Supplementary table and figures

Supplementary Information

Supplementary Tables S1–S2 and Figures S1–S12

Table S1. Summary of meta-analysis effect sizes and heterogeneity statistics. Effect sizes reported as log response ratios (log RR), with τ^2, I^2, Q (df), and Q p-value.

Outcome	Effect Size (Log RR)	Standard Error	95% CI Lower	95% CI Upper	p-value	Tau^2(τ^2)	I^2 (%)	Q (df)
Alpha Diversity (Shannon Index)	-0.472	0.121	-0.71	-0.234	0.0001	0.0279	16.4	Q(df = 11) = 11.2139
Firmicutes	0.0762	0.0328	0.0119	0.1405	0.0203	0.0141	96.09	Q(df = 18) = 544.722
Bacteroidetes	-0.127	0.0617	-0.248	-0.0061	0.0395	0.0587	92.22	Q(df = 18) = 286.48
F:B Ratio	0.1467	0.0859	-0.0216	0.3149	0.0876	0.1398	99.91	Q(df = 18) = 24505.1

Table S2: Results of Egger's test and trim-and-fill analysis for alpha diversity and phylum-level models.

Measure	Egger's z	Egger's p-value	Intercept (95% CI)	Missing studies (trim-and-fill)	τ^2	I^2 (%)	Q (df)	Q p-value
Alpha diversity	0.6092	0.5560	–0.6362 (–1.2311, –0.0412)	Left:1 (SE = 2.3675)	0.0244	13.93	11.847 (12)	0.4580
Firmicutes	–2.033	0.0421	0.1276 (0.0532, 0.2020)	Right: 6 (SE = 2.83)	0.0173	96.26	602.63 (24)	< 0.0001

Bacteroidetes	1.509	0.1314	–0.2765 (–0.5021, –0.0509)	Left: 3 (SE = 2.95)	0.0621	92.03	313.30 (21)	< 0.0001
F:B Ratio	–2.650	0.0080	0.6592 (0.2531, 1.0652)	Right: 2 (SE = 2.92)	0.1604	99.91	25 972.90 (20)	< 0.0001

Figure S1. Forest plot of alpha diversity (Shannon index) Hedges' g for 12 diet comparisons in P. americana. Points = study effects; horizontal bars = 95% CI; diamond = pooled estimate.

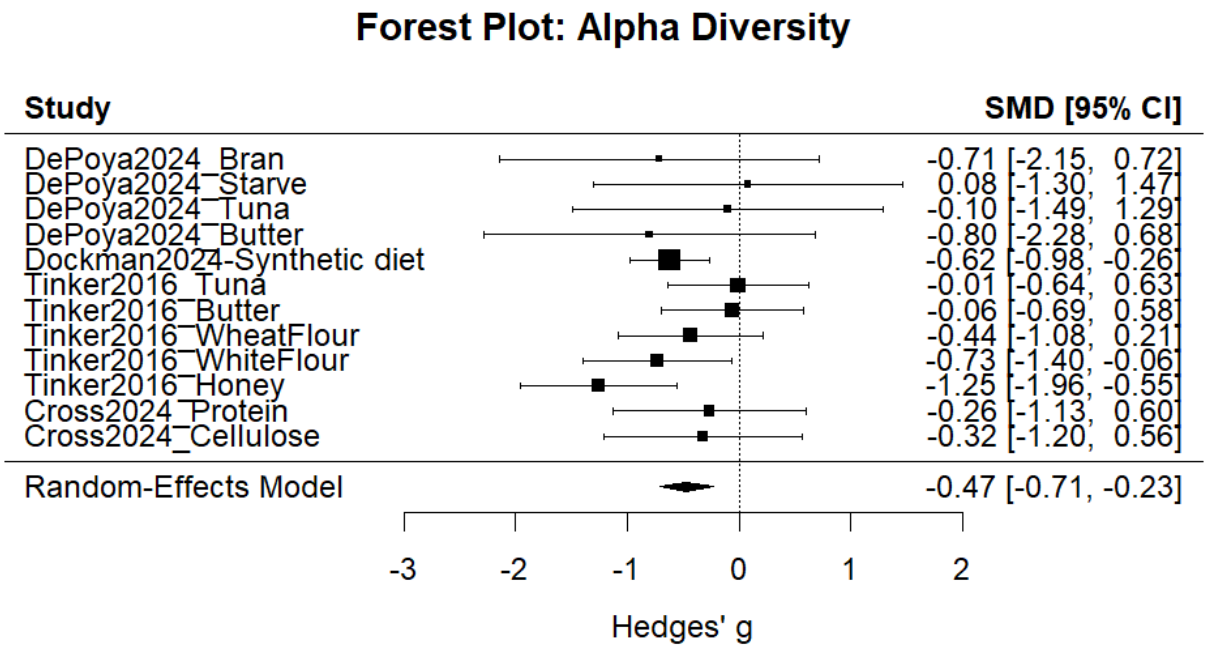

Figure S2. Funnel plot of Hedges' g vs. SE for alpha diversity. Dashed line = pooled effect; tests for asymmetry by Egger's regression.

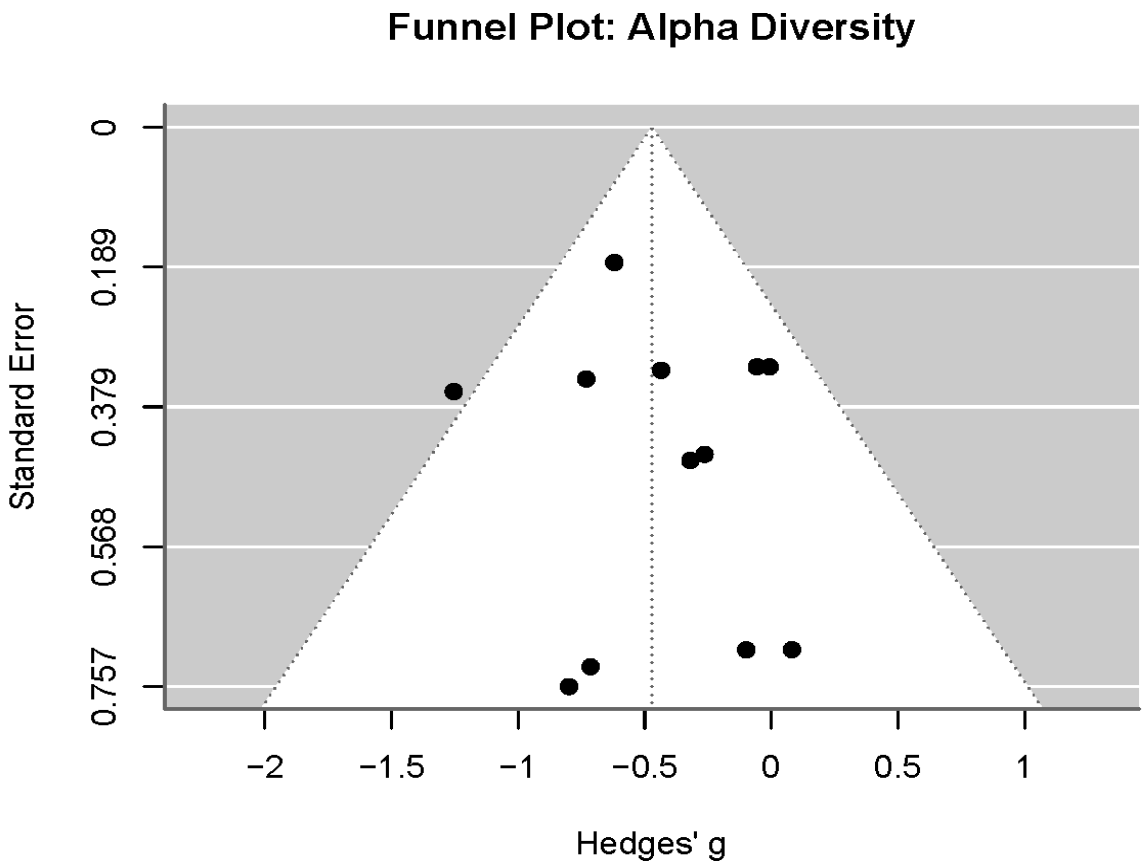

Figure S3. Leave-one-out sensitivity plot for alpha diversity. Points = pooled g after omitting each study; dashed line = original pooled g.

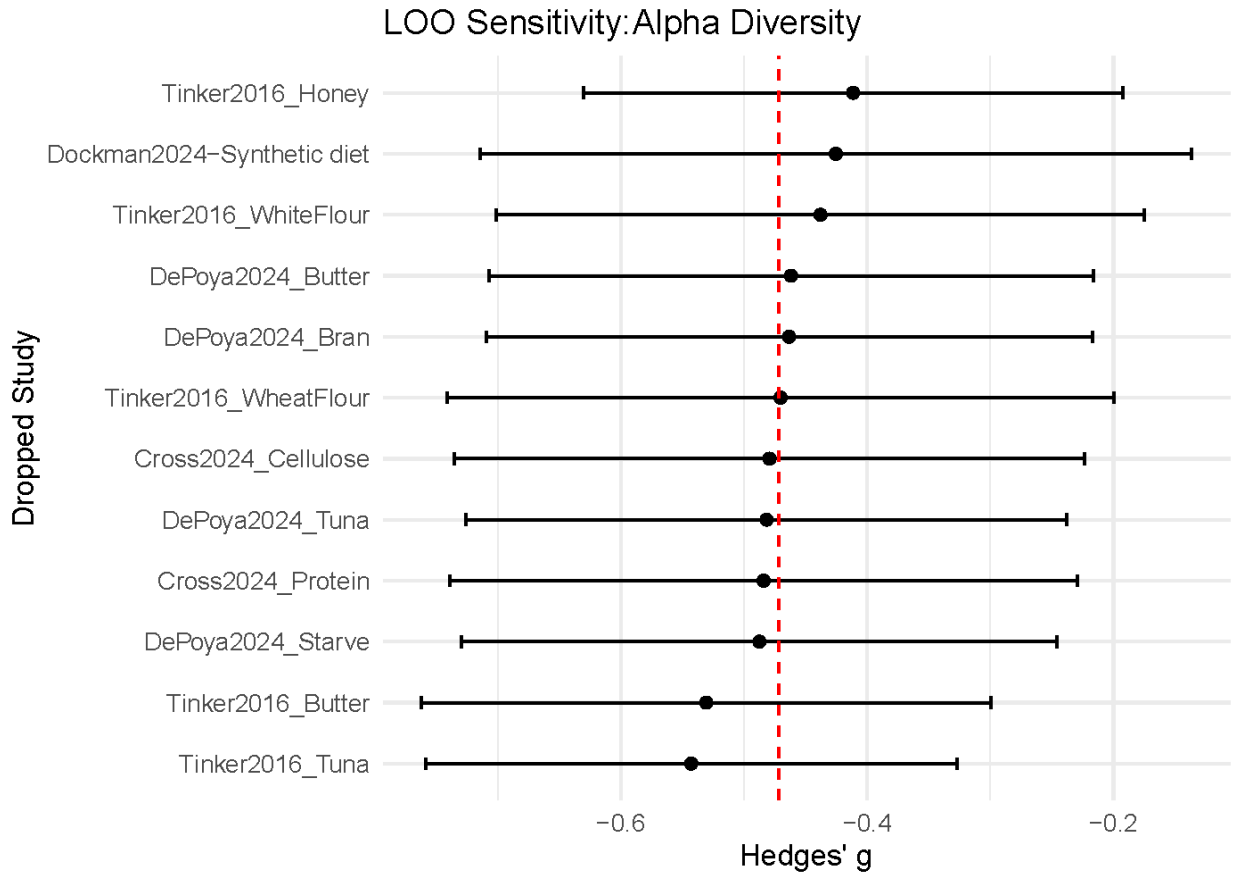

Figure S4. Forest plot of Firmicutes log-ratio for 19 diet comparisons. Points = study log RR; bars = 95% CI; diamond = pooled log RR.

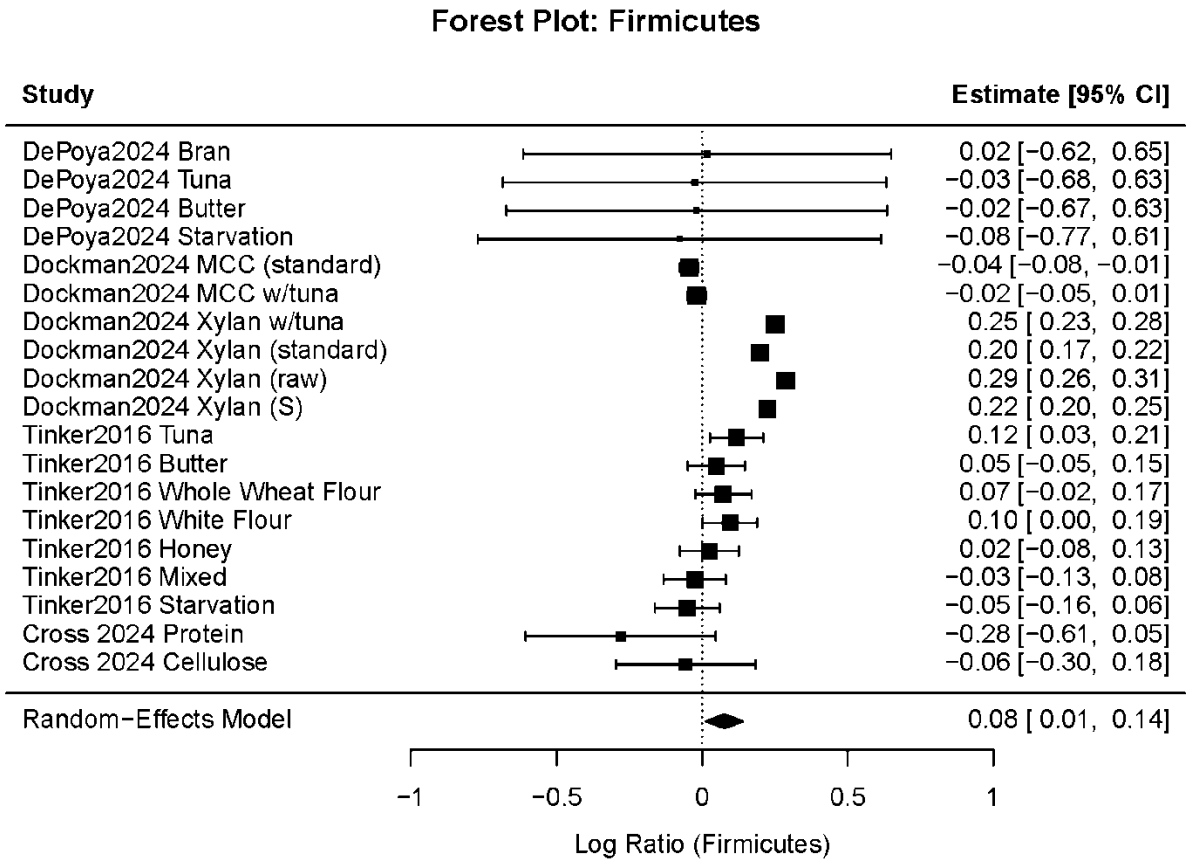

Figure S5. Funnel plot of Firmicutes log RR vs. SE.

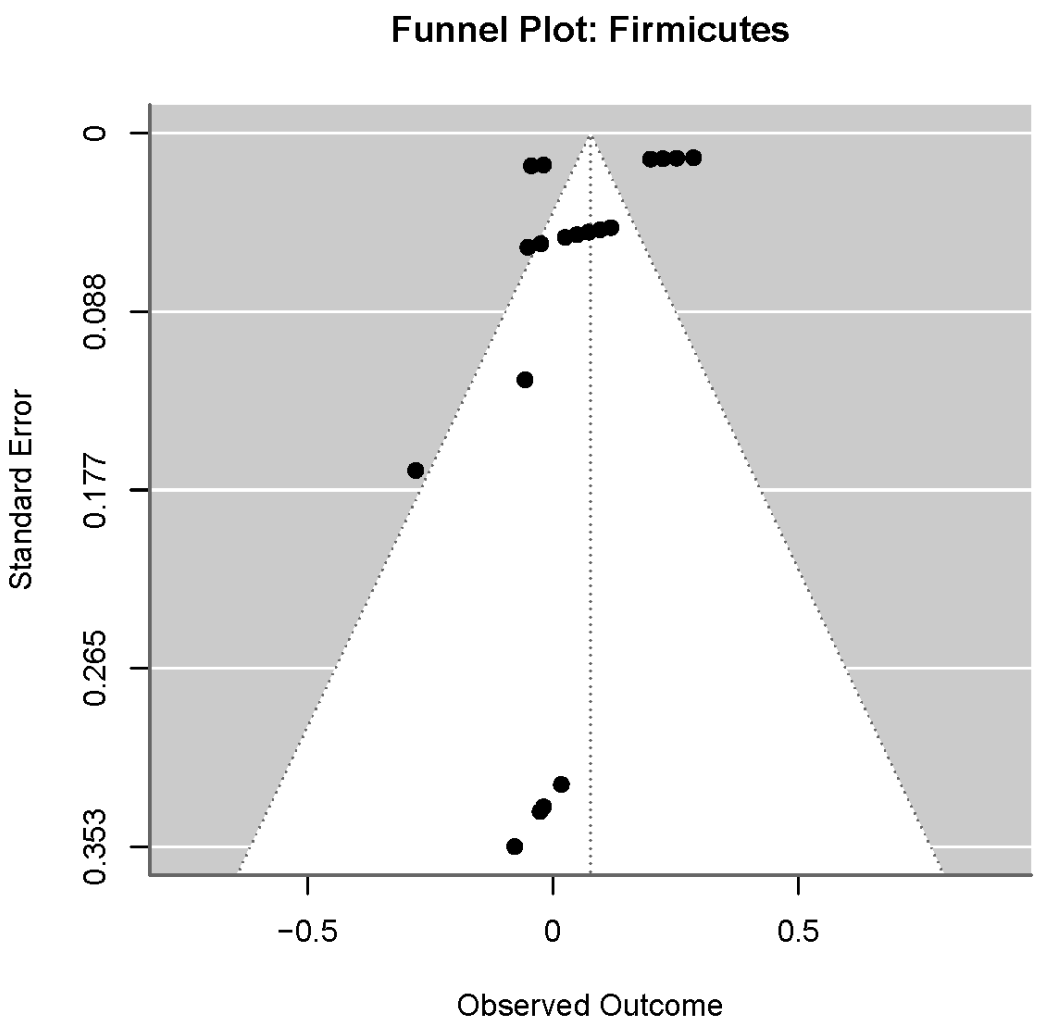

Figure S6. Leave-one-out sensitivity plot for Firmicutes log RR.

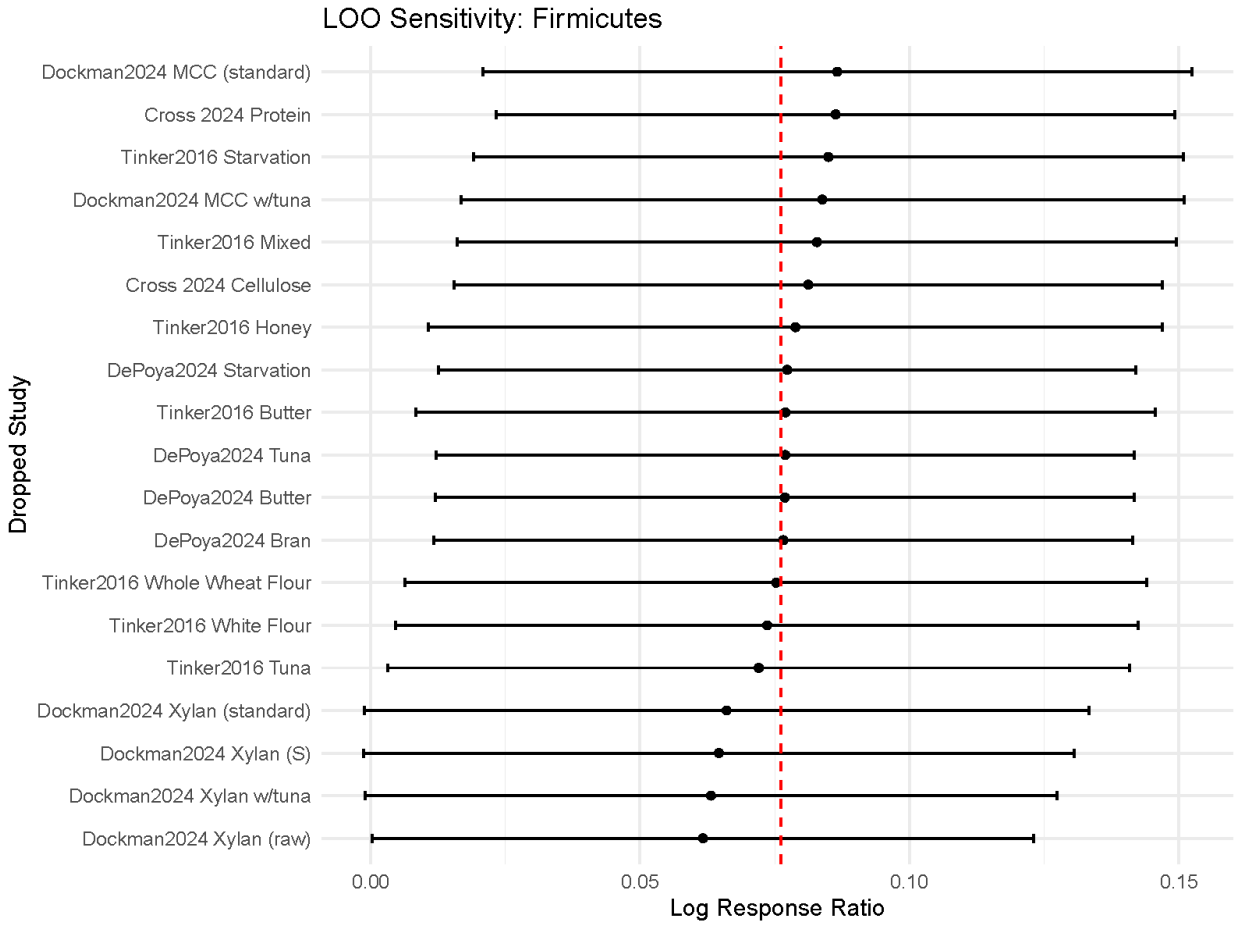

Figure S7. Forest plot of Bacteroidetes log-ratio for 19 diet comparisons.

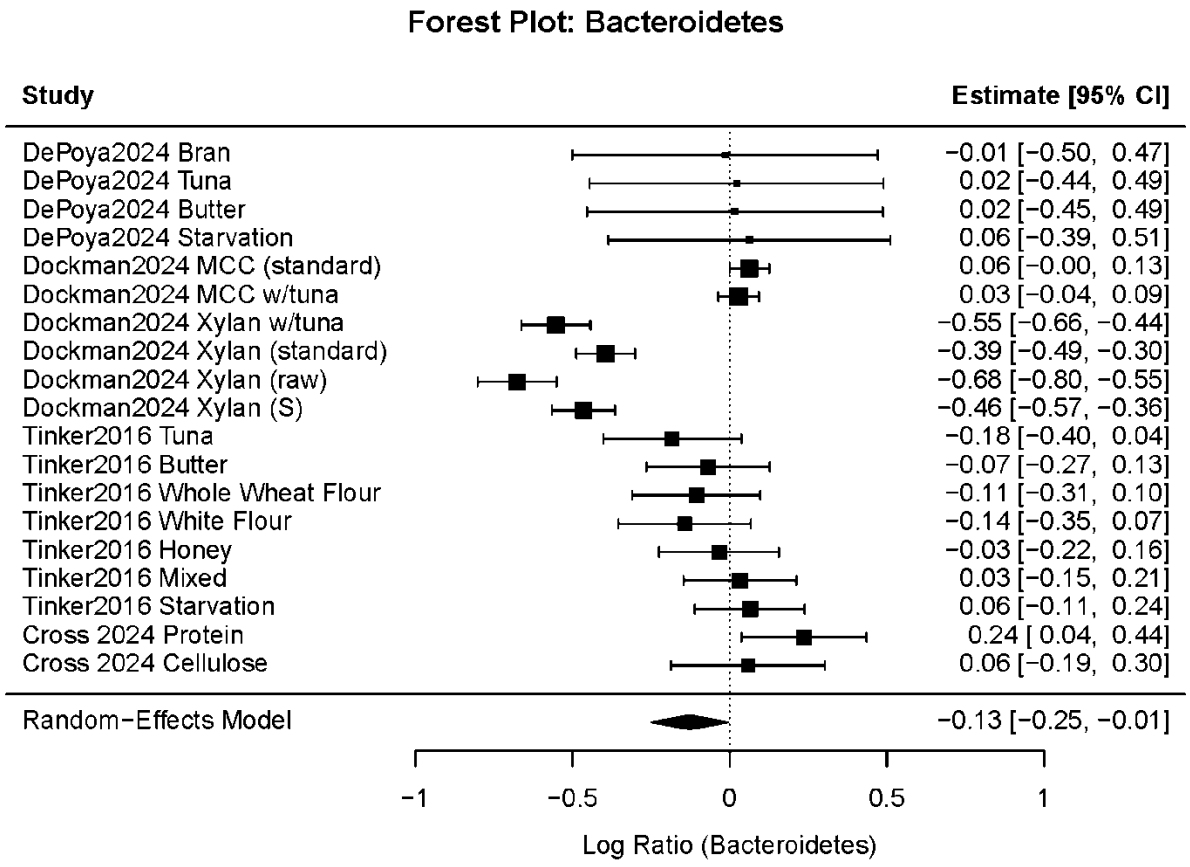

Figure S8. Funnel plot of Bacteroidetes log RR vs. SE.

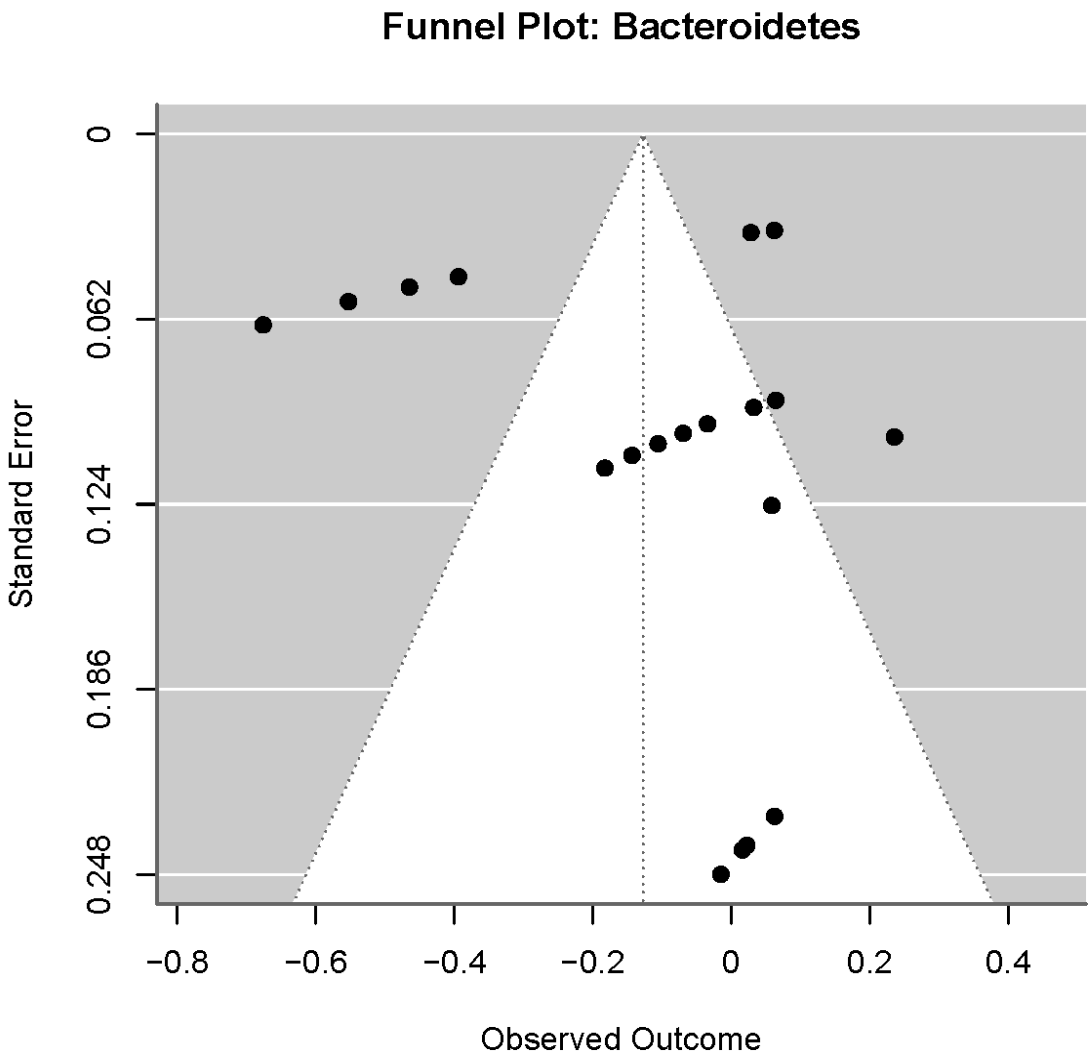

Figure S9. Leave-one-out sensitivity for Bacteroidetes log RR.

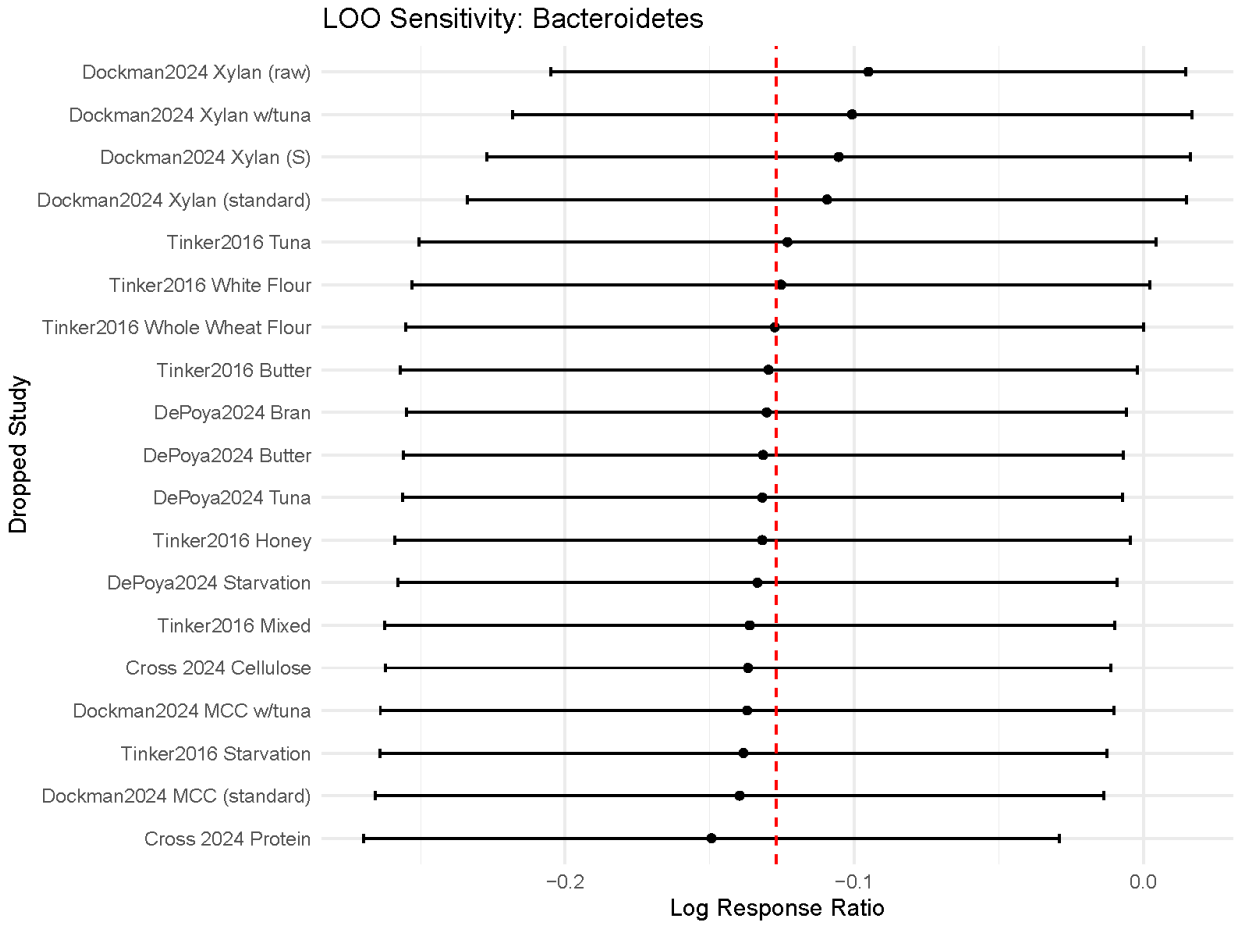

Figure S10. Forest plot of Firmicutes: Bacteroidetes ratio log-ratio.

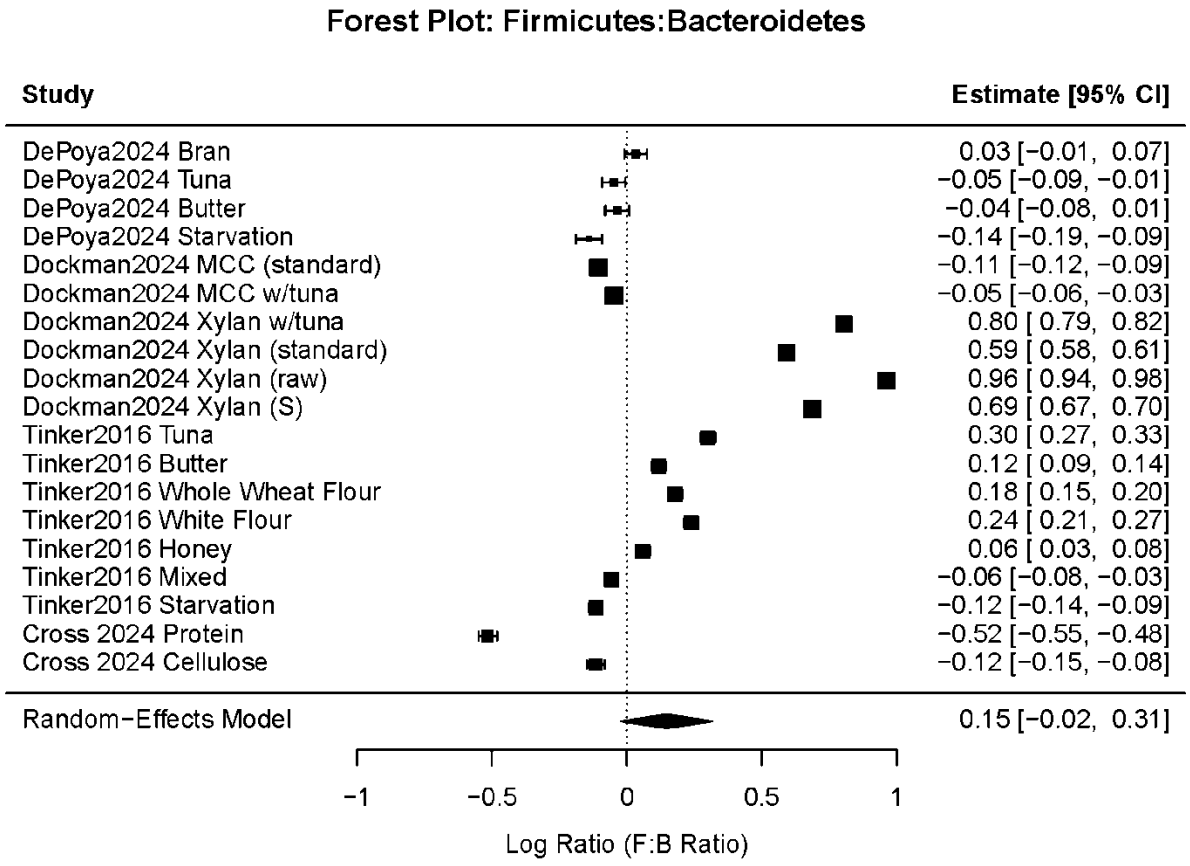

Figure S11. Funnel plot of Firmicutes: Bacteroidetes ratio log RR vs. SE.

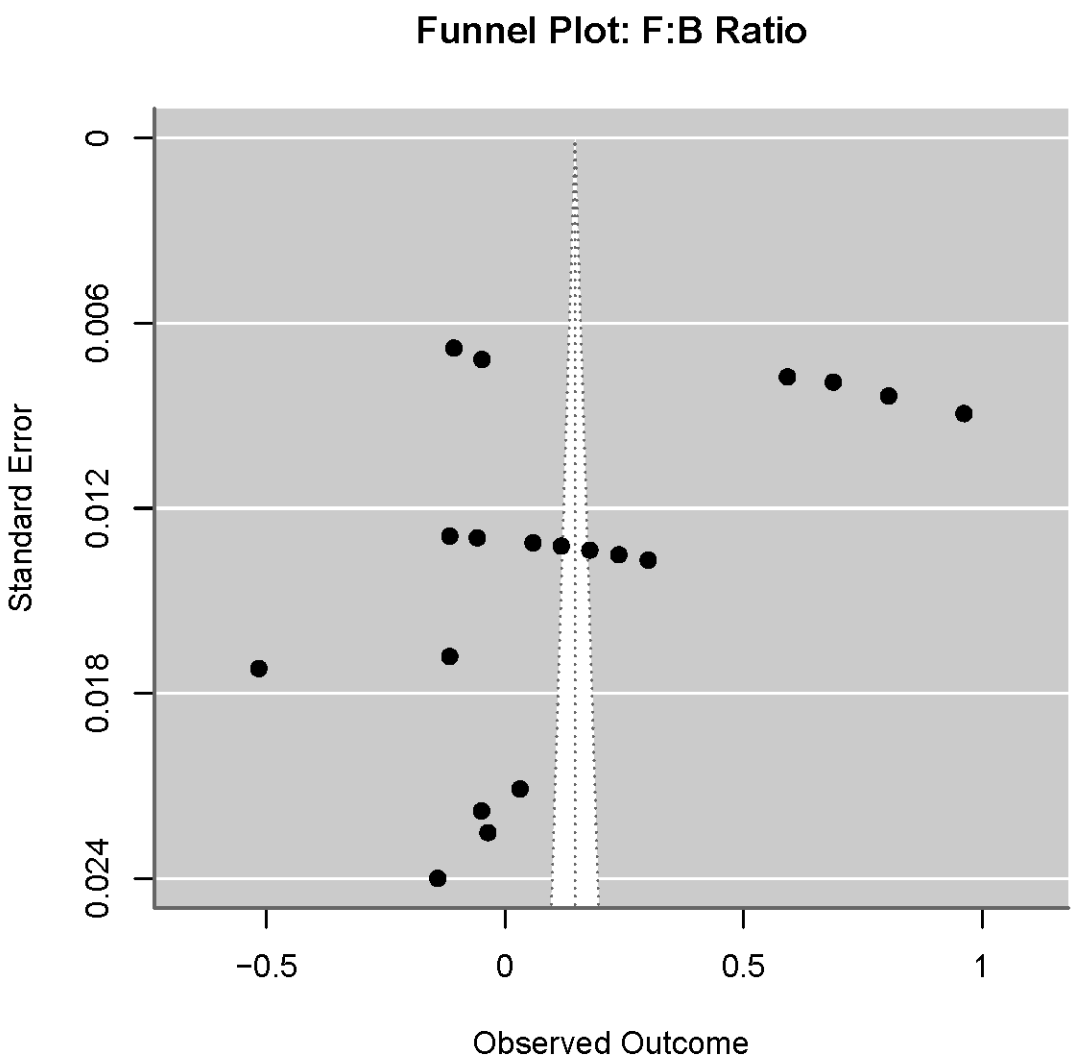

Figure S12. Leave-one-out sensitivity for F:B ratio log RR.