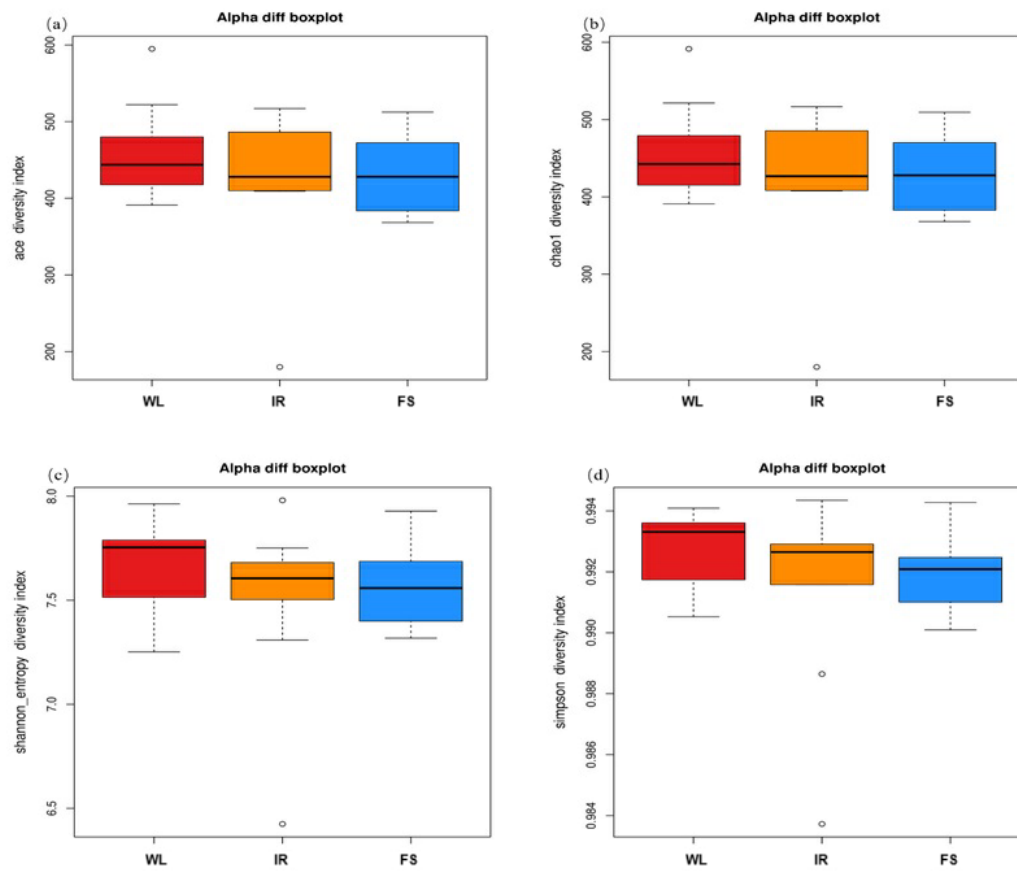
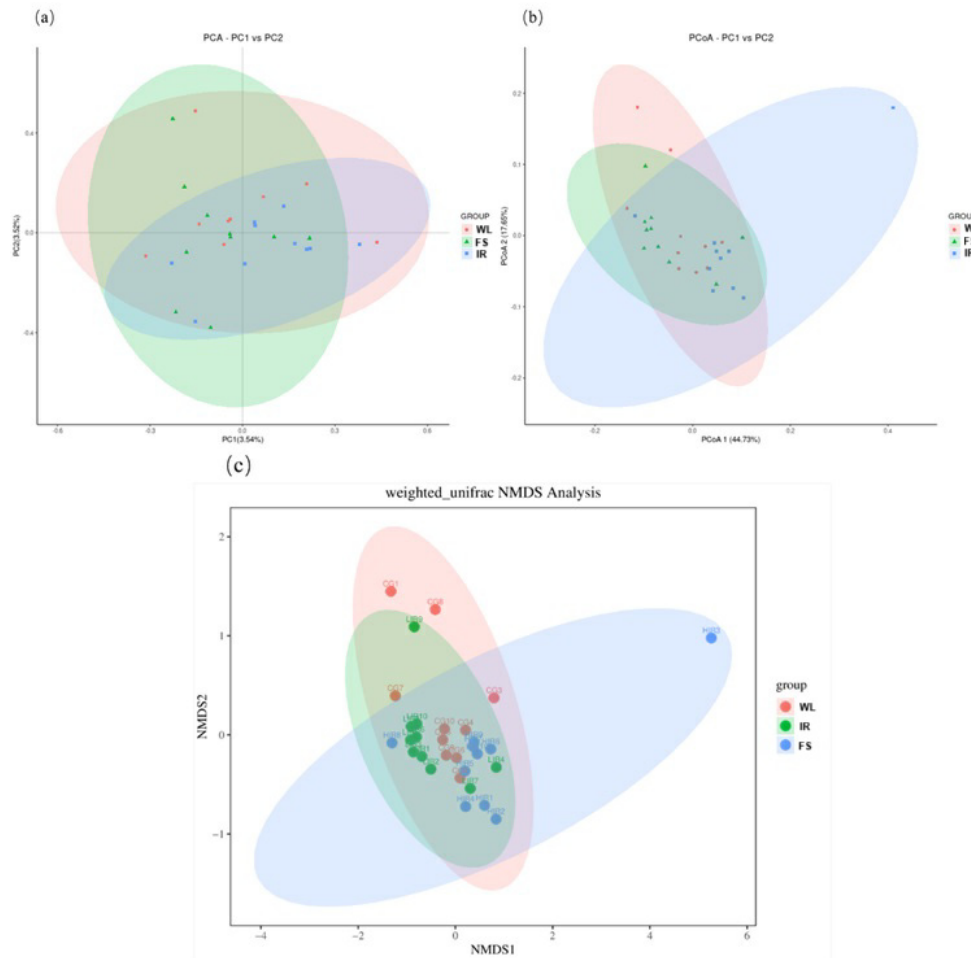


**Supplementary Figure S1.** Rarefaction and rank abundance curve of the group during the rearing period: observed features index; (b) chao1 index; (c) shannon index; (d) rank abundance curve; IR: infrared radiation group; FS: full spectrum radiation group; WL: white light group (control group).



**Supplementary Figure S2.** Alpha diversity index of different groups: (a) ace index; (b) hao1 index; (c) shannon index; (d) simpson index. Outliers are marked with "o". IR: infrared radiation group; FS: full spectrum radiation group; WL: white light group (control group).



**Supplementary Figure S3.** Beta diversity analysis of the groups: (a) PCA; (b) PCoA; NMDS analysis. IR: infrared radiation group; FS: full spectrum radiation group; WL: white light group (control group)