For the column name --- rejected count rate countM: Mardia's test countR: Royston's test count2: Any 2 rejected tests countH: Henze-Zirkler's test countN: N-statistic (energy test) Seed times: 500

## Power study

Mixture of two normal distributions	countM	countH	countR	countN	countHR	countHN	countRN	count2	countHRN
composition: 0.5 0.5 ,rho: 0 0.9 ,probes: 25, size: 50	1	1	0.166	1	0.166	1	0.166	1	0.166
composition: 0.5 0.5 ,rho: 0 0.9 ,probes: 25, size: 100	1	1	0.174	1	0.174	1	0.174	1	0.174
composition: 0.5 0.5 ,rho: 0 0.9 ,probes: 49, size: 50	0	0.012	0.218	0.06	0.004	0.008	0.022	0.026	0.004
composition: 0.5 0.5 ,rho: 0 0.9 ,probes: 49, size: 100	1	1	0.226	1	0.226	1	0.226	1	0.226
composition: 0.5 0.5, rho: 0.5, probes: 25, size: 50	0.634	0.036	0.096	0.592	0.006	0.032	0.054	0.084	0.004
composition: 0.5 0.5 ,rho: 0 0.5 ,probes: 25, size: 100	0.992	0.164	0.102	0.96	0.014	0.164	0.1	0.25	0.014
composition: 0.5 0.5 ,rho: 0 0.5 ,probes: 49, size: 50	0	0.006	0.152	0.03	0	0.002	0.004	0.006	0
composition: 0.5 0.5 ,rho: 0 0.5 ,probes: 49, size: 100	1	0.012	0.16	1	0.002	0.012	0.16	0.17	0.002
composition:0.1 0.9 ,rho:0 0.9 ,probes:25,size:50	0.966	0.088	0.102	0.958	0.006	0.088	0.098	0.18	0.006
composition:0.1 0.9 ,rho:0 0.9 ,probes:25,size:100	1	0.744	0.096	1	0.078	0.744	0.096	0.762	0.078
composition: 0.1 0.9 ,rho: 0 0.9 ,probes: 49, size: 50	0	0.036	0.094	0.09	0.004	0.018	0.008	0.022	0.004
composition: 0.1 0.9 ,rho: 0 0.9 ,probes: 49, size: 100	1	0.03	0.078	1	0.004	0.03	0.078	0.104	0.004
composition:0.1 0.9 ,rho:0 0.5 ,probes:25,size:50	0.25	0.03	0.126	0.23	0.006	0.016	0.034	0.048	0.004
composition:0.1 0.9 ,rho:0 0.5 ,probes:25,size:100	0.746	0.04	0.138	0.534	0.006	0.024	0.074	0.096	0.004
composition: 0.1 0.9 ,rho: 0 0.5 ,probes: 49, size: 50	0	0.006	0.204	0.04	0	0.004	0.002	0.006	0
composition: 0.1 0.9 ,rho: 0 0.5 ,probes: 49, size: 100	0.802	0	0.17	0.748	0	0	0.128	0.128	0

For the row name --- composition:a b, rho:c d, probes(dimension):e , size:f  $aN_{(e)}(0, c) + bN_{(e)}(0, d)$  , sample size = f , dimension = e, mix proportion: a, b, a + b = 1, rho: c, d, it represents the correlation matrix with compound symmetry structure with correlation c and d for the two normal distributions respectively.