



Collaborative Testing Services, Inc.

**FORENSIC TESTING PROGRAM**

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## *Manufacturer's Information*

# **Test No. 20-5870: DNA - Parentage**

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Each sample set was a collection of known blood samples, provided on FTA Micro cards, from three individuals (Items 1-3); a mother, a daughter, and a potential father. 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 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 (75  $\mu$ l) was blood from a female (mother) donor, Item 2 (75  $\mu$ l) was blood from a female (daughter) donor, and Item 3 (75  $\mu$ l) was blood from a male donor who was the biological father of the Item 2 female. 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 18th, 2020.

**SAMPLE SET ASSEMBLY:** For each sample set, all three Items (1-3) 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 sibling relationship.

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

*Manufacturer's Information, continued*  
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<b>Amelogenin and STR Results</b>						
<i>Results compiled from predistribution laboratories and a consensus of at least 10 participants.</i>						
<b>Item</b>	<b>D1S1656</b>	<b>D2S1338</b>	<b>D2S441</b>	<b>D3S1358</b>	<b>D5S818</b>	<b>D6S1043</b>
	<b>D7S820</b>	<b>D8S1179</b>	<b>D10S1248</b>	<b>D12S391</b>	<b>D13S317</b>	<b>D16S539</b>
	<b>D18S51</b>	<b>D19S433</b>	<b>D21S11</b>	<b>D22S1045</b>	<b>Amelogenin</b>	<b>CSF1PO</b>
	<b>FGA</b>	<b>Penta D</b>	<b>Penta E</b>	<b>SE33</b>	<b>TH01</b>	<b>TPOX</b>
	<b>vWA</b>	<b>DYS391</b>	<b>DYS570</b>	<b>DYS576</b>	<b>Y Indel</b>	
1	12,17	20,23	10,14	15,16	12,13	*
	8,14	8,14	13,14	21,23	12,12	11,11
	12,16	12,14	29,29	11,17	X,X	11,12
	21,22	9,14	10,10	18,27.2	9,9.3	8,11
	17,17	NM	NM	NM	NM	
2	12,12	19,23	10,15	15,15	12,12	*
	8,14	8,12	14,15	19,21	12,12	8,11
	15,16	12,15	29,32.2	15,17	X,X	10,12
	22,24	9,13	5,10	17,27.2	9,9.3	8,11
	17,19	NM	NM	NM	NM	
3	12,15.3	17,19	14,15	14,15	12,12	*
	8,10	12,14	13,15	17,19	9,12	8,13
	11,15	14,15	30,32.2	15,16	X,Y	10,10
	20,24	13,14	5,11	17,29.2	7,9.3	8,8
	17,19	10	18	16	2	

<b>YSTR Results</b>									
<i>Results compiled from predistribution laboratories and a consensus of at least 10 participants.</i>									
<b>Item</b>	<b>DYF387S1</b>	<b>DYS19</b>	<b>DYS385</b>	<b>DYS389-I</b>	<b>DYS389-II</b>	<b>DYS390</b>	<b>DYS391</b>	<b>DYS392</b>	<b>DYS393</b>
	<b>DYS437</b>	<b>DYS438</b>	<b>DYS439</b>	<b>DYS448</b>	<b>DYS449</b>	<b>DYS456</b>	<b>DYS458</b>	<b>DYS460</b>	<b>DYS481</b>
	<b>DYS518</b>	<b>DYS533</b>	<b>DYS549</b>	<b>DYS570</b>	<b>DYS576</b>	<b>DYS627</b>	<b>DYS635</b>	<b>DYS643</b>	<b>YGATAH4</b>
3	*	15	14,16	12	28	24	10	11	12
	16	9	11	19	*	13	17	*	22
	*	12	*	18	16	*	21	*	11

\* Results were not received from a minimum of 10 participants for the loci indicated.  
 NM - Non-Male profile, YSTR results not expected.

*Manufacturer's Information, continued*  
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<b>Paternity Indices</b>					
<i>Median Paternity Index results compiled from predistribution laboratories and a consensus of at least 10 participants.</i>					
<b>Item Database</b>					
<b>D1S1656</b>	<b>D2S1338</b>	<b>D2S441</b>	<b>D3S1358</b>	<b>D5S818</b>	<b>D6S1043</b>
<b>D7S820</b>	<b>D8S1179</b>	<b>D10S1248</b>	<b>D12S391</b>	<b>D13S317</b>	<b>D16S539</b>
<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>3PI - FBI PopStats</b>					
4.2094	3.3113	9.6127	2.0201	2.8425	*
2.8441	3.54	2.8826	*	1.618	25.253
3.7397	3.4819	4.5914	1.374	-	3.9604
3.6075	*	*	6.9638	1.0632	1.2469
6.12					
<b>3PI - Grand Mean <math>\pm</math>3STD Range**</b>					
3.3330-5.1989	2.5578-5.2092	6.2341-11.4697	1.0912-2.5870	2.2803-3.0429	2.9816-3.6062
2.1003-4.1448	2.3633-3.9575	2.1762-3.0813	2.9460-5.3054	1.4303-2.1351	12.7413-41.0780
2.0649-4.3098	2.6843-3.9006	3.7532-6.7873	1.2370-1.7659	-	3.4414-5.2183
3.2685-4.0721	1.7079-3.4825	5.6428-7.4068	6.0387-9.2242	0.9393-1.2208	1.1588-1.4044
3.2933-7.0713					
<b>3PI - NIST STRBASE</b>					
4.2992	4.1494	8.3893	1.8321	2.5786	*
3.3132	2.9833	2.5419	4.0096	1.8608	27.7777
2.9343	3.1948	5.5555	1.5562	-	4.5413
3.723	2.5419	6.5616	8.0256	1.0776	1.287
4.8123					

\* 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 FBI PopStats and NIST STRBASE 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.

*The information presented here is that received from the sample manufacturer. It presents details of the design specification for the test samples and/or details of how they were prepared. This information does not necessarily represent the answers that should or could be obtained from an examination of the sample. Final interpretation of the results should be deferred until the summary report is available.*