



Collaborative Testing Services, Inc.

FORENSIC TESTING PROGRAM

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Manufacturer's Information

Test No. 22-5870/5: DNA - Parentage

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

SAMPLE PREPARATION: All stains were prepared from human whole blood which was drawn into EDTA tubes. Item 1 was blood from a female (mother) donor, Item 2 was blood from a male (son) donor, Item 3 was blood from a male donor who was not the biological father of the Item 2 male, and Item 4 was blood from a male donor who was the biological father of the Item 2 male. Each FTA card was spotted with 75uL of blood, while each swab (two swabs per item) was spotted with 100uL of blood. The different items were prepared at separate times and were packaged once they were thoroughly dried. Completed sample sets were stored at -20°C until shipment on February 15th, 2022.

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

KINSHIP EXERCISE: This exercise included allelic results representing a full sibling relationship.

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

Key to Test Substrates

5870 - FTA Microcards

5875 - Swabs

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Manufacturer's Information, continued
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Amelogenin and STR Results						
<i>Results compiled from predistribution laboratories and a consensus of at least 10 participants.</i>						
Item	D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
	D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
	D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
	FGA	Penta D	Penta E	SE33	TH01	TPOX
	vWA	DYS391	DYS570	DYS576	Y Indel	
1	14,18.3	19,20	11,14	16,17	12,12	*
	8,12	12,15	14,15	21,22	8,12	11,12
	12,14	13,14	29,30	15,17	X,X	11,12
	24,24	9,13	11,14	22.2,30.2	6,9	8,8
	15,17	NM	NM	NM	NM	
2	14,18.3	19,20	14,15	16,17	12,13	*
	10,12	10,15	13,14	19,22	8,12	11,14
	14,16	13,14	30,30	16,17	X,Y	11,12
	24,24	9,9	14,16	28.2,30.2	9,9.3	8,11
	15,17	11	17	17	2	
3	16.3,17.3	23,24	11,15	15,17	12,12	*
	8,9	13,13	13,16	20,20	11,11	11,12
	10,19	12,15	30,31	15,16	X,Y	10,13
	20,21	9,12	7,12	19.2,29.2	7,9.3	8,10
	17,18	11	18	17	2	
4	14,15.3	17,20	14,15	16,17	13,13	*
	10,10	10,14	13,14	19,23	12,14	13,14
	16,18	14,17	30,30	16,16	X,Y	10,11
	22,24	9,11	7,16	17,28.2	9.3,9.3	8,11
	15,17	11	17	17	2	

YSTR Results									
<i>Results compiled from predistribution laboratories and a consensus of at least 10 participants.</i>									
Item	DYF387S1	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393
	DYS437	DYS438	DYS439	DYS448	DYS449	DYS456	DYS458	DYS460	DYS481
	DYS518	DYS533	DYS549	DYS570	DYS576	DYS627	DYS635	DYS643	YGATAH4
2	35,38	14	11,14	13	29	*	11	13	13
	14	12	11	19	29	17	17	11	22
	*	12	13	17	17	21	23	10	11
3	36,37	15	13,16	12	29	24	11	11	14
	15	10	11	19	28	14	17	10	23
	38	10	11	18	17	20	24	13	11
4	35,38	14	11,14	13	29	*	11	13	13
	14	12	11	19	29	17	17	11	22
	*	12	*	17	17	21	23	*	11

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

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

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Manufacturer's Information, continued
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Paternity Indices					
<i>Mode Paternity Index results compiled from predistribution laboratories and a consensus of at least 10 participants.</i>					
Item Database					
D1S1656	D2S1338	D2S441	D3S1358	D5S818	D6S1043
D7S820	D8S1179	D10S1248	D12S391	D13S317	D16S539
D18S51	D19S433	D21S11	D22S1045	Amelogenin	CSF1PO
FGA	Penta D	Penta E	SE33	TH01	TPOX
vWA					
4PI - NIST STRBASE					
3.88	1.805	8.389	2.23	7.007	*
3.903	4.878	1.626	4.009	1.28	19.011
3.405	0.811	3.539	2.615	*	0.747
3.723	2.256	9.77	6.561	2.9	1.983
2.569					
4PI - Grand Mean ±3STD Range**					
2.439-4.725	1.442-2.098	4.374-12.904	2.069-2.364	5.111-8.554	*
3.125-4.396	3.844-5.852	1.381-1.835	2.762-5.393	1.148-1.370	10.848-24.208
2.024-5.507	0.758-0.864	2.676-4.810	2.028-3.505	*	0.690-0.837
3.060-4.211	2.011-2.495	6.046-13.338	4.720-8.387	2.482-3.521	1.899-2.061
2.368-2.784					
4PI - FBI Popstats					
3.06	1.669	9.615	2.256	6.622	*
3.453	*	1.485	4.6992	1.216	15.528
4.807	0.795	4.297	3.156	*	0.798
*	2.2563	9.765	7.215	3.284	1.96
2.623					
3PI - Grand Mean ±3STD Range**					
0-0.004	0-0.001	6.067-10.912	1.076-1.149	0-0.002	*
0-0.003	0-0.006	1.395-1.792	0-0.004	0-0.003	0-0.006
0-0.005	0-0.001	1.305-2.477	1.033-1.723	*	0-0.005
0-0.007	1.572-3.125	0-0.001	0-0.011	1.243-1.790	0
1.192-1.376					

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

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

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