

3H Results

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* Note:

Finger	01	02	03	06	07	08	01+06	02+07	03+08
Description	Right Thumb	Right Index	Right Middle	Left Thumb	Left Index	Left Middle	Right and Left Thumb	Right and Left Index	Right and Left Middle

3H 1K Sample Template Size Distribution

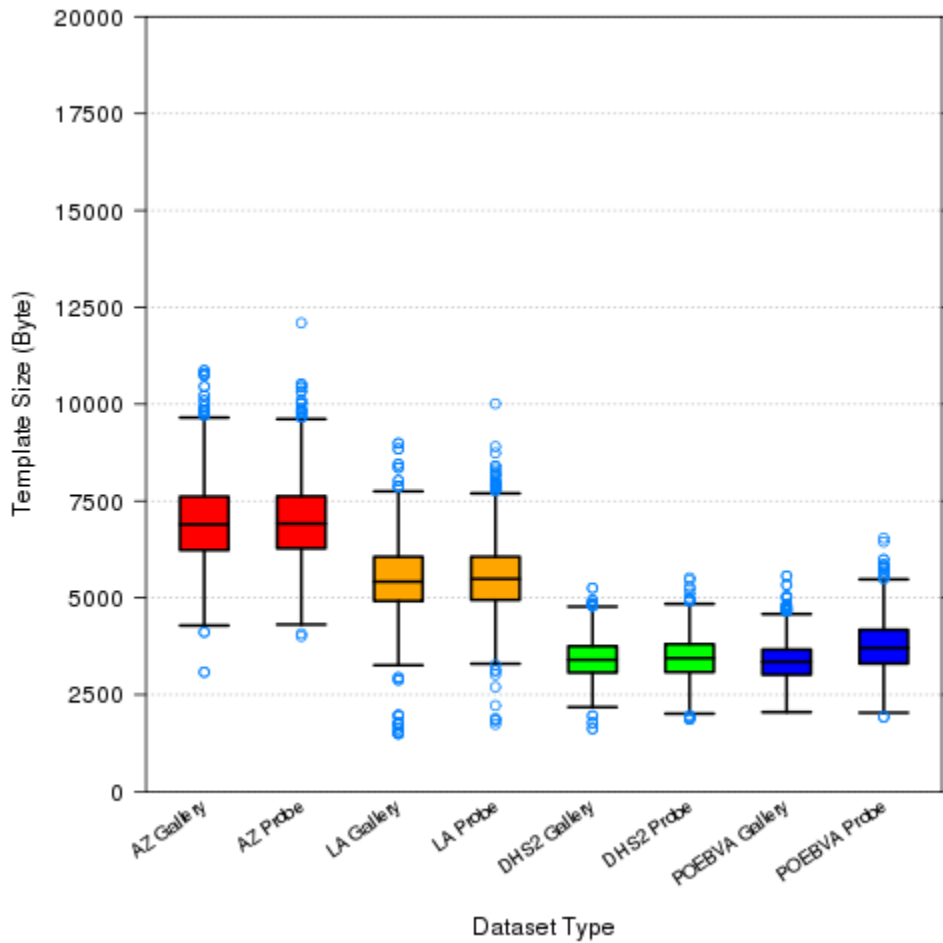


Figure 3H-1

Dataset	AZ	AZ	LA	LA	DHS2	DHS2	POEBVA	POEBVA
Type	Gallery	Probe	Gallery	Probe	Gallery	Probe	Gallery	Probe
Width x Height (pixels)	800x800	800x800	412x1000	400x776	368x368	368x368	500x500	368x368
Maximum	10866	12097	5250	5519	8989	10010	5564	6541
75%	7615	7621	3752	3805	6060	6062	3666	4175
Median	6894	6914	3399	3441	5417	5489	3348	3706
25%	6229	6276	3069	3081	4918	4946	3014	3304
Minimum	3080	4005	1621	1862	1492	1733	2049	1914

Table 3H-1

3H 1K sample Enrollment and Comparison time

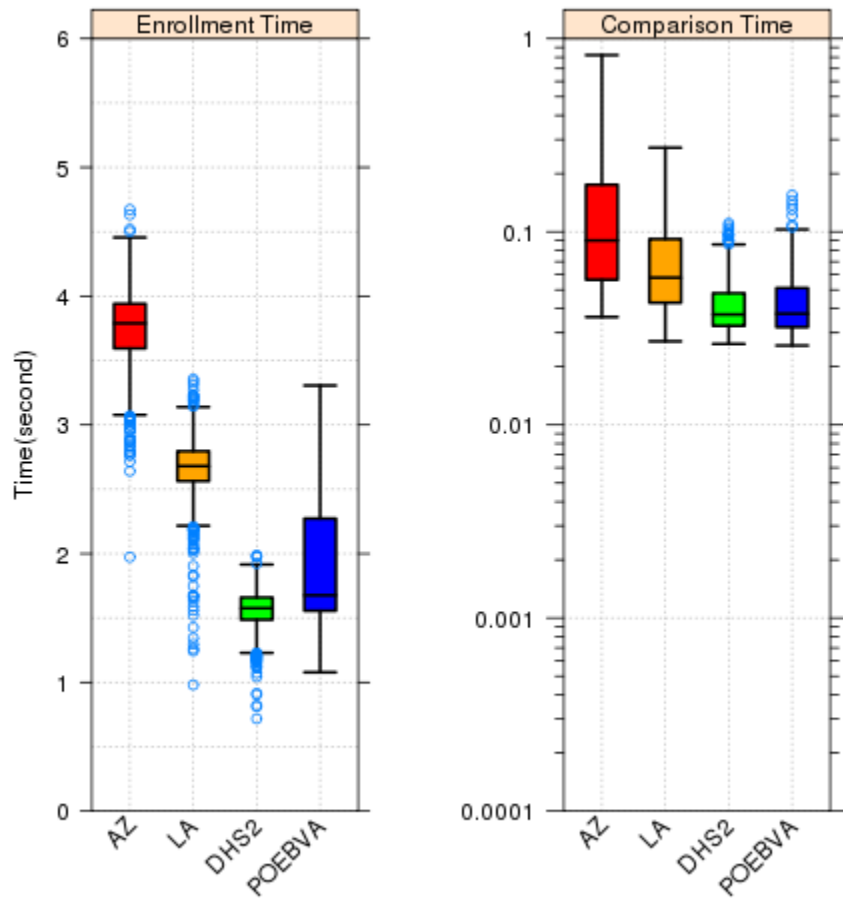


Figure 3H-2

Enrollment Time (second)

Dataset	AZ	LA	DHS2	POEBVA
Maximum	4.6718	3.3544	1.9868	3.3056
75%	3.9406	2.7951	1.6592	2.2723
Median	3.7886	2.6798	1.5762	1.6762
25%	3.5935	2.5628	1.4867	1.5558
Minimum	1.9726	0.9803	0.7180	1.0784

Comparison Time (second)

Dataset	AZ	LA	DHS2	POEBVA
Maximum	0.8213	0.2721	0.1104	0.1547
75%	0.1751	0.0916	0.0481	0.0511
Median	0.0901	0.0578	0.0373	0.0376
25%	0.0564	0.0429	0.0326	0.0320
Minimum	0.0362	0.0271	0.0262	0.0257

Table 3H-2 1K Sample Enrollment and Comparison Time

3H- DET for ALL Datasets (P2P)

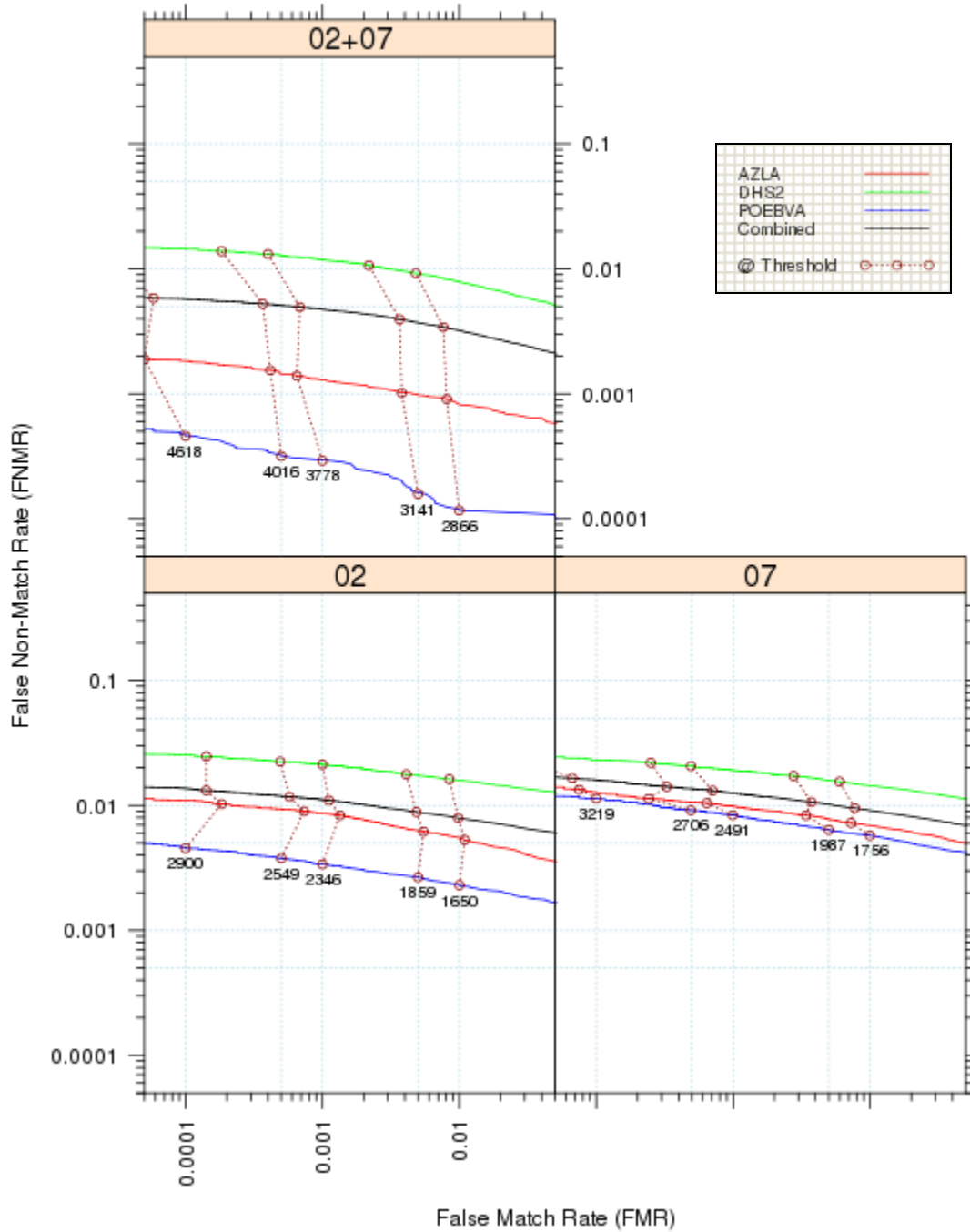


Figure 3H-3

3H- DET for dataset AZLA

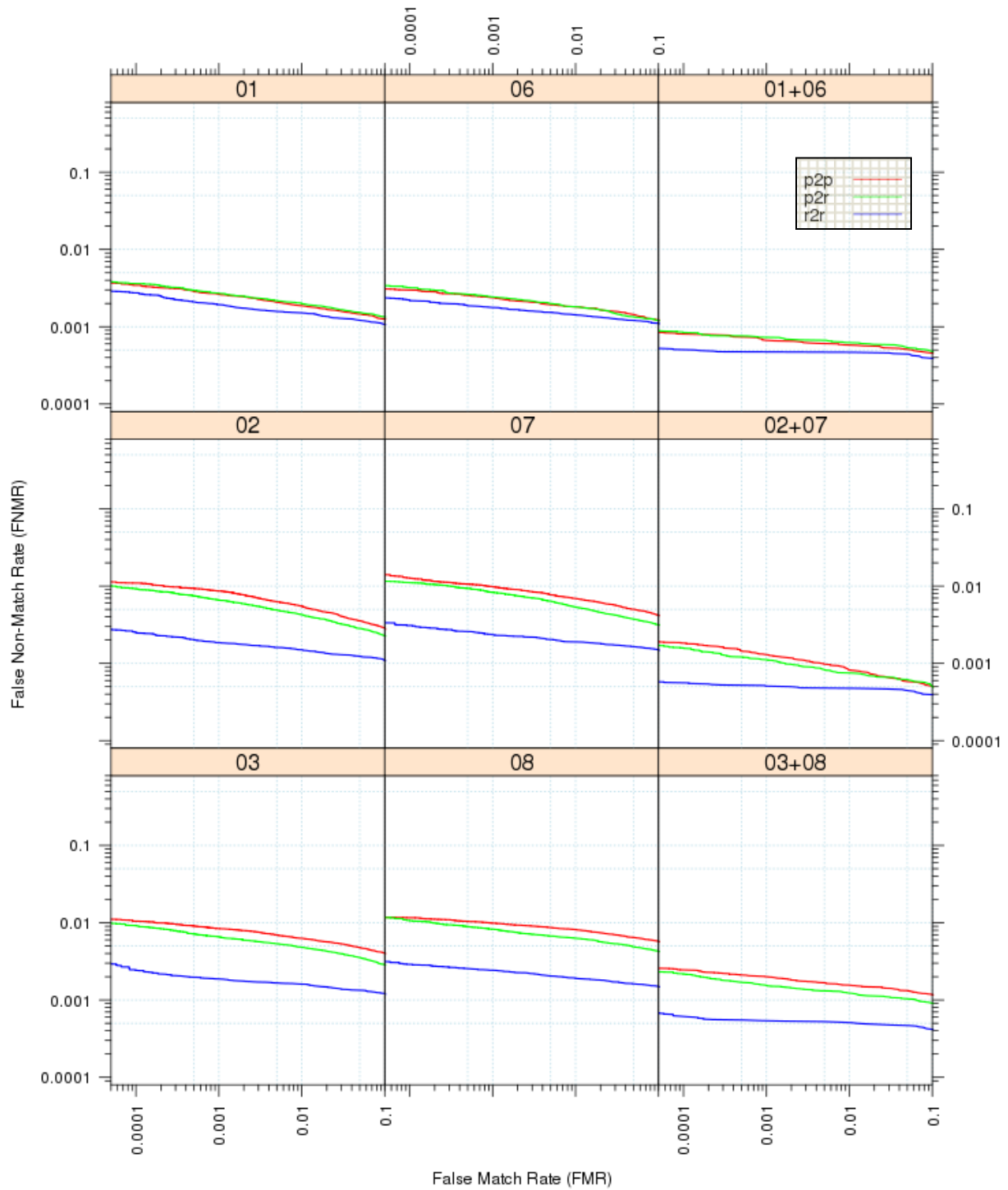


Figure 3H-4

Note: p2p - plain vs. plain; p2r - plain vs. rolled; r2r – rolled vs. rolled.

3H = Morpho

3H EER and FTE

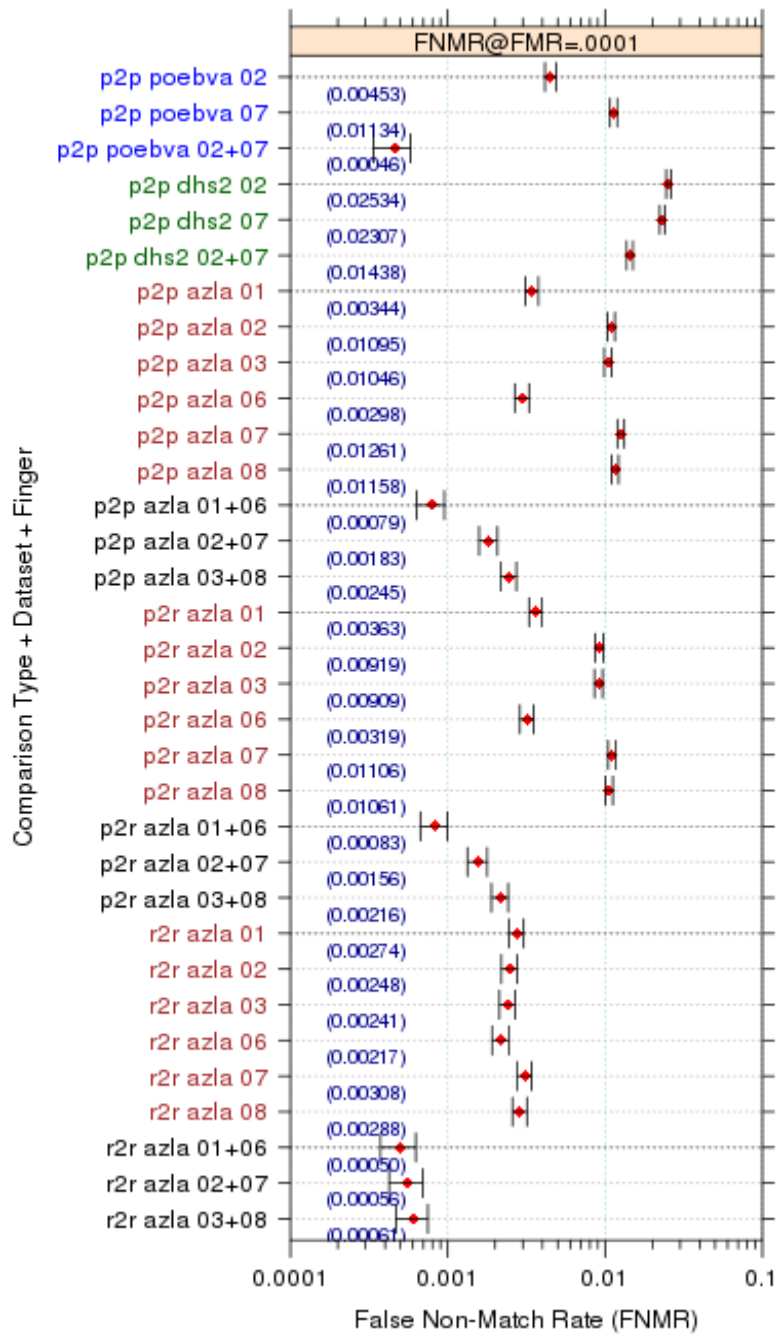


Figure 3H-5

Note: FTE is not presented in Figure 5 due to all the FTE = 0 from Table 3.

3H - FNMRs @ FMR = .0001 and 95% Confidence Intervals

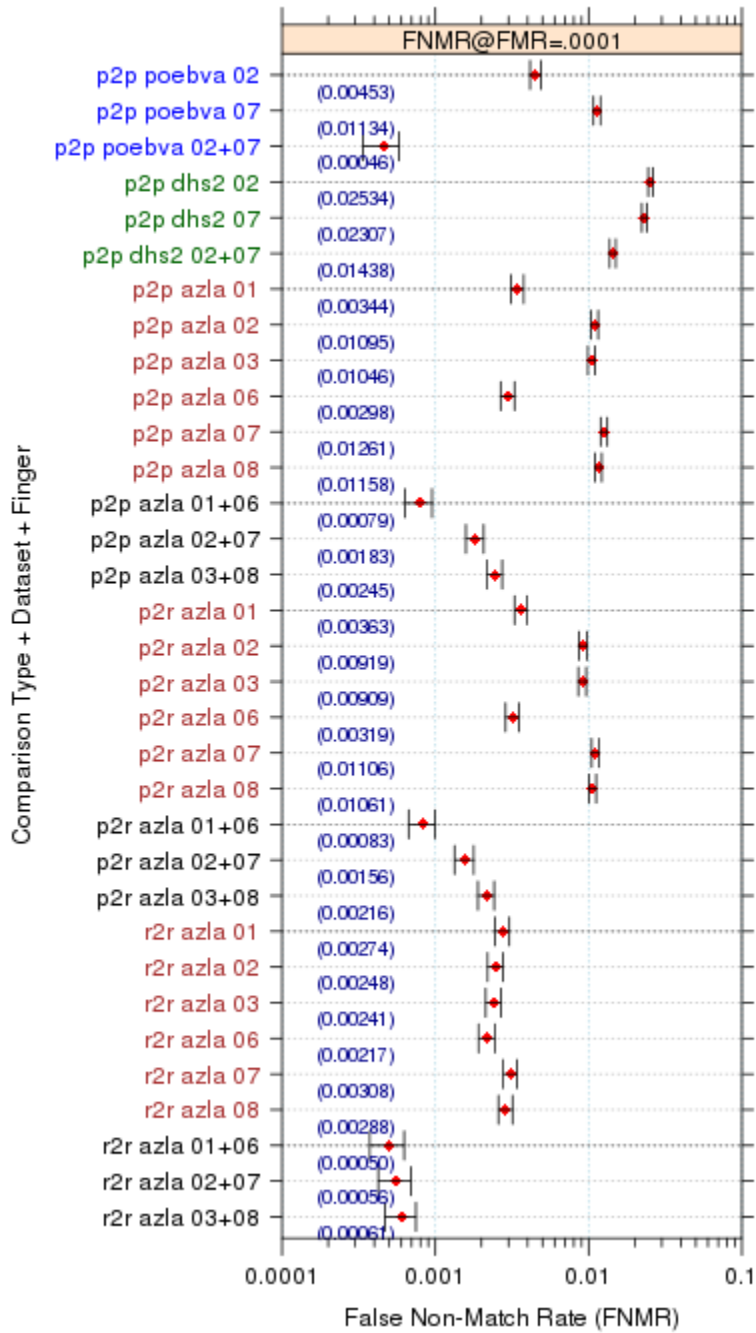


Figure 3H-5

3H- FMRs @ FNMR = (.002, 0.005) and 95% Confidence Intervals



Figure 3H-6

Note: NA – The number couldn't be reliably measured with the current sample size of 120,000.

3H - EER and FTE table

Comparison Type	Dataset	Finger Position	EER	FTE Rate	FTE count
p2p	poebva	02	0.0029	0	0
p2p	poebva	07	0.0061	0	0
p2p	poebva	02+07	0.0004	0	0
p2p	dhs2	02	0.0150	0	0
p2p	dhs2	07	0.0138	0	0
p2p	dhs2	02+07	0.0082	0	0
p2p	azla	01	0.0024	0	0
p2p	azla	02	0.0061	0	0
p2p	azla	03	0.0066	0	0
p2p	azla	06	0.0021	0	0
p2p	azla	07	0.0073	0	0
p2p	azla	08	0.0083	0	0
p2p	azla	01+06	0.0007	0	0
p2p	azla	02+07	0.0012	0	0
p2p	azla	03+08	0.0019	0	0
p2r	azla	01	0.0024	0	0
p2r	azla	02	0.0049	0	0
p2r	azla	03	0.0053	0	0
p2r	azla	06	0.0022	0	0
p2r	azla	07	0.0061	0	0
p2r	azla	08	0.0065	0	0
p2r	azla	01+06	0.0007	0	0
p2r	azla	02+07	0.0011	0	0
p2r	azla	03+08	0.0015	0	0
r2r	azla	01	0.0018	0	0
r2r	azla	02	0.0018	0	0
r2r	azla	03	0.0018	0	0
r2r	azla	06	0.0017	0	0
r2r	azla	07	0.0022	0	0
r2r	azla	08	0.0023	0	0
r2r	azla	01+06	0.0005	0	0
r2r	azla	02+07	0.0005	0	0
r2r	azla	03+08	0.0005	0	0

Table 3H-3

3H- FNMR @ FMR=0.0001, FMRs @ FNMR = (.002, 0.005) and 95% Confidence Intervals

Matching Type	Dataset	Finger position	FNMR@ FMR= 0.0001	95% Confidence Interval of FNMR	FMR1 @ FNMR= 0.002	95% Confidence Interval of FMR1	FMR2 @ FNMR= 0.005	95% Confidence Interval of FMR2
p2p	poebva	02	0.0045	0.00038	0.0215	0.00082	NA	0.00004
p2p	poebva	07	0.0113	0.00060	0.3335	0.00267	0.0194	0.00078
p2p	poebva	02+07	0.0005	0.00012	NA	NA	NA	NA
p2p	dhs2	02	0.0253	0.00089	0.8851	0.00180	0.5818	0.00279
p2p	dhs2	07	0.0231	0.00085	0.8758	0.00187	0.5166	0.00283
p2p	dhs2	02+07	0.0144	0.00067	0.3818	0.00275	0.0512	0.00125
p2p	azla	01	0.0034	0.00033	0.0064	0.00045	NA	NA
p2p	azla	02	0.0110	0.00059	0.3168	0.00263	0.0136	0.00065
p2p	azla	03	0.0105	0.00058	0.4732	0.00283	0.0403	0.00111
p2p	azla	06	0.0030	0.00031	0.0039	0.00035	NA	NA
p2p	azla	07	0.0126	0.00063	0.5793	0.00279	0.0511	0.00125
p2p	azla	08	0.0116	0.00061	0.6987	0.00260	0.1677	0.00211
p2p	azla	01+06	0.0008	0.00016	NA	NA	NA	NA
p2p	azla	02+07	0.0018	0.00024	NA	0.00003	NA	NA
p2p	azla	03+08	0.0025	0.00028	0.0010	0.00018	NA	NA
p2r	azla	01	0.0036	0.00034	0.0099	0.00056	NA	NA
p2r	azla	02	0.0092	0.00054	0.1571	0.00206	0.0044	0.00038
p2r	azla	03	0.0091	0.00054	0.2628	0.00249	0.0079	0.00050
p2r	azla	06	0.0032	0.00032	0.0050	0.00040	NA	0.00002
p2r	azla	07	0.0111	0.00059	0.3422	0.00268	0.0142	0.00067
p2r	azla	08	0.0106	0.00058	0.4902	0.00283	0.0457	0.00118
p2r	azla	01+06	0.0008	0.00016	NA	NA	NA	NA
p2r	azla	02+07	0.0016	0.00022	NA	0.00002	NA	NA
p2r	azla	03+08	0.0022	0.00026	0.0002	0.00007	NA	NA
r2r	azla	01	0.0027	0.00030	0.0008	0.00016	NA	NA
r2r	azla	02	0.0025	0.00028	0.0005	0.00013	NA	NA
r2r	azla	03	0.0024	0.00028	0.0004	0.00012	NA	NA
r2r	azla	06	0.0022	0.00026	0.0003	0.00009	NA	NA
r2r	azla	07	0.0031	0.00031	0.0057	0.00043	NA	NA
r2r	azla	08	0.0029	0.00030	0.0067	0.00046	NA	NA
r2r	azla	01+06	0.0005	0.00013	NA	NA	NA	NA
r2r	azla	02+07	0.0006	0.00013	NA	NA	NA	NA
r2r	azla	03+08	0.0006	0.00014	NA	NA	NA	NA

Table 3H-4

Note: NA – The number couldn't be reliably measured with the current sample size of 120,000.