Supplementary data of the paper: ***Probe-specific mixed-model approach to detect copy number differences using multiplex ligation-dependent probe amplification (MLPA).*** Juan R González, Josep L Carrasco, Lluís Armengol, Sergi Villatoro, Lluís Jover, Yutaka Yasui, Xavier Estivill

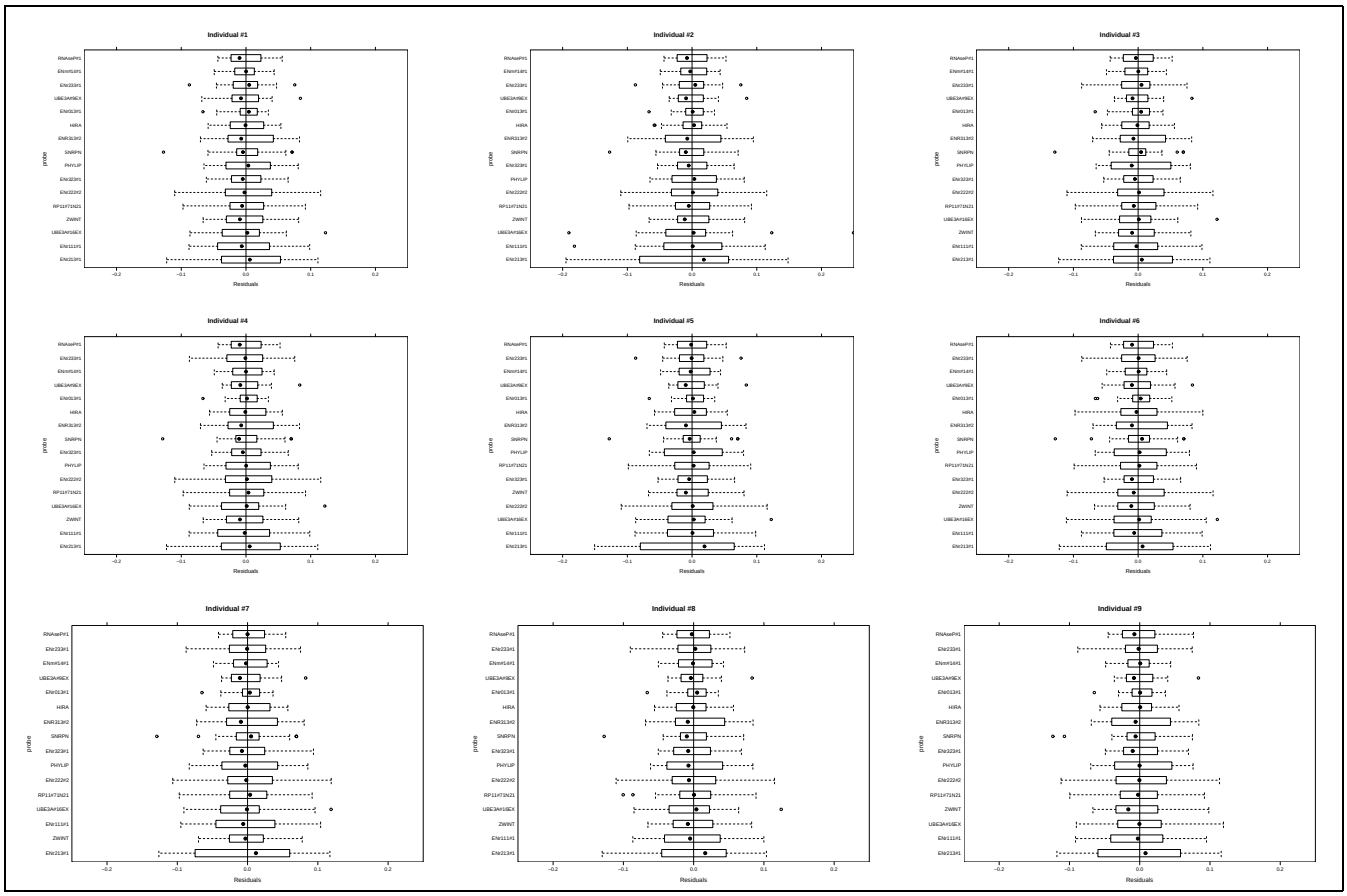

Figure 1: Residual error for each probe after fitting the probe-specific mixed-model.

Table 1: Empirical type-I error and power obtained in 1,000 simulations using the three different approaches: REX (iterative regression), PEMM (probe-specific mixture model) and threshold. These results are for the case of having 20% of probes as a internal control probes (needed for the REX approach) and 50% of probes as a true altered probes. The results are given for different scenarios between probe variability (σ_β), probe-test variability (σ_γ) and within-probe variability (σ_ϵ). The column $\bar{x}_{alt}$ indicates the mean number of simulated altered probes.

σ_β	σ_γ	σ_ϵ	$\bar{x}_{alt}$	REX	PEMM	REX	PEMM	thres	REX	PEMM	thres
0.2	0.2	0.05	17.9	0.064	0.056	0.609	0.839	0.000	0.620	0.838	0.000
0.2	0.2	0.08	17.7	0.059	0.048	0.396	0.697	0.000	0.392	0.695	0.000
0.2	0.4	0.05	18.0	0.090	0.063	0.888	0.942	0.021	0.886	0.940	0.038
0.2	0.4	0.08	18.0	0.077	0.058	0.757	0.883	0.030	0.746	0.884	0.049
0.2	0.6	0.05	18.0	0.093	0.065	0.944	0.962	0.122	0.946	0.962	0.164
0.2	0.6	0.08	18.0	0.086	0.061	0.886	0.931	0.150	0.878	0.935	0.196
0.2	1.0	0.05	17.9	0.092	0.067	0.976	0.981	0.372	0.974	0.981	0.421
0.2	1.0	0.08	17.9	0.092	0.064	0.953	0.967	0.393	0.948	0.966	0.446
0.2	1.5	0.05	18.0	0.101	0.066	0.984	0.985	0.548	0.985	0.986	0.595
0.2	1.5	0.08	18.2	0.095	0.066	0.973	0.976	0.582	0.971	0.980	0.621
0.2	4.0	0.05	18.1	0.107	0.068	0.995	0.996	0.832	0.995	0.995	0.845
0.2	4.0	0.08	18.0	0.106	0.065	0.992	0.993	0.843	0.991	0.991	0.852
0.4	0.2	0.05	18.0	0.071	0.055	0.626	0.827	0.000	0.633	0.834	0.000
0.4	0.2	0.08	17.8	0.048	0.049	0.360	0.700	0.000	0.358	0.698	0.001
0.4	0.4	0.05	18.0	0.089	0.066	0.896	0.937	0.026	0.891	0.936	0.045
0.4	0.4	0.08	17.9	0.071	0.056	0.742	0.878	0.034	0.742	0.886	0.051
0.4	0.6	0.05	18.0	0.097	0.067	0.946	0.963	0.132	0.947	0.959	0.169
0.4	0.6	0.08	18.1	0.079	0.057	0.872	0.929	0.149	0.877	0.934	0.202
0.4	1.0	0.05	17.9	0.093	0.064	0.973	0.978	0.358	0.976	0.983	0.427
0.4	1.0	0.08	18.0	0.094	0.060	0.952	0.963	0.401	0.947	0.961	0.444
0.4	1.5	0.05	18.0	0.105	0.063	0.984	0.987	0.541	0.983	0.988	0.603
0.4	1.5	0.08	17.9	0.097	0.066	0.970	0.977	0.582	0.973	0.978	0.621
0.4	4.0	0.05	18.0	0.099	0.071	0.995	0.995	0.825	0.995	0.996	0.845
0.4	4.0	0.08	17.9	0.101	0.069	0.990	0.991	0.838	0.992	0.992	0.865
0.6	0.2	0.05	17.9	0.068	0.055	0.613	0.833	0.001	0.616	0.833	0.002
0.6	0.2	0.08	18.0	0.048	0.048	0.358	0.690	0.003	0.342	0.693	0.003
0.6	0.4	0.05	18.0	0.084	0.061	0.894	0.940	0.039	0.891	0.938	0.055
0.6	0.4	0.08	17.9	0.074	0.056	0.760	0.882	0.048	0.742	0.879	0.071
0.6	0.6	0.05	18.1	0.093	0.064	0.951	0.966	0.149	0.946	0.960	0.186
0.6	0.6	0.08	17.8	0.085	0.061	0.876	0.930	0.166	0.878	0.930	0.212
0.6	1.0	0.05	17.9	0.098	0.067	0.971	0.979	0.359	0.969	0.975	0.434
0.6	1.0	0.08	18.0	0.089	0.062	0.952	0.964	0.411	0.950	0.963	0.460
0.6	1.5	0.05	17.9	0.098	0.066	0.985	0.987	0.544	0.986	0.988	0.598
0.6	1.5	0.08	18.0	0.097	0.066	0.972	0.977	0.584	0.971	0.979	0.632
0.6	4.0	0.05	17.8	0.096	0.068	0.995	0.996	0.838	0.994	0.996	0.848
0.6	4.0	0.08	18.0	0.102	0.067	0.992	0.993	0.838	0.992	0.993	0.857

Table 2: Empirical type-I error and power obtained in 1,000 simulations using the three different approaches: REX (iterative regression), PEMM (probe-specific mixture model) and threshold. These results are for the case of having 20% of probes as a internal control probes (needed for the REX approach) and 20% of probes as a true altered probes. The results are given for different scenarios between probe variability (σ_β), probe-test variability (σ_γ) and within-probe variability (σ_ϵ). The column $\bar{x}_{alt}$ indicates the mean number of simulated altered probes.

σ_β	σ_γ	σ_ϵ	$\bar{x}_{alt}$	REX	PEMM	REX	PEMM	thres	REX	PEMM	thres
0.2	0.2	0.05	7.4	0.077	0.045	0.806	0.803	0.000	0.800	0.792	0.000
0.2	0.2	0.08	7.1	0.068	0.035	0.635	0.613	0.000	0.635	0.601	0.000
0.2	0.4	0.05	7.2	0.083	0.054	0.923	0.918	0.020	0.911	0.920	0.038
0.2	0.4	0.08	7.1	0.075	0.046	0.858	0.849	0.026	0.857	0.842	0.050
0.2	0.6	0.05	7.3	0.084	0.058	0.948	0.950	0.119	0.956	0.961	0.177
0.2	0.6	0.08	7.1	0.080	0.052	0.919	0.918	0.148	0.919	0.927	0.193
0.2	1.0	0.05	7.3	0.093	0.066	0.979	0.977	0.364	0.974	0.979	0.408
0.2	1.0	0.08	7.1	0.081	0.059	0.961	0.965	0.387	0.949	0.959	0.434
0.2	1.5	0.05	7.2	0.084	0.066	0.985	0.991	0.538	0.980	0.984	0.583
0.2	1.5	0.08	7.4	0.084	0.063	0.973	0.977	0.584	0.976	0.977	0.613
0.2	4.0	0.05	7.2	0.089	0.068	0.995	0.995	0.849	0.996	0.995	0.858
0.2	4.0	0.08	7.2	0.092	0.068	0.990	0.992	0.847	0.991	0.991	0.854
0.4	0.2	0.05	7.3	0.070	0.038	0.800	0.792	0.000	0.798	0.789	0.000
0.4	0.2	0.08	7.1	0.067	0.032	0.650	0.602	0.000	0.646	0.610	0.000
0.4	0.4	0.05	7.2	0.085	0.055	0.925	0.922	0.032	0.928	0.927	0.043
0.4	0.4	0.08	7.3	0.077	0.050	0.859	0.850	0.027	0.853	0.849	0.055
0.4	0.6	0.05	7.1	0.081	0.058	0.957	0.957	0.138	0.946	0.952	0.174
0.4	0.6	0.08	7.3	0.084	0.054	0.916	0.919	0.160	0.924	0.923	0.193
0.4	1.0	0.05	7.2	0.081	0.059	0.981	0.982	0.377	0.976	0.978	0.427
0.4	1.0	0.08	7.3	0.080	0.058	0.955	0.961	0.406	0.950	0.962	0.434
0.4	1.5	0.05	7.1	0.080	0.065	0.986	0.983	0.545	0.979	0.984	0.599
0.4	1.5	0.08	7.3	0.084	0.062	0.975	0.979	0.591	0.974	0.973	0.625
0.4	4.0	0.05	7.2	0.086	0.067	0.997	0.998	0.828	0.993	0.994	0.836
0.4	4.0	0.08	7.2	0.087	0.066	0.991	0.993	0.847	0.989	0.991	0.859
0.6	0.2	0.05	7.3	0.073	0.041	0.803	0.778	0.001	0.806	0.792	0.001
0.6	0.2	0.08	7.2	0.066	0.035	0.651	0.608	0.002	0.651	0.596	0.004
0.6	0.4	0.05	7.3	0.082	0.053	0.928	0.928	0.040	0.931	0.929	0.052
0.6	0.4	0.08	7.1	0.078	0.045	0.868	0.867	0.041	0.866	0.846	0.076
0.6	0.6	0.05	7.1	0.085	0.059	0.950	0.955	0.135	0.948	0.955	0.175
0.6	0.6	0.08	7.2	0.081	0.052	0.919	0.925	0.167	0.917	0.907	0.206
0.6	1.0	0.05	7.2	0.084	0.065	0.973	0.978	0.369	0.978	0.981	0.444
0.6	1.0	0.08	7.3	0.087	0.060	0.959	0.967	0.402	0.952	0.953	0.449
0.6	1.5	0.05	7.3	0.086	0.064	0.984	0.984	0.559	0.984	0.987	0.580
0.6	1.5	0.08	7.1	0.090	0.067	0.969	0.976	0.568	0.973	0.973	0.631
0.6	4.0	0.05	7.1	0.084	0.067	0.995	0.995	0.828	0.991	0.993	0.842
0.6	4.0	0.08	7.2	0.088	0.066	0.990	0.993	0.831	0.992	0.996	0.862

Table 3: Empirical type-I error and power obtained in 1,000 simulations using the three different approaches: REX (iterative regression), PEMM (probe-specific mixture model) and threshold. These results are for the case of having 20% of probes as a internal control probes (needed for the REX approach) and 5% of probes as a true altered probes. The results are given for different scenarios between probe variability (σ_β), probe-test variability (σ_γ) and within-probe variability (σ_ϵ). The column $\bar{x}_{alt}$ indicates the mean number of simulated altered probes.

σ_β	σ_γ	σ_ϵ	$\bar{x}_{alt}$	REX	PEMM	REX	PEMM	thres	REX	PEMM	thres
0.2	0.2	0.05	1.8	0.080	0.025	0.846	0.700	0.000	0.835	0.703	0.000
0.2	0.2	0.08	1.8	0.080	0.022	0.720	0.495	0.000	0.716	0.498	0.000
0.2	0.4	0.05	1.8	0.082	0.032	0.941	0.906	0.018	0.941	0.883	0.045
0.2	0.4	0.08	1.8	0.078	0.026	0.884	0.778	0.033	0.855	0.762	0.040
0.2	0.6	0.05	1.9	0.081	0.040	0.946	0.924	0.113	0.953	0.919	0.173
0.2	0.6	0.08	1.8	0.080	0.030	0.924	0.853	0.136	0.931	0.870	0.179
0.2	1.0	0.05	1.8	0.077	0.046	0.971	0.957	0.367	0.982	0.971	0.447
0.2	1.0	0.08	1.7	0.081	0.038	0.972	0.951	0.406	0.966	0.943	0.447
0.2	1.5	0.05	1.8	0.077	0.051	0.977	0.978	0.572	0.984	0.981	0.573
0.2	1.5	0.08	1.8	0.080	0.044	0.970	0.953	0.551	0.968	0.955	0.604
0.2	4.0	0.05	1.8	0.082	0.055	0.999	0.994	0.815	0.997	0.997	0.838
0.2	4.0	0.08	1.8	0.078	0.050	0.984	0.985	0.821	0.985	0.977	0.823
0.4	0.2	0.05	1.7	0.076	0.024	0.844	0.706	0.000	0.846	0.701	0.000
0.4	0.2	0.08	1.8	0.077	0.021	0.712	0.495	0.000	0.716	0.508	0.000
0.4	0.4	0.05	1.8	0.078	0.033	0.932	0.883	0.023	0.933	0.879	0.039
0.4	0.4	0.08	1.8	0.079	0.027	0.877	0.773	0.044	0.870	0.749	0.051
0.4	0.6	0.05	1.9	0.080	0.040	0.952	0.932	0.145	0.961	0.931	0.176
0.4	0.6	0.08	1.9	0.081	0.034	0.912	0.852	0.157	0.925	0.866	0.188
0.4	1.0	0.05	1.8	0.083	0.046	0.984	0.962	0.390	0.983	0.979	0.458
0.4	1.0	0.08	1.8	0.078	0.039	0.964	0.946	0.385	0.950	0.928	0.424
0.4	1.5	0.05	1.8	0.080	0.052	0.981	0.975	0.543	0.993	0.988	0.599
0.4	1.5	0.08	1.8	0.077	0.045	0.974	0.953	0.563	0.965	0.949	0.647
0.4	4.0	0.05	1.8	0.083	0.056	0.997	0.999	0.830	0.997	0.993	0.832
0.4	4.0	0.08	1.8	0.080	0.053	0.993	0.988	0.831	0.992	0.989	0.860
0.6	0.2	0.05	1.7	0.078	0.025	0.830	0.688	0.000	0.842	0.708	0.003
0.6	0.2	0.08	1.7	0.072	0.021	0.733	0.514	0.000	0.716	0.518	0.002
0.6	0.4	0.05	1.8	0.080	0.035	0.921	0.872	0.037	0.917	0.866	0.053
0.6	0.4	0.08	1.8	0.078	0.026	0.879	0.772	0.060	0.882	0.773	0.086
0.6	0.6	0.05	1.8	0.083	0.040	0.959	0.935	0.123	0.957	0.948	0.192
0.6	0.6	0.08	1.8	0.078	0.032	0.909	0.862	0.169	0.917	0.873	0.211
0.6	1.0	0.05	1.8	0.081	0.046	0.974	0.958	0.356	0.973	0.968	0.400
0.6	1.0	0.08	1.9	0.083	0.040	0.963	0.939	0.383	0.965	0.933	0.472
0.6	1.5	0.05	1.8	0.075	0.053	0.984	0.984	0.549	0.986	0.979	0.614
0.6	1.5	0.08	1.8	0.080	0.045	0.977	0.968	0.600	0.983	0.971	0.643
0.6	4.0	0.05	1.8	0.083	0.057	0.994	0.996	0.833	0.996	0.993	0.876
0.6	4.0	0.08	1.9	0.082	0.055	0.991	0.995	0.864	0.993	0.990	0.853

Table 4: Empirical type-I error and power obtained in 1,000 simulations using the three different approaches: REX (iterative regression), PEMM (probe-specific mixture model) and threshold. These results are for the case of having 10% of probes as a internal control probes (needed for the REX approach) and 50% of probes as a true altered probes. The results are given for different scenarios between probe variability (σ_β), probe-test variability (σ_γ) and within-probe variability (σ_ϵ). The column $\bar{x}_{alt}$ indicates the mean number of simulated altered probes.

σ_β	σ_γ	σ_ϵ	$\bar{x}_{alt}$	REX	PEMM	REX	PEMM	thres	REX	PEMM	thres
0.2	0.2	0.05	20.0	0.031	0.055	0.380	0.834	0.000	0.374	0.842	0.000
0.2	0.2	0.08	19.8	0.024	0.048	0.174	0.705	0.000	0.184	0.707	0.000
0.2	0.4	0.05	19.9	0.048	0.062	0.789	0.936	0.020	0.780	0.937	0.034
0.2	0.4	0.08	20.0	0.037	0.061	0.523	0.890	0.028	0.519	0.888	0.049
0.2	0.6	0.05	20.1	0.050	0.065	0.894	0.966	0.123	0.892	0.961	0.159
0.2	0.6	0.08	20.1	0.042	0.061	0.743	0.930	0.146	0.735	0.935	0.197
0.2	1.0	0.05	19.8	0.055	0.063	0.953	0.979	0.367	0.949	0.978	0.407
0.2	1.0	0.08	20.0	0.049	0.063	0.893	0.965	0.395	0.891	0.964	0.451
0.2	1.5	0.05	20.1	0.056	0.064	0.972	0.989	0.555	0.971	0.987	0.595
0.2	1.5	0.08	20.0	0.053	0.061	0.948	0.978	0.580	0.944	0.977	0.631
0.2	4.0	0.05	19.9	0.056	0.065	0.990	0.997	0.823	0.990	0.995	0.843
0.2	4.0	0.08	20.1	0.059	0.066	0.984	0.993	0.840	0.986	0.993	0.866
0.4	0.2	0.05	20.0	0.036	0.059	0.388	0.837	0.000	0.394	0.834	0.000
0.4	0.2	0.08	19.9	0.022	0.049	0.175	0.707	0.000	0.172	0.700	0.001
0.4	0.4	0.05	20.1	0.042	0.062	0.773	0.936	0.024	0.769	0.933	0.044
0.4	0.4	0.08	20.2	0.037	0.059	0.506	0.888	0.035	0.503	0.881	0.057
0.4	0.6	0.05	19.8	0.049	0.062	0.893	0.962	0.134	0.888	0.961	0.167
0.4	0.6	0.08	20.1	0.043	0.062	0.735	0.935	0.154	0.736	0.934	0.198
0.4	1.0	0.05	20.1	0.056	0.069	0.950	0.979	0.362	0.947	0.980	0.419
0.4	1.0	0.08	20.1	0.050	0.064	0.906	0.964	0.391	0.898	0.961	0.452
0.4	1.5	0.05	20.0	0.053	0.067	0.969	0.985	0.546	0.968	0.987	0.593
0.4	1.5	0.08	20.0	0.053	0.067	0.945	0.982	0.577	0.946	0.978	0.630
0.4	4.0	0.05	20.0	0.058	0.067	0.990	0.995	0.826	0.990	0.995	0.840
0.4	4.0	0.08	20.1	0.053	0.066	0.984	0.993	0.839	0.983	0.993	0.863
0.6	0.2	0.05	20.0	0.035	0.054	0.386	0.844	0.002	0.386	0.837	0.002
0.6	0.2	0.08	19.9	0.022	0.049	0.175	0.699	0.003	0.166	0.700	0.003
0.6	0.4	0.05	20.0	0.047	0.066	0.757	0.937	0.039	0.769	0.938	0.057
0.6	0.4	0.08	20.2	0.042	0.059	0.516	0.884	0.049	0.518	0.884	0.073
0.6	0.6	0.05	20.1	0.048	0.067	0.889	0.961	0.143	0.880	0.960	0.183
0.6	0.6	0.08	20.2	0.043	0.062	0.739	0.934	0.168	0.739	0.933	0.219
0.6	1.0	0.05	19.8	0.055	0.064	0.952	0.979	0.369	0.947	0.979	0.433
0.6	1.0	0.08	19.9	0.049	0.068	0.900	0.967	0.399	0.890	0.962	0.448
0.6	1.5	0.05	19.9	0.053	0.068	0.971	0.987	0.558	0.971	0.987	0.595
0.6	1.5	0.08	20.0	0.050	0.065	0.940	0.976	0.585	0.942	0.974	0.615
0.6	4.0	0.05	20.0	0.061	0.071	0.990	0.995	0.834	0.988	0.994	0.845
0.6	4.0	0.08	20.1	0.056	0.066	0.982	0.992	0.843	0.984	0.994	0.861

Table 5: Empirical type-I error and power obtained in 1,000 simulations using the three different approaches: REX (iterative regression), PEMM (probe-specific mixture model) and threshold. These results are for the case of having 10% of probes as a internal control probes (needed for the REX approach) and 20% of probes as a true altered probes. The results are given for different scenarios between probe variability (σ_β), probe-test variability (σ_γ) and within-probe variability (σ_ϵ). The column $\bar{x}_{alt}$ indicates the mean number of simulated altered probes.

σ_β	σ_γ	σ_ϵ	$\bar{x}_{alt}$	REX	PEMM	REX	PEMM	thres	REX	PEMM	thres
0.2	0.2	0.05	8.0	0.044	0.044	0.692	0.804	0.000	0.706	0.818	0.000
0.2	0.2	0.08	7.9	0.034	0.035	0.477	0.631	0.000	0.473	0.612	0.000
0.2	0.4	0.05	7.9	0.049	0.057	0.870	0.928	0.020	0.872	0.931	0.040
0.2	0.4	0.08	8.0	0.043	0.045	0.776	0.855	0.027	0.753	0.856	0.048
0.2	0.6	0.05	8.1	0.050	0.061	0.927	0.962	0.129	0.929	0.963	0.172
0.2	0.6	0.08	8.0	0.049	0.057	0.861	0.926	0.151	0.856	0.916	0.177
0.2	1.0	0.05	7.9	0.052	0.065	0.956	0.978	0.339	0.961	0.981	0.407
0.2	1.0	0.08	7.9	0.049	0.061	0.929	0.965	0.419	0.936	0.962	0.460
0.2	1.5	0.05	7.9	0.051	0.064	0.972	0.986	0.567	0.968	0.986	0.608
0.2	1.5	0.08	8.1	0.051	0.061	0.960	0.977	0.579	0.959	0.981	0.618
0.2	4.0	0.05	8.1	0.049	0.067	0.987	0.995	0.829	0.992	0.997	0.847
0.2	4.0	0.08	7.9	0.052	0.065	0.984	0.989	0.838	0.987	0.994	0.876
0.4	0.2	0.05	8.0	0.040	0.045	0.690	0.808	0.000	0.684	0.801	0.000
0.4	0.2	0.08	8.1	0.034	0.037	0.479	0.642	0.001	0.471	0.624	0.001
0.4	0.4	0.05	8.0	0.049	0.056	0.871	0.922	0.025	0.878	0.929	0.042
0.4	0.4	0.08	8.0	0.041	0.046	0.753	0.846	0.030	0.765	0.845	0.054
0.4	0.6	0.05	8.0	0.050	0.062	0.925	0.963	0.145	0.924	0.958	0.171
0.4	0.6	0.08	8.0	0.045	0.056	0.861	0.922	0.154	0.853	0.919	0.199
0.4	1.0	0.05	7.9	0.054	0.064	0.963	0.982	0.384	0.959	0.982	0.417
0.4	1.0	0.08	8.0	0.048	0.062	0.928	0.960	0.395	0.931	0.961	0.455
0.4	1.5	0.05	8.0	0.053	0.065	0.981	0.989	0.571	0.972	0.987	0.598
0.4	1.5	0.08	8.0	0.050	0.062	0.957	0.977	0.597	0.962	0.976	0.632
0.4	4.0	0.05	7.9	0.055	0.069	0.991	0.996	0.836	0.989	0.992	0.838
0.4	4.0	0.08	8.0	0.050	0.067	0.986	0.997	0.850	0.985	0.994	0.864
0.6	0.2	0.05	7.9	0.042	0.046	0.680	0.799	0.001	0.670	0.787	0.002
0.6	0.2	0.08	8.0	0.035	0.036	0.470	0.633	0.005	0.474	0.633	0.006
0.6	0.4	0.05	8.0	0.045	0.055	0.871	0.923	0.035	0.868	0.924	0.056
0.6	0.4	0.08	8.0	0.037	0.049	0.772	0.865	0.050	0.755	0.852	0.078
0.6	0.6	0.05	8.2	0.053	0.063	0.925	0.961	0.139	0.931	0.960	0.191
0.6	0.6	0.08	7.9	0.047	0.057	0.858	0.913	0.162	0.865	0.925	0.207
0.6	1.0	0.05	8.0	0.050	0.063	0.957	0.979	0.366	0.970	0.983	0.439
0.6	1.0	0.08	8.0	0.052	0.061	0.929	0.960	0.401	0.924	0.961	0.446
0.6	1.5	0.05	8.1	0.052	0.067	0.973	0.985	0.555	0.974	0.987	0.602
0.6	1.5	0.08	8.0	0.050	0.063	0.952	0.976	0.567	0.957	0.976	0.631
0.6	4.0	0.05	8.0	0.051	0.066	0.989	0.994	0.824	0.992	0.996	0.855
0.6	4.0	0.08	8.1	0.051	0.068	0.983	0.993	0.843	0.985	0.994	0.862

Table 6: Empirical type-I error and power obtained in 1,000 simulations using the three different approaches: REX (iterative regression), PEMM (probe-specific mixture model) and threshold. These results are for the case of having 10% of probes as a internal control probes (needed for the REX approach) and 5% of probes as a true altered probes. The results are given for different scenarios between probe variability (σ_β), probe-test variability (σ_γ) and within-probe variability (σ_ϵ). The column $\bar{x}_{alt}$ indicates the mean number of simulated altered probes.

σ_β	σ_γ	σ_ϵ	$\bar{x}_{alt}$	REX	PEMM	REX	PEMM	thres	REX	PEMM	thres
0.2	0.2	0.05	2.0	0.048	0.027	0.756	0.733	0.000	0.751	0.730	0.000
0.2	0.2	0.08	2.0	0.044	0.023	0.573	0.518	0.000	0.599	0.552	0.000
0.2	0.4	0.05	2.0	0.052	0.037	0.881	0.874	0.023	0.895	0.892	0.049
0.2	0.4	0.08	1.9	0.046	0.028	0.794	0.781	0.030	0.785	0.765	0.047
0.2	0.6	0.05	2.0	0.049	0.043	0.940	0.946	0.141	0.935	0.931	0.151
0.2	0.6	0.08	2.0	0.047	0.036	0.882	0.893	0.147	0.859	0.855	0.175
0.2	1.0	0.05	2.1	0.047	0.047	0.970	0.974	0.383	0.964	0.973	0.410
0.2	1.0	0.08	2.0	0.053	0.045	0.936	0.942	0.419	0.918	0.931	0.443
0.2	1.5	0.05	2.0	0.052	0.052	0.980	0.982	0.546	0.982	0.988	0.592
0.2	1.5	0.08	1.9	0.052	0.045	0.958	0.967	0.590	0.958	0.958	0.597
0.2	4.0	0.05	2.0	0.050	0.057	0.994	0.996	0.826	0.993	0.994	0.849
0.2	4.0	0.08	1.9	0.048	0.057	0.987	0.986	0.818	0.985	0.985	0.846
0.4	0.2	0.05	2.0	0.045	0.026	0.782	0.719	0.000	0.753	0.706	0.000
0.4	0.2	0.08	2.0	0.048	0.024	0.598	0.549	0.000	0.607	0.548	0.002
0.4	0.4	0.05	2.0	0.046	0.038	0.897	0.886	0.031	0.882	0.888	0.054
0.4	0.4	0.08	2.0	0.047	0.032	0.812	0.824	0.038	0.811	0.789	0.065
0.4	0.6	0.05	2.1	0.048	0.041	0.936	0.936	0.133	0.935	0.937	0.193
0.4	0.6	0.08	2.0	0.049	0.034	0.873	0.864	0.170	0.863	0.866	0.184
0.4	1.0	0.05	2.0	0.048	0.050	0.955	0.959	0.362	0.962	0.967	0.432
0.4	1.0	0.08	2.0	0.050	0.042	0.924	0.928	0.403	0.943	0.947	0.462
0.4	1.5	0.05	2.0	0.048	0.052	0.979	0.980	0.537	0.974	0.981	0.574
0.4	1.5	0.08	2.0	0.051	0.046	0.962	0.963	0.576	0.958	0.966	0.617
0.4	4.0	0.05	1.9	0.048	0.057	0.992	0.994	0.835	0.992	0.994	0.831
0.4	4.0	0.08	2.0	0.049	0.055	0.987	0.988	0.841	0.982	0.993	0.860
0.6	0.2	0.05	2.0	0.046	0.028	0.735	0.729	0.001	0.752	0.710	0.002
0.6	0.2	0.08	2.0	0.041	0.023	0.597	0.505	0.003	0.593	0.522	0.003
0.6	0.4	0.05	2.0	0.049	0.037	0.887	0.884	0.027	0.910	0.899	0.068
0.6	0.4	0.08	2.0	0.047	0.029	0.810	0.801	0.047	0.798	0.787	0.074
0.6	0.6	0.05	2.0	0.052	0.043	0.923	0.923	0.160	0.927	0.946	0.175
0.6	0.6	0.08	1.9	0.047	0.033	0.867	0.871	0.140	0.878	0.881	0.215
0.6	1.0	0.05	2.0	0.052	0.049	0.962	0.958	0.376	0.964	0.968	0.435
0.6	1.0	0.08	1.9	0.048	0.042	0.927	0.921	0.380	0.957	0.949	0.482
0.6	1.5	0.05	2.0	0.048	0.052	0.973	0.973	0.514	0.970	0.984	0.583
0.6	1.5	0.08	2.0	0.050	0.048	0.973	0.975	0.574	0.972	0.967	0.645
0.6	4.0	0.05	2.0	0.050	0.058	0.991	0.994	0.829	0.991	0.992	0.857
0.6	4.0	0.08	2.1	0.049	0.058	0.986	0.983	0.845	0.986	0.991	0.855