

Artifact Risk in IBD Microbiome Studies

IBD-Specific Confounders

- Diarrhea → diluted samples
- Inflammation → altered transit
- Disease activity → load variation

Artifact Risk

- Load variation up to 10x
- Creates ± 3.3 log2FC artifacts
- Mimics taxon-specific changes

Recommended Approach

1. Report effect sizes, not just p-values
2. Flag findings < 3.3 log2FC as "needs validation"
3. Use spike-in controls when possible

Robust, Reproducible Findings

Only large effects (> 3.3 log2FC) or validated by spike-in