



Collaborative Testing Services, Inc.

FORENSIC TESTING PROGRAM

P.O. Box 650820
Sterling, VA 20165-0820
e-mail: forensics@cts-interlab.com
Telephone: +1-571-434-1925
Web site: www.cts-forensics.com

Manufacturer's Information

Test No. 23-5872/7: DNA - Parentage

Each sample set consisted of known blood samples from four individuals (Items 1-4), a mother, a son, and two potential fathers, provided on either FTA™ Micro Cards or swabs. 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 from two individuals for comparison. Participants were requested to determine if an Uncle/Nephew relationship claim was supported following the review of these profiles.

SAMPLE PREPARATION: All items were prepared from human whole blood which was drawn into EDTA tubes. Each FTA™ Micro Card was spotted with 75 µL of blood, while each swab (two swabs per item) was spotted with 100 µL of blood. Item 1 was created from a female (mother) donor. Item 2 was created from a male (son) donor. Item 3 was created from a male donor who was not the biological father of the Item 2 male, and Item 4 was created from a male donor who was the biological father of the Item 2 male. The items were prepared at separate times and were packaged once they were thoroughly dried. Completed sample sets were stored at -20°C until shipment on August 21, 2023.

SAMPLE SET ASSEMBLY: For each sample set, all Items (1-4) were packaged into separate envelopes and then placed together in a pre-labeled sample set envelope and sealed. The sealed sample set 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 Uncle/Nephew relationship.

VERIFICATION: All predistribution laboratories confirmed the manufacturer's expected associations. Consistent allelic results and associations were reported across both substrates.

Key to Test Substrates

5872 - FTA™ Micro Cards

5877 - Swabs

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.

Manufacturer's Information, continued
Test No. 23-5872/7: DNA - Parentage

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	11,11	20,23	11,15	15,15	13,13	18,19
	8,9	8,10	14,14	20,23	8,12	11,11
	15,18	14,15.2	29,31	11,16	X,X	11,12
	19,23	12,12	13,14	21,27.2	6,8	8,8
	15,17	NM	NM	NM	NM	
2	11,12	20,25	11,11	15,15	12,13	11,19
	7,8	8,12	14,15	17,23	12,13	11,11
	14,18	14,15.2	31,31	12,16	X,Y	11,14
	19,23	10,12	8,13	15,21	8,9.3	8,8
	17,17	10	21	16	2	
3	16.3,17.3	20,24	12,14	14,17	11,11	12,14
	9,12	13,13	13,13	17,18	8,8	11,11
	16,18	13,14	28,32.2	16,17	X,Y	10,11
	21,21	9,13	13,13	19,28.2	7,7	8,11
	15,17	11	17	18	2	
4	12,13	17,25	10,11	15,16	12,12	11,20
	7,9	12,13	13,15	17,19.3	8,13	11,11
	14,19	13,14	30,31	12,16	X,Y	12,14
	23,24	10,10	8,17	15,17	9.3,9.3	8,8
	17,19	10	21	16	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	37,38	15	13,14	12	28	22	10	11	13
	16	10	12	20	26	15	16	11	25
	37	11	11	21	16	20	22	12	10
3	35,36	14	12,14	13	29	23	11	13	13
	15	12	12	20	31	16	16	12	22
	40	13	13	17	18	21	24	10	12
4	38,38	15	13,14	12	28	22	10	11	13
	16	10	12	20	26	15	16	11	25
	37	11	11	21	16	20	22	12	10

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

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.

Manufacturer's Information, continued
Test No. 23-5872/7: DNA - Parentage

Paternity Indices					
<i>Mean 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					
3PI - Grand Mean ± 3STD Range**					
0-0.00336	0-0.203	0-0.0913	0-0.11	0-0.368	*
0-0.0184	0-0.405	0-0.0365	0-11.2	0-0.000999	0.247-6.77
0-0.0592	0-6.03	0-0.00341	0-0.00829	-	0-0.0373
0-0.135	0-0.128	0-7.45	0-0.00415	0-0.000886	0.458-1.5
1.01-2.79					
4PI - FBI PopStats					
4.06-4.45	4.63-5.51	1.31-1.78	1.66-2.26	2.37-3.13	*
9.73-40	2.55-4.11	2.22-3.25	3.14-5.74	4.14-4.71	2.8-4.19
1.91-4.4	1.18-1.44	6.8-7.09	25-57.4	-	12.8-66.1
2.19-2.58	*	*	11.4-12.6	2.59-3.7	1.75-1.96
1.71-2					
4PI - Grand Mean ± 3STD Range**					
0-36	1.84-8.42	0.988-2.05	0.294-3.6	0-6.87	*
0-52.7	0-23.8	1.78-3.46	0-13.5	1.54-7.45	0-7.33
0.523-6.71	0-4.04	0-20.8	6.45-68.8	-	11.1-76.4
0-7.49	4.25-13.4	5.16-65.2	0-91.8	0-15.6	1.01-2.85
0.931-2.77					
4PI - NIST-STRBASE					
0-48.7	1.66-8.66	0.811-2.2	0-4.29	0-8.56	*
0-53.2	0-32.8	1.66-3.55	0-18	3.93-4.66	0-8.94
0.126-7.9	0-5.25	0-26.8	5.03-67.9	-	22.6-74.1
0-9.74	3.94-14	5.25-65	0-120	0-8.2	0.763-3.26
0.642-3.06					

* 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. Data values are presented in three significant figures. Data values less than zero are presented as "0."

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.