	1.3638
	ZBH8UK-5877	^	^	
	ZPY8HX-5877			1.3670

Statistical Analysis Summary of PentaD **Likelihood Ratio Mode: 1.3639**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
PentaE	227FXV-5872	((1/8)*(1+4*r))/r	r=7	1.5730
	49Z23Z-5872	(1+4p)/8p	p=7	1.5730
	66BCVT-5877	(1+4P)/8P	p=7	1.573
	7K9EG7-5872	1/8p+1/2	p=7	1.5730
	7QF9B3-5872	1+4p/8p	p=7	1.573
	7WLNZP-5877	1+4r/8r	r=7	1.5730
	82PA2R-5872	(k1+2k0a)/2a	a=7	1.5730
	8D43XE-5877	N/A	N/A	
	8HW7KQ-5877	(1+4p)/8p	p=7, q=11, r=12	1.573
	AL77UM-5872	(1+4p)/8p	p=7	1.5730
	BY7KAB-5872	(4p+1)/8p	p=7, q=12	1.573
	C4JK83-5872	(4p+1)/8p	p=7, q=11, r=12	1.572961373
	CQCJPR-5872	(1+4p)/8p	p = 7	1.5730
	D37AUV-5872	(0.5/4p)+0.5	p=7	1.573
	D6TPH7-5872	(1+4r)/8r	r=7	1.5729
	FXXYN7-5877	N/A	N/A	
	H6EXCG-5877	(1+4p)/8p	p = 7	1.572
	HEGFMK-5872	(1+4p)/8p	p=7	1.572961373
	HLHQZ6-5872	(1+4p)/8p	p=7	1.5729
	HXT3BD-5872	(1+4p)/8p	p=7	1.5730
	JGG2W3-5877	*	*	
	LMH24A-5877	((1/4p)+(((1)+(1))/2))/2	p=7, q=12, z=11	1.5730
	M6CXEC-5877	(1+4p)/8p	p=7	1.5730
	MHMK9V-5872	(1+4p)/8p	p=7	1.57296

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
PentaE	MQWWJ8-5872	(1+4p)/8p	p=7	1.5730
	MWKGP9-5872	(1+4a)/8a	a=7	1.57
	P8WNE8-5872	(1+4p)/8p	p=7	1.5730
	PJRUEX-5872	LR=(2p+1/2)/4p	p=7, q=12	1.5729
	PK6927-5872	(1+4p)/8p	p=7	1.5730
	PTGLZP-5872	((1/8)x(1+4r))/r	p=11, q=12, r=7	1.57
	PZVCHB-5872	(k1+2k0a)/2a	a=7	1.5730
	RUGFQ7-5877	(1+4p)/8p	p=7	1.573
	UL6XEQ-5872	(1+4p)/8p	p=7	1.5730
	VCB87N-5872	(1+4p)/8p	p=7	1.5729
	WJMNEN-5872	((1/4p)+(((1)+(1))/2))/2	p=7	1.5730
	WVHWWQ-5877	*	*	
	XNAWUZ-5877	(1+4p)/8p	p=7	1.5730
	ZBH8UK-5877	^	^	
	ZPY8HX-5877			1.5739

Statistical Analysis Summary of PentaE **Likelihood Ratio Mode: 1.5730**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
SE33	227FXV-5872	((1/8)*(1+4*r))/r	r=32.2	12.2925
	49Z23Z-5872	(1+4f)/8f	f=32.2	12.2925
	66BCVT-5877	(1+4P)/8P	p=32.2	12.292
	7K9EG7-5872	1/8p+1/2	p=32.2	12.2925
	7QF9B3-5872	1+4p/8p	p=32.2	12.29
	7WLNZP-5877	1+4r/8r	r=32.2	12.2925
	82PA2R-5872	(k1+2k0a)/2a	a=32.2	12.292
	8D43XE-5877	*	*	6.71
	8HW7KQ-5877	(1+4r)/8r	p=15, q=27.2, r=32.2	12.29
	AL77UM-5872	(1+4f)/8f	f=32.2	12.2925
	BY7KAB-5872	(4p+1)/8p	p=32.2, q=15	12.292
	C4JK83-5872	(4p+1)/8p	p=32.2, q=27.2, r=15	12.29245283
	CQCJPR-5872	(1+4p)/8p	p = 32.2	12.2925
	D37AUV-5872	(0.5/4p)+0.5	p=32.2	12.292
	D6TPH7-5872	(1+4f)/8f	f=32.2	12.2924
	FXXYN7-5877	N/A	N/A	6.712
	H6EXCG-5877	(1+4p)/8p	p = 32.2	12.292
	HEGFMK-5872	(1+4p)/8p	p=32.2	12.29245283
	HLHQZ6-5872	(1+4f)/8f	f=32.2	12.2924
	HXT3BD-5872	(1+4p)/8p	p=32.2	12.292
	JGG2W3-5877	*	*	6.713
	LMH24A-5877	((1/4q)+(((1)+(1))/2))/2	p=15, q=32.2, z=27.2	12.2925
	M6CXEC-5877	(1+4p)/8p	p=32.2	12.292
	MHMK9V-5872	(1+4p)/8p	p=32.2	12.29245

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
SE33	MQWWJ8-5872	(1+4r)/8r	r=32.2	12.2925
	MWKGP9-5872	(1+4a)/8a	a=32.2	12.29
	P8WNE8-5872	(1+4p)/8p	p=32.2	12.2925
	PJRUEX-5872	LR=(2p+1/2)/4p	p=32.2, q=15	12.2924
	PK6927-5872	(1+4p)/8p	p=32.2	12.2925
	PTGLZP-5872	((1/8)x(1+4r))/r	p=15, q=27.2, r=32.2	12.29
	PZVCHB-5872	(k1+2k0a)/2a	a=32.2	12.2925
	RUGFQ7-5877	(1+4p)/8p	p=32.2	12.292
	UL6XEQ-5872	(1+4p)/8p	p=32.2	12.2925
	VCB87N-5872	(1+4f)/8f	f=32.2	12.2924
	WJMNEN-5872	((1/4q)+(((1)+(1))/2))/2	q=32.2	12.2925
	WVHWWQ-5877	*	*	6.712
	XNAWUZ-5877	(1+4p)/8p	p=32.2	12.292
	ZBH8UK-5877	*	*	6.712
	ZPY8HX-5877			12.2913

Statistical Analysis Summary of SE33 **Likelihood Ratio Mode: 12.2925**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
TH01	227FXV-5872	((1/4)*(1+2*q))/q	q=7	1.3429
	49Z23Z-5872	(1+2q)/4q	q=7	1.3429
	66BCVT-5877	R=a(k1)+((a*a)* (k0)),U=a*a,LR=R/U	a=7, k1=0.25,, kO=0.5	1.343
	7K9EG7-5872	1/4p+1/2	p=7	1.3429
	7QF9B3-5872	2p+1/4p	p=7	1.343
	7WLNZP-5877	1+2q/4q	q=7	1.3429
	82PA2R-5872	(k1+k0a)/a	a=7	1.3429
	8D43XE-5877	*	*	1.31
	8HW7KQ-5877	(1+2q)/4q	p=6, q=7	1.343
	AL77UM-5872	(1+2q)/4q	q=7	1.3429
	BY7KAB-5872	(2p+1)/4p	p=7	1.343
	C4JK83-5872	(2p+1)/4p	p=7, q=6	1.342886041
	CQCJPR-5872	(1+2p)/4p	p = 7	1.3429
	D37AUV-5872	(0.5/2p)+0.5	p=7	1.343
	D6TPH7-5872	(1+2q)/4q	q=7	1.3428
	FXXYN7-5877	N/A	N/A	1.314
	H6EXCG-5877	(1+2p)/4p	p = 7	1.342
	HEGFMK-5872	(1+2p)/4p	p=7	1.342886042
	HLHQZ6-5872	(1+2q)/4q	q=7	1.3428
	HXT3BD-5872	(1+2p)/4p	p=7	1.3429
	JGG2W3-5877	*	*	1.314
	LMH24A-5877	((1/2p)+(((1)+(1))/2))/2	p=7, z=6	1.3429
	M6CXEC-5877	(1+2p)/4p	p=7	1.3429
	MHMK9V-5872	(1+2p)/4p	p=7	1.34288

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
TH01	MQWWJ8-5872	(1+2q)/4q	q=7	1.3429
	MWKGP9-5872	(1+2a)/4a	a=7	1.34
	P8WNE8-5872	(1+2p)/4p	p=7	1.3429
	PJRUEX-5872	LR=(p.q+p/4+q/4)/2.p.q	p=7, q=7	1.3428
	PK6927-5872	(2+4p)/8p	p=7	1.3429
	PTGLZP-5872	((1/4)x(1+2q))/q	p=6, q=7	1.34
	PZVCHB-5872	(k1+k0a)/a	a=7	1.3429
	RUGFQ7-5877	(1+2p)/4p	p=7	1.3429
	UL6XEQ-5872	(1+2p)4p	p=7	1.3429
	VCB87N-5872	(1+2q)/4q	q=7	1.3428
	WJMNEN-5872	((1/2p)+(((1)+(1))/2))/2	p=7	1.3429
	WVHWWQ-5877	*	*	1.314
	XNAWUZ-5877	(1+2p)/4p	p=7	1.3429
	ZBH8UK-5877	*	*	1.314
	ZPY8HX-5877			1.3429

Statistical Analysis Summary of TH01 **Likelihood Ratio Mode: 1.3429**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
TPOX	227FXV-5872	((1/4)*(1+2*p))/p	p=11	1.4835
	49Z23Z-5872	(1+2s)/4s	s=11	1.4835
	66BCVT-5877	R=b(k1)+b(k1)+2ab(k0),U=2ab,LR=R/U	a=11, b=8, k1=0.25, kO=0.5	1.483
	7K9EG7-5872	1/4p+1/2	p=11	1.4835
	7QF9B3-5872	2p+1/4p	p=11	1.483
	7WLNZP-5877	1+2p/4p	p=11	1.4835
	82PA2R-5872	(k1+k0a)/a	a=11	1.4835
	8D43XE-5877	*	*	1.44
	8HW7KQ-5877	(1+2q)/4q	p=8, q=11	1.483
	AL77UM-5872	(1+2s)/4s	s=11	1.4835
	BY7KAB-5872	(2p+1)/4p	p=11, q=8	1.483
	C4JK83-5872	(2p+1)/4p	p=11, q=8	1.483477576
	CQCJPR-5872	(1+2p)/4p	p = 11	1.4835
	D37AUV-5872	(0.5/2P)+0.5	p=11	1.483
	D6TPH7-5872	(1+2s)/4s	s=11	1.4834
	FXXYN7-5877	N/A	N/A	1.439
	H6EXCG-5877	(1+2p)/4p	p = 11	1.483
	HEGFMK-5872	(1+2p)/4p	p=11	1.483477577
	HLHQZ6-5872	(1+2s)/4s	s=11	1.4834
	HXT3BD-5872	(1+2p)/4p	p=11	1.4835
	JGG2W3-5877	*	*	1.439
	LMH24A-5877	((1/2q)+(((1)+(1))/2))/2	p=8, q=11	1.4835
	M6CXEC-5877	(1+2p)/4p	p=11	1.4835
	MHMK9V-5872	(1+2p)/4p	p=11	1.48347

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
TPOX	MQWWJ8-5872	(1+2q)/4q	q=11	1.4835
	MWKGP9-5872	(1+2a)/4a	a=11	1.48
	P8WNE8-5872	(1+2p)/4p	p=11	1.4835
	PJRUEX-5872	LR=(p.q+q/2)/2.p.q	p=8, q=11	1.4834
	PK6927-5872	(2+4p)/8p	p=11	1.4835
	PTGLZP-5872	((1/4)x(1+2p))/p	p=11, q=8	1.48
	PZVCHB-5872	(k1+k0a)/a	a=11	1.4835
	RUGFQ7-5877	(1+2p)/4p	p=11	1.4835
	UL6XEQ-5872	(1+2p)4p	p=11	1.4835
	VCB87N-5872	(1+2s)/4s	s=11	1.4834
	WJMNEN-5872	((1/2q)+(((1)+(1))/2))/2	q=11	1.4835
	WVHWWQ-5877	*	*	1.439
	XNAWUZ-5877	(1+2p)/4p	p=11	1.4835
	ZBH8UK-5877	*	*	1.439
	ZPY8HX-5877			1.4839

Statistical Analysis Summary of TPOX **Likelihood Ratio Mode: 1.4835**

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
vWA	227FXV-5872	((1/8)*(1+4*p))/p	p=14	2.0528
	49Z23Z-5872	(1+4p)/8p	p=14	2.0528
	66BCVT-5877	(1+4P)/8P	P=14,	2.053
	7K9EG7-5872	1/8p+1/2	p=14	2.0528
	7QF9B3-5872	1+4p/8p	p=14	2.053
	7WLNZP-5877	1+4p/8p	p=14	2.0528
	82PA2R-5872	(k1+2k0a)/2a	a=14	2.0528
	8D43XE-5877	*	*	1.92
	8HW7KQ-5877	(1+4p)/8p	p=14, q=15, r=19	
	AL77UM-5872	(1+4p)/8p	p=14	2.0528
	BY7KAB-5872	(4p+1)/8p	p=14, q=15	2.053
	C4JK83-5872	(4p+1)/8p	p=14, q=19, r=15	2.052795031
	CQCJPR-5872	(1+4p)/8p	p = 14	2.0528
	D37AUV-5872	(0.5/4p)+0.5	p=14	2.053
	D6TPH7-5872	(1+4p)/8p	p=14	2.0527
	FXXYN7-5877	N/A	N/A	1.920
	H6EXCG-5877	(1+4p)/8p	p = 14	2.052
	HEGFMK-5872	(1+4p)/8p	p=14	2.052795031
	HLHQZ6-5872	(1+4p)/8p	p=14	2.0527
	HXT3BD-5872	(1+4p)/8p	p=14	2.0528
	JGG2W3-5877	*	*	1.920
	LMH24A-5877	((1/4p)+(((1)+(1))/2))/2	p=14, q=15, z=19	2.0528
	M6CXEC-5877	(1+4p)/8p	p=14	2.0528
	MHMK9V-5872	(1+4p)/8p	p=14	2.05279

TABLE 6 - Kinship Likelihood Ratio Results

Locus	WebCode-Test	Formula	Allele Legend	Likelihood Ratio
vWA	MQWWJ8-5872	(1+4p)/8p	p=14	2.0528
	MWKGP9-5872	(1+4a)/8a	a=14	2.053
	P8WNE8-5872	(1+4p)/8p	p=14	2.0528
	PJRUEX-5872	LR=(2p+1/2)/4p	p=14, q=15	2.0527
	PK6927-5872	(1+4p)/8p	p=14	2.0528
	PTGLZP-5872	((1/8)x(1+4p))/p	p=14, q=15, r=19	2.05
	PZVCHB-5872	(k1+2k0a)/2a	a=14	2.0528
	RUGFQ7-5877	(1+4p)/8p	p=14	2.0528
	UL6XEQ-5872	(1+4p)/8p	p=14	2.0528
	VCB87N-5872	(1+4p)/8p	p=14	2.0527
	WVHWWQ-5877	*	*	1.920
	XNAWUZ-5877	(1+4p)/8p	p=14	2.0528
	ZBH8UK-5877	*	*	1.920
	ZPY8HX-5877			2.0554

Statistical Analysis Summary of vWA **Likelihood Ratio Mode: 2.0528**

Kinship DNA Statistics

Is the claim of the following relationship supported by the genetic evidence: **Grandmother and Grandson**?

TABLE 7

WebCode-Test	Kinship Index	Claim Supported?
227FXV-5872	498,006.5159	Yes
49Z23Z-5872	497978	Yes
66BCVT-5877	498219.895	Yes
7K9EG7-5872	497,976	Yes
7QF9B3-5872	498,600	Yes
7WLNZP-5877	497978.3143	Yes
82PA2R-5872	497.900	Yes
8D43XE-5877	24,000	Yes
8HW7KQ-5877	76,600	Yes
AL77UM-5872	4.9798e5	Yes
BY7KAB-5872	497978	Yes
C4JK83-5872	497978.3079	Yes
CQCJPR-5872	4.980E+05	Yes
D37AUV-5872	490,000	Yes
D6TPH7-5872	497978.3142	Yes
FXXYN7-5877	24,000	Yes
H6EXCG-5877	184234	Yes
HEGFMK-5872	497978.3143	Yes
HLHQZ6-5872	497978.3142	Yes
HXT3BD-5872	4.9792E+05	Yes
JGG2W3-5877	24,000	Yes
LMH24A-5877	497,978.3143	Yes
M6CXEC-5877	4.9795E+05	Yes
MHMK9V-5872	497978.31429	Yes
MQWWJ8-5872	4.9798 E+05	Yes
MWKGP9-5872	4.9*10^5	Yes
P8WNE8-5872	497978.3143	Yes
PJRUEX-5872	KI=502988,9013	Yes

TABLE 7 - Kinship DNA Statistics

WebCode-Test	Kinship Index	Claim Supported?
PK6927-5872	1.66E+5	Yes
PTGLZP-5872	498,000	Yes
PZVCHB-5872	497978.3143	Yes
RUGFQ7-5877	497,900	Yes
UL6XEQ-5872	497,980	Yes
VCB87N-5872	497978.3142	Yes
WJMNEN-5872	242585.5026	Yes
WVHWWQ-5877	24,000	Yes
XNAWUZ-5877	497,927	Yes
ZBH8UK-5877	24,000	Yes
ZPY8HX-5877	5.1785E5	Yes

Response Summary	Participants: 39
Is the relationship claim of Grandmother and Grandson supported?	
Yes	39
No	0
Inconclusive	0

Additional Kinship Statistical Results

TABLE 8

WebCode-Test	Additional Statistical Results
49Z23Z-5872	Combined Relationship Index = 497978. Probability of Grandparentage = 99.9998% (50% prior probability). AABB RT Standard 5.3.8.2 states that likelihood ratios greater than 10 shall be considered genetic evidence supporting the tested relationship. 100% of the ratios above this value have been found to be associated with a true second-degree relationship between the tested parties.
7WLNZP-5877	Per AABB standards, the following statement would be added to the report: Pu and Linacre have shown at a likelihood ratio >33 that STR test results correctly confirm second-degree relationships such as grandparentage >99% of the time. (Increasing the confidence in half-sibship determination based upon 15 STR loci. Pu and Linacre. Journal of Forensic andLegal Medicine 15 (2008) 373–377.)
82PA2R-5872	A kinship index of 497.900 and a kinship probability of 0.99799559% were obtained, When comparing the genetic profiles obtained from sample A (GRANDMOTHER) and sample B (grandchild). It´s suggested to complement the analysis with x chromosome or mitochondrial
8D43XE-5877	*The likelihood ratios shown above were calculated using the [Laboratory software] that uses standard formulae for simple PI's and 2-person KI's that incorporate a theta value of 0.01 with allele probabilities with no rounding and a 1/k prior instead of x/N. The combined KI (Hispanic) shown above does not include D12. D12 was removed due to genetic linkage with vWA. The Penta D and Penta E loci were not calculated as these loci are not tested in this laboratory. The combined KI (Hispanic) is only calculated to 2 significant figures by the [Laboratory software].
8HW7KQ-5877	NOTE: 1. Our protocol states to report three significant figures; however, per the instructions we are reporting four significant figures for this proficiency test. 2. NA: (Not applied or not multiplied into the cumulative likelihood ratio. The number in parenthesis is the calculated LR for that locus, but this LR is not multiplied into the cumulative likelihood ratio) 3. The following two pairs of loci may demonstrate linkage disequilbrium:CSF1PO/D5S818 and D12S391/vWA. Therefore based on our protocol D5S818 and vWA are not utilized in determining the cumulative likelihood ratio for this non-parentage relationship test. If these two loci were calculated, then the cumulative LR would be 499,800. [The following likelihood ratios were removed from kinship results so that statistical analysis could be performed: "D5S818: NA (3.179). vWA: NA (2.053).]
D6TPH7-5872	Lokus STR A B Formula Allele legend Allele Frequency LR D3S1358 14,16 14,16 (p+r+4pr) / 8pr p=14 r=16 p=0.0784 r=0.2797 2.5412 vWA 14,19 14,15 (1+4p) / 8p p=14 p=0.0805 2.0527 D16S539 10,11 11,13 (1+4q) / 8q q=11 q=0.2648 0.9720 CSF1PO 11,12 10,12 (1+4r) / 8r r=12 r=0.375 0.8333 TPOX 11 8,11 (1+2s) / 4s s=11 s=0.2542 1.4834 Y indel Amelogenin D8S1179 13,14 13 (1+2p) / 4p p=13 p=0.2733 1.4147 D21S11 29,31 30,31 (1+4r) / 8r r=31 r=0.0763 2.1382 D18S51 12,16 12,13 (1+4p) / 8p p=12 p=0.1144 1.5926 DYS391 D2S441 10,11 10,11 (p+q+4pq) / 8pq p=10 q=11 p=0.3369 q=0.2987 1.2895 D19S433 13,14 14 (1+2q) / 4q q=14 q=0.3538 1.2066 TH01 6,7 7 (1+2q) / 4q q=7 q=0.2966 1.3428 FGA 23 22,23 (1+2q) / 4q q=23 q=0.1208 2.5695 D22S1045 15 15,16 (1+2p) / 4p p=15 p=0.4258 1.0871 D5S818 9,11 9,11 (p+r+4pr) / 8pr p=9 r=11 p=0.053 r=0.3898 3.1791 D13S317 11,12 11,12 (p+q+4pq) / 8pq p=11 q=12 p=0.2182 q=0.2352 1.6043 D7S820 9,10 8,10 (1+4r) / 8r r=10 r=0.3072 0.9069 SE33 27.2,32.2 15,32.2 (1+4f) / 8f f=32.2 f=0.0106 12.2924 D10S1248 14 14 (1+p) / 2p p=14 p=0.339 1.9749 D1S1656 15 15,16 (1+2p) / 4p p=15 p=0.1377 2.3155 D12S391 16,23 15,23 (1+4v) / 8v v=23 v=0.0572 2.6853 D2S1338 17,19 17,19 (p+r+4pr) / 8pr p=17 r=19 p=0.1695 r=0.1928 1.8858 Penta D 11,13 9,13 (1+4r) / 8r r=13 r=0.1447 1.3638 Penta E 7,11 7,12 (1+4r) / 8r r=7 r=0.1165 1.5729 Kinship Index=497978.3142 Probability of relationship=99.9997%. [Participant created a manually formatted table within the free-form text space. This special formatting was not transferable into the final report. Data is presented as is.]
DHFZNN-5877	Currently, the Laboratory does not perform Kinship DNA analysis and its associated statistical calculations.

TABLE 8

WebCode-Test	Additional Statistical Results
FXXYN7-5877	As noted in the Comments Section, the reported values are Kinship Index (KI) values calculated using [Laboratory software] 5.0.12 BFS software that uses standard formulae for simple PI's and 2-person KI's that incorporate a theta value of 0.01 with allele probablities with no rounding and a 1/k prior instead of x/N. Although the software reports the KI at each locus at up to nine significant figures, the final combined KI is reported as two significant figures. Due to possible genetic linkage between the vWA and D12S391 loci, the genotypes from only one of those loci (vWA) were used in the KI calculation. Per our laboratory practice, only the GlobalFiler loci are used for the KI calculations, hence no KI's were reported for the Penta D and Penta E loci. Our Missing Persons DNA Program typically does not report KI results as "Yes/No/Inconclusive" with respect to a relationship or pedigree. Instead, verbal qualifiers ranging from "uninformative" to "very strong support" for a kinship are reported. In this case, the verbal qualifier would be reported as "strong support" for this grandmother-grandson relationship.
GMFGVY-5877	Analysis type not applicable for our laboratory. [From Table 7 - Kinship DNA Statistics: "Outside scope of our accreditation"]
H6EXCG-5877	* = D12S391 not used in conjunction with vWA
JGG2W3-5877	*The likelihood rations were calculated with the [Laboratory software] that used the standard formulae for simple PIs and 2-person KIs that incorporate the theta value of 0.01 with allele probabilities with no rounding and a 1/k instead of x/N. The [Laboratory software] uses the NIST STRBase Population Database. Although the likelihood ratios for all loci are shown, only one of the vWA/D12S391 loci were used to calculate the combined KI, due to linkage between these two loci. For this example D12S391 was omitted. The scenario did not state if this was a paternal or maternal grandmother, so the maternal relationship was used. [Laboratory] does not test for or report PentaD and PentaE loci, therefore those loci were not reported.
MWKGP9-5872	the probability of half sibling is 99.99%
PJRUEX-5872	The biological child, Grandson (DNA profile B) cannot be excluded as the biological parent of woman, Grandmother (DNA profile A). Kinship index, KI=502998,9013, Kinship probability=99.999%
PPFMJ6-5877	Grandparent relationships not reported.
PTGLZP-5872	There is strong support.
PZVCHB-5872	When performing the comparison between the genetic profile reported as A with the genetic profile reported as B, a kinship index of 497978.3143 was obtained.
QBTRPQ-5877	We do not do grandparent/grandchild comparisons
WJMNEN-5872	Locus vWA excluded due to linkage with D12S391
WVHWWQ-5877	*The likelihood ratios were calculated with the [Laboratory software] that used the standard formulae for simple PIs and 2-person KIs that incorporate the theta value of 0.01 with allele probabilities with no rounding and a 1/k instead of x/N. The [Laboratory software] uses the NIST STRBase Population Database. Although the likelihood ratios for all loci are shown, only one of the vWA/D12S391 loci were used to calculate the combined KI, due to linkage between these two loci. For this scenario D12S391 was omitted. The scenario did not state if it was a paternal or maternal grandmother, so the maternal relationship was used. [Laboratory] does not test for or report Penta D and Penta E loci, therefore those loci were not reported.
ZBH8UK-5877	*The likelihood ratios were calculated with the [Laboratory software] that uses standard formulae for simple PI's and 2-person KI's that incorporate a theta value of 0.01 with allele probabilities with no rounding and a 1/k prior instead of just x/N. Combined kinship index omits the locus D12S391 due to linkage disequilibrium. ^Only GlobalFiler loci used in calculation per TL, additional loci (PentaD, PentaE) not tested at our laboratory.
ZPY8HX-5877	combined Kinship index 5.1785E.If a priori 0,5 propability then the probability for the first hypothesis is 99.9998068928%

Additional Comments

TABLE 9

WebCode-Test	Additional Comments
3KHENB-5872	Final CPI truncated to two significant figures per laboratory policy. D12S391 not used in calculation per laboratory policy. Kinship DNA portion not completed. Per laboratory policy, no kinship statistics are calculated for avuncular/grandparentage relationships.
66BCVT-5877	Allele frequencies used for Paternity statistics is from file version "JFS 2003",i.e. previously uploaded frequencies to the NIST STRBASE database
6FE8EX-5872	NR = No Results. Item 2 is concordant with PowerPlex Fusion and Yfiler at DYS391. Item 3 is concordant with PowerPlex Fusion and Yfiler at DYS391. Item 4 is concordant with PowerPlex Fusion and Yfiler at DYS391.
6LMT3U-5877	Population Database Used: National frequencies. Only the statistical calculation of paternity (IP) is performed for the alleles of item #4, due to compatibility.
6PZPQ6-5872	NR = No Results. N/A = Loci not used for statistics.
6TM4EE-5872	Combined Paternity Index in Part II [Table 5: Paternity DNA Statistics & Conclusions]: Paternity DNA Statistics calculated using Fst of 3% which is the typical value applied for a standard criminal paternity test.
7JFQXB-5872	Statistics are not generated for paternity exclusions, therefore, no stats for Alleged Father A. Our lab uses Popstats but we use the amended NIST allele frequencies. I marked Popstats as what I used.
82MKWV-5872	NR = No Results. PowerPlex Fusion and YFiler Results were concordant at DYS391 for Items 2, 3 and 4.
8D43XE-5877	For the paternity statistics, the likelihood ratios entered were calculated using the [Laboratory software] that uses standard formulae for simple PI's and 2-person KI's that incorporate a theta value of 0.01 with allele probabilities with no rounding and a 1/k prior instead of x/N. The combined KI (Caucasian) shown does not include D12. D12 was removed due to genetic linkage with vWA. This laboratory does not report probability of paternity and so this value was not calculated.
8RMRQP-5877	NR = no results
8WW4PB-5872	Any labeled peaks seen in samples that are likely due to PCR/STR artifacts were not reported and will not be used for conclusions or comparisons. DYS391 is reported as INC for the PowerPlex® Fusion System as per laboratory policy. Locus specific PI's only available for those loci used for comparison in DNAview ver. 27.23.
AGTGDY-5872	No statistics are calculated for vWA and SE33 per this lab's SOP.

TABLE 9

WebCode-Test	Additional Comments
AL77UM-5872	1. Extraction: In-situ extraction method was used to extract DNA from Item 1, Item 2, Item 3 and Item 4. Chelex extraction method was used to extract DNA from Item 3 for confirmation on exclusion. 2. Quantification: DNA quantification was carried out on Item 3 using Quantifiler Human DNA Quantification Kit with Applied Biosystem Real Time Polymerase Chain Reaction 7500 System. 3. Amplification: Amplification of STR (Short Tandem Repeat) Genetic Loci was carried out on Item 1, Item 2, Item 3 and Item 4 using the AmpFLSTR Identifiler Direct PCR Amplification Kit, while on Item 3 using the AmpFLSTR Identifiler Plus PCR Amplification Kit on the 9700 GeneAmp PCR System. Y-STR (Y-Short Tandem Repeat) amplification was carried out on Item 2, Item 3 and Item 4 using the AmpFLSTR Y-Filer PCR Amplification kit on the 9700 GeneAmp PCR system. 4. Electrophoresis: Electrophoresis was carried out using Applied Biosystem 3500xL Genetic Analyzer with GeneMapper ID-X Software for Item 1, Item 2, Item 3 and Item 4 (Identifiler Direct) and Item 3 (Identifiler Plus). Electrophoresis for Y-Filer was carried out using Applied Biosystem 3500xL Genetic Analyzer with GeneMapper ID-X Software for Item 2, Item 3 and Item 4. 5. Reagent blank, positive control and negative control were carried out throughout the analysis and all gave the intended results.
AX4ZA7-5877	It is our Laboratory's policy to report the most conservative number when using multiple population databases. Additionally, vWA and D12S391 are not included together in the same statistical calculation. The locus selected provides the most discriminating potential. The Combined Paternity Index value reported in Part 2 [Table 5: Paternity DNA Statistics & Conclusion] is from the Southeast Hispanic database using D12S391 (excluding vWA). We do not report the Probability of Paternity.
BUBNM6-5872	Our Lab does not calculate paternity stats on vWA or SE33
C442M6-5872	Our lab does not calculate paternity statistics on vWA or SE33
CKQJF7-5877	For Part II [Table 5: Paternity DNA Statistics & Conclusions], per laboratory policy, the vWA locus will not be used for statistical evaluations when complete profiles are used for kinship comparisons. For the locus and Combined Paternity Index values, our laboratory policy is to report the smallest CPI calculated in Popstats for 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%. For Part III [Tables 6-8: Kinship DNA Statistics], our laboratory does not evaluate grandparent/grandchild relationships.
D6TPH7-5872	1) On comparison to the DNA profiles obtained, I found that the source of bloodstain specimen “Item 4” is the biological father to the source of bloodstain specimen “Item 2” (given that the biological mother is represented by the source of bloodstain specimen “Item 1”). 2) On comparison to the DNA profiles obtained, I found that the source of bloodstain specimen “Item 3” is not the biological father to the source of bloodstain specimen “Item 2”(given that the biological mother is represented by the source of bloodstain specimen “Item 1”). 3) Extraction: Item 1, Item 2, Item 3 and Item 4 were punched using 1.2mm size puncher and the FTA disc subjected for direct amplification. 4) Amplification: Item 1, Item 2, Item 3 and Item4 were amplified using GlobalFiler Express PCR Amplification Kit on Applied Biosystem Proflex PCR System. Item 2, Item 3 and Item 4 were further amplified using AmpFLSTR Y-Filer PCR Amplification Kit on Applied Biosystem Proflex PCR System. 5)Electrophoresis: Electrophoresis was carried out using Genetic Analyzer 3500 for all amplified product o GlobalFiler Express and YFiler Amplification kit. 6) Quality Control: Reagent Blank, Positive Control and Negative Control were incorporated in the overall analysis and gave expected results. 7) The statistical formula were derived from DNAView Statistical Software and calculated using Microsoft Excel.
DHFZNN-5877	Currently, the Laboratory does not perform Kinship DNA analysis and its associated statistical calculations.

TABLE 9

WebCode-Test	Additional Comments
E2PD2W-5872	Our laboratory doesn't use vWA in statistics due to linkage with D12S391. Our laboratory doesn't use SE33 in statistics due to high mutation rate.
EAZWXZ-5872	D12S391 is omitted from all final calculations, as per laboratory policy. The CPI is truncated to 2 significant figures, as per laboratory policy. Grandparentage relationship analyses are not conducted by the laboratory therefore Part III [Tables 6-8: Kinship DNA Statistics] left blank.
FXXYN7-5877	For Part I [Tables1-4: DNA & Paternity Index Results]: PI values at specific loci, Part II [Table 5: Paternity DNA Statistics & Conclusions] Item 2 Combined PI value, and Part III [Tables 6-8] Kinship DNA Statistics: the reported values are Kinship Index values calculated using [Laboratory software] 5.0.12 BFS software that uses standard formulae for simple PI's and 2-person KI's that incorporate a theta value of 0.01 with allele probabilities with no rounding and a 1/k prior instead of 1/N. Although the software reports the KI at each locus at up to nine significant figures, the final combined KI is reported as two significant figures. Due to possible genetic linkage between the vWA and D12S391 loci, the genotypes from only one of these loci were used in the combined KI calculation. For Part II [Table 5] Item 2: the result was listed as "1.2E12" because I was unable enter the result using scientific notation. "1.2E12" should be interpreted as 1.2 times 10 raised to the 12th power. For Part II [Table 5] Item 3: since our laboratory does not report Probabilities of Paternity, no value was entered. For Part III [Tables 6-8] Kinship DNA Statistics: since the reported Likelihood Ratios are the KI values calculated using the [Laboratory software] 5.0.12 BFS software as mentioned above, the "Formula Used" and "Allele Legend" for each locus was unavailable to report. The CTS-provided Allele Frequencies at each locus were not used by the [Laboratory software]. Per our laboratory practice, only the GlobalFiler loci are used for the KI calculations, hence no KI's were reported for the Penta D and Penta E loci. The genotypes at the D12S391 locus were not used due to possible genetic linkage with the vWA locus.
G62ZNZ-5872	This laboratory does not perform statistics at vWA or SE33.
G6WHQ2-5877	For the locus and combined paternity index values, our laboratory protocol is to report the smallest paternity index value calculated in FBI PopStats using selected population groups/ethnicities (African American, Caucasian, Southeast Hispanic, and Southwest Hispanic). Based on our laboratory protocol, the vWA locus is not used for kinship statistical estimation purposes. Additionally, the probability of paternity is calculated using prior values of 0.01, 0.05, and 0.09. Probability of paternity values greater than 99.99% are reported as >99.99%.
GMFGVY-5877	Our laboratory evaluates putative relationships using a software programme called Familias and the strength of the relationship is expressed as a Likelihood Ratio. The results would be reported as follows: Because a child inherits one half of his or her DNA from each parent, half of the DNA elements in the child's DNA profile will be seen in the DNA profile of each parent. In the present case half of the DNA elements in the DNA profile of Son Item 2 are present in the DNA profile of Mother item 1 and the other half are present in the DNA profile of Alleged Father B item 4. In evaluating the strength of the DNA evidence, I have considered the following alternative propositions: Either: Son item 2 is the biological child of Alleged Father B item 4 given Mother item 1 is his biological mother Or: Son item 2 is not the biological child of Alleged Father B item 4 given Mother item 1 is his biological mother and is the child of an unknown unrelated male. The DNA evidence observed is approximately 8639 million times more likely if Son item 2 is a biological child of Alleged Father B item 4 rather than the child of an unrelated male given Mother item 1 is his biological mother. These findings provide extremely strong support that Son item 2 is a biological child of Alleged Father B. I have chosen this level of support from the following scale: Weak support, moderate support, moderately strong support, strong support, very strong support, extremely strong support.

TABLE 9

WebCode-Test	Additional Comments
HCF7ZX-5872	PI is not calculated when an individual is excluded as the biological father of the offspring. Our laboratory does not use vWA and 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 independence for kinship analysis. Part III [Tables 6-8: Kinship DNA Statistics] not applicable to our laboratory.
HLHQZ6-5872	1) On comparison to the DNA profiles obtained, I found that the source of bloodstain specimen "Item 4" is the biological father to the source of bloodstain specimen "Item 2"(given that the biological mother is represented by the source of bloodstain specimen "Item 1"). 2) On comparison to the DNA profiles obtained, I found that the source of bloodstain specimen "Item 3" is not the biological father to the source of bloodstain specimen "Item2" (given that the biological mother is represented by the source of bloodstain specimen "Item 1"). 3) Extraction: Item 1, Item 2, Item 3 and Item 4 were punched using 1.2mm size puncher and the FTA disc subjected for direct amplification. 4) Amplification: Item 1, Item 2, Item 3 and Item4 were amplified using GlobalFiler Express PCR Amplification Kit on Applied Biosystem Proflex PCR System. Item 2, Item 3 and Item 4were further amplified using AmpFLSTR Y-Filer PCR Amplification Kit on Applied Biosystem Proflex PCR System. 5)Electrophoresis: Electrophoresis was carried out using Genetic Analyzer 3500 for all amplified product o GlobalFiler Express and Y Filer Amplification kit. 6) Quality Control: Reagent Blank, Positive Control and Negative Control were incorporated in the overall analysis and gave expected results. 7) The statistical formula were derived from DNA View Statistical Software and calculated using Microsoft Excel.
JGG2W3-5877	Part II [Table 5]; Paternity DNA Statistics The [Laboratory software] was used to calculate the paternity indices using the standard formulae for simple PIs that incorporate a theta value of 0.01 with allele probabilities with no rounding and a 1/k instead of x/N. The [Laboratory software] uses the NIST STRBase Population Database. Although the paternity index for all loci are shown, only one of the vWA/D12S391 loci were used to calculate the combined KI, due to linkage between these two loci. For this example D12S391 was omitted. Our laboratory does not report the Probability of Paternity.
JQR4H3-5872	Item 3: No PI provided due to exclusion. The Laboratory will exclude the alleged parent as a biological parent of the child when there are three or more markers with genetic inconsistencies. Likelihood ratio is not calculated when the alleged parent is excluded. Item 4: No PI provided for D12S391. The Laboratory does not include the locus D12S391 for kinship statistical calculation. Part III [Tables 6-8: Kinship DNA Statistics]: Grandparent-grandchild relationships are not evaluated in our laboratory.
KM676W-5872	Our lab only reports the combined CPI, not a particular ethnic group. If an alleged parent is excluded, we do not calculate stats for that person. We do not include vWA in stats. Our lab only does paternity cases, not any other family relationship.

TABLE 9

WebCode-Test	Additional Comments
MHMK9V-5872	1) On comparison to the DNA profiles obtained, I found that the source of bloodstain specimen "Item 4" is the biological father to the source of bloodstain specimen "Item 2" (given that the biological mother is represented by the source of bloodstain specimen "Item 1"). 2) On comparison to the DNA profiles obtained, I found that the source of bloodstain specimen "Item 3" is not the biological father to the source of bloodstain specimen "Item 2"(given that the biological mother is represented by the source of bloodstain specimen "Item 1"). 3) Extraction: Item 1, Item 2, Item 3 and Item 4 were punched using 1.2mm size puncher and the FTA disc subjected for direct amplification. 4) Amplification: Item 1, Item 2, Item 3 and Item4 were amplified using GlobalFiler Express PCR Amplification Kit on Applied Biosystem Proflex PCR System. Item 2, Item 3 and Item 4 were further amplified using AmpFLSTR Y-Filer PCR Amplification Kit on Applied Biosystem Proflex PCR System. 5)Electrophoresis: Electrophoresis was carried out using Genetic Analyzer 3500 for all amplified product of GlobalFiler Express and YFiler Amplification kit. 6) Quality Control: Reagent Blank, Positive Control and Negative Control were incorporated in the overall analysis and gave expected results. 7) The statistical formula were derived from DNAView Statistical Software and calculated using Microsoft Excel.
MWKGP9-5872	Alleged parent of item 3 is excluded as a possible biological father while alleged father of item 4 cant be excluded as a biological father.
NEZ7KK-5872	Statistical calculations performed routinely in the laboratory were reported, no other calculations were performed. Alleged Father A could be excluded as being the biological father therefore the paternity index for individual loci was not calculated. The laboratory does not calculate the probability of paternity therefore this was not reported. Kinship calculations are performed on specialised software that cannot be altered in regards to allele frequencies, or they are submitted to an external expert therefore these calculations were also not performed.
PJRUEX-5872	PART I, DNA Analysis for Item 3 [Table 1]: The laboratory does not perform any statistical analysis if more than three exclusions are observed. For that reason, the blanks provided for PI of the excluded systems were filled as "Exclusion". For calculations of part II: Paternity DNA Statistics [Table 5], the software Familias 3.2.2.
PZVCHB-5872	Part I - II [Tables 1-5: Paternity DNA Analysis, Statistics, & Conclusions] Comments: In our laboratory the results of exclusion are confirmed by reprocessing from original samples, a procedure permormed in the present test. Likewise, our internal protocols establish that for cases wilth results of confirmed exclusion, it's not necessary to perform probability calculations. Part III [Tables 6-8: Kinship DNA Statistics] Comments: k0=0.5, k1=0.25, 2k1=0.5.
QBTRPQ-5877	For locus and the combined paternity index value, our laboratory protocol is to report the smallest CPI calculated in Popstats of the selected population groups/ethnicities. For part II [Table 5: Paternity DNA Statistics & Conclusions]: Assuming prior probabilities of 10%, 50%, and 90%, the probability of paternity is greater than 99.99%. Probability of Paternity - the following locus was not used in statistical calculation: vWA
TFDB26-5877	VWA was omitted due to linkage with d12. Per lab policy the most probative locus will be included in the PI, and the least probative locus will be omitted. PI for item 3 was not calculated due to Alleged Father A was excluded as a potential biological parent of the son. Lab policy does not require a PI to be calculated for excluded potential parents.
TGTQDL-5872	For Part I [Tables 1-4: Paternity DNA Analysis]: Item 4: This laboratory omits the D12S391 locus from Paternity Index calculations, so PI was purposely left blank for this locus. Also, no PI calculations are conducted if an alleged father is eliminated by inspection of results (ie: Item 3). For Part II [Table 5: Paternity DNA Statistics & Conclusions]: Paternity DNA Statistics, laboratory protocol is to truncate the CPI to two significant digits, and for the Probability of Paternity report only four digits after the decimal point.

TABLE 9

WebCode-Test	Additional Comments
THMEVG-5872	FBI Popstats NIST 2017 data set. SE33 and vWA are not utilized for statistical calculations in this laboratory.
U3L4GA-5872	Item 2: DYS391 PowerPlex Fusion5C results are concordant with DYS391 YFiler results. Item 3: DYS391 PowerPlex Fusion5C results are concordant with DYS391 YFiler results. Item 4: DYS391 PowerPlex Fusion5C results are concordant with DYS391 YFiler results. NR = No Result.
U8HTZ3-5877	Part III [Tables 6-8: Kinship DNA Statistics] as not applicable in our laboratory
UHGJPF-5872	NR=Tested but No Results. My laboratory does not produce PI calculations. For Criminal paternity cases, my laboratory calculates the "Random Man Not Excluded" statistical calculation (RMNE). This formula is: p^2 + 2p(1-p)=2p - p^2, when one obligatory allele is present (where p is the frequency of the obligatory allele), and =(2p1 - p1^2) + (2p2 - p2^2) - (2p1p2) if two obligatory alleles are present. The statistic is calculated for the African American, Caucasian, and SE Hispanic populations. The most common population statistic of the three populations is reported. In this scenario, the SE Hispanic population was the most common of the three and the one which would be reported. That statistic is as follows: Combined Match Probability (CMP) = 4.86164E-15, 1/CMP = 2.05692E+14.
VCB87N-5872	1. On comparison to the DNA profiles obtained, I found that the source of bloodstain specimen “Item 4” is the biological father to the source of bloodstain specimen “Item 2” (given that the biological mother is represented bythe source of bloodstain specimen “Item 1”). 2. On comparison to the DNA profiles obtained, I found that the source of bloodstain specimen “Item 3” is not the biological father to the source of bloodstain specimen “Item 2”(given that the biological mother is represented bythe source of bloodstain specimen “Item 1”). 3. Extraction: Item 1, Item 2, Item 3 and Item 4 were punched using 1.2mm size puncher and the FTA disc subjected for direct amplification. 4. Amplification: Item 1, Item 2, Item 3 and Item 4 were amplified using GlobalFiler Express PCR Amplification Kit on Applied Biosystem Proflex PCR System. Item 2, Item 3 and Item 4 were further amplified using AmpFLSTR Y-Filer PCR Amplification Kit on Applied Biosystem Proflex PCR System. 5. Electrophoresis: Electrophoresis was carried out using Genetic Analyzer 3500 for all amplified product of GlobalFiler Express and YFiler Amplification kit. 6. Quality Control: Reagent Blank, Positive Control and Negative Control were incorporated in the overall analysis and gave expected results. 7. The statistical formula were derived from DNAView Statistical Software and calculated using Microsoft Excel.
W7FZ2K-5877	For part II [Table 5: Paternity DNA Statistics & Conclusions], the locus vWA was not used in the statistical calculation. For the locus and combined paternity index values, our laboratory protocol is to report the smallest CPI calculated in FBI Popstats of the selected population groups/ethnicities. The probability of paternity was calculated assuming prior probabilities of 10%, 50% and 90%. Part III [Tables 6-8: Kinship DNA Statistics] was not completed as our laboratory does not calculate grandparent-grandchild relationship statistics.
WVHWWQ-5877	Part II: Paternity DNA Statistics [Table 5]- The [Laboratory software] was used to calculate the paternity indices using the standard formulae for simple PIs that incorporate a theta value of 0.01 with allele probabilities with no rounding and a 1/k instead of x/N. The [Laboratory software] uses the NIST STRBase Population Database. Although the paternity index for all loci are shown, only one of the vWA/D12S391 loci were used to calculate the combined KI, due to linkage between these two loci. For this calculation D12S391 was omitted. Our laboratory does not report the Probability of Paternity.
X7A37F-5872	D12S391 is omitted from all final calculations, as per laboratory policy. The CPI is truncated to 2 significant figures, as per laboratory policy. Part III [Tables 6-8: Kinship DNA Statistics] not completed, our lab does not calculate kinship stats for half siblings.

TABLE 9

WebCode-Test	Additional Comments
XC38YJ-5877	Our laboratory does not calculate or determine the relationship between grandmother and grandson. For the DNA Paternity Statistics: 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 locus was not used the statistical calculation: vWA.
XXJGZG-5872	Laboratory does not conduct grandparentage calculations. D12S391 is omitted from all final calculations, as per laboratory policy. The final CPI is truncated to 2 significant figures, as per laboratory policy. PI values reported as provided from calculations using NIST 1036 U.S. Population Dataset.
Z2TGAD-5872	The paternity index was calculated without using the D12S391 locus due to its potential linkage to vWA in distantly related individuals, as is lab protocol. The probability values are truncated at four integers after the decimal point, as is lab protocol.
ZBH8UK-5877	Our laboratory does not calculate probability of paternity. *The likelihood ratios were calculated with the [Laboratory software] that uses standard formulae for simple PI's and 2-person KI's that incorporate a theta value of 0.01 with allele probabilities with no rounding and a 1/k prior instead of just x/N. Combined kinship index omits the locus D12S391 or vWA due to linkage disequilibrium.
ZPY8HX-5877	[Laboratory] cannot give formulas and allele legends for the paper challenge used by the software.

-End of Report-
(Appendix may follow)

Collaborative Testing Services ~ Forensic Testing Program

Test No. 21-5872: DNA Parentage

DATA MUST BE SUBMITTED BY **Oct. 25, 2021, 11:59 p.m.** TO BE INCLUDED IN THE REPORT

Participant Code: U1234A WebCode: 9HTY2V

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 DPF3 - FTA Microcards):
Item 1: Blood Sample from Known Parent (Caucasian Mother)
Item 2: Blood Sample from Known Child (Son)
Item 3: Blood Sample from Alleged Father A (Caucasian)
Item 4: Blood Sample from Alleged Father B (Caucasian)

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

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

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

Part I: DNA Analysis for Item 1

STR Amplification Kit(s) Used:

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

☐ Identifiler® ☐ GlobalFiler™ ☐ Investigator® 24plex

☐ PowerPlex® Other

Report the Probabilistic Genotyping Software Used (if applicable):

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

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

Part I (continued): DNA Analysis for Item 2

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

☐ Identifiler® ☐ GlobalFiler™ ☐ Investigator® 24plex

☐ PowerPlex® Other

Report the Probabilistic Genotyping Software Used (if applicable):

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

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

YSTR results are for proficiency concordance only.

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

☐ YFiler™ ☐ PowerPlex® Y Other

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

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

Part I (continued): DNA Analysis for Item 3

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

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

☐ Identifiler® ☐ GlobalFiler™ ☐ Investigator® 24plex

☐ PowerPlex® Other

Report the Probabilistic Genotyping Software Used (if applicable):

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

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

YSTR results are for proficiency concordance only.

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

☐ YFiler™ ☐ PowerPlex® Y Other

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

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

Part I (continued): DNA Analysis for Item 4

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

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

☐ Identifiler® ☐ GlobalFiler™ ☐ Investigator® 24plex

☐ PowerPlex® Other

Report the Probabilistic Genotyping Software Used (if applicable):

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

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

YSTR results are for proficiency concordance only.

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

☐ YFiler™ ☐ PowerPlex® Y Other

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

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

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 17: 0.1053	15: 0.1053	(1+4p)/8p	p = 14	1.847

Scenario:

The two DNA profiles below are presented as a potential Hispanic Grandmother (A) and Grandson (B) relationship. Using the allele frequencies shown for the tested loci, calculate the likelihood ratio for support of the proposed relationship versus being unrelated.

Locus	A	B	Allele Frequencies		Formula Used	Allele Legend	Likelihood Ratio
D1S1656	15,15	15,16	15: 0.1377	16: 0.1758			
D2S1338	17,19	17,19	17: 0.1695	19: 0.1928			
D2S441	10,11	10,11	10: 0.3369	11: 0.2987			
D3S1358	14,16	14,16	14: 0.0784	16: 0.2797			
D5S818	9,11	9,11	9: 0.0530	11: 0.3898			

Locus	A	B	Allele Frequencies		Formula Used	Allele Legend	Likelihood Ratio
D7S820	9,10	8,10	8: 0.1208	9: 0.0911			
			10: 0.3072				
D8S1179	13,14	13,13	13: 0.2733	14: 0.2627			
D10S1248	14,14	14,14	14: 0.3390				
D12S391	16,23	15,23	15: 0.0445	16: 0.0424			
			23: 0.0572				
D13S317	11,12	11,12	11: 0.2182	12: 0.2352			
D16S539	10,11	11,13	10: 0.1504	11: 0.2648			
			13: 0.1335				
D18S51	12,16	12,13	12: 0.1144	13: 0.1229			
			16: 0.1250				
D19S433	13,14	14,14	13: 0.2225	14: 0.3538			
D21S11	29,31	30,31	29: 0.2076	30: 0.2733			
			31: 0.0763				
D22S1045	15,15	15,16	15: 0.4258	16: 0.3496			

Locus	A	B	Allele Frequencies		Formula Used	Allele Legend	Likelihood Ratio
CSF1PO	11,12	10,12	10: 0.2373	11: 0.2797			
			12: 0.3750				
FGA	23,23	22,23	22: 0.1653	23: 0.1208			
PentaD	11,13	9,13	9: 0.2426	11: 0.1553			
			13: 0.1447				
PentaE	7,11	7,12	7: 0.1165	11: 0.0763			
			12: 0.1695				
SE33	27.2,32.2	15,32.2	15: 0.0360	27.2: 0.0763			
			32.2: 0.0106				
TH01	6,7	7,7	6: 0.2394	7: 0.2966			
TPOX	11,11	8,11	8: 0.4852	11: 0.2542			
vWA	14,19	14,15	14: 0.0805	15: 0.1441			
			19: 0.0508				

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

2. Is the relationship of Grandmother and Grandson 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)