

Table S2 False positive rate at a fix true positive rate of 0.50 for a group size of 10 + 10.

fold change: 3		Human gut I				Human gut II				Marine			
Method	B	LU	U	HU	B	LU	U	HU	B	LU	U	HU	
TMM	9.5E-4	1.3E-3	2.5E-3	1.4E-2	2.2E-3	1.1E-3	3.3E-3	1.6E-2	0	3.2E-4	6.3E-4	3.6E-3	
RLE	9.5E-4	1.4E-3	4.1E-3	2.8E-2	2.2E-3	1.1E-3	3.3E-3	1.6E-2	0	3.2E-4	9.5E-4	1.2E-2	
CSS	1.9E-3	2.9E-3	7.1E-3	3.7E-2	1.7E-3	1.1E-3	5.6E-3	4.1E-2	3.2E-4	3.2E-4	1.3E-3	1.1E-2	
RCSS	1.3E-3	2.4E-3	3.5E-3	2.6E-2	2.2E-3	2.2E-3	3.3E-3	1.4E-2	3.2E-4	6.3E-4	1.1E-2	8.6E-2	
quantile-quantile	3.2E-4	9.5E-4	4.6E-3	5.2E-2	2.2E-3	2.2E-3	7.8E-3	3.6E-2	3.2E-4	1.3E-3	2.0E-2	1.3E-1	
upper quartile	1.3E-3	2.2E-3	1.2E-2	1.0E-1	2.2E-3	2.2E-3	5.6E-3	3.6E-2	3.2E-4	1.3E-3	5.0E-2	2.0E-1	
median	1.6E-3	3.2E-3	1.0E-2	6.6E-2	2.2E-3	2.2E-3	8.9E-3	6.7E-2	3.2E-4	3.2E-4	2.2E-3	3.1E-2	
total count	1.1E-3	1.9E-3	4.8E-3	3.9E-2	2.2E-3	1.1E-3	4.4E-3	2.3E-2	3.2E-4	6.3E-4	1.2E-2	9.8E-2	
rarefying	9.5E-4	1.3E-3	3.0E-3	2.8E-2	1.1E-2	1.1E-2	1.6E-2	3.8E-2	3.2E-4	6.3E-4	9.8E-3	8.5E-2	
fold change: 5		Human gut I				Human gut II				Marine			
Method	B	LU	U	HU	B	LU	U	HU	B	LU	U	HU	
TMM	0	0	0	1.4E-3	0	0	0	2.5E-3	0	0	0	3.6E-4	
RLE	0	0	1.6E-4	5.7E-3	0	0	0	1.3E-3	0	0	0	1.3E-3	
CSS	0	1.6E-4	1.3E-3	1.9E-2	0	0	1.1E-3	2.3E-2	0	0	0	7.1E-3	
RCSS	0	0	3.2E-4	6.1E-3	0	0	0	1.3E-3	0	0	1.9E-3	5.8E-2	
quantile-quantile	0	0	9.5E-4	2.9E-2	0	0	1.1E-3	1.5E-2	0	3.2E-4	7.5E-3	9.9E-2	
upper quartile	0	0	1.9E-3	6.1E-2	0	0	0	1.0E-2	0	3.2E-4	2.9E-2	2.2E-1	
median	0	3.2E-4	3.0E-3	6.9E-2	0	0	1.1E-3	2.9E-2	0	0	3.2E-4	2.5E-2	
total count	0	0	3.2E-4	1.4E-2	0	0	0	5.0E-3	0	0	2.4E-3	7.5E-2	
rarefying	0	0	3.2E-4	8.4E-3	1.1E-3	1.1E-3	2.8E-3	1.0E-2	0	0	1.9E-3	6.3E-2	

B: balanced, 10% effects added. 50% in each group,
 LU: lightly-unbalanced, 10% effects added. 75%-25% in each group,
 U: unbalanced, 10% effects added. 100% in only one group,
 HU: heavily-unbalanced, 20% effects added. 100% in only one group.