



## ***Manufacturer's Information*** **Test No. 21-5801: DNA-Mixture**

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Each sample pack consisted of two known bloodstains on clean, white muslin fabric (Items 1 & 2), and two questioned stains; one on clean pink fabric (Item 3) and one on clean, off-white fabric (Item 4). Participants were requested to analyze these items using their existing protocols.

**SAMPLE PREPARATION:** The stains in Items 1, 2, and 4 were prepared using human whole blood which was either drawn into citric acid preservative bags or EDTA tubes. The stain in Item 3 was a mixture prepared from human whole blood and semen. The semen sample was first thawed and mixed 1:1 with TAE buffer, then mixed 1:1 with the blood. Item 1 (50  $\mu$ l) was created using blood from a female donor. Items 2 (50  $\mu$ l) and 4 (50  $\mu$ l) were created using blood from the same male donor. Item 3 (50  $\mu$ l) was created using a 1:1 mixture of blood from the female donor found in Item 1 and semen from a male donor whose known standard was not provided. Stains from different sources were prepared at separate times and were packaged once they were thoroughly dried. Completed sample sets were stored at -20°C until shipment on January 4, 2021 following receipt of predistribution results.

**SAMPLE SET ASSEMBLY:** For each sample set, all four Items (1-4) were packed into separate envelopes and then placed together 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.

**VERIFICATION:** All predistribution laboratories confirmed the manufacturer's expected associations. Consistent allelic results were reported for all STR and YSTR loci.

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**Manufacturer's Information, continued**  
**Test No. 21-5801: DNA-Mixture**

<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	15,16	21,25	11,11	16,16	9,11	*
	11,11	14,15	13,16	17,20	12,12	10,11
	14,20	13,14	29,30	16,18	X,X	10,12
	16.1,23	10,11	8,13	28.2,28.2	8,9.3	8,11
	14,17	NM	NM	NM	NM	
2	15.3,16	25,26	10,15	15,15	11,11	*
	9,11	10,12	13,14	15,17	10,11	10,12
	17,22	14,15	29,29	15,17	X,Y	10,11
	18,21	10,15	10,16	15,27.2	6,8	9,11
	16,17	10	18	17	2	
3-Blood	15,16	21,25	11,11	16,16	9,11	*
	11,11	14,15	13,16	17,20	12,12	10,11
	14,20	13,14	29,30	16,18	X,X	10,12
	16.1,23	10,11	8,13	28.2,28.2	8,9.3	8,11
	14,17	NM	NM	NM	NM	
3-Semen	15,17.3	20,23	10,11.3	15,15	9,11	*
	8,9	12,14	15,16	17,18	12,13	12,13
	17,17	13,14	29,29	11,15	X,Y	10,12
	20,24	9,13	10,11	18,25.2	6,8	8,12
	14,19	11	*	*	2	
4	15.3,16	25,26	10,15	15,15	11,11	*
	9,11	10,12	13,14	15,17	10,11	10,12
	17,22	14,15	29,29	15,17	X,Y	10,11
	18,21	10,15	10,16	15,27.2	6,8	9,11
	16,17	10	18	17	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>
2	36,38	15	11,14	13	29	24	10	11	13
	14	11	12	20	32	17	16	11	26
	43	12	12	18	17	16	23	10	12
3-Semen	37,39	16	14,15	13	31	24	11	11	13
	15	10	12	21	32	15	17	10	30
	40	12	*	18	18	20	23	*	11
4	36,38	15	11,14	13	29	24	10	11	13
	14	11	12	20	32	17	16	11	26
	43	12	12	18	17	16	23	10	12

\* = Results were not received by a minimum of 10 participants for the loci indicated.

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

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