



DNA Parentage Test No. 16-5872 Summary Report

This proficiency test was sent to 38 participants. Each participant received a sample pack consisting of the standard paternity trio, collected from an alleged mother and father, and a potential male offspring. Participants were requested to analyze the samples using their existing protocols. Data were returned from 32 participants (84% response rate) and are compiled into the following tables:

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

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

Manufacturer's Information

Each sample set was a collection of known blood samples, provided on FTA Micro cards, from three individuals (Items 1-3); a mother, a father, and the alleged child. Participants were requested to analyze these items using their existing protocols. Also included in the data sheet was a kinship exercise that consisted of autosomal DNA profiles of two individuals for comparison. Participants were requested to determine if an aunt/niece relationship claim was supported following the review of these profiles.

SAMPLE PREPARATION: All stains were prepared from human whole blood which was drawn into EDTA tubes. Item 1 (75 μ l) was blood from a female (mother) donor, Item 2 (75 μ l) was from a male (father) donor and Item 3 (75 μ l) was created using blood collected from a male donor who was not the biological offspring of the mother (Item 1) and father (Item 2). Each different Item was prepared at separate times and were packaged once they were thoroughly dried. Completed sample sets were stored at -20°C until shipment on August 8th, 2016.

SAMPLE SET ASSEMBLY: For each sample set, all three Items (1-3) were placed in a pre-labeled sample pack envelope and sealed. The sample pack envelopes were then packaged in pre-labeled Heat Seal envelopes and sealed. This process was repeated until all of the sample sets were prepared.

KINSHIP EXERCISE: This exercise included allelic results representing an aunt/niece relationship.

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

Manufacturer's Information, continued

Amelogenin and STR Results

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

Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D7S820
	D8S1179	D10S1248	D12S391	D13S317	D16S539	D18S51
	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO	FGA
	Penta D	Penta E	SE33	TH01	TPOX	vWA
1	11,15	22,25	10,14	15,15	12,13	8,9
	15,15	12,15	18,23	11,12	9,12	13,14
	13,13.2	28,30	14,17	X,X	12,12	23,23
	5,11	7,8	*	8,8	6,9	15,19
2	14,15	17,19	11.3,11.3	18,19	13,13	9,11
	13,14	14,14	18,23	8,12	12,13	14,18
	14,15	30,30	15,15	X,Y	10,11	22,24
	9,13	10,13	*	7,9	11,11	18,18
3	13,17	17,21	11,14	16,17	10,11	8,10
	14,14	15,15	17,18	10,12	9,12	12,20
	14.2,15	30,32	14,16	X,Y	8,13	19,22
	7,11	10,13	*	7,8	6,8	16,18

YSTR Results

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

Item	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
	DYS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS481	DYS533
	DYS549	DYS570	DYS576	DYS635	DYS643	Y GATA H4	Y Indel	
2	14	11,14	13	29	24	11	13	13
	15	12	12	20	15	17	*	*
	*	*	*	23	*	12	*	
3	17	15,19	13	31	21	10	11	15
	14	11	12	21	15	16	*	*
	*	*	*	21	*	12	*	

* Results were not received by a minimum of 10 participants for STR and YSTR loci indicated.

Paternity Indices

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

Database	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D7S820
	D8S1179	D10S1248	D12S391	D13S317	D16S539	D18S51
	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO	FGA
	Penta D	Penta E	SE33	TH01	TPOX	vWA
3PI- FBI PopStats	∅	∅	∅	*	∅	∅
	∅	∅	∅	∅	*	∅
	∅	∅	∅	∅	∅	∅
	∅	∅	∅	*	∅	∅
3PI- NIST-STRBASE	∅	*	∅	*	*	*
	*	∅	∅	*	3.34	*
	*	*	∅	∅	*	*
	∅	∅	∅	3.12	*	*

* PI data was not received from a minimum of 10 participants for the loci indicated.

∅ No results were received for the loci indicated with this symbol.

Summary Comments

The 16-5872 DNA Parentage test was designed to allow participants to assess their proficiency in the analysis and interpretation of a standard trio of blood stains on FTA Micro cards. Item 1 was blood collected from a female donor (mother), Item 2 was blood collected from a male donor (father), and Item 3 was blood collected from a male donor (not the biological offspring of mother and father). Participants were requested to analyze the samples and provide allelic and statistical results and relationship conclusions regarding the potential offspring. Sample sets also included a kinship exercise provided on the data sheets 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).

Three participants reported allelic results that differed from the consensus/predistribution results, with two participants reporting an inconsistent STR allele at vWA, and one reporting an inconsistent YSTR allele at DYS393.

Paternity DNA results were returned by 32 participants and from those, 28 reported information relating to the paternity statistics such as the population database used, the calculated combined paternity index and the probability of paternity.

For the population database used, all participants responded. Sixteen participants used NIST-STRBASE, six used the FBI POPSTATS database and six participants reported the use of a laboratory specific database.

Of the 28 participants returning results, four reported a CPI value between $3.7036E-36$ and $3.7043E-36$. Other participants stated that the combined paternity index was zero, or that it was not calculated for exclusions.

For the Probability of Paternity, all responding participants reported either a value of "0" or did not report a probability value.

For the Paternity Conclusions, all 32 participants reported that the male child (Item 3) was excluded as the biological offspring of the mother (Item 1) and father (Item 2).

For the Kinship Exercise, 15 participants responded, and all 15 reported that the aunt/niece claim was supported. The kinship Index reported by the 15 participants ranged from 23,000 to over 2.5 million.

Amelogenin & STR Results

TABLE 1

WebCode Item	Item 1					
	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D7S820
	D8S1179	D10S1248	D12S391	D13S317	D16S539	D18S51
	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO	FGA
Penta D	Penta E	SE33	TH01	TPOX	vWA	
2P8ZT9	<i>GlobalFiler Express</i>					
1	11,15	22,25	10,14	15	12,13	8,9
	15	12,15	18,23	11,12	9,12	13,14
	13,13.2	28,30	14,17	X	12	23
			14,21	8	6,9	15,19
334W47	<i>Identifiler® Plus</i>					
1		22,25		15	12,13	8,9
	15			11,12	9,12	13,14
	13,13.2	28,30		X	12	23
				8	6,9	15,19
44TJZ7	<i>PowerPlex® 21, CS7, NGMS</i>					
1	11,15	22,25	10,14	15	12,13	8,9
	15	12,15	18,23	11,12	9,12	13,14
	13,13.2	28,30	14,17	X	12	23
	5,11	7,8	14,21	8	6,9	15,19
4GJG26	<i>PowerPlex® 16HS</i>					
1				15,15	12,13	8,9
	15,15			11,12	9,12	13,14
		28,30		X,X	12,12	23,23
	5,11	7,8		8,8	6,9	15,19
4HEY47	<i>PowerPlex® esi-fast, esx, fusion</i>					
1	11,15	22,25	10,14	15,15	12,13	8,9
	15,15	12,15	18,23	11,12	9,12	13,14
	13,13.2	28,30	14,17	X,X	12,12	23,23
	5,11	7,8	14,21	8,8	6,9	15,19
77ETH7	<i>Identifiler® Plus, PowerPlex® 21</i>					
1	11,15	22,25		15,15	12,13	8,9
	15,15		18,23	11,12	9,12	13,14
	13,13.2	28,30		X,X	12,12	23,23
	5,11	7,8		8,8	6,9	15,19
79HJR8	<i>Identifiler®</i>					
1		22,25		15,15	12,13	8,9
	15,15			11,12	9,12	13,14
	13,13.2	28,30		X,X	12,12	23,23
				8,8	6,9	15,19
7RDGM8	<i>PowerPlex® ESX17, FUSION</i>					
1	11,15	22,25	10,14	15,15	12,13	8,9
	15,15	12,15	18,23	11,12	9,12	13,14
	13,13.2	28,30	14,17	X,X	12,12	23,23
	5,11	7,8	14,21	8,8	6,9	15,19

TABLE 1

WebCode Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D7S820
	D8S1179	D10S1248	D12S391	D13S317	D16S539	D18S51
	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO	FGA
	Penta D	Penta E	SE33	TH01	TPOX	vWA
Item 1						
7VCRH8	<i>Identifiler® Plus</i>					
1		22,25		15,15	12,13	8,9
	15,15			11,12	9,12	13,14
	13,13.2	28,30		X,X	12,12	23,23
				8,8	6,9	15,19
BM7J63	<i>IDplex Plus</i>					
1		22,25		15,15	12,13	8,9
	15,15			11,12	9,12	13,14
	13,13.2	28,30		X,X	12,12	23,23
				8,8	6,9	15,19
CC4EVZ	<i>PowerPlex® 21</i>					
1	11,15	22,25	-	15,15	12,13	8,9
	15,15	-	18,23	11,12	9,12	13,14
	13,13.2	28,30	-	X,X	12,12	23,23
	5,11	7,8	-	8,8	6,9	15,19
CRFWM2	<i>Identifiler® Direct, GFE, PowerPlex® CS7, PP21, ESX</i>					
1	11,15	22,25	10,14	15	12,13	8,9
	15	12,15	18,23	11,12	9,12	13,14
	13,13.2	28,30	14,17	X	12	23
	5,11	7,8	14,21	8	6,9	15,19
D8JQUZ	<i>Identifiler®</i>					
1		22,25		15	12,13	8,9
	15			11,12	9,12	13,14
	13,13.2	28,30		X	12	23
				8	6,9	15,19
G9MK2W	<i>Identifiler® DIRECT</i>					
1	-	22,25	-	15	12,13	8,9
	15	-	-	11,12	9,12	13,14
	13,13.2	28,30	-	X,X	12	23
	-	-	-	8	6,9	15,19
HZ8MAU	<i>Identifiler®</i>					
1		22,25		15,15	12,13	8,9
	15,15			11,12	9,12	13,14
	13,13.2	28,30		X,X	12,12	23,23
				8,8	6,9	15,19
JXV9FU	<i>Identifiler® Direct, PowerPlex® CS7, NGMSElect Express</i>					
1	11,15	22,25	10,14	15,15	12,13	8,9
	15,15	12,15	18,23	11,12	9,12	13,14
	13,13.2	28,30	14,17	X,X	12,12	23,23
	5,11	7,8	14,21	8,8	6,9	15,19

TABLE 1

WebCode Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D7S820
	D8S1179	D10S1248	D12S391	D13S317	D16S539	D18S51
	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO	FGA
	Penta D	Penta E	SE33	TH01	TPOX	vWA
Item 1						
KY76RP	<i>PowerPlex® Fusion</i>					
1	11,15	22,25	10,14	15	12,13	8,9
	15	12,15	18,23	11,12	9,12	13,14
	13,13.2	28,30	14,17	X	12	23
	5,11	7,8		8	6,9	15,19
KZGCNQ	<i>Identifiler® Plus</i>					
1		22,25		15,15	12,13	8,9
		15,15		11,12	9,12	13,14
		13,13.2	28,30	X,X	12,12	23,23
				8,8	6,9	15,19
MJMJP	<i>GlobalFiler</i>					
1	11,15	22,25	10,14	15,15	12,13	8,9
	15,15	12,15	18,23	11,12	9,12	13,14
	13,13.2	28,30	14,17	X,X	12,12	23,23
			14,21	8,8	6,9	15,19
MXNVRN	<i>PowerPlex® Fusion, NGM Select</i>					
1	11,15	22,25	10,14	15	12,13	8,9
	15	12,15	18,23	11,12	9,12	13,14
	13,13.2	28,30	14,17	X	12	23
	5,11	7,8	14,21	8	6,9	15,19
PB33GK	<i>PowerPlex® ESX 16</i>					
1	11,15	22,25	10,14	15		
	15	12,15	18,23		9,12	13,14
	13,13.2	28,30	14,17	X		23
				8		15,19
PCXPTN	<i>Investigator IDplex Plus Kit</i>					
1		22,25		15,15	12,13	8,9
		15,15		11,12	9,12	13,14
		13,13.2	28,30	X,X	12,12	23,23
				8,8	6,9	15,19
REWJ7J	<i>PowerPlex® Fusion</i>					
1	11,15	22,25	10,14	15	12,13	8,9
	15	12,15	18,23	11,12	9,12	13,14
	13,13.2	28,30	14,17	X	12	23
	5,11	7,8		8	6,9	15,19
RG326F	<i>Identifiler® Direct</i>					
1	-	22,25	-	15	12,13	8,9
	15	-	-	11,12	9,12	13,14
	13,13.2	28,30	-	X,X	12	23
	-	-	-	8	6,9	15,19

TABLE 1

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

Item 1

TXKLVJ	<i>Identifiler® Direct</i>	1	22,25		15	12,13	8,9		
			15		11,12	9,12	13,14		
			13,13.2	28,30		X	12	23	
					8	6,9	15,19		
V7PBRE	<i>PowerPlex® Fusion</i>	1	11,15	22,25	10,14	15	12,13	8,9	
			15	12,15	18,23	11,12	9,12	13,14	
			13,13.2	28,30	14,17		X	12	23
			5,11	7,8		8	6,9	15,19	
V7URQD	<i>PowerPlex® 16, HS</i>	1				15,15	12,13	8,9	
						15,15	11,12	9,12	13,14
				28,30			X,X	12,12	23,23
			5,11	7,8		8,8	6,9	15,19	
WMT6YE	<i>PowerPlex® HS</i>	1				15,15	12,13	8,9	
						15,15	11,12	9,12	13,14
				28,30			X,X	12,12	23,23
			5,11	7,8		8,8	6,9	15,19	
XQ8YFB	<i>PowerPlex® 16 Hot Start</i>	1				15,15	12,13	8,9	
						15,15	11,12	9,12	13,14
				28,30			X,X	12,12	23,23
			5,11	7,8		8,8	6,9	15,19	
Y23R28	<i>Identifiler® Direct</i>	1	-	22,25	-	15	12,13	8,9	
			15	-	-	11,12	9,12	13,14	
			13,13.2	28,30	-	X,X	12	23	
			-	-	-	8	6,9	15,19	
YX4F68	<i>Identifiler® Direct</i>	1	-	22,25	-	15	12,13	8,9	
			15	-	-	11,12	9,12	13,14	
			13,13.2	28,30	-	X,X	12	23	
			-	-	-	8	6,9	15,19	
ZERV3C	<i>Identifiler® Plus</i>	1		22,25		15,15	12,13	8,9	
						15,15	11,12	9,12	13,14
				13,13.2	28,30		X,X	12,12	23,23
						8,8	6,9	15,19	

TABLE 1

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

Item 2

2P8ZT9	<i>GlobalFiler Express</i>					
2	14,15	17,19	11.3	18,19	13	9,11
	13,14	14	18,23	8,12	12,13	14,18
	14,15	30	15	X,Y	10,11	22,24
			22,29.2	7,9	11	18
334W47	<i>Identifiler® Plus</i>					
2		17,19		18,19	13	9,11
	13,14			8,12	12,13	14,18
	14,15	30		X,Y	10,11	22,24
				7,9	11	18
44TJZ7	<i>PowerPlex® 21, Y23, CS7, NGMS</i>					
2	14,15	17,19	11.3	18,19	13	9,11
	13,14	14	18,23	8,12	12,13	14,18
	14,15	30	15	X,Y	10,11	22,24
	9,13	10,13	22,29.2	7,9	11	18
4GJG26	<i>PowerPlex® 16HS</i>					
2				18,19	13,13	9,11
	13,14			8,12	12,13	14,18
		30,30		X,Y	10,11	22,24
	9,13	10,13		7,9	11,11	18,18
4HEY47	<i>PowerPlex® esi-fast, esx, fusion</i>					
2	14,15	17,19	11.3,11.3	18,19	13,13	9,11
	13,14	14,14	18,23	8,12	12,13	14,18
	14,15	30,30	15,15	X,Y	10,11	22,24
	9,13	10,13	22,29.2	7,9	11,11	18,18
77ETH7	<i>Identifiler® Plus, PowerPlex® 21</i>					
2	14,15	17,19		18,19	13,13	9,11
	13,14		18,23	8,12	12,13	14,18
	14,15	30,30		X,Y	10,11	22,24
	9,13	10,13		7,9	11,11	18,18
79HJR8	<i>Identifiler®</i>					
2		17,19		18,19	13,13	9,11
	13,14			8,12	12,13	14,18
	14,15	30,30		X,Y	10,11	22,24
				7,9	11,11	18,18
7RDGM8	<i>PowerPlex® ESX17, FUSION</i>					
2	14,15	17,19	11.3,11.3	18,19	13,13	9,11
	13,14	14,14	18,23	8,12	12,13	14,18
	14,15	30,30	15,15	X,Y	10,11	22,24
	9,13	10,13	22,29.2	7,9	11,11	18,18

TABLE 1

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

Item 2

7VCRH8	<i>Identifiler® Plus</i>						
	2		17,19		18,19	13,13	9,11
		13,14			8,12	12,13	14,18
		14,15	30,30		X,Y	10,11	22,24
				7,9	11,11	18,18	
BM7J63	<i>IDplex Plus</i>						
	2		17,19		18,19	13,13	9,11
		13,14			8,12	12,13	14,18
		14,15	30,30		X,Y	10,11	22,24
				7,9	11,11	18,18	
CC4EVZ	<i>PowerPlex® 21</i>						
	2	14,15	17,19	-	18,19	13,13	9,11
		13,14	-	18,23	8,12	12,13	14,18
		14,15	30,30	-	X,Y	10,11	22,24
	9,13	10,13	-	7,9	11,11	18,18	
CRFWM2	<i>Identifiler® Direct, GFE, PowerPlex® CS7, PP21, ESX</i>						
	2	14,15	17,19	11.3	18,19	13	9,11
		13,14	14	18,23	8,12	12,13	14,18
		14,15	30	15	X,Y	10,11	22,24
	9,13	10,13	22,29.2	7,9	11	18	
D8JQUZ	<i>Identifiler®</i>						
	2		17,19		18,19	13	9,11
		13,14			8,12	12,13	14,18
		14,15	30		X,Y	10,11	22,24
				7,9	11	18	
G9MK2W	<i>Identifiler® DIRECT</i>						
	2	-	17,19	-	18,19	13	9,11
		13,14	-	-	8,12	12,13	14,18
		14,15	30	-	X,Y	10,11	22,24
	-	-	-	7,9	11	18	
HZ8MAU	<i>Identifiler®</i>						
	2		17,19		18,19	13,13	9,11
		13,14			8,12	12,13	14,18
		14,15	30,30		X,Y	10,11	22,24
				7,9	11,11	18,18	
JXV9FU	<i>Identifiler® Direct, PowerPlex® CS7, NGMSElect Express</i>						
	2	14,15	17,19	11.3,11.3	18,19	13,13	9,11
		13,14	14,14	18,23	8,12	12,13	14,18
		14,15	30,30	15,15	X,Y	10,11	22,24
	9,13	10,13	22,29.2	7,9	11,11	18,18	

TABLE 1

WebCode Item	D1S1656		D2S1338		D2S441		D3S1358		D5S818		D7S820	
	D8S1179		D10S1248		D12S391		D13S317		D16S539		D18S51	
	D19S433		D21S11		D22S1045		Amelogenin		CSF1PO		FGA	
	Penta D		Penta E		SE33		TH01		TPOX		vWA	
Item 2												
KY76RP	<i>PowerPlex® Fusion</i>											
2	14,15	17,19	11.3	18,19	13	9,11	13,14	14	18,23	8,12	12,13	14,18
	14,15	30	15	X,Y	10,11	22,24	9,13	10,13	7,9	11	18	
KZGCNQ	<i>Identifiler® Plus</i>											
2	17,19	18,19	13,13	9,11	13,14	8,12	12,13	14,18	14,15	30,30	X,Y	22,24
	7,9	11,11	18,18									
MJMJP	<i>GlobalFiler</i>											
2	14,15	17,19	11.3,11.3	18,19	13,13	9,11	13,14	14,14	18,23	8,12	12,13	14,18
	14,15	30,30	15,15	X,Y	10,11	22,24	22,29.2	7,9	11,11	19,19		
MXNVRN	<i>PowerPlex® Fusion, NGM Select</i>											
2	14,15	17,19	11.3	18,19	13	9,11	13,14	14	18,23	8,12	12,13	14,18
	14,15	30	15	X,Y	10,11	22,24	9,13	10,13	22,29.2	7,9	11	18
PB33GK	<i>PowerPlex® ESX 16</i>											
2	14,15	17,19	11.3	18,19	12,13	14,18	13,14	14	18,23			
	14,15	30	15	X,Y	22,24		7,9					18
PCXPTN	<i>Investigator IDplex Plus Kit</i>											
2	17,19	18,19	13,13	9,11	13,14	8,12	12,13	14,18	14,15	30,30	X,Y	22,24
	7,9	11,11	18,18									
REWJ7J	<i>PowerPlex® Fusion</i>											
2	14,15	17,19	11.3	18,19	13	9,11	13,14	14	18,23	8,12	12,13	14,18
	14,15	30	15	X,Y	10,11	22,24	9,13	10,13	7,9	11	18	
RG326F	<i>Identifiler® Direct</i>											
2	-	17,19	-	18,19	13	9,11	13,14	-	-	8,12	12,13	14,18
	-	30	-	X,Y	10,11	22,24	-	-	7,9	11	18	

TABLE 1

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

Item 2

TXKLVJ	<i>Identifiler® Direct</i>						
	2		17,19		18,19	13	9,11
		13,14			8,12	12,13	14,18
		14,15	30		X,Y	10,11	22,24
				7,9	11	18	
V7PBRE	<i>PowerPlex® Fusion</i>						
	2	14,15	17,19	11.3	18,19	13	9,11
		13,14	14	18,23	8,12	12,13	14,18
		14,15	30	15	X,Y	10,11	22,24
	9,13	10,13		7,9	11	18	
V7URQD	<i>PowerPlex® 16, HS</i>						
	2				18,19	13,13	9,11
		13,14			8,12	12,13	14,18
			30,30		X,Y	10,11	22,24
	9,13	10,13		7,9	11,11	18,18	
WMT6YE	<i>PowerPlex® HS</i>						
	2				18,19	13,13	9,11
		13,14			8,12	12,13	14,18
			30,30		X,Y	10,11	22,24
	9,13	10,13		7,9	11,11	18,18	
XQ8YFB	<i>PowerPlex® 16 Hot Start</i>						
	2				18,19	13,13	9,11
		13,14			8,12	12,13	14,18
			30,30		X,Y	10,11	22,24
	9,13	10,13		7,9	11,11	18,18	
Y23R28	<i>Identifiler® Direct</i>						
	2	-	17,19	-	18,19	13	9,11
		13,14	-	-	8,12	12,13	14,18
		14,15	30	-	X,Y	10,11	22,24
	-	-	-	7,9	11	18	
YX4F68	<i>Identifiler® Direct</i>						
	2	-	17,19	-	18,19	13	9,11
		13,14	-	-	8,12	12,13	14,18
		14,15	30	-	X,Y	10,11	22,24
	-	-	-	7,9	11	18	
ZERV3C	<i>Identifiler® Plus</i>						
	2		17,19		18,19	13,13	9,11
		13,14			8,12	12,13	14,18
		14,15	30,30		X,Y	10,11	22,24
				7,9	11,11	18,18	

TABLE 1

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

Item 3STR

2P8ZT9	<i>GlobalFiler Express</i>					
3STR	13,17	17,21	11,14	16,17	10,11	8,10
	14	15	17,18	10,12	9,12	12,20
	14.2,15	30,32	14,16	X,Y	8,13	19,22
			12,25.2	7,8	6,8	16,18
334W47	<i>Identifiler® Plus</i>					
3STR		17,21		16,17	10,11	8,10
	14			10,12	9,12	12,20
	14.2,15	30,32		X,Y	8,13	19,22
				7,8	6,8	16,18
44TJZ7	<i>PowerPlex® 21, Y23, CS7, NGMS</i>					
3STR	13,17	17,21	11,14	16,17	10,11	8,10
	14	15	17,18	10,12	9,12	12,20
	14.2,15	30,32	14,16	X,Y	8,13	19,22
	7,11	10,13	12,25.2	7,8	6,8	16,18
4GJG26	<i>PowerPlex® 16HS</i>					
3STR				16,17	10,11	8,10
	14,14			10,12	9,12	12,20
		30,32		X,Y	8,13	19,22
	7,11	10,13		7,8	6,8	16,18
4HEY47	<i>PowerPlex® esi-fast, esx, fusion</i>					
3STR	13,17	17,21	11,14	16,17	10,11	8,10
	14,14	15,15	17,18	10,12	9,12	12,20
	14.2,15	30,32	14,16	X,Y	8,13	19,22
	7,11	10,13	12,25.2	7,8	6,8	16,18
77ETH7	<i>Identifiler® Plus, PowerPlex® 21</i>					
3STR	13,17	17,21		16,17	10,11	8,10
	14,14		17,18	10,12	9,12	12,20
	14.2,15	30,32		X,Y	8,13	19,22
	7,11	10,13		7,8	6,8	16,18
79HJR8	<i>Identifiler®</i>					
3STR		17,21		16,17	10,11	8,10
	14,14			10,12	9,12	12,20
	14.2,15	30,32		X,Y	8,13	19,22
				7,8	6,8	16,18
7RDGM8	<i>PowerPlex® ESX17, FUSION</i>					
3STR	13,17	17,21	11,14	16,17	10,11	8,10
	14,14	15,15	17,18	10,12	9,12	12,20
	14.2,15	30,32	14,16	X,Y	8,13	19,22
	7,11	10,13	12,25.2	7,8	6,8	16,18

TABLE 1

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

Item 3STR

7VCRH8	<i>Identifiler® Plus</i>						
	3STR		17,21		16,17	10,11	8,10
		14,14			10,12	9,12	12,20
		14.2,15	30,32		X,Y	8,13	19,22
				7,8	6,8	16,18	
BM7J63	<i>IDplex Plus</i>						
	3STR		17,21		16,17	10,11	8,10
		14,14			10,12	9,12	12,20
		14.2,15	30,32		X,Y	8,13	19,22
				7,8	6,8	16,18	
CC4EVZ	<i>PowerPlex® 21</i>						
	3STR	13,17	17,21	-	16,17	10,11	8,10
		14,14	-	17,18	10,12	9,12	12,20
		14.2,15	30,32	-	X,Y	8,13	19,22
	7,11	10,13	-	7,8	6,8	16,18	
CRFWM2	<i>Identifiler® Direct, GFE, PowerPlex® CS7, PP21, ESX</i>						
	3STR	13,17	17,21	11,14	16,17	10,11	8,10
		14	15	17,18	10,12	9,12	12,20
		14.2,15	30,32	14,16	X,Y	8,13	19,22
	7,11	10,13	12,25.2	7,8	6,8	19,18	
D8JQUZ							
	3STR		17,21		16,17	10,11	8,10
		14			10,12	9,12	12,20
		14.2,15	30,32		X,Y	8,13	19,22
				7,8	6,8	16,18	
G9MK2W	<i>Identifiler® DIRECT</i>						
	3STR	-	17,21	-	16,17	10,11	8,10
		14	-	-	10,12	9,12	12,20
		14.2,15	30,32	-	X,Y	8,13	19,22
	-	-	-	7,8	6,8	16,18	
HZ8MAU	<i>Identifiler®</i>						
	3STR		17,21		16,17	10,11	8,10
		14,14			10,12	9,12	12,20
		14.2,15	30,32		X,Y	8,13	19,22
				7,8	6,8	16,18	
JXV9FU	<i>Identifiler® Direct, PowerPlex® CS7, NGMSElect Express</i>						
	3STR	13,17	17,21	11,14	16,17	10,11	8,10
		14,14	15,15	17,18	10,12	9,12	12,20
		14.2,15	30,32	14,16	X,Y	8,13	19,22
	7,11	10,13	12,25.2	7,8	6,8	16,18	

TABLE 1

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

Item 3STR

KY76RP	<i>PowerPlex® Fusion</i>						
	3STR	13,17	17,21	11,14	16,17	10,11	8,10
		14	15	17,18	10,12	9,12	12,20
		14.2,15	30,32	14,16	X,Y	8,13	19,22
		7,11	10,13		7,8	6,8	16,18
KZGCNQ	<i>Identifiler® Plus</i>						
	3STR		17,21		16,17	10,11	8,10
		14,14			10,12	9,12	12,20
		14.2,15	30,32		X,Y	8,13	19,22
					7,8	6,8	16,18
MJMJVP	<i>GlobalFiler</i>						
	3STR	13,17	17,21	11,14	16,17	10,11	8,10
		14,14	15,15	17,18	10,12	9,12	12,20
		14.2,15	30,32	14,16	X,Y	8,13	19,22
				12,25.2	7,8	6,8	16,18
MXNVRN	<i>PowerPlex® Fusion, NGM Select</i>						
	3STR	13,17	17,21	11,14	16,17	10,11	8,10
		14	15	17,18	10,12	9,12	12,20
		14.2,15	30,32	14,16	X,Y	8,13	19,22
		7,11	10,13	12,25.2	7,8	6,8	16,18
PB33GK	<i>PowerPlex® ESX 16</i>						
	3STR	13,17	17,21	11,14	16,17		
		14	15	17,18		9,12	12,20
		14.2,15	30,32	14,16	X,Y		19,22
					7,8		16,18
PCXPTN	<i>Investigator IDplex Plus Kit</i>						
	3STR		17,21		16,17	10,11	8,10
		14,14			10,12	9,12	12,20
		14.2,15	30,32		X,Y	8,13	19,22
					7,8	6,8	16,18
REWJ7J	<i>PowerPlex® Fusion</i>						
	3STR	13,17	17,21	11,14	16,17	10,11	8,10
		14	15	17,18	10,12	9,12	12,20
		14.2,15	30,32	14,16	X,Y	8,13	19,22
		7,11	10,13		7,8	6,8	16,18
RG326F	<i>Identifiler® Direct</i>						
	3STR	-	17,21	-	16,17	10,11	8,10
		14	-	-	10,12	9,12	12,20
		14.2,15	30,32	-	X,Y	8,13	19,22
		-	-	-	7,8	6,8	16,18

TABLE 1

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

Item 3STR

TXKLVJ	<i>Identifiler® Direct</i>					
3STR		17,21		16,17	10,11	8,10
	14			10,12	9,12	12,20
	14.2,15	30,32		X,Y	8,13	19,22
				7,8	6,8	16,18
V7PBRE	<i>PowerPlex® Fusion</i>					
3STR	13,17	17,21	11,14	16,17	10,11	8,10
	14	15	17,18	10,12	9,12	12,20
	14.2,15	30,32	14,16	X,Y	8,13	19,22
	7,11	10,13		7,8	6,8	16,18
V7URQD	<i>PowerPlex® 16, HS</i>					
3STR				16,17	10,11	8,10
	14,14			10,12	9,12	12,20
		30,32		X,Y	8,13	19,22
	7,11	10,13		7,8	6,8	16,18
WMT6YE	<i>PowerPlex® HS</i>					
3STR				16,17	10,11	8,10
	14,14			10,12	9,12	12,20
		30,32		X,Y	8,13	19,22
	7,11	10,13		7,8	6,8	16,18
XQ8YFB	<i>PowerPlex® 16 Hot Start</i>					
3STR				16,17	10,11	8,10
	14,14			10,12	9,12	12,20
		30,32		X,Y	8,13	19,22
	7,11	10,13		7,8	6,8	16,18
Y23R28	<i>Identifiler® Direct</i>					
3STR	-	17,21	-	16,17	10,11	8,10
	14	-	-	10,12	9,12	12,20
	14.2,15	30,32	-	X,Y	8,13	19,22
	-	-	-	7,8	6,8	16,18
YX4F68	<i>Identifiler® Direct</i>					
3STR	-	17,21	-	16,17	10,11	8,10
	14	-	-	10,12	9,12	12,20
	14.2,15	30,32	-	X,Y	8,13	19,22
	-	-	-	7,8	6,8	16,18
ZERV3C	<i>Identifiler® Plus</i>					
3STR		17,21		16,17	10,11	8,10
	14,14			10,12	9,12	12,20
	14.2,15	30,32		X,Y	8,13	19,22
				7,8	6,8	16,18

Item 3 Paternity Index Results

TABLE 2

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

Item 3PI

2P8ZT9	FBI PopStats					
	3PI	0	0	0	0	0
		0	0	0	0	3.37
		0	0	0	0	0
			0	3.06	0	0
44TJZ7	NIST-STRBASE					
	3PI	0	0	0	0	0
		0	0	0	0	3.3424
		0	0	0	0	0
	0	0	0	3.1286	0	0
4GJG26	FBI PopStats					
	3PI			NA	NA	NA
		NA		NA	3.37	NA
			NA	NA	NA	NA
	NA	NA	3.05	NA	NA	
4HEY47	NIST-STRBASE					
	3PI	0	0	0	0	0
		0	0	0	0	3.3424
		0	0	0	0	0
	0	0	0	3.1286	0	0
77ETH7	NIST-STRBASE					
	3PI	0	0	0	0	0
		0	0	0	0	3.341829
		0	0	0	0	0
	0	0	3.128551	0	0	
79HJR8	Caucasian (Internal)					
	3PI		EX		EX	EX
		EX			EX	3.42
		EX	EX		N/A	EX
			9.99	EX	EX	
BM7J63	NIST-STRBASE					
	3PI		0		0	0
		0			0	1.082
		0	0		0	0
			1.517	0	0	
CC4EVZ	LABORATORY SPECIFIC DATABASE					
	3PI	0	0	-	0	0
		0	-	0	0	3.0345
		0	0	-	-	0
	0	0	-	10.4104	0	0

TABLE 2

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

Item 3PI

CRFWM2	[Local Database]						
	3PI	0	0	0	0	0	
		0	0	0	0	0	
		0	0	0	0	0	
		0	0	0	0	0	
G9MK2W	NIST-STRBASE						
	3PI	-	0.0010	-	0.0020	0.0010	0.0020
		0.0040	-	-	0.0020	3.3418	0.0030
		0.0010	0.0010	-	-	0.0030	0.0041
		-	-	-	3.1286	0.0001	0.0030
JXV9FU	NIST-STRBASE						
	3PI	0	0	0	0	0	
		0	0	0	0	3.3424	0
		0	0	0	0	0	0
		0	0	0	3.1286	0	0
KY76RP	NIST-STRBASE						
	3PI					3.3423	
						3.1286	
MXNVRN	NIST-STRBASE						
	3PI	0	0	0	0	0	0
		0	0	0	0	3.34236	0
		0	0	0	0	0	0
		0	0	0	3.12861	0	0
PCXPTN	FBI PopStats, Caucasian FBI STR Population Data 2015						
	3PI		0		0.0047	0	0
					0	3.5185	0
			0			0	0
				11.4309	0	0	
RG326F	NIST-STRBASE						
	3PI	-	0.0010	-	0.0020	0.0010	0.0020
		0.0040	-	-	0.0020	3.3418	0.0030
		0.0010	0.0010	-	-	0.0030	0.0041
		-	-	-	3.1286	0.0001	0.0030
TXKLVJ	NIST-STRBASE						
	3PI		2.48				
		1.70			0.60	1.22	
		3.00	2.95				1.26
					0.62		3.35

TABLE 2

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

Item 3PI

V7PBRE	NIST-STRBASE					
	3PI					
					3.3423	
				3.1286		
V7URQD	FBI PopStats					
	3PI					
				NA	NA	NA
	NA			NA	3.37	NA
		NA		NA	NA	NA
	NA	NA		3.05	NA	NA
WMT6YE	FBI PopStats					
	3PI					
				NA	NA	NA
	NA			NA	3.37	NA
		NA		NA	NA	NA
	NA	NA		3.05	NA	NA
XQ8YFB	FBI PopStats, Amended FBI STR 2015					
	3PI					
				0	0	0
	0			0	3.37	0
		0		NA	0	0
	NA	NA		3.05	0	0
Y23R28	NIST-STRBASE					
	3PI					
	-	0.0010	-	0.0020	0.0010	0.0020
	0.0040	-	-	0.0020	3.3424	0.0030
	0.0010	0.0010	-	-	0.0030	0.0041
	-	-	-	3.1286	0.0001	0.0030
YX4F68	NIST-STRBASE					
	3PI					
	-	0.001	-	0.002	0.001	0.002
	0.004	-	-	0.002	3.3424	0.003
	0.001	0.001	-	-	0.003	0.0041
	-	-	-	3.1286	0.0001	0.003

YSTR Results

TABLE 3

WebCode	Item	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
		DYS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS481	DYS533
		DYS549	DYS570	DYS576	DYS635	DYS643	Y GATA H4	YInDel	
Item 2									
2P8ZT9	Yfiler® Plus, GlobalFiler Express								
	2	14	11,14	13	29	24	11	13	13
		15	12	12	20	15	17	25	12
			17	16	23		12	2	
44TJZ7	PowerPlex® Y 23								
	2	14	11,14	13	29	24	11	13	13
		15	12	12	20	15	17	25	12
		12	17	16	23	10	12		
4HEY47	PowerPlex® Y 23								
	2	14	11,14	13	29	24	11	13	13
		15	12	12	20	15	17	25	12
		12	17	16	23	10	12		
77ETH7	Yfiler®								
	2	14	11,14	13	29	24	11	13	13
		15	12	12	20	15	17		
				23			12		
7RDGM8	PowerPlex® Y 23								
	2	14	11,14	13	29	24	11	13	13
		15	12	12	20	15	17	25	12
		12	17	16	23	10	12		
7VCRH8	Yfiler®								
	2	14	11,14	13	29	24	11	13	13
		15	12	12	20	15	17		
				23			12		
BM7J63	Yfiler®								
	2	14	11,14	13	29	24	11	13	16
		15	12	12	20	15	17		
				23			12		
CRFWM2	PowerPlex® Y 23								
	2	14	11,14	13	29	24	11	13	13
		15	12	12	20	15	17	25	12
		12	17	16	23	10	12	2	
G9MK2W	Yfiler®								
	2	14	11,14	13	29	24	11	13	13
		15	12	12	20	15	17	-	-
		-	-	-	23	-	12	-	

TABLE 3

WebCode	Item	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
		DYS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS481	DYS533
		DYS549	DYS570	DYS576	DYS635	DYS643	Y GATA H4	YIndel	
Item 2									
KY76RP	Yfiler® 2	14	11,14	13	29	24	11	13	13
		15	12	12	20	15	17		
					23		12		
MXNVRN	PowerPlex® Y 23 2	14	11,14	13	29	24	11	13	13
		15	12	12	20	15	17	25	12
		12	17	16	23	10	12		
PB33GK	PowerPlex® Y 23 2	14	11,14	13	29	24	11	13	13
		15	12	12	20	15	17	25	12
		12	17	16	23	10	12		
PCXPTN	PowerPlex® Y 23 2	14	11,14	13	29	24	11	13	13
		15	12	12	20	15	17	25	12
		12	17	16	23	10	12		
REWJ7J	Yfiler® 2	14	11,14	13	29	24	11	13	13
		15	12	12	20	15	17		
					23		12		
RG326F	Yfiler® 2	14	11,14	13	29	24	11	13	13
		15	12	12	20	15	17	-	-
		-	-	-	23	-	12	-	-
V7PBRE	Yfiler® 2	14	11,14	13	29	24	11	13	13
		15	12	12	20	15	17		
					23		12		
Y23R28	Yfiler® 2	14	11,14	13	29	24	11	13	13
		15	12	12	20	15	17	-	-
		-	-	-	23	-	12	-	-
YX4F68	Yfiler® 2	14	11,14	13	29	24	11	13	13
		15	12	12	20	15	17	-	-
		-	-	-	23	-	12	-	-

TABLE 3

WebCode	Item	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393	
		DYS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS481	DYS533	
		DYS549	DYS570	DYS576	DYS635	DYS643	Y GATA H4	YIndel		
Item 3										
2P8ZT9	Yfiler® Plus, GlobalFiler Express	3	17	15,19	13	31	21	10	11	15
			14	11	12	21	15	16	28	11
				20	14	21		12	2	
44TJZ7	PowerPlex® Y 23	3	17	15,19	13	31	21	10	11	15
			14	11	12	21	15	16	28	11
			11	20	14	21	13	12		
4HEY47	PowerPlex® Y 23	3	17	15,19	13	31	21	10	11	15
			14	11	12	21	15	16	28	11
			11	20	14	21	13	12		
77ETH7	Yfiler®	3	17	15,19	13	31	21	10	11	15
			14	11	12	21	15	16		
						21		12		
7RDGM8	PowerPlex® Y 23	3	17	15,19	13	31	21	10	11	15
			14	11	12	21	15	16	28	11
			11	20	14	21	13	12		
7VCRH8	Yfiler®	3	17	15,19	13	31	21	10	11	15
			14	11	12	21	15	16		
						21		12		
BM7J63	Yfiler®	3	17	115,19	13	31	21	10	1112	15
			11	21	12		15	16		
						21		14		
CRFWM2	PowerPlex® Y 23	3	17	15,19	13	31	21	10	11	15
			14	11	12	21	15	16	28	11
			11	20	14	21	13	12	2	
G9MK2W	Yfiler®	3	17	15,19	13	31	21	10	11	15
			14	11	12	21	15	16	-	-
			-	-	-	21	-	12	-	

TABLE 3

WebCode	Item	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
		DYS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS481	DYS533
		DYS549	DYS570	DYS576	DYS635	DYS643	Y GATA H4	YIndel	
Item 3									
KY76RP	Yfiler® 3	17	15,19	13	31	21	10	11	15
		14	11	12	21	15	16		
					21		12		
MXNVRN	PowerPlex® Y 23 3	17	15,19	13	31	21	10	11	15
		14	11	12	21	15	16	28	11
		11	20	14	21	13	12		
PB33GK	PowerPlex® Y 23 3	17	15,19	13	31	21	10	11	15
		14	11	12	21	15	16	28	11
		11	20	14	21	13	12		
PCXPTN	PowerPlex® Y 23 3	17	15,19	13	31	21	10	11	15
		14	11	12	21	15	16	28	11
		11	20	14	21	13	12		
REWJ7J	Yfiler® 3	17	15,19	13	31	21	10	11	15
		14	11	12	21	15	16		
					21		12		
RG326F	Yfiler® 3	17	15,19	13	31	21	10	11	15
		14	11	12	21	15	16	-	-
		-	-	-	21	-	12	-	-
V7PBRE	Yfiler® 3	17	15,19	13	31	21	10	11	15
		14	11	12	21	15	16		
					21		12		
Y23R28	Yfiler® 3	17	15,19	13	31	21	10	11	15
		14	11	12	21	15	16	-	-
		-	-	-	21	-	12	-	-
YX4F68	Yfiler® 3	17	15,19	13	31	21	10	11	15
		14	11	12	21	15	16	-	-
		-	-	-	21	-	12	-	-

Additional DNA & PI Results

TABLE 4

Locus	WebCode	Item 1	Item 2	Item 3	Item 3 Paternity Index
D6S1043	44TJZ7	11,17	12,13	10,11	0
	77ETH7	11,17	12,13	10,11	0
	CC4EVZ	11,17	12,13	10,11	0
	CRFWM2	11,17	12,13	10,11	0
DY391	MJMJP		11	10	
DYF387S1	2P8ZT9		35,36	36,38	
DYS391	REWJ7J		11	10	
DYS449	2P8ZT9		28	29	
DYS460	2P8ZT9		10	10	
DYS518	2P8ZT9		36	39	
DYS627	2P8ZT9		21	20	
F13A01	44TJZ7	5,7	5,7	5	2.1728
	CRFWM2	5,7	5,7	5	0
	JXV9FU	5,7	5,7	5,5	2.1728
F13B	44TJZ7	6	9,10	6,8	0
	CRFWM2	6	9,10	6,8	0
	JXV9FU	6,6	9,10	6,8	0
FESFPS	44TJZ7	13	12,13	8,12	0
	CRFWM2	13	12,13	8,12	0
	JXV9FU	13,13	12,13	8,12	0
LPL	44TJZ7	10,11	11,12	9,10	0
	CRFWM2	10,11	11,12	9,10	0
	JXV9FU	10,11	11,12	9,10	0
PENTA C	44TJZ7	9,11	11,13	9,11	2.6085
	CRFWM2	9,11	11,13	9,11	0
	JXV9FU	9,11	11,13	9,11	2.6085
YINDEL	MJMJP		2	2	

Paternity DNA Statistics

TABLE 5

WebCode	Combined Paternity Index	Probability of Paternity	Population Database Used
2P8ZT9	see comment	see comment	FBI PopStats
44TJZ7	0	0	NIST-STRBASE
4GJG26			FBI PopStats
4HEY47	0	0	NIST-STRBASE
77ETH7	0	0%	NIST-STRBASE
79HJR8			Caucasian (Internal)
7RDGM8			NIST-STRBASE
7VCRH8	0.0	0.0	NIST-STRBASE
BM7J63	0	0	NIST-STRBASE
CC4EVZ	0		LABORATORY SPECIFIC DATABASE
CRFWM2	0	0	[Local Database]
G9MK2W	3.7043E-36	0.0000%	NIST-STRBASE
HZ8MAU		N/A EXCLUSION	IDENTIFILER FREQUENCY DATABASE
JXV9FU	0	0	NIST-STRBASE
KY76RP			NIST-STRBASE
KZGCNQ			Local Database/State
MXNVRN	0.0	0.0	NIST-STRBASE
PB33GK	exclusion	exclusion	NIST-STRBASE
PCXPTN	0	0	FBI PopStats, Caucasian FBI STR Population Data 2015
RG326F	3.7036E-36	0.0000%	NIST-STRBASE
TXKLVJ	0	0	NIST-STRBASE
V7PBRE			NIST-STRBASE
V7URQD			FBI PopStats
WMT6YE			FBI PopStats
XQ8YFB			FBI PopStats, Amended FBI STR 2015
Y23R28	3.7043E-36	0.0000%	NIST-STRBASE
YX4F68	3.7043E-36	0.0000%	NIST-STRBASE
ZERV3C			Local/State database

Paternity Conclusions

TABLE 6

WebCode	Conclusions	WebCode	Conclusions
2P8ZT9	Excluded	V7PBRE	Excluded
334W47	Excluded	V7URQD	Excluded
44TJZ7	Excluded	WMT6YE	Excluded
4GJG26	Excluded	XQ8YFB	Excluded
4HEY47	Excluded	Y23R28	Excluded
77ETH7	Excluded	YX4F68	Excluded
79HJR8	Excluded	ZERV3C	Excluded
7RDGM8	Excluded		
7VCRH8	Excluded		
BM7J63	Excluded		
CC4EVZ	Excluded		
CRFWM2	Excluded		
D8JQUZ	Excluded		
G9MK2W	Excluded		
HZ8MAU	Excluded		
JXV9FU	Excluded		
KY76RP	Excluded		
KZGCNQ	Excluded		
MJMJVP	Excluded		
MXNVRN	Excluded		
PB33GK	Excluded		
PCXPTN	Excluded		
REWJ7J	Excluded		
RG326F	Excluded		
TXKLVJ	Excluded		

Response Summary		Total: 32
Responses	Not Excluded	0
	Excluded	32
	Inconclusive	0

Kinship DNA Statistics

Is the claim of a Aunt/Niece (Caucasian) relationship supported by the genetic evidence?

TABLE 7

WebCode	Database	Kinship Index	Claim Supported?
44TJZ7	NIST-STRBASE	8.9475E+05	Yes
4HEY47	NIST-STRBASE	82014	yes
77ETH7	NIST-STRBASE	340,010.8	Yes
7RDGM8	NIST-STRBASE	2592191	YES, IT IS
7VCRH8	NIST-STRBASE	111666.0181	Yes
BM7J63	NIST-STRBASE	58207.5987621	Yes, it is.
CRFWM2	[Local Database]	92101.2652621988	yes
G9MK2W	NIST-STRBASE	537541.0834	Yes
KZGCNQ	Local Database/State	23000	Yes, the DNA evidence supports the said relationship
MXNVRN	NIST-STRBASE	1,321,002.493	yes
PB33GK	NIST-STRBASE	535620	yes
RG326F	NIST-STRBASE	5.2555E+5	YES
Y23R28	NIST-STRBASE	537523.6365	Yes
YX4F68	NIST-STRBASE	537541.0834	Yes
ZERV3C	Local/State database	23000	Yes, it does support the relationship in question.

Additional Kinship Statistical Results

TABLE 8

WebCode	Additional Statistical Results
44TJZ7	For the markers, with no frequency for the alleles, we calculate a minimum frequency by using the following equation: $f=(1 - [\alpha]^{(1/2N)})$, with $N=361$. For kinship index we used software Familias version 3.1.9.4 and GFF 2.7.72 BETA.
4HEY47	In case the allele frequency is less than 1% or does not include in the database, we took frequency of 1% according to the laboratory's guidelines.
77ETH7	Based on the obtained results, the occurrence of the obtained DNA profiles is 340,010.8 times more likely to occur considering that the niece is related to aunt as in an aunt/niece relationship, against the hypothesis that niece is not genetically related to aunt. This DNA evidence strongly supports the claim of aunt/niece relationship.
7RDGM8	By analyzing the comparison between female genetic profiles of the aunt and niece, the Kinship Index was 2592191 and the Kinship probability of 99.999961% was obtained.
7VCRH8	The two DNA profiles were compared by using the Caucasian population database same as previous section. There are likely to be Aunt/Niece relationship because by kinship index is greater than 99.9991%.
BM7J63	Minimal allele frequency in STR loci = $5/2N$ (N =number of population) The DNA profile cannot be excluded the relation of Aunt and Niece with the kinship index = 58207.5987621 using 24 STR markers in Caucasian population database.
CRFWM2	X: 7.32024064374514E-94 Y: 7.94803483199224E-99 W: 99.9989142503747
G9MK2W	[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.] STR Locus Aunt Niece Formula Given frequency LR D1S1656 13,16 13,14 (1+4s)/8s s=13 0.0665 2.3797 D2S1338 16,19 19,22 (1+4s)/8s s=19 0.1205 1.5373 D2S441 11,12 14,14 1/2 0.5000 0.5000 D3S1358 14,16 9,16 (1+4w)/8w w=16 0.2382 1.0248 D5S818 11,16 12,15 1/2 0.5000 0.5000 D7S820 12,15 11,12 (1+4q)/8q q=12 0.1593 1.2847 D8S1179 13 13,14 (1+2p)/4p p=13 0.3296 1.2585 D10S1248 14,16 13,15 1/2 0.5000 0.5000 D12S391 19,20 21,25 1/2 0.5000 0.5000 D13S317 10,16 7,13 1/2 0.5000 0.5000 D16S539 9,14 10,14 (1+4u)/8u u=14 0.0263 5.2529 D18S51 9,23 12,23 (1+4x)/8x x=23 0.0069 18.6159 D19S433 11,12.2 11,17.2 (1+4p)/8p p=11 0.0055 23.2273 D21S11 29,32 27,32 (1+4u)/8u u=32 0.0055 23.2273 D22S1045 13,16 13,15 (1+4u)/8u u=13 0.0069 18.6159 AMEL XX XX CSF1PO 10,12 10 (1+2p)/4p p=10 0.2202 1.6353 FGA 24,29 24,33.2 (1+4p)/8p p=24 0.1343 1.4308 PENTA D 9,9 8,11 1/2 0.5000 0.5000 PENTA E 9,15 12,15 (1+4p)/8p p=15 0.0429 3.4138 SE33 18,33.2 14,20.2 1/2 0.5000 0.5000 TH01 8,9.3 7,9 1/2 0.5000 0.5000 TPOX 11,12 9,11 (1+4r)/8r r=11 0.2521 0.9958 VWA 19 13,19 (1+2u)/4u u=19 0.1039 2.9062
HZ8MAU	AUNT/NIECE RELATION TESTS NOT PERFORMED BY OUR LAB.
KZGCNQ	The DNA results are consistent with the "Aunt" being the biological aunt of the "Niece". The alleged aunt has a 23000 times greater chance of being the biological aunt of the "Niece" than any other randomly chosen individual in the Caucasian population group.
MXNVRN	With this Kinship Index, we calculated the kinship probability, this value is higher than 99.9999%, for this reason we can say that this relationship is supported by genetic evidence. In the frequencies that didn't have frequency report, we calculate the minimal frequency as $1/(n+1)$

TABLE 8

WebCode	Additional Statistical Results
RG326F	<p>[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.] Profile Aunt Niece Formula Given frequency LR D1S1656 13,16 13,14 (1+4s)/8s s=13 0.0665 2.3802 D2S1338 16,19 19,22 (1+4s)/8s s=19 0.1205 1.5374 D2S441 11,12 14,14 1/2 0.5000 0.5000 D3S1358 14,16 9,16 (1+4w)/8w w=16 0.2382 1.0247 D5S818 11,16 12,15 1/2 0.5000 0.5000 D7S820 12,15 11,12 (1+4q)/8q q=12 0.1593 1.2848 D8S1179 13 13,14 (1+2p)/4p p=13 0.3296 1.2584 D10S1248 14,16 13,15 1/2 0.5000 0.5000 D12S391 19,20 21,25 1/2 0.5000 0.5000 D13S317 10,16 7,13 1/2 0.5000 0.5000 D16S539 9,14 10,14 (1+4u)/8u u=14 0.0263 5.2500 D18S51 9,23 12,23 (1+4x)/8x x=23 0.0069 18.5500 D19S433 11,12.2 11,17.2 (1+4p)/8p p=11 0.0055 23.0625 D21S11 29,32 27,32 (1+4u)/8u u=32 0.0055 23.0625 D22S1045 13,16 13,15 (1+4u)/8u u=13 0.0069 18.5500 AMEL XX XX CSF1PO 10,12 10 (1+2p)/4p p=10 0.2202 1.6352 FGA 24,29 24,33.2 (1+4p)/8p p=24 0.1343 1.4304 PENTA D 9,9 8,11 1/2 0.5000 0.5000 PENTA E 9,15 12,15 (1+4p)/8p p=15 0.0429 3.4113 SE33 18,33.2 14,20.2 1/2 0.5000 0.5000 TH01 8,9.3 7,9 1/2 0.5000 0.5000 TPOX 11,12 9,11 (1+4r)/8r r=11 0.2521 0.9959 VWA 19 13,19 (1+2u)/4u u=19 0.1039 2.9067. Cumulative LR = 5.2555E+05. Probability of Meterteral = 99.9998%</p>
Y23R28	<p>[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.] STR Locus Formula Legend PI Given Frequencies D1S1656 (1+4p)/8p p=13 2.3797 p=0.0665 D2S1338 (1+4s)/8s s=19 1.5373 s=0.1205 D2S441 1/2 0.5000 D3S1358 (1+4w)/8w w=16 1.0248 w=0.2382 D5S818 1/2 0.5000 D7S820 (1+4q)/8q q=12 1.2847 q=0.1593 D8S1179 (1+2p)/4p p=13 1.2585 p=0.3296 D10S1248 1/2 0.5000 D12S391 1/2 0.5000 D13S317 1/2 0.5000 D16S539 (1+4u)/8u u=14 5.2529 u=0.0263 D18S51 (1+4x)/8x x=23 18.6159 x=0.0069 D19S433 (1+4p)/8p p=11 23.2273 p=0.0055 D21S11 (1+4u)/8u u=32 23.2273 u=0.0055 D22S1045 (1+4p)/8p p=13 18.6159 p=0.0069 CSF1PO (1+2p)/4p p=10 1.6353 p=0.2202 FGA (1+4p)/8p p=24 1.4308 p=0.1343 PentaD 1/2 0.5000 PentaE (1+4p)/8p p=15 3.4138 p=0.0429 SE33 1/2 0.5000 TH01 1/2 0.5000 TPOX (1+4r)/8r r=11 0.9958 r=0.2521 vWA (1+2u)/4u u=19 2.9062 u=0.1039. Cumulative LR = 537523.6365. Probability of Materteral = 99.9998%</p>
YX4F68	<p>[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.] STR Locus Aunt Niece Formula Legend PI Given Frequency D1S1656 13,16 13,14 (1+4p)/8p p=13 2.3797 0.0665 D2S1338 16,19 19,22 (1+4u)/8u u=19 1.5373 0.1205 D2S441 11,12 14,14 0.5 0.5 D3S1358 14,16 9,16 (1+4n)/8n n=16 1.0248 0.2382 D5S818 11,16 12,15 0.5 0.5 D7S820 12,15 11,12 (1+4v)/8v v=12 1.2847 0.1593 D8S1179 13,13 13,14 (1+2p)/4p p=13 1.2585 0.3296 D10S1248 14,16 13,15 0.5 0.5 D12S391 19,20 21,25 0.5 0.5 D13S317 10,16 7,13 0.5 0.5 D16S539 9,14 10,14 (1+4h)/8h h=14 5.2529 0.0263 D18S51 9,23 12,23 (1+4i)/8i i=23 18.6159 0.0069 D19S433 11,12.2 11,17.2 (1+4t)/8t t=11 23.2273 0.0055 D21S11 29,32 27,32 (1+4m)/8m m=32 23.2273 0.0055 D22S1045 13,16 13,15 (1+4a)/8a a=13 18.6159 0.0069 Amel X,X X,X CSF1PO 10,12 10,10 (1+2b)/4b b=10 1.6353 0.2202 FGA 24,29 24,33.2 (1+4c)/8c c=24 1.4308 0.1343 PentaD 9,9 8,11 0.5 0.5 PentaE 9,15 12,15 (1+4d)/8d d=15 3.4138 0.0429 SE33 18,33.2 14,20.2 0.5 0.5 TH01 8,9.3 7,9 0.5 0.5 TPOX 11,12 9,11 (1+4e)/8e e=11 0.9958 0.2521 VWA 19,19 13,19 (1+2u)/4u u=19 2.9062 0.1039 Note : Frequency D18S51 = 5/2n, n=361, 5/(2(361))=0.0069. Cumulative LR = 537541.0834. Probability of Aunt/Niece relationship = 99.9998%</p>
ZERV3C	<p>The DNA results obtained are consistent with the profile "Aunt" being the biological aunt of profile "Niece" (niece).</p>

Additional Comments

TABLE 9

WebCode	Additional Comments
2P8ZT9	The alleged father and alleged mother are excluded as the parents of the child.
44TJZ7	For the four STR markers not excluded in paternity index, we used software Familias, version 3.1.9.4
79HJR8	EX = exclusion
7RDGM8	It is possible to study mitochondrial if the aunt is maternal aunt, to supplement the information relationship.
CC4EVZ	PART III - KINSHIP DNA STATISTICS (NON-PARENTAGE) NOT APPLICABLE TO THIS LABORATORY.
G9MK2W	1. Item 1, Item 2 and Item 3 were extracted using in-situ method. 2. All items were amplified using AmpFISTR Identifiler Direct Kit. 3. Y-STR was carried out for Item 2 and Item 3 using AmpFISTR YFiler kit. 4. Electrophoresis was carried out using 3130xl Genetic Analyzer. 5. Reagent blank, Positive Control and Negative Control were also carried out along with the analysis. 6. The statistical formulations were derived from the DNA View software and calculated using Microsoft Excel and checked manually.
KY76RP	Item 3 can be excluded as being the biological offspring of Item 1 and Item 2 based on the DNA results at twenty of the twenty-two STR loci tested. This laboratory does not report statistics for exclusions. PowerPlex Fusion and YFiler were performed on Item 2 and Item 3. Results for each respective sample were concordant at DYS391.
KZGCNQ	The Identifiler Plus Loci set was considered for the above likelihood ratio calculation (KI) of the local population group/database.
MXNVRN	exercise 1: In our lab, we don't calculate PI when there are three or more STR system that are excluded, for this reason, in the data sheet the PI value is zero in the systems that don't have a concordance between Alleged parents and the child.
PB33GK	In cases of exclusions, our laboratory does not perform statistical analysis.
PCXPTN	1.The kinship DNA statistics (Non-Parentage) is not applicable to our laboratory. 2.If the child is excluded as the possible offspring we don't calculated the paternity index value in routine.
RG326F	1. Item 1, Item 2 and Item 3 were extracted using in-situ method and amplified using AmpFISTR Direct Kit. Item 2 and Item 3 were also amplified using YFiler Kit. 2. Electrophoresis were carried out using Applied Biosystem Genetic Analyzer 3130xl. 3. Reagent blank, positive control and negative control were carried out along with the analysis. 4. The statistical formula are all derived by DNA View Statistical Software and calculated using Microsoft Excel.
V7PBRE	Yfiler was completed on all three Items. Item 1 gave no Yfiler results as expected. The DYS391 locus was concordant for both Item 2 and Item 3 between the PowerPlex Fusion kit and the Yfiler kit.
Y23R28	1. Item 1, Item 2 and Item 3 were extracted using in-situ method and amplified using AmpFISTR Direct Kit and Yfiler Kit. 2. Electrophoresis were carried out using Applied Biosystem Genetic Analyzer 3130xl. 3. Reagent Blank, Positive Control and Negative Control were carried out along with the analysis. 4. The statistical formula are all derived by DNA View Statistical Software and calculated using Microsoft Excel.
YX4F68	1. Item 1, Item 2 and Item 3 were extracted using in-situ method. 2. All items were amplified using AmpFISTR Identifiler Direct kit. 3. Y-STR was carried out for Item 2 and Item 3 using AmpFISTR YFiler kit. 4. Electrophoresis was carried out using 3130xl Genetic Analyzer. 5. Reagent blank, Positive Control and Negative Control were also carried out along with the analysis. 6. The statistical formulations were derived from the DNA View software and calculated using Microsoft Excel and checked manually.
ZERV3C	The local/state database had been used for calculations. We made use of the Identifiler Plus STR amplification kit.

Appendix: Data Sheet

Collaborative Testing Services ~ Forensic Testing Program

Test No. 16-5872: DNA Parentage

DATA MUST BE RECEIVED BY October 11, 2016 TO BE INCLUDED IN THE REPORT

Participant Code:

WebCode:

Accreditation Release Statement

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

This participant's data is intended for submission to ASCLD/LAB, ANAB and/or A2LA. (Accreditation Release section on the last page must be completed and submitted.)

This participant's data is NOT intended for submission to ASCLD/LAB, ANAB or A2LA.

Scenario:

John and Jane Doe have reason to suspect that their infant male child may not be their baby due to a possible switch at the hospital. Samples have been collected from John and Jane Doe and the male infant to confirm the parentage of the child. Your laboratory is tasked with examining the blood standards and comparing the DNA profiles.

Items Submitted (Sample Pack DNP3):

Item 1: Blood Sample from Alleged Parent (Mother, Black / African American)

Item 2: Blood Sample from Alleged Parent (Father, Black / African American)

Item 3: Blood Sample from male infant child

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")

* PI = Paternity Index; KI - Kinship Index

Example	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D7S820
STR	15,18	12,17	10	14	12	5,13
PI	1.65	3.01	3.16	4.12	2.45	5.65

Please return all pages of this data sheet.

Page 1 of 8

Part I: DNA ANALYSIS FOR ITEM 1

STR Amplification Kit Used:		Please check the brands that apply for this item and record ONLY the additional kit specific naming in the blank provided (i.e. 16, Plus, Direct, 16 HS, etc.).			
<input type="checkbox"/>	Cofiler®/Profiler Plus® _____	<input type="checkbox"/>	PowerPlex® _____		
<input type="checkbox"/>	Identifiler® _____	<input type="checkbox"/>	Other _____		

	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D7S820
STR	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	D8S1179	D10S1248	D12S391	D13S317	D16S539	D18S51
STR	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
ITEM 1	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO	FGA
STR	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Penta D	Penta E	SE33	TH01	TPOX	vWA
STR	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

ADDITIONAL DNA RESULTS FOR ITEM 1

(If additional space is needed, copy this page or attach your own form following this layout)

	ITEM 1		ITEM 1
	Alleles		Alleles
_____	<input type="text"/>	_____	<input type="text"/>
_____	<input type="text"/>	_____	<input type="text"/>

Part I: DNA ANALYSIS FOR ITEM 2

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

Cofiler®/Profiler Plus® _____
 PowerPlex® _____
 Identifiler® _____
 Other _____

	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D7S820
STR	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	D8S1179	D10S1248	D12S391	D13S317	D16S539	D18S51
STR	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
ITEM 2	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO	FGA
STR	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Penta D	Penta E	SE33	TH01	TPOX	vWA
STR	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

TABLE 1b: YSTR Results (YSTR results are for proficiency concordance only.)

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

YFiler® _____
 PowerPlex® Y _____
 Other _____

	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
ITEM 2	DYS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS481	DYS533
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	DYS549	DYS570	DYS576	DYS635	DYS643	Y GATA H4	Y Indel	
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	

ADDITIONAL DNA RESULTS FOR ITEM 2

(If additional space is needed, copy this page or attach your own form following this layout)

	ITEM 2		ITEM 2
	Alleles		Alleles
_____	<input type="text"/>	_____	<input type="text"/>
_____	<input type="text"/>	_____	<input type="text"/>

Please return all pages of this data sheet.

Part I: DNA ANALYSIS FOR ITEM 3

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

<input type="checkbox"/> Cofiler®/Profiler Plus® _____	<input type="checkbox"/> PowerPlex® _____
<input type="checkbox"/> Identifiler® _____	<input type="checkbox"/> Other _____

Please refer to the 'Part II: Paternity DNA Statistics' section of this data sheet regarding the suggested Population Databases to use to determine PI values.

	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D7S820
STR	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
PI	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	D8S1179	D10S1248	D12S391	D13S317	D16S539	D18S51
STR	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
PI	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
ITEM 3	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO	FGA
STR	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
PI	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Penta D	Penta E	SE33	TH01	TPOX	vWA
STR	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
PI	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

TABLE 1b: YSTR Results (YSTR results are for proficiency concordance only.)

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

<input type="checkbox"/> Yfiler® _____	<input type="checkbox"/> PowerPlex® Y _____	<input type="checkbox"/> Other _____
--	---	--------------------------------------

	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
ITEM 3	DYS437	DYS438	DYS439	DYS448	DYS456	DYS458	DYS481	DYS533
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	DYS549	DYS570	DYS576	DYS635	DYS643	Y GATA H4	Y Indel	
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	

ADDITIONAL DNA RESULTS FOR ITEM 3

(If additional space is needed, copy this page or attach your own form following this layout)

ITEM 3		ITEM 3	
Alleles	Paternity Index	Alleles	Paternity Index
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Please return all pages of this data sheet.

Part II: PATERNITY DNA STATISTICS

For the purposes of consistency among reported statistical values, use the ethnicity listed for the alleged parent 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, select 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.

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: _____

4) Based on DNA results, select your response from the following options. If the wording differs from the normal wording in your reports, adapt these conclusions as best as you can and use your preferred wording in your additional comments.

- The child (Item 3) could not be excluded as the biological offspring of the Alleged Mother (Item 1) and Alleged Father (Item 2).
- The child (Item 3) is excluded as the possible biological offspring of the Alleged Mother (Item 1) and Alleged Father (Item 2).
- Inconclusive as to whether the child (Item 3) could be the biological offspring of the Alleged Mother (Item 1) and Alleged Father (Item 2). (Please document the reason in the Additional Comments section of this data sheet.)

Please return all pages of this data sheet.

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Part III: KINSHIP DNA STATISTICS (NON-PARENTAGE)

To be completed if applicable to your laboratory.

The two DNA profiles below are presented as a potential Aunt/Niece (Caucasian) relationship. Compare these profiles to answer the questions using the same population database used in previous sections of the data sheet, given the ethnicity listed above for this kinship scenario.

Profile	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D7S820
Aunt	13,16	16,19	11,12	14,16	11,16	12,15
Niece	13,14	19,22	14,14	9,16	12,15	11,12

Profile	D8S1179	D10S1248	D12S391	D13S317	D16S539	D18S51
Aunt	13,13	14,16	19,20	10,16	9,14	9,23
Niece	13,14	13,15	21,25	7,13	10,14	12,23

Profile	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO	FGA
Aunt	11,12.2	29,32	13,16	X,X	10,12	24,29
Niece	11,17.2	27,32	13,15	X,X	10,10	24,33.2

Profile	PentaD	PentaE	SE33	TH01	TPOX	vWA
Aunt	9,9	9,15	18,33.2	8,9.3	11,12	19,19
Niece	8,11	12,15	14,20.2	7,9	9,11	13,19

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

2) Is the claim of a Aunt/Niece relationship supported by the genetic evidence?

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

Part IV: ADDITIONAL COMMENTS

Comments regarding any part of this Parentage Test.

Any interpretations based on the results obtained should be reported in the Paternity DNA Statistics designated section.

<u>Return Instructions:</u> Data must be received via online data entry, fax (please include a cover sheet), or mail by <i>October 11, 2016</i> to be included in the report. Emailed data sheets will not be accepted.		ONLINE DATA ENTRY: www.cts-portal.com
QUESTION?		FAX: +1-571-434-1937
TEL: +1-571-434-1925 (8 am - 4:30 pm EST)		MAIL: Collaborative Testing Services, Inc.
EMAIL: forensics@cts-interlab.com		P.O. Box 650820
www.ctsforensics.com		Sterling, VA 20165-0820 USA

Please return all pages of this data sheet.

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RELEASE OF DATA TO ACCREDITATION BODIES

The following Accreditation Releases will apply only to:

Participant Code:

WebCode:

for Test No. **16-5872: DNA Parentage**

This release page must be completed and received by **October 11, 2016** to have this participant's submitted data included in the reports forwarded to the respective Accreditation Bodies.

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

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

ASCLD/LAB Certificate No. _____

ANAB Certificate No. _____

A2LA Certificate No. _____

Step 2: Complete the Laboratory Identifying Information in its entirety

Signature and Title _____

Laboratory Name _____

Location (City/State) _____

Accreditation Release

Return Instructions

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

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

Please return all pages of this data sheet.

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