



## **DNA Parentage Test No. 15-5872 Summary Report**

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This proficiency test was sent to 38 participants. Each participant received a sample pack consisting of the standard paternity trio, collected from a mother, daughter, and a potential father. Participants were requested to analyze the samples using their existing protocols. Data were returned from 36 participants (95% 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, daughter and a potential father. 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 a grandmother/granddaughter 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  $\mu$ l) was created using blood collected from a female (mother) donor, Item 2 (75  $\mu$ l) was from a female (daughter) donor and Item 3 (75  $\mu$ l) was created using blood collected from one male donor who was not the biological father of Item 2. Each different Item was prepared at separate times and all three items were packaged once they were thoroughly dried. Completed sample sets were stored at -20°C until shipment on August 10, 2015.

**SAMPLE SET ASSEMBLY:** For each sample set, all three Items (1-3) were placed in a pre-labeled sample pack envelope. The sealed 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/granddaughter 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.

<u>Item</u>	<b>D1S1656</b> <b>D8S1179</b> <b>D19S433</b> <b>Penta D</b>	<b>D2S1338</b> <b>D10S1248</b> <b>D21S11</b> <b>Penta E</b>	<b>D2S441</b> <b>D12S391</b> <b>D22S1045</b> <b>SE33</b>	<b>D3S1358</b> <b>D13S317</b> <b>Amelogenin</b> <b>TH01</b>	<b>D5S818</b> <b>D16S539</b> <b>CSF1PO</b> <b>TPOX</b>	<b>D7S820</b> <b>D18S51</b> <b>FGA</b> <b>vWA</b>
1	11,16	24,26	11,11*	15,18	11,12	8,12
	14,14	12,14*	18,24	9,11	11,13	16,17
	15,16	28,28	14,15*	X,X	10,11	21,23
	10,13	7,10	18,22.2*	9.3,10	8,8	16,16
2	11,18	24,25	10,11*	18,18	11,12	8,11
	14,15	12,13*	17.3,18	8,11	11,11	17,19
	14.2,15	27,28	14,16*	X,X	11,12	21,23
	12,13	10,10	22.2,28.2*	7,10	8,10	15,16
3	12,17.3	19,22	10,15*	15,18	11,12	8,10
	10,12	13,14*	18,23	8,9	12,13	15,16
	15,15.2	29,30	16,17*	X,Y	10,10	25,25
	9,11	10,12	22.2,27.2*	7,9.3	8,9	14,17

### YSTR Results

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

<u>Item</u>	<b>DYS19</b> <b>DYS437</b> <b>DYS549</b>	<b>DYS385</b> <b>DYS438</b> <b>DYS570</b>	<b>DYS389-I</b> <b>DYS439</b> <b>DYS576</b>	<b>DYS389-II</b> <b>DYS448</b> <b>DYS635</b>	<b>DYS390</b> <b>DYS456</b> <b>DYS643</b>	<b>DYS391</b> <b>DYS458</b> <b>Y GATA H4</b>	<b>DYS392</b> <b>DYS481</b> <b>Y Indel</b>	<b>DYS393</b> <b>DYS533</b>
3	14	12,15	14	31	24	10	13	13
	15	12	12	19	16	17	22*	12*
	13*	18*	18*	23	10*	12	2*	

\* Results were not received from a minimum of 10 participants for the STR and YSTR loci indicated. The above results are a reflection of the data received.

### Paternity Indices

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

<u>Database</u>	<b>D1S1656</b> <b>D8S1179</b> <b>D19S433</b> <b>Penta D</b>	<b>D2S1338</b> <b>D10S1248</b> <b>D21S11</b> <b>Penta E</b>	<b>D2S441</b> <b>D12S391</b> <b>D22S1045</b> <b>SE33</b>	<b>D3S1358</b> <b>D13S317</b> <b>Amelogenin</b> <b>TH01</b>	<b>D5S818</b> <b>D16S539</b> <b>CSF1PO</b> <b>TPOX</b>	<b>D7S820</b> <b>D18S51</b> <b>FGA</b> <b>vWA</b>
3PI-FBI Popstats	∅	0.0014*	∅	3.07*	1.31*	0*
	0*	∅	∅	5.03*	0*	0*
	0*	0*	∅	0*	0*	0*
	0*	0*	∅	2.90*	0*	0*
3PI-NIST STRBASE	0*	0*	1.9275*	1.34	1.34*	0*
	0*	1.73*	0*	4.15*	0*	0*
	0*	0*	1.37*	0*	0*	0*
	0*	5.82*	0*	2.58	0*	0*

\* Results were not received from a minimum of 10 participants for the loci indicated. The above results are a reflection of the data received.

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

## **Summary Comments**

The 15-5872 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 female donor (daughter of Item 1) and Item 3 was blood collected from a male donor (potential father of Item 2). Participants were requested to analyze the samples and provide allelic and statistical results and relationship conclusions regarding the potential father. 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]

Paternity DNA Statistics (Table 5):

For the Combined Paternity Index (CPI), 19 participants reported either "N/A" or another notation indicating no result including participants that left this response area blank. There were seven that reported a low value (less than 1) and the remaining two participants reported "61.7" and "1 in 11.02100455" for the CPI.

For the Probability of Paternity, 26 participants reported either "0", "N/A" or another notation indicating no result. The remaining two participants reported "98.41" and "90.926%".

For the Paternity Conclusions (Table 6), all 36 participants reported that the potential father (Item 3) was excluded as the potential biological parent of the daughter (Item 2).

A few laboratories stated that they did not report values for the Combined Paternity Index and the Probability of Paternity due to the fact that the questioned individual was excluded as the biological father of the child.

For Kinship DNA Statistics (Table 7), a variety of responses were provided for the kinship index. The majority of participants using a particular population database reported consistent Kinship index values. Of the 19 responding participants, fourteen reported "No" and/or "Inconclusive" as to whether the relationship claim of grandmother/granddaughter was supported and five reported that the claim was supported. A discrepancy existed between the PDF version of the data sheet, where the kinship ethnicity was described as African-American and the Online Entry/Paper versions of the data sheet where the kinship ethnicity was described as Hispanic. This error could have resulted in some of the inconsistent Kinship index values amongst participants using the same population database. Another discrepancy was present in which the Portal Data Entry incorrectly listed as "28, 30.2" for locus D21S11 of Profile A yet the paper versions of the data sheet listed "29,30.2". This error was corrected to match the paper versions of the data sheet to show "29,30.2" prior to the data due date and laboratories were notified of the change. Steps are being taken to eliminate these errors from occurring in future tests.

Only one participant reported allelic results that differed from the consensus/predistribution results. This participant reported an inconsistent allele at one locus for Item 1.

# Amelogenin & STR Results

TABLE 1

WebCode	Item	D1S1656 D8S1179 D19S433 Penta D	D2S1338 D10S1248 D21S11 Penta E	D2S441 D12S391 D22S1045 SE33	D3S1358 D13S317 Amelogenin TH01	D5S818 D16S539 CSF1PO TPOX	D7S820 D18S51 FGA vWA
<b>Item 1</b>							
29WZJY	<i>Identifiler® Plus</i>						
	1	24,26			15,18	11,12	8,12
		14			9,11	11,13	16,17
		15,16	28		X	10,11	21,23
					9,3,10	8	16
3Q978Z	<i>COfiler® and Profiler Plus®</i>						
	1				15,18	11,12	8,12
		14,14			9,11		16,17
			28,28		X,X		21,23
							16,16
4C7W26	<i>PowerPlex®</i>						
	1	11,16	24,26		15,18	11,12	8,12
		14,14		18,24	9,11	11,13	16,17
		15,16	28,28			10,11	21,23
		10,13	7,10		9,3,10	8,8	16,16
4RXU3Z	<i>Identifiler®</i>						
	1	24,26			15,18	11,12	8,12
		14			9,11	11,13	16,17
		15,16	28		X	10,11	21,23
					9,3,10	8	16
86QM2Y	<i>Identifiler® Plus</i>						
	1	24,26			15,18	11,12	8,12
		14			9,11	11,13	16,17
		15,16	28		X	10,11	21,23
					9,3,10	8	16
8MWRRW	<i>Identifiler® Direct</i>						
	1	-	24,26	-	15,18	11,12	8,12
		14	-	-	9,11	11,13	16,17
		15,16	28	-	X,X	10,11	21,23
		-	-	-	9,3,10	8	16
8NRBTX	<i>Identifiler®</i>						
	1	24,26			15,18	11,12	8,12
		14			9,11	11,13	16,17
		15,16	28		X	10,11	21,23
					9,3,10	8	16
94DDNR							
	1	24,26			15,18	11,12	8,12
		14			9,11	11,13	16,17
		16,16	28		X	10,11	21,23
					9,3,10	8	16

TABLE 1

<b>WebCode Item</b>	<b>D1S1656</b>	<b>D2S1338</b>	<b>D2S441</b>	<b>D3S1358</b>	<b>D5S818</b>	<b>D7S820</b>
	<b>D8S1179</b>	<b>D10S1248</b>	<b>D12S391</b>	<b>D13S317</b>	<b>D16S539</b>	<b>D18S51</b>
	<b>D19S433</b>	<b>D21S11</b>	<b>D22S1045</b>	<b>Amelogenin</b>	<b>CSF1PO</b>	<b>FGA</b>
	<b>Penta D</b>	<b>Penta E</b>	<b>SE33</b>	<b>TH01</b>	<b>TPOX</b>	<b>vWA</b>
<b>Item 1</b>						
BU4TEU	<i>Identifiler® Plus</i>					
1		24,26		15,18	11,12	8,12
	14			9,11	11,13	16,17
	15,16	28		X	10,11	21,23
				9,3,10	8	16
DPHMVP	<i>Identifiler® Direct</i>					
1	-	24,26	-	15,18	11,12	8,12
	14	-	-	9,11	11,13	16,17
	15,16	28	-	X,X	10,11	21,23
	-	-	-	9,3,10	8	16
DWJ2FR	<i>PowerPlex® 16 HS</i>					
1				15,18	11,12	8,12
	14,14			9,11	11,13	16,17
		28,28		X,X	10,11	21,23
	10,13	7,10		9,3,10	8,8	16,16
EAYJNL	<i>IDplex Plus</i>					
1		24,26		15,18	11,12	8,12
	14,14			9,11	11,13	16,17
	15,16	28,28		X,X	10,11	21,23
				9,3,10	8,8	16,16
EJP33U	<i>PowerPlex® 21, GlobalFiler Express</i>					
1	11,16	24,26	11,11	15,18	11,12	8,12
	14,14	12,14	18,24	9,11	11,13	16,17
	15,16	28,28	14,15	X,X	10,11	21,23
	10,13	7,10	18,22.2	9,3,10	8,8	16,16
ETC4KP	<i>Identifiler® Plus, PowerPlex® 21</i>					
1	11,16	24,26		15,18	11,12	8,12
	14,14		18,24	9,11	11,13	16,17
	15,16	28,28		X,X	10,11	21,23
	10,13	7,10		9,3,10	8,8	16,16
FK22YN	<i>Identifiler® Direct</i>					
1		24,26		15,18	11,12	8,12
	14			9,11	11,13	16,17
	15,16	28		X	10,11	21,23
				9,3,10	8	16
HV9QPP	<i>PowerPlex® Fusion</i>					
1	11,16	24,26	11,11	15,18	11,12	8,12
	14,14	12,14	18,24	9,11	11,13	16,17
	15,16	28,28	14,15	X,X	10,11	21,23
	10,13	7,10		9,3,10	8,8	16,16

TABLE 1

WebCode Item	D1S1656 D8S1179 D19S433 Penta D	D2S1338 D10S1248 D21S11 Penta E	D2S441 D12S391 D22S1045 SE33	D3S1358 D13S317 Amelogenin TH01	D5S818 D16S539 CSF1PO TPOX	D7S820 D18S51 FGA vWA
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## Item 1

JE4JBM	<i>Identifiler® Plus</i>					
	1	24,26		15,18	11,12	8,12
		14		9,11	11,13	16,17
		15,16	28	X	10,11	21,23
			9,3,10	8	16	
JFY3CN	<i>Identifiler® Plus</i>					
	1	24,26		15,18	11,12	8,12
		14		9,11	11,13	16,17
		15,16	28	X	10,11	21,23
			9,3,10	8	16	
JG6KBJ	<i>Identifiler® Direct</i>					
	1	-	24,26	-	15,18	11,12
		14	-	-	9,11	11,13
		15,16	28	-	X,X	10,11
	-	-	-	9,3,10	8	16
LFNABH	<i>PowerPlex® FUSION, Power Plex ESX17</i>					
	1	11,16	24,26	11,11	15,18	11,12
		14,14	12,14	18,24	9,11	11,13
		15,16	28,28	14,15	X,X	10,11
	10,13	7,10	18,22.2	9,3,10	8,8	16,16
M8RUJY	<i>PowerPlex® ESI-Fast</i>					
	1	11,16	24,26	11,11	15,18	
		14,14	12,14	18,24		11,13
		15,16	28,28	14,15	X,X	21,23
				9,3,10	16,16	
N8MW4D	<i>PowerPlex® 16HS, ESX, ESI, CS7</i>					
	1	11,16	24,26	11	15,18	11,12
		14	12,14	18,24	9,11	11,13
		15,16	28	14,15	X	10,11
	10,13	7,10	18,22.2	9,3,10	8	16
NMVN7J	<i>PowerPlex® 16HS, CS7, 21, NGMSelect</i>					
	1	11,16	24,26	11	15,18	11,12
		14	12,14	18,24	9,11	11,13
		15,16	28	14,15	X	10,11
	10,13	7,10	18,22.2	9,3,10	8	16
PLJ9CH	<i>Identifiler® Direct, PowerPlex® ESX17, 16HS, Fusion, CS7, NGM SElect, Investigator Argus X-12</i>					
	1	11,16	24,26	11	15,18	11,12
		14	12,14	18,24	9,11	11,13
		15,16	28	14,15	X	10,11
	10,13	7,10	18,22.2	9,3,10	8	16

TABLE 1

WebCode Item	D1S1656 D8S1179 D19S433 Penta D	D2S1338 D10S1248 D21S11 Penta E	D2S441 D12S391 D22S1045 SE33	D3S1358 D13S317 Amelogenin TH01	D5S818 D16S539 CSF1PO TPOX	D7S820 D18S51 FGA vWA
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## Item 1

Q26B8C	<i>Identifiler®</i>	1	24,26		15,18	11,12	8,12	
			14,14		9,11	11,13	16,17	
			15,16	28,28		X,X	10,11	21,23
					9,3,10	8,8	16,16	
Q3ZTAD	<i>Identifiler®</i>	1	24,26		15,18	11,12	8,12	
			14		9,11	11,13	16,17	
			15,16	28		X	10,11	21,23
					9,3,10	8	16	
QXQFRE	<i>PowerPlex® 16HS</i>	1			15,18	11,12	8,12	
			14,14		9,11	11,13	16,17	
				28,28		X,X	10,11	21,23
			10,13	7,10		9,3,10	8,8	16,16
R68B89	<i>Identifiler® Plus</i>	1	24,26		15,18	11,12	8,12	
			14,14		9,11	11,13	16,17	
			15,16	28,28		X,X	10,11	21,23
					9,3,10	8,8	16,16	
TKU9MA	<i>Identifiler® Plus</i>	1	24,26		15,18	11,12	8,12	
			14		9,11	11,13	16,17	
			15,16	28		X	10,11	21,23
					9,3,10	8	16	
UCYTBA	<i>PowerPlex® 16 HS</i>	1			15,18	11,12	8,12	
			14,14		9,11	11,13	16,17	
				28,28		X,X	10,11	21,23
			10,13	7,10		9,3,10	8,8	16,16
VRQPC6	<i>PowerPlex® ESX17, FUSION</i>	1	11,16	24,26	11,11	15,18	11,12	8,12
			14,14	12,14	18,24	9,11	11,13	16,17
			15,16	28,28	14,15	X,X	10,11	21,23
			10,13	7,10	18,22.2	9,3,10	8,8	16,16
VTY3U8	<i>Profiler Plus®</i>	1			15,18	11,12	8,12	
			14,14		9,11		16,17	
				28,28		X,X	21,23	
							16,16	



TABLE 1

<b>WebCode Item</b>	<b>D1S1656</b>	<b>D2S1338</b>	<b>D2S441</b>	<b>D3S1358</b>	<b>D5S818</b>	<b>D7S820</b>
	<b>D8S1179</b>	<b>D10S1248</b>	<b>D12S391</b>	<b>D13S317</b>	<b>D16S539</b>	<b>D18S51</b>
	<b>D19S433</b>	<b>D21S11</b>	<b>D22S1045</b>	<b>Amelogenin</b>	<b>CSF1PO</b>	<b>FGA</b>
	<b>Penta D</b>	<b>Penta E</b>	<b>SE33</b>	<b>TH01</b>	<b>TPOX</b>	<b>vWA</b>
<b>Item 1</b>						
WBXE39	<i>Identifiler®</i>					
1	24,26			15,18	11,12	8,12
	14			9,11	11,13	16,17
	15,16	28		X	10,11	21,23
				9,3,10	8	16
WECAH6	<i>PowerPlex® Fusion</i>					
1	11,16	24,26	11	15,18	11,12	8,12
	14	12,14	18,24	9,11	11,13	16,17
	15,16	28	14,15	X	10,11	21,23
	10,13	7,10	-	9,3,10	8	16
WK3LH9	<i>PowerPlex® 16 HS</i>					
1				15,18	11,12	8,12
	14,14			9,11	11,13	16,17
		28,28		X,X	10,11	21,23
	10,13	7,10		9,3,10	8,8	16,16
YYU2V8	<i>Identifiler® Plus</i>					
1	24,26			15,18	11,12	8,12
	14,14			9,11	11,13	16,17
	15,16	28,28		X,X	10,11	21,23
				9,3,10	8,8	16,16

TABLE 1

WebCode Item	D1S1656 D8S1179 D19S433 Penta D	D2S1338 D10S1248 D21S11 Penta E	D2S441 D12S391 D22S1045 SE33	D3S1358 D13S317 Amelogenin TH01	D5S818 D16S539 CSF1PO TPOX	D7S820 D18S51 FGA vWA
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## Item 2

29WZJY	<i>Identifiler® Plus</i>					
	2	24,25		18	11,12	8,11
		14,15		8,11	11	17,19
		14.2,15	27,28	X	11,12	21,23
			7,10	8,10	15,16	
3Q978Z	<i>COfiler® and Profiler Plus®</i>					
	2			18,18	11,12	8,11
		14,15		8,11		17,19
			27,28	X,X		21,23
					15,16	
4C7W26	<i>PowerPlex®</i>					
	2	11,18	24,25	18,18	11,12	8,11
		14,15		17.3,18	8,11	11,11
		14.2,15	27,28		11,12	21,23
	12,13	10,10		7,10	8,10	15,16
4RXU3Z	<i>Identifiler®</i>					
	2	24,25		18	11,12	8,11
		14,15		8,11	11	17,19
		14.2,15	27,28	X	11,12	21,23
			7,10	8,10	15,16	
86QM2Y	<i>Identifiler® Plus</i>					
	2	24,25		18	11,12	8,11
		14,15		8,11	11	17,19
		14.2,15	27,28	X	11,12	21,23
			7,10	8,10	15,16	
8MWRRW	<i>Identifiler® Direct</i>					
	2	-	24,25	-	18	11,12
		14,15	-	-	8,11	11
		14.2,15	27,28	-	X,X	11,12
	-	-	-	7,10	8,10	15,16
8NRBTX	<i>Identifiler®</i>					
	2	24,25		18	11,12	8,11
		14,15		8,11	11	17,19
		14.2,15	27,28	X	11,12	21,23
			7,10	8,10	15,16	
94DDNR						
	2	24,25		18	11,12	8,11
		14,15		8,11	11	17,19
		14.2,15	27,28	X	11,12	21,23
			7,10	8,10	15,16	

TABLE 1

WebCode Item	D1S1656 D8S1179 D19S433 Penta D	D2S1338 D10S1248 D21S11 Penta E	D2S441 D12S391 D22S1045 SE33	D3S1358 D13S317 Amelogenin TH01	D5S818 D16S539 CSF1PO TPOX	D7S820 D18S51 FGA vWA
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## Item 2

BU4TEU	<i>Identifiler® Plus</i>					
	2	24,25		18	11,12	8,11
		14,15		8,11	11	17,19
		14.2,15	27,28	X	11,12	21,23
			7,10	8,10	15,16	
DPHMVP	<i>Identifiler® Direct</i>					
	2	-	24,25	-	18	11,12
		14,15	-	-	8,11	11
		14.2,15	27,28	-	X,X	11,12
	-	-	-	7,10	8,10	15,16
DWJ2FR	<i>PowerPlex® 16 HS</i>					
	2			18,18	11,12	8,11
		14,15		8,11	11,11	17,19
			27,28	X,X	11,12	21,23
	12,13	10,10	7,10	8,10	15,16	
EAYJNL	<i>IDplex Plus</i>					
	2	24,25		18,18	11,12	8,11
		14,15		8,11	11,11	17,19
		14.2,15	27,28	X,X	11,12	21,23
			7,10	8,10	15,16	
EJP33U	<i>PowerPlex® 21, GlobalFiler Express</i>					
	2	11,18	24,25	10,11	18,18	11,12
		14,15	12,13	17.3,18	8,11	11,11
		14.2,15	27,28	14,16	X,X	11,12
	12,13	10,10	22.2,28.2	7,10	8,10	15,16
ETC4KP	<i>Identifiler® Plus, PowerPlex® 21</i>					
	2	11,18	24,25		18,18	11,12
		14,15		17.3,18	8,11	11,11
		14.2,15	27,28		X,X	11,12
	12,13	10,10		7,10	8,10	15,16
FK22YN	<i>Identifiler® Direct</i>					
	2	24,25		18	11,12	8,11
		14,15		8,11	11	17,19
		14.2,15	27,28	X	11,12	21,23
			7,10	8,10	15,16	
HV9QPP	<i>PowerPlex® Fusion</i>					
	2	11,18	24,25	10,11	18,18	11,12
		14,15	12,13	17.3,18	8,11	11,11
		14.2,15	27,28	14,16	X,X	11,12
	12,13	10,10	7,10	8,10	15,16	

TABLE 1

WebCode Item	D1S1656 D8S1179 D19S433 Penta D	D2S1338 D10S1248 D21S11 Penta E	D2S441 D12S391 D22S1045 SE33	D3S1358 D13S317 Amelogenin TH01	D5S818 D16S539 CSF1PO TPOX	D7S820 D18S51 FGA vWA
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## Item 2

JE4JBM	<i>Identifiler® Plus</i>					
	2	24,25		18	11,12	8,11
		14,15		8,11	11	17,19
		14.2,15	27,28	X	11,12	21,23
			7,10	8,10	15,16	
JFY3CN	<i>Identifiler® Plus</i>					
	2	24,25		18	11,12	8,11
		14,15		8,11	11	17,19
		14.2,15	27,28	X	11,12	21,23
			7,10	8,10	15,16	
JG6KBJ	<i>Identifiler® Direct</i>					
	2	-	24,25	-	18	11,12
		14,15	-	-	8,11	11
		14.2,15	27,28	-	X,X	11,12
	-	-	-	7,10	8,10	15,16
LFNABH	<i>PowerPlex® FUSION, Power Plex ESX17</i>					
	2	11,18	24,25	10,11	18,18	11,12
		14,15	12,13	17.3,18	8,11	11,11
		14.2,15	27,28	14,16	X,X	11,12
	12,13	10,10	22.2,28.2	7,10	8,10	15,16
M8RUYJ	<i>PowerPlex® ESI-Fast</i>					
	2	11,18	24,25	10,11	18,18	
		14,15	12,13	17.3,18		11,11
		14.2,15	27,28	14,16	X,X	21,23
			7,10		15,16	
N8MW4D	<i>PowerPlex® 16HS, ESX, ESI, CS7</i>					
	2	11,18	24,25	10,11	18	11,12
		14,15	12,13	17.3,18	8,11	11
		14.2,15	27,28	14,16	X	11,12
	12,13	10	22.2,28.2	7,10	8,10	15,16
NMVN7J	<i>PowerPlex® 16HS, CS7, 21, NGMSelect</i>					
	2	11,18	24,25	10,11	18	11,12
		14,15	12,13	17.3,18	8,11	11
		14.2,15	27,28	14,16	X	11,12
	12,13	10	22.2,28.2	7,10	8,10	15,16
PLJ9CH	<i>Identifiler® Direct, PowerPlex® ESX17, 16HS, Fusion, CS7, NGM SElect, Investigator Argus X-12</i>					
	2	11,18	24,25	10,11	18	11,12
		14,15	12,13	17.3,18	8,11	11
		14.2,15	27,28	14,16	X	11,12
	12,13	10	22.2,28.2	7,10	8,10	15,16

TABLE 1

WebCode Item	D1S1656 D8S1179 D19S433 Penta D	D2S1338 D10S1248 D21S11 Penta E	D2S441 D12S391 D22S1045 SE33	D3S1358 D13S317 Amelogenin TH01	D5S818 D16S539 CSF1PO TPOX	D7S820 D18S51 FGA vWA
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## Item 2

Q26B8C	<i>Identifiler®</i>	2	24,25		18,18	11,12	8,11	
			14,15		8,11	11,11	17,19	
			14.2,15	27,28		X,X	11,12	21,23
						7,10	8,10	15,16
Q3ZTAD	<i>Identifiler®</i>	2	24,25		18	11,12	8,11	
			14,15		8,11	11	17,19	
			14.2,15	27,28		X	11,12	21,23
						7,10	8,10	15,16
QXQFRE	<i>PowerPlex® 16HS</i>	2			18,18	11,12	8,11	
			14,15		8,11	11,11	17,19	
				27,28		X,X	11,12	21,23
			12,13	10,10		7,10	8,10	15,16
R68B89	<i>Identifiler® Plus</i>	2	24,25		18,18	11,12	8,11	
			14,15		8,11	11,11	17,19	
			14.2,15	27,28		X,X	11,12	21,23
						7,10	8,10	15,16
TKU9MA	<i>Identifiler® Plus</i>	2	24,25		18	11,12	8,11	
			14,15		8,11	11	17,19	
			14.2,15	27,28		X	11,12	21,23
						7,10	8,10	15,16
UCYTBA	<i>PowerPlex® 16 HS</i>	2			18,18	11,12	8,11	
			14,15		8,11	11,11	17,19	
				27,28		X,X	11,12	21,23
			12,13	10,10		7,10	8,10	15,16
VRQPC6	<i>PowerPlex® ESX17, FUSION</i>	2	11,18	24,25	10,11	18,18	11,12	8,11
			14,15	12,13	17.3,18	8,11	11,11	17,19
			14.2,15	27,28	14,16	X,X	11,12	21,23
			12,13	10,10	22.2,28.2	7,10	8,10	15,16
VTY3U8	<i>Profiler Plus®</i>	2			18,18	11,12	8,11	
			14,15		8,11		17,19	
				27,28		X,X		21,23
								15,16

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

WBXE39	<i>Identifiler®</i>	2	24,25		18	11,12	8,11		
			14,15		8,11	11	17,19		
			14.2,15	27,28		X	11,12	21,23	
						7,10	8,10	15,16	
WECAH6	<i>PowerPlex® Fusion</i>	2	11,18	24,25	10,11	18	11,12	8,11	
			14,15	12,13	17.3,18	8,11	11	17,19	
			14.2,15	27,28	14,16	X	11,12	21,23	
			12,13	10	-	7,10	8,10	15,16	
WK3LH9	<i>PowerPlex® 16 HS</i>	2				18,18	11,12	8,11	
						14,15	8,11	11,11	17,19
				27,28			X,X	11,12	21,23
				12,13	10,10		7,10	8,10	15,16
YYU2V8	<i>Identifiler® Plus</i>	2	24,25			18,18	11,12	8,11	
			14,15			8,11	11,11	17,19	
			14.2,15	27,28			X,X	11,12	21,23
							7,10	8,10	15,16

TABLE 1

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

Item 3

29WZJY	<i>Identifiler® Plus</i>						
	3		19,22		15,18	11,12	8,10
			10,12		8,9	12,13	15,16
			15,15.2	29,30	X,Y	10	25
				7,9.3	8,9	14,17	
3Q978Z	<i>COfiler® and Profiler Plus®</i>						
	3				15,18	11,12	8,10
			10,12		8,9		15,16
				29,30	X,Y		25,25
						14,17	
4C7W26	<i>PowerPlex®</i>						
	3	12,17.3	19,22		15,18	11,12	8,10
		10,12		18,23	8,9	12,13	15,16
		15,15.2	29,30			10,10	25,25
	9,11	10,12		7,9.3	8,9	14,17	
4RXU3Z	<i>Identifiler®</i>						
	3		19,22		15,18	11,12	8,10
			10,12		8,9	12,13	15,16
			15,15.2	29,30	X,Y	10	25
				7,9.3	8,9	14,17	
86QM2Y	<i>Identifiler® Plus</i>						
	3		19,22		15,18	11,12	8,10
			10,12		8,9	12,13	15,16
			15,15.2	29,30	X,Y	10	25
				7,9.3	8,9	14,17	
8MWRRW	<i>Identifiler® Direct</i>						
	3	-	19,22	-	15,18	11,12	8,10
			10,12	-	8,9	12,13	15,16
			15,15.2	29,30	X,Y	10	25
		-	-	-	7,9.3	8,9	14,17
8NRBTX	<i>Identifiler®</i>						
	3		19,22		15,18	11,12	8,10
			10,12		8,9	12,13	15,16
			15,15.2	29,30	X,Y	10	25
				7,9.3	8,9	14,17	
94DDNR							
	3		19,22		15,18	11,12	8,10
			10,12		8,9	12,13	15,16
			15,15.2	29,30	X,Y	10	25
				7,9.3	8,9	14,17	

TABLE 1

WebCode Item	D1S1656 D8S1179 D19S433 Penta D	D2S1338 D10S1248 D21S11 Penta E	D2S441 D12S391 D22S1045 SE33	D3S1358 D13S317 Amelogenin TH01	D5S818 D16S539 CSF1PO TPOX	D7S820 D18S51 FGA vWA
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## Item 3

BU4TEU	<i>Identifiler® Plus</i>					
	3	19,22		15,18	11,12	8,10
		10,12		8,9	12,13	15,16
		15,15.2	29,30	X,Y	10	25
			7,9.3	8,9	14,17	
DPHMVP	<i>Identifiler® Direct</i>					
	3	-	19,22	-	15,18	11,12
		10,12	-	-	8,9	12,13
		15,15.2	29,30	-	X,Y	10
	-	-	-	7,9.3	8,9	14,17
DWJ2FR	<i>PowerPlex® 16 HS</i>					
	3			15,18	11,12	8,10
		10,12		8,9	12,13	15,16
			29,30	X,Y	10,10	25,25
	9,11	10,12	7,9.3	8,9	14,17	
EAYJNL	<i>IDPlex Plus</i>					
	3	19,22		15,18	11,12	8,10
		10,12		8,9	12,13	15,16
		15,15.2	29,30	X,Y	10,10	25,25
			7,9.3	8,9	14,17	
EJP33U	<i>PowerPlex® 21, GlobalFiler Express</i>					
	3	12,17.3	19,22	10,15	15,18	11,12
		10,12	13,14	18,23	8,9	12,13
		15,15.2	29,30	16,17	X,Y	10,10
	9,11	10,12	22.2,27.2	7,9.3	8,9	14,17
ETC4KP	<i>Identifiler® Plus, PowerPlex® 21</i>					
	3	12,17.3	19,22		15,18	11,12
		10,12		18,23	8,9	12,13
		15,15.2	29,30		X,Y	10,10
	9,11	10,12		7,9.3	8,9	14,17
FK22YN	<i>Identifiler® Direct</i>					
	3	19,22		15,18	11,12	8,10
		10,12		8,9	12,13	15,16
		15,15.2	29,30		X,Y	10
			7,9.3	8,9	14,17	
HV9QPP	<i>PowerPlex® Fusion</i>					
	3	12,17.3	19,22	10,15	15,18	11,12
		10,12	13,14	18,23	8,9	12,13
		15,15.2	29,30	16,17	X,Y	10,10
	9,11	10,12		7,9.3	8,9	14,17



TABLE 1

WebCode Item	D1S1656 D8S1179 D19S433 Penta D	D2S1338 D10S1248 D21S11 Penta E	D2S441 D12S391 D22S1045 SE33	D3S1358 D13S317 Amelogenin TH01	D5S818 D16S539 CSF1PO TPOX	D7S820 D18S51 FGA vWA
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## Item 3

JE4JBM	<i>Identifiler® Plus</i>					
	3	19,22		15,18	11,12	8,10
		10,12		8,9	12,13	15,16
		15,15.2	29,30	X,Y	10	25
			7,9.3	8,9	14,17	
JFY3CN	<i>Identifiler® Plus</i>					
	3	19,22		15,18	11,12	8,10
		10,12		8,9	12,13	15,16
		15,15.2	29,30	X,Y	10	25
			7,9.3	8,9	14,17	
JG6KBJ	<i>Identifiler® Direct</i>					
	3	-	19,22	-	15,18	11,12
		10,12	-	-	8,9	12,13
		15,15.2	29,30	-	X,Y	10
	-	-	-	7,9.3	8,9	
LFNABH	<i>PowerPlex® FUSION, Power Plex ESX17</i>					
	3	12,17.3	19,22	10,15	15,18	11,12
		10,12	13,14	18,23	8,9	12,13
		15,15.2	29,30	16,17	X,Y	10,10
	9,11	10,12	22.2,27.2	7,9.3	8,9	
M8RUJY	<i>PowerPlex® ESI-Fast</i>					
	3	12,17.3	19,22	10,15	15,18	
		10,12	13,14	18,23		12,13
		15,15.2	29,30	16,17	X,Y	25,25
			7,9.3		14,17	
N8MW4D	<i>PowerPlex® 16HS, ESX, ESI, CS7</i>					
	3	12,17.3	19,22	10,15	15,18	11,12
		10,12	13,14	18,23	8,9	12,13
		15,15.2	29,30	16,17	X,Y	10
	9,11	10,12	22.2,27.2	7,9.3	8,9	
NMVN7J	<i>PowerPlex® 16HS, CS7, 21, NMGSelect[sic], Yfiler</i>					
	3	12,17.3	19,22	10,15	15,18	11,12
		10,12	13,14	18,23	8,9	12,13
		15,15.2	29,30	16,17	X,Y	10
	9,11	10,12	22.2,27.2	7,9.3	8,9	
PLJ9CH	<i>Identifiler® Direct, PowerPlex® ESX17, 16HS, Fusion, CS7, NGM SElect, Investigator Argus X-12</i>					
	3	12,17.3	19,22	10,15	15,18	11,12
		10,12	13,14	18,23	8,9	12,13
		15,15.2	29,30	16,17	X,Y	10
	9,11	10,12	22.2,27.2	7,9.3	8,9	

TABLE 1

WebCode Item	D1S1656 D8S1179 D19S433 Penta D	D2S1338 D10S1248 D21S11 Penta E	D2S441 D12S391 D22S1045 SE33	D3S1358 D13S317 Amelogenin TH01	D5S818 D16S539 CSF1PO TPOX	D7S820 D18S51 FGA vWA
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## Item 3

Q26B8C	<i>Identifiler®</i>	3		19,22		15,18		11,12		8,10		
				10,12			8,9		12,13		15,16	
				15,15.2	29,30			X,Y		10,10		25,25
							7,9.3		8,9			14,17
Q3ZTAD	<i>Identifiler®</i>	3		19,22		15,18		11,12		8,10		
				10,12			8,9		12,13		15,16	
				15,15.2	29,30			X,Y		10		25
							7,9.3		8,9			14,17
QXQFRE	<i>PowerPlex® 16HS</i>	3				15,18		11,12		8,10		
				10,12			8,9		12,13		15,16	
					29,30			X,Y		10,10		25,25
				9,11	10,12			7,9.3		8,9		14,17
R68B89	<i>Identifiler® Plus</i>	3		19,22		15,18		11,12		8,10		
				10,12			8,9		12,13		15,16	
				15,15.2	29,30			X,Y		10,10		25,25
							7,9.3		8,9			14,17
TKU9MA	<i>Identifiler® Plus</i>	3		19,22		15,18		11,12		8,10		
				10,12			8,9		12,13		15,16	
				15,15.2	29,30			X,Y		10		25
							7,9.3		8,9			14,17
UCYTBA	<i>PowerPlex® 16 HS</i>	3				15,18		11,12		8,10		
				10,12			8,9		12,13		15,16	
					29,30			X,Y		10,10		25,25
				9,11	10,12			7,9.3		8,9		14,17
VRQPC6	<i>PowerPlex® ESX17, FUSION</i>	3	12,17.3	19,22	10,15	15,18		11,12		8,10		
				10,12	13,14	18,23	8,9		12,13		15,16	
				15,15.2	29,30	16,17	X,Y		10,10		25,25	
				9,11	10,12	22.2,27.2	7,9.3		8,9			14,17
VTY3U8	<i>Profiler Plus®</i>	3				15,18		11,12		8,10		
				10,12			8,9				15,16	
					29,30			X,Y				25,25
												14,17

TABLE 1

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

Item 3

WBXE39	<i>Identifiler®</i>					
3		19,22		15,18	11,12	8,10
	10,12			8,9	12,13	15,16
	15,15.2	29,30		X,Y	10	25
				7,9.3	8,9	14,17
WECAH6	<i>PowerPlex® fusion</i>					
3	12,17.3	19,22	10,15	15,18	11,12	8,10
	10,12	13,14	18,23	8,9	12,13	15,16
	15,15.2	29,30	16,17	X,Y	10	25
	9,11	10,12	-	7,9.3	8,9	14,17
WK3LH9	<i>PowerPlex® 16 HS</i>					
3				15,18	11,12	8,10
	10,12			8,9	12,13	15,16
		29,30		X,Y	10,10	25,25
	9,11	10,12		7,9.3	8,9	14,17
YYU2V8	<i>Identifiler® Plus</i>					
3		19,22		15,18	11,12	8,10
	10,12			8,9	12,13	15,16
	15,15.2	29,30		X,Y	10,10	25,25
				7,9.3	8,9	14,17

# 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

4C7W26 Laboratory Specific Database

3PI	0	0		2.97	1.36	0
	0		0	3.75	0	0
	0	0			0	0
	0	4.09		2.61	0	0

4RXU3Z FBI PopStats

3PI		0.0014		3.07579	1.30871	0.00188
	0.0026			5.02563	0.00195	0.00295
	0.00131	0.00208			0.00311	0.00445
				2.90006	0.00032	0.00272

86QM2Y

3PI				3.0339	1.3422	
				4.1050		
				2.2956		

8MWRRW NIST-STRBASE

3PI	-	0.0010	-	3.3119	1.3445	0.0020
	0.0040	-	-	4.1494	0.0040	0.0030
	0.0010	0.0010	-	-	0.0030	0.0041
	-	-	-	2.5786	0.0001	0.0030

8NRBTX FBI PopStats

3PI		0.0014		3.07579	1.30871	0.00188
	0.0026			5.02563	0.00195	0.00295
	0.00131	0.00208			0.00311	0.00445
				2.90006	0.00032	0.00272

94DDNR FBI PopStats

3PI		0		3.07	1.30	0
	0			5.02	0	0
	0	0			0	0
				20.90	0	0

DPHMVP NIST-STRBASE

3PI	-	0.0010	-	3.3119	1.3445	0.0020
	0.0040	-	-	4.1494	0.0040	0.0030
	0.0010	0.0010	-	-	0.0030	0.0041
	-	-	-	2.5786	0.0001	0.0030

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

DWJ2FR	FBI PopStats					
3PI				3.0600	1.3087	0
	0			5.0251	0	0
		0		0	0	0
	0	0		2.8852	0	0

EAYJNL	NIST-STRBASE					
3PI				4.73	1.49	
				5.15		
				1.7		

ETC4KP	NIST-STRBASE					
3PI	0	0		3.286364	1.341373	0
	0		0	4.107955	0	0
	0	0			0	0
	0	5.738095		2.56383	0	0

FK22YN	NIST-STRBASE					
3PI		0.0		3.29	1.34	0.0
	0.0			4.42	0.0	0.0
	0.0	0.0			0.0	0.0
				2.63	0.0	0.0

JFY3CN	Laboratory Specific Database					
3PI		0.0000		3.0339	1.3422	0.0000
	0.0000			4.1050	0.0000	0.0000
	0.0000	0.0000			0.0000	0.0000
				2.2956	0.0000	0.0000

JG6KBJ	NIST-STRBASE					
3PI	-	0.001	-	3.3119	1.3445	0.002
	0.004	-	-	4.1494	0.004	0.003
	0.001	0.001	-		0.003	0.004
	-	-	-	2.5786	0.0001	0.003

M8RUYJ	NIST-STRBASE					
3PI	0	0	2.375	3.31193		
	0	1.62613	0		0	0
	0	0	1.30797			0
				2.57857		0

NMVN7J	NIST-STRBASE					
3PI	0	0	1.48	4.07	1.37	0
	0	1.83	0	4.54	0	0
	0	0	1.43		0	0
	0	5.90	0	1.69	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

Q3ZTAD	FBI PopStats					
3PI		0.0014		3.07579	1.30871	0.00188
		0.0026		5.02563	0.00195	0.00295
		0.00131	0.00208		0.00311	0.00445
				2.90006	0.00032	0.00272

QXQFRE	FBI PopStats					
3PI				3.06	1.30	
				5.02		
				2.88		

R68B89	NIST-STRBASE					
3PI		0		3.282	0.671	0
		0		4.441	0	0
		0	0	-	0	0
				2.626	0	0

TKU9MA	NIST-STRBASE					
3PI		0.00		3.31	1.34	0.00
		0.00		4.15	0.00	0.00
		0.00	0.00		0.00	0.00
				2.58	0.00	0.00

UCYTBA	FBI PopStats					
3PI				3.06	1.30	0
				5.02	0	0
			0	0	0	0
		0	0	2.88	0	0

WBXE39	FBI PopStats					
3PI		0.0014		3.07579	1.30871	0.00188
		0.0026		5.02563	0.00195	0.00295
		0.00131	0.00208		0.00311	0.00445
				2.90006	0.00032	0.00272

WK3LH9	FBI PopStats					
3PI				3.0600	1.3087	0
				5.0251	0	0
			0		0	0
		0	0	2.8852	0	0

YYU2V8	[Country] Caucasian Pop Database					
3PI				3.64	1.39	
				3.73		
				2.65		

# 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	
<b>Item 3</b>									
8MWRRW	Yfiler® 3	14	12,15	14	31	24	10	13	13
		15	12	12	19	16	17	-	-
		-	-	-	23	-	12	-	-
DPHMVP	Yfiler® 3	14	12,15	14	31	24	10	13	13
		15	12	12	19	16	17	-	-
		-	-	-	23	-	12	-	-
EAYJNL	Yfiler® 3	14	12,15	14	31	24	10	13	13
		15	12	12	19	16	17		
					23		12		
EJP33U	3						10		
								2	
FK22YN	Yfiler® 3	14	12,15	14	31	24	10	13	13
		15	12	12	19	16	17		
					23		12		
HV9QPP	Yfiler® 3	14	12,15	14	31	24	10	13	13
		15	12	12	19	16	17		
					23		12		
JG6KBJ	Yfiler® 3	14	12,15	14	31	24	10	13	13
		15	12	12	19	16	17	-	-
		-	-	-	23	-	12	-	-
LFNABH	PowerPlex® Y 23 3	14	12,15	14	31	24	10	13	13
		15	12	12	19	16	17	22	12
		13	18	18	23	10	12		
M8RUYJ	PowerPlex® Y 23 3	14	12,15	14	31	24	10	13	13
		15	12	12	19	16	17	22	12
		13	18	18	23	10	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

NMVN7J	Yfiler® 3	14	12,15	14	31	24	10	13	13
		15	12	12	19	16	17		
					23		12		
PLJ9CH	PowerPlex® Y 23 3	14	12,15	14	31	24	10	13	13
		15	12	12	19	16	17	22	12
		13	18	18	23	10	12		
VRQPC6	PowerPlex® Y 23 3	14	12,15	14	31	24	10	13	13
		15	12	12	19	16	17	22	12
		13	18	18	23	10	12		



# Additional DNA & PI Results

TABLE 4

Locus	WebCode	Item 1	Item 2	Item 3	Item 3 Paternity Index
D6S1043	4C7W26	11,19	11,11	14,20	0
	EJP33U	11,19	11,11	14,20	
	ETC4KP	11,19	11,11	14,20	
	NMVN7J	11,19	11	14,20	
DXS10074	PLJ9CH	7,8	7,18	19	
DXS10079	PLJ9CH	17,20	20,21	17	
DXS10101	PLJ9CH	27.2,32	27.2,30	31.2	
DXS10103	PLJ9CH	16,21	16,17	19	
DXS10134	PLJ9CH	35,37	35,37	38	
DXS10135	PLJ9CH	18.1,28	25,28	23	
DXS10146	PLJ9CH	24,28	24,29	29	
DXS10148	PLJ9CH	18,29.1	25.1,29.1	24.1	
DXS7132	PLJ9CH	14	12,14	12	
DXS7423	PLJ9CH	13	13,14	15	
DXS8378	PLJ9CH	11,12	11,12	11	
DYS391	HV9QPP			10	
F13A01	N8MW4D	6,7	3.2,6	7	
	NMVN7J	6,7	3.2,6	7	
	PLJ9CH	6,7	3.2,6	7	
F13B	N8MW4D	8,10	10	9,10	1.13
	NMVN7J	8,10	10	9,10	
	PLJ9CH	8,10	10	9,10	
FESFPS	N8MW4D	11	11	12	
	NMVN7J	11	11	12	
	PLJ9CH	11	11	12	
HPRTB	PLJ9CH	12,14	12	13	
LPL	N8MW4D	11,13	10,13	10,12	1.03
	NMVN7J	11,13	10,13	10,12	
	PLJ9CH	11,13	10,13	10,12	
PENTA C	NMVN7J	11	11	9,12	
	PLJ9CH	11	11	9,12	

# Paternity DNA Statistics

TABLE 5

WebCode	Combined Paternity Index	Probability of Paternity	Population Database Used
3Q978Z	N/A	N/A	Local/State Database
4C7W26	0	0	Laboratory Specific Database
4RXU3Z	7.5E-29	not reported by our lab	FBI PopStats
8MWRRW	2.38e-29	0% (CPI less than 1, therefore no relationship)	NIST-STRBASE
8NRBTX	7.5 x 10 <sup>-29</sup>	Not performed by this laboratory	FBI PopStats
94DDNR	0.0	0.0%	FBI PopStats
DPHMVP	2.38E-29	0% (CPI less than 1 - no relationship)	NIST-STRBASE
DWJ2FR	0	0	FBI PopStats
EAYJNL	61.7	98.41	NIST-STRBASE
ETC4KP	0	0%	NIST-STRBASE
FK22YN	0.0	0.0	NIST-STRBASE
JFY3CN			Laboratory Specific Database
JG6KBJ	2.38E-29	0.00%	NIST-STRBASE
M8RUYJ	0	0	NIST-STRBASE
N8MW4D	0	0	[Country]
NMVN7J	0	0	NIST-STRBASE
PLJ9CH	In exclusion case, the laboratory don't report any LR, nor was reported paternity probability.	In exclusion case, the laboratory don't report any LR, nor was reported paternity probability.	No se toma datos de población puesto que el caso es exclusión.
Q26B8C	N/A	N/A	Identifiler frequency database
Q3ZTAD	7.5 E-29	(not calculated in our Laboratory)	FBI PopStats
QXQFRE	N/A	N/A	FBI PopStats
R68B89	1 in 11.02100455	90.926%	NIST-STRBASE
TKU9MA	0	0	NIST-STRBASE
UCYTBA	N/A	N/A	FBI PopStats
VTY3U8	N/A	N/A	Local/State Database
WBXE39	7.5 x 10 <sup>-29</sup>	Not performed	FBI PopStats

<b>WebCode</b>	<b>Combined Paternity Index</b>	<b>Probability of Paternity</b>	<b>Population Database Used</b>
WECAH6	exclusion!	exclusion!	
WK3LH9	0	0	FBI PopStats
YYU2V8			[Country] Caucasian Pop Database

# Paternity Conclusions

TABLE 6

WebCode	Conclusions	WebCode	Conclusions
29WZJY	Excluded	VRQPC6	Excluded
3Q978Z	Excluded	VTY3U8	Excluded
4C7W26	Excluded	WBXE39	Excluded
4RXU3Z	Excluded	WECAH6	Excluded
86QM2Y	Excluded	WK3LH9	Excluded
8MWRRW	Excluded	YYU2V8	Excluded
8NRBTX	Excluded		
94DDNR	Excluded		
BU4TEU	Excluded		
DPHMVP	Excluded		
DWJ2FR	Excluded		
EAYJNL	Excluded		
EJP33U	Excluded		
ETC4KP	Excluded		
FK22YN	Excluded		
HV9QPP	Excluded		
JE4JBM	Excluded		
JFY3CN	Excluded		
JG6KBJ	Excluded		
LFNABH	Excluded		
M8RUYJ	Excluded		
N8MW4D	Excluded		
NMVN7J	Excluded		
PLJ9CH	Excluded		
Q26B8C	Excluded		
Q3ZTAD	Excluded		
QXQFRE	Excluded		
R68B89	Excluded		
TKU9MA	Excluded		
UCYTBA	Excluded		

Response Summary		Total: 36
Responses	Not Excluded	0
	Excluded	36
	Inconclusive	0

## Kinship DNA Statistics

Is the claim of an avuncular relationship supported by the genetic evidence?

TABLE 7

WebCode	Database	Kinship Index	Claim Supported?
3Q978Z	Local/State Database	0.141	No, the DNA evidence does not support the relationship
4RXU3Z	FBI PopStats	0.22	No
8MWRRW	NIST-STRBASE	39.97	Yes
8NRBTX	FBI PopStats	0.19	No, KI is less than 1.
DPHMVP	NIST-STRBASE	39.97	Yes
EAYJNL	NIST-STRBASE	15.1449	No
ETC4KP	NIST-STRBASE	31.9	Inconclusive result
FK22YN	NIST-STRBASE	13.09	Yes
JG6KBJ	NIST-STRBASE	39.97	Yes
LFNABH		39,9954	No, Inconclusive
M8RUYJ	NIST-STRBASE	39.9745	YES (see 3)
N8MW4D	[Country]	54	No
NMVN7J	NIST-STRBASE	39.37	No, is not conclusive
PLJ9CH	No se toma datos de población puesto que el caso es exclusión.	39,97454363	According to the genetic evidence, is 39,97454363 more likely the relationship hypothesis versus no relationship hypothesis, nevertheless this value doesn't support Grandmother/ Granddaughter relationship.
Q3ZTAD	FBI PopStats	2.2E-01	No
VRQPC6		39,99546484	No, Inconclusive
VTY3U8	Local/State Database	0.141	No, based on the calculation the DNA evidence does not support the alleged relationship.
WBXE39	FBI PopStats	0.22	No
WECAH6		9.01681432	inconclusive

# Additional Kinship Statistical Results

TABLE 8

WebCode	Additional Statistical Results
3Q978Z	No conclusion could be made as to whether the alleged grandmother (profile A) is the biological grandparent of the granddaughter (profile B) or not.
4RXU3Z	This statistic was calculated only using the Identifiler loci
8MWRRW	A: 15,17.3, B: 15,16, Locus: D1S1656, Formula: (1+4p)/8p, Allele: p=15, Frequency: 0.1377, PI: 1.4077. A: 22,23, B: 17,24, Locus: D2S1338, Formula: 1/2, Frequency: 0.5000, PI: 0.5000. A: 13,14, B: 10,13, Locus: D2S441, Formula: (1+4p)/8p, Allele: p=13, Frequency: 0.0233, PI: 5.8636. A: 15,18, B: 14,15, Locus: D3S1358, Formula: (1+4p)/8p, Allele: p=15, Frequency: 0.3220, PI: 0.8882. A: 11,13, B: 7,11, Locus: D5S818, Formula: (1+4p)/8p, Allele: p=11, Frequency: 0.3898, PI: 0.8207. A: 10,11, B: 10,11, Locus: D7S820, Formula: (p+q+4pq)/8pq, Allele: p=10,q=11, Frequency: 0.3072, 0.2775, PI: 1.3573. A: 10,13, B: 10,12, Locus: D8S1179, Formula: (1+4p)/8p, Allele: p=10, Frequency: 0.0932, PI: 1.8409. A: 12,17, B: 14,16, Locus: D10S1248, Formula: 1/2, Frequency: 0.5000, PI: 0.5000. A: 18, B: 18,22, Locus: D12S391, Formula: (1+2p)/4p, Allele: p=18, Frequency: 0.1780, PI: 1.9048. A: 11,12, B: 11,12, Locus: D13S317, Formula: (p+q+4pq)/8pq, Allele: p=11, q=12, Frequency: 0.2182, 0.2352, PI: 1.6043. A: 9,13, B: 13,15, Locus: D16S539, Formula: (1+4p)/8p, Allele: p=13, Frequency: 0.1335, PI: 1.4365. A: 15,18, B: 12,13, Locus: D18S51, Formula: 1/2, Frequency: 0.5000, PI: 0.5000. A: 14,15, B: 13,15.2, Locus: D19S433, Formula: 1/2, Frequency: 0.5000, PI: 0.5000. A: 29,30.2, B: 29,30, Locus: D21S11, Formula: (1+4p)/8p, Allele: p=29, Frequency: 0.2076, PI: 1.1020. A: 11,15, B: 11, Locus: D22S1045, Formula: (1+2p)/4p, Allele: p=11, Frequency: 0.0636, PI: 4.4333. A: 10,11, B: 11,12, Locus: CSF1PO, Formula: (1+4p)/8p, Allele: p=11, Frequency: 0.2797, PI: 0.9470. A: 20, B: 22,23, Locus: FGA, Formula: 1/2, Frequency: 0.5000, PI: 0.5000. A: 9,12, B: 11,12, Locus: Penta D, Formula: (1+4p)/8p, Allele: p=12, Frequency: 0.1631, PI: 1.2662. A: 12,13, B: 13,19, Locus: Penta E, Formula: (1+4p)/8p, Allele: p=13, Frequency: 0.0932, PI: 1.8409. A: 29.2,30.2, B: 18,29.2, Locus: SE33, Formula: (1+4p)/8p, Allele: p=29.2, Frequency: 0.0614, PI: 2.5345. A: 7,8, B: 6,8, Locus: TH01, Formula: (1+4p)/8p, Allele: p=8, Frequency: 0.0911, PI: 1.8721. A: 8,11, B: 8,10, Locus: TPOX, Formula: (1+4p)/8p, Allele: p=8, Frequency: 0.4852, PI: 0.7576. A: 16, B: 15,17, Locus: vWA, Formula: 1/2, Frequency: 0.5000, PI: 0.5000. Cumulative LR = 39.9745. Probability of Grandparent/Grandchild Relationship = 97.5595%.
8NRBTX	Used the 15 loci for identifiler (performed at this lab), using the genotypes on this page.
DPHMVP	Kinship (non-parentage): A: 15,17.3, B: 15,16, STR Locus: D1S1656, Formula: (1+4p)/8p, Allele: p=15, Given frequency: 0.1377, PI 1.4077. A: 22,23, B: 17,24, STR Locus: D2S1338, Formula: 1/2, PI: 0.5000. A: 13,14, B: 10,13, STR Locus: D2S441, Formula: (1+4q)/8q, Allele: q=13, Given frequency: 0.0233, PI: 5.8636. A: 15,18, B: 14,15, STR Locus: D3S1358, Formula: (1+4q)/8q, Allele: q=15, Given frequency: 0.3220, PI: 0.8882. A: 11,13, B: 7,11, Locus: D5S818, Formula: (1+4t)/8t, Allele: t=11, Given frequency: 0.3898, PI: 0.8207. A: 10,11, B: 10,11, STR Locus: D7S820, Formula: (p+q+4pq)/8pq, Allele: p=10, q=11, Given frequency: 0.3072, 0.2775, PI: 1.3573. A: 10,13, B: 10,12, STR Locus: D8S1179, Formula: (1+4p)/8p, Allele: p=10, Given frequency: 0.0932, PI: 1.8409. A: 12,17, B: 14,16, STR Locus: D10S1248, Formula: 1/2, PI: 0.5000. A: 18,18, B: 18,22, STR Locus: D12S391, Formula: (1+2p)/4p, Allele: p=18, Given frequency: 0.1780, PI: 1.9048. A: 11,12, B: 11,12, STR Locus: D13S317, Formula: (p+q+4pq)/8pq, Allele: p=11, q=12, Given frequency: 0.2182, 0.2352, PI: 1.6043. A: 9,13, B: 13,15, STR Locus: D16S539, Formula: (1+4t)/8t, Allele: t=13, Given frequency: 0.1335, PI: 1.4365. A: 15,18, B: 12,13, STR Locus: D18S51, Formula: 1/2, PI: 0.5000. A: 14,15, B: 13,15.2, STR Locus: D19S433, Formula: 1/2, PI: 0.5000. A: 29,30.2, B: 29,30, STR Locus: D21S11, Formula: (1+4p)/8p, Allele: p=29, Given frequency: 0.2076, PI: 1.1020. A: 11,15, B: 11,11, STR Locus: D22S1045, Formula: (1+2q)/4q, Allele: q=11, Given frequency: 0.0636, PI: 4.4333. A: 10,11, B: 11,12, STR Locus: CSF1PO, Formula: (1+4q)/8q, Allele: q=11, Given frequency: 0.2797, PI: 0.9470. A: 20,20, B: 22,23, STR Locus: FGA, Formula: 1/2, PI: 0.5000. A: 9,12, B: 11,12, STR Locus: Penta D, Formula: (1+4s)/8s, Allele: s=12, Given frequency: 0.1631, PI: 1.2662. A: 12,13, B: 13,19, STR Locus: Penta E, Formula: (1+4q)/8q, Allele: q=13, Given

**WebCode****Additional Statistical Results**

frequency: 0.0932, PI: 1.8409. A: 29,2,30,2, B: 18,29,2, STR Locus: SE33, Formula:  $(1+4t)/8t$ , Allele:  $t=29,2$ , Given frequency: 0.0614, PI: 2.5345. A: 7,8, B: 6,8, STR Locus: TH01, Formula:  $(1+4r)/8r$ , Allele:  $r=8$ , Given frequency: 0.0911, PI: 1.8721. A: 8,11, B: 8,10, STR Locus: TPOX, Formula:  $(1+4p)/8p$ , Allele:  $p=8$ , Given frequency: 0.4852, PI: 0.7576. A: 16, B: 15,17, STR Locus: vWA, Formula:  $1/2$ , PI: 0.5000. Cumulative LR = 39.9745. Probability of Grandparent/Grandchild Relationship = 97.5595%.

- ETC4KP The profiles obtained from Profile A and B are 31.9 more likely if A and B are related as grandmother and granddaughter than if they are no related. According to [Laboratory] policies, kinship indexes below 1,000 are considered inconclusive. Based on the provided profiles and the obtained kinship index, the result is inconclusive.
- FK22YN Profile A (Grandmother) and Profile B (Granddaughter) are 13.09 times more likely to be Grandparent/Grandchild as compared to an untested, unrelated person of the Hispanic population. The two people tested are likely to be biologically related as Grandparent/Grandchild.
- JG6KBJ STR Locus: D1S1656, Formula:  $(1+4p)/8p$ , Legend:  $p = 15$ , PI: 1.4077, Given Frequencies:  $p = 0.1377$ . STR Locus: D2S1338, Formula:  $1/2$ , PI: 0.5000. STR Locus: D2S441, Formula:  $(1+4q)/8q$ , Legend:  $q = 13$ , PI: 5.8636, Given Frequencies:  $q = 0.0233$ . STR Locus: D3S1358, Formula:  $(1+4q)/8q$ , Legend:  $q = 15$ , PI: 0.8882, Given Frequencies:  $s = 0.1510$ . STR Locus: D5S818, Formula:  $(1+4t)/8t$ , Legend:  $t = 11$ , PI: 0.8207, Given Frequencies:  $t = 0.3898$ . STR Locus: D7S820, Formula:  $(p+q+4pq)/8pq$ , Legend:  $p = 10$   $q = 11$ , PI: 1.3573, Given Frequencies:  $p = 0.3072$ ,  $q = 0.2775$ . STR Locus: D8S1179, Formula:  $(1+4p)/8p$ , Legend:  $p = 10$ , PI: 1.8409, Given Frequencies:  $p = 0.0932$ . STR Locus: D10S1248, Formula:  $1/2$ , PI: 0.5000. STR Locus: D12S391, Formula:  $(1+2p)/4p$ , Legend:  $p = 18$ , PI: 1.9048, Given Frequencies:  $p = 0.1780$ . STR Locus: D13S317, Formula:  $(p+q+4pq)/8pq$ , Legend:  $p = 11$ ,  $q = 12$ , PI: 1.6043, Given Frequencies:  $p = 0.2182$ ,  $q = 0.2352$ . STR Locus: D16S539, Formula:  $(1+4t)/8t$ , Legend:  $t = 13$ , PI: 1.4365, Given Frequencies:  $t = 0.1335$ . STR Locus: D18S51, Formula:  $1/2$ , PI: 0.5000. STR Locus: D19S433, Formula:  $1/2$ , PI: 0.5000. STR Locus: D21S11, Formula:  $(1+4p)/8p$ , Legend:  $p = 29$ , PI: 1.1020, Given Frequencies:  $p = 0.2076$ . STR Locus: D22S1045, Formula:  $(1+2p)/4p$ , Legend:  $p = 11$ , PI: 4.4333, Given Frequencies:  $p = 0.0636$ . STR Locus: CSF1PO, Formula:  $(1+4q)/8q$ , Legend:  $q = 11$ , PI: 0.9470, Given Frequencies:  $q = 0.2797$ . STR Results: FGA, Formula:  $1/2$ , PI: 0.5000. STR Locus: Penta D, Formula:  $(1+4q)/8q$ , Legend:  $q = 12$ , PI: 1.2662, Given Frequencies:  $q = 0.1631$ . STR Results: Penta E, Formula:  $(1+4q)/8q$ , Legend:  $q = 13$ , PI: 1.8409, Given Frequencies:  $q = 0.0932$ . STR Locus: SE33, Formula:  $(1+4q)/8q$ , Legend:  $q = 29,2$ , PI: 2.5345, Given Frequencies:  $q = 0.0614$ . STR Locus: TH01, Formula:  $(1+4r)/8r$ , Legend:  $r = 8$ , PI: 1.8721, Given Frequencies:  $r = 0.0911$ . STR Locus: TPOX, Formula:  $(1+4p)/8p$ , Legend:  $p = 8$ , PI: 0.7576, Given Frequencies:  $p = 0.4852$ . STR Locus: vWA, Formula:  $1/2$ , PI: 0.5000. Cumulative LR: 39.97454. Probability of grandmother/granddaughter relationship 97.55946033.
- LFNABH When making the comparison between the genetic profile of the Maternal Grandmother and Granddaughter an Kinship Index 39,9954 and Probability of Relationship 97,5607%. Given these results are requested to complete the two genetic profiles with more DNA STR Nuclear Maternal Grandmother and Granddaughter and further analysis of mitochondrial DNA to complete the genetic evidence.
- M8RUYJ The LR (Kinship Index) is 39.97: greater than 1. Assuming a 1:1 prior, we get the Probability of kinship of 97.56%.
- N8MW4D We could use more allelic markers. We could use X chromosome haplotype. We could use Mitochondrial DNA. All of them in order to support the obtained results.
- NMVN7J To complement the analysis, it is required to include uniparental markers
- PLJ9CH From the kinship index, a likelihood that yielded a result of 97.56205624% was calculated. This indicates that is 97.56205624% more likely to exist a family relationship given the genotypes found in the genetic study, as long as it is assumed an apriori value of (0.5). Since the calculated values do not allow obtain a definitive exclusion or reach a conclusive likelihood value, it is suggested to do the following additional studies: 1) Increase the number of autosomic markers. 2) Implement non autosomic inheritance studies like X sexual chromosome and mitochondrial DNA to study maternal inheritance. (The kinship index calculation was made the Familias 3.1.8 software),

**WebCode****Additional Statistical Results**

Q26B8C	Grandparent/Grandchild tests not performed by our laboratory.
Q3ZTAD	Our Laboratory currently looks at 15 loci with the Identifiler Kit. Therefore, all loci provided was not used for statistics.
VRQPC6	According to the kinship index obtained (39,99546484) there are a Probability of Relationship of 97,5607% (Grandmother-Granddaughter), however to strengthen the genetic evidence It is necessary to complement these results analyzing lineage Markers in this case Mitochondrial DNA and analyzing more autosomal STR loci commercially available.
VTY3U8	No conclusion could be made as to whether the alleged Grandmother (Profile A) is the biological Grandparent of the Granddaughter (Profile B) or not.
WECAH6	For the calculation of the kinship index we used the NIST-Hispanics database. The kinship index (9.01681432) is too low to draw any relationship conclusions.



# Additional Comments

TABLE 9

WebCode	Additional Comments
3Q978Z	The results are reported as no conclusion since the minimum calculated index of less than 99 (prior odds = 0.25) is reported as such according to the standard procedures of this laboratory. The local/state database was used for calculation purposes and the most conservative likelihood ratio was used (Asian). The Identifiler Plus loci set was considered for the above likelihood ratio calculation (KI).
4C7W26	This laboratory does not perform non-parentage testing on the scenario outlined in Part III [Kinship section] of this Collaborative Test.
86QM2Y	Item 3 can be excluded as being the biological father of Item 2 based on the DNA results at eleven of the fifteen STR loci tested. This laboratory does not report statistics for exclusions.
8MWRRW	1. Item 1, Item 2 and Item 3 were extracted using in-situ method and amplified using AmpFISTR Direct Kit. 2. Item 3 was amplified using Yfiler Kit. 3. Electrophoresis were carried out using Applied Biosystem 3130XL Genetic Analyzer. 4. Reagent blank, positive control and negative control were carried out along with the analysis. 5. The statistical formula are all derived by DNA View Statistical Software and calculated using Excel.
8NRBTX	It was observed on the online version for Part III (kinship, non parentage), that person A's [Grandmother] genotype at D21S11 differs from that on the paper copy.
DPHMVP	1. Item 1, Item 2 and Item 3 were extracted using in-situ method and amplified using Identifiler Direct in the 9700 thermal cycler. 2. Item 3 was amplified using Yfiler Kit in the 9700 thermal cycler. 3. All electrophoresis process were carried out by Genetic Analyzer 3130xl. 4. Reagent blank, positive control and negative control were carried out along with the analysis and all gave the intended results. 5. The statistical formula are all derived by DNA View Statistical Software and calculated using Excel.
JFY3CN	Based on the DNA results, Item 3 can be excluded as being the biological father of Item 2 at eleven of the fifteen STR loci tested. This laboratory does not report the combined paternity index or probability[sic] of paternity for exclusions.
JG6KBJ	Item 1, Item 2 and Item 3 were extracted using in-situ method and amplified using AmpFISTR Identifiler Direct and Yfiler PCR Kit. The electrophoresis were carried out on Genetic Analyzer 3130xl. Reagent Blank, Positive Control and Negative Control carried out along with the analysis. The statistical formulation were derived from the DNA View software, and calculated using Excel and checked manually.
PLJ9CH	Part II Conclusion: DNA Paternity Statistics. According to the genetic systems evaluated in the study case, we can observed that: the item 3 don't have the OPA (obligatory pattern allele) that should have the biological father for the child (Item 2) in eighteen (18) genetic markers analyzed: D8S1179, D21S11, D7S820, CSF1PO, D16S539, D2S1338, D19S433, vWA, TPOX, D18S51, FGA, Penta_D, SE33, D1S1656, D12S391, FESFPS, F13A01 and Penta_C.
VTY3U8	The Identifiler Plus® STR Amplification Kit loci were considered for the above likelihood ratio calculation. The Local/State Database frequencies were used for the calculation and the most conservative likelihood ratio observed was considered and reported. The result is reported as No conclusion based on the minimum calculated index of <99 using a prior odds of 0.25. This is reported as such according to the Laboratory's Standard Operating Procedure based on Kinship Analysis Reporting.
YYU2V8	Population database used was published in: (2007) Eckhoff, c.et al. "Population data from sub-populations of [Location in Country] for 15 Autosomal short tandem repeats (STR) loci" Forensic Sci. Int. 171: 237-49.

# Appendix: Data Sheet

Collaborative Testing Services ~ Forensic Testing Program

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## Test No. 15-5872: DNA Parentage

DATA MUST BE RECEIVED BY October 13, 2015 TO BE INCLUDED IN THE REPORT

Participant Code:

WebCode:

### Accreditation Release Statement

CTS submits external proficiency test data directly to ASCLD/LAB and ANAB. 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 and/or ANAB.  
(Accreditation Release section on the last page must be completed and submitted.)

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

### Scenario:

A standard paternity trio case has been presented to your laboratory. Blood standards have been collected from the mother, daughter and alleged father. Your laboratory is tasked with examining the blood standards and comparing the DNA profiles.

### Items Submitted (Sample Pack DNP3):

Item 1: Blood Sample from the Known Mother

Item 2: Blood Sample from the Known Daughter

Item 3: Blood Sample from the Alleged Father (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")

\* 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

### Online Data Entry

Visit [www.cts-portal.com](http://www.cts-portal.com) to enter and/or upload your proficiency test results online. If you have any questions please do not hesitate to contact CTS.

**Please return all pages of this data sheet.**

Page 1 of 8

**Part I: DNA ANALYSIS FOR ITEM 1**

<p><b>STR Amplification Kit Used:</b> 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.).</p>	
<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)

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

**Part I: DNA ANALYSIS FOR ITEM 2**

<b>STR Amplification Kit Used:</b>		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 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"/>

**ADDITIONAL DNA RESULTS FOR ITEM 2**

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

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

**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.**

ITEM 3		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"/>	<input type="text"/>
PI	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
		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"/>	<input type="text"/>
PI	<input type="text"/>	<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"/>	<input type="text"/>
PI	<input type="text"/>	<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 _____
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ITEM 3		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"/>
		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 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 Alleged parent (Item 3) could not be excluded as the biological parent of the child (Item 2).
- The Alleged parent (Item 3) is excluded as a possible biological parent of the child (Item 2).
- Inconclusive as to whether the Alleged parent (Item 3) could be the biological parent of the child (Item 2). (Please document the reason in the Additional Comments section of this data sheet.)

**Part III: KINSHIP DNA STATISTICS (NON-PARENTAGE)**

To be completed if applicable to your laboratory.

The two DNA profiles below are presented as potential Maternal Grandmother (Profile A)/Granddaughter (Profile B) relationship. Compare these profiles to answer the questions with the population database used in previous sections of the data sheet given that the ethnicity for this kinship scenerio is Hispanic.

	<b>D1S1656</b>	<b>D2S1338</b>	<b>D2S441</b>	<b>D3S1358</b>	<b>D5S818</b>	<b>D7S820</b>
<b>Profile A</b>	15,17.3	22,23	13,14	15,18	11,13	10,11
<b>Profile B</b>	15,16	17,24	10,13	14,15	7,11	10,11

	<b>D8S1179</b>	<b>D10S1248</b>	<b>D12S391</b>	<b>D13S317</b>	<b>D16S539</b>	<b>D18S51</b>
<b>Profile A</b>	10,13	12,17	18,18	11,12	9,13	15,18
<b>Profile B</b>	10,12	14,16	18,22	11,12	13,15	12,13

	<b>D19S433</b>	<b>D21S11</b>	<b>D22S1045</b>	<b>Amelogenin</b>	<b>CSF1PO</b>	<b>FGA</b>
<b>Profile A</b>	14,15	29,30.2	11,15	X,X	10,11	20,20
<b>Profile B</b>	13,15.2	29,30	11,11	X,X	11,12	22,23

	<b>Penta D</b>	<b>Penta E</b>	<b>SE33</b>	<b>TH01</b>	<b>TPOX</b>	<b>vWA</b>
<b>Profile A</b>	9,12	12,13	29.2,30.2	7,8	8,11	16,16
<b>Profile B</b>	11,12	13,19	18,29.2	6,8	8,10	15,17

1) Evaluate profiles A and B and record the kinship index. \_\_\_\_\_

2) Is the claim of a grandparent/grandchild relationship supported by the genetic evidence?

\_\_\_\_\_

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

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**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.*

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<b>Return Instructions:</b> Data must be received via online data entry, fax (please include a cover sheet), or mail by <i>October 13, 2015</i> to be included in the report.		ONLINE DATA ENTRY: <a href="http://www.cts-portal.com">www.cts-portal.com</a>
QUESTION?		FAX: +1-571-434-1937
TEL: +1-571-434-1925 (8 am - 4:30 pm EST)		MAIL: Collaborative Testing Services, Inc.
EMAIL: <a href="mailto:forensics@cts-interlab.com">forensics@cts-interlab.com</a>		P.O. Box 650820
<a href="http://www.ctsforensics.com">www.ctsforensics.com</a>		Sterling, VA 20165-0820 USA

**Please return all pages of this data sheet.** Page 7 of 8



# RELEASE OF DATA TO ACCREDITATION BODIES

The following Accreditation Releases will apply only to:

Participant Code:

WebCode:

for Test No. **15-5872: DNA Parentage**

This release page must be completed and received by **October 13, 2015** to have this participant's submitted data included in the reports forwarded to the respective Accreditation Bodies.

### ASCLD/LAB RELEASE

If your lab has been accredited by ASCLD/LAB and you are submitting this data as part of their external proficiency test requirements, have the laboratory's designated individual complete the following. **The information below must be completed in its entirety for the results to be submitted to ASCLD/LAB.**

ASCLD/LAB Legacy Certificate \_\_\_\_\_ ASCLD/LAB International Certificate No. \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_\_

Laboratory Name \_\_\_\_\_

Location (City/State) \_\_\_\_\_

### ANAB RELEASE

If your laboratory maintains its accreditation through ANAB, please complete the following form in its entirety to have your results forwarded.

ANAB Certificate No. \_\_\_\_\_

Signature and Title \_\_\_\_\_ Date \_\_\_\_\_

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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