

Supplementary data for:

**Fatty acid composition and phospholipid types used in infant formulas
modifies the establishment of human gut bacteria in germ-free mice**

by

Rikke Guldhammer Nejrup, Tine Rask Licht and Lars Ingvar Hellgren

Content:

Supplementary Figures S1-S6.

Peroxide values in emulsions

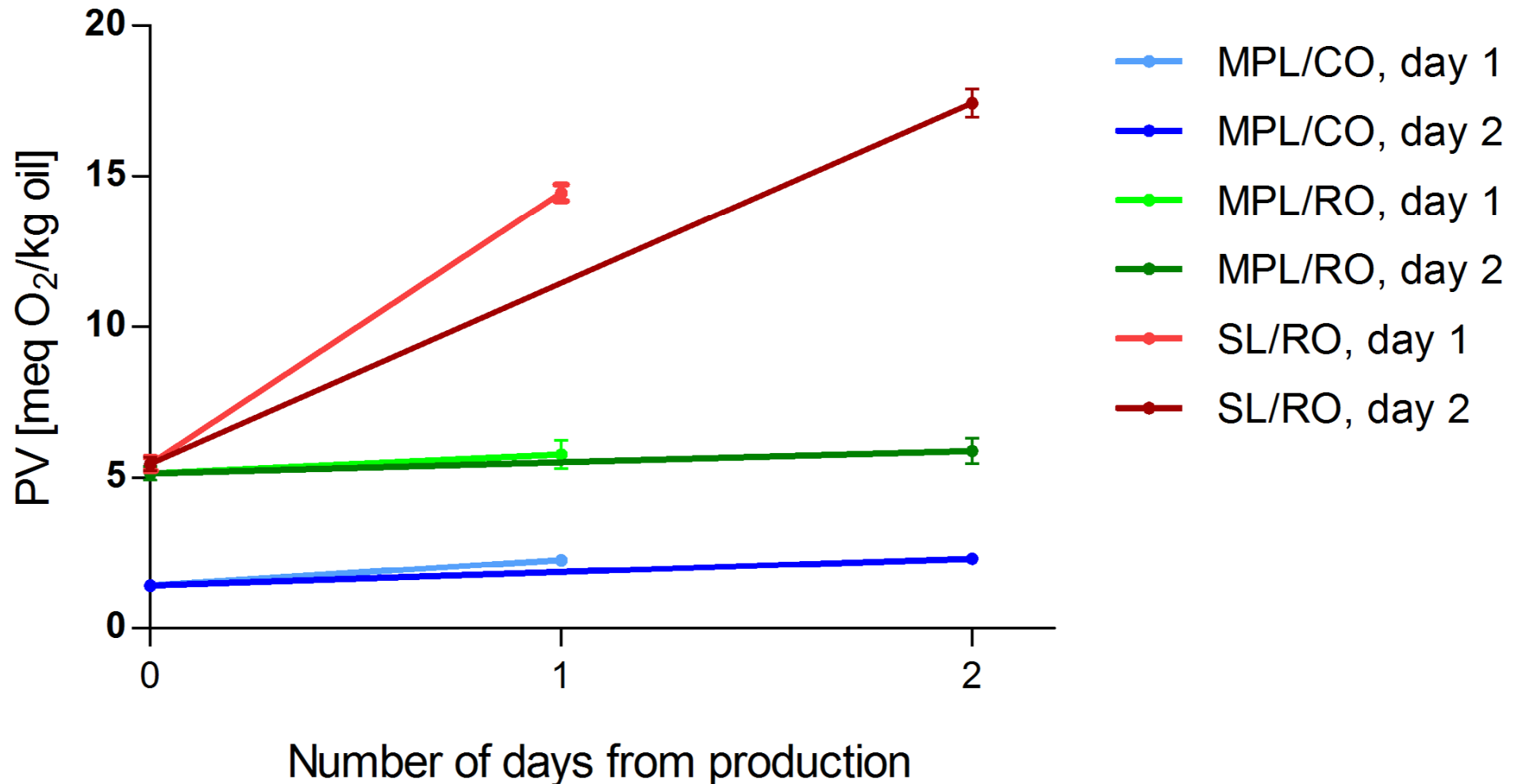
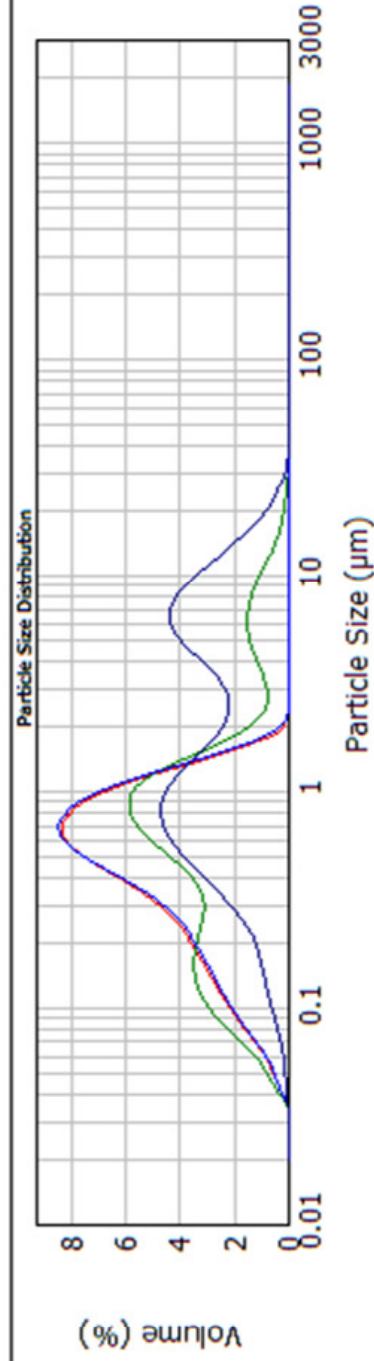
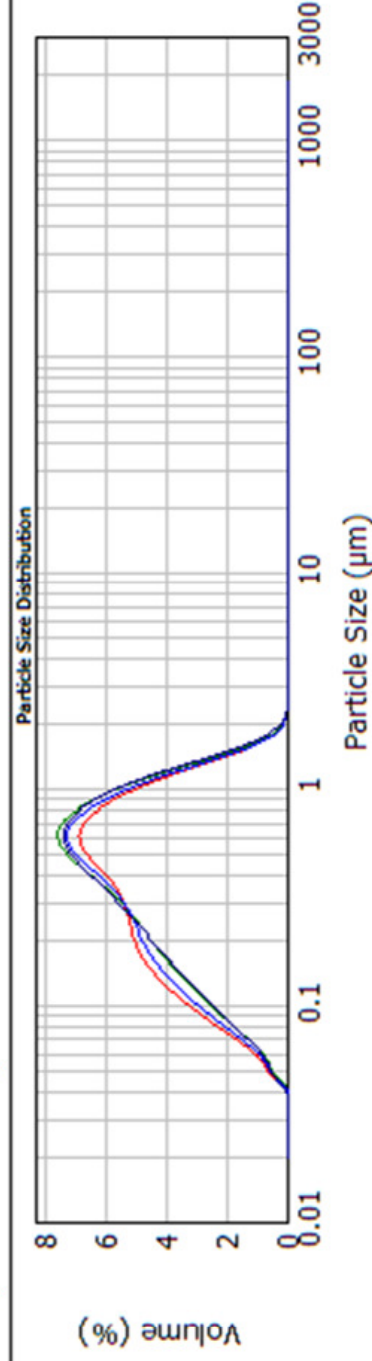


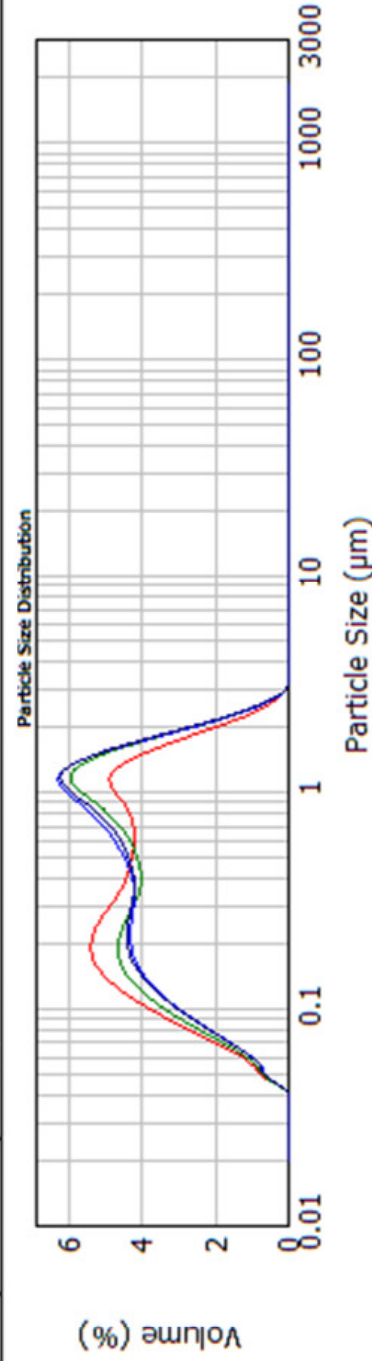
Figure S1 Peroxide values in emulsions over time. Values are shown in milliequivalent (meq) O₂/kg oil. Values are measured right after production (day 0), and here after at day 1 and 2, respectively. Day 1 refers to the measurement after 24 hrs at RT, while day 2 refers to 24 hrs storage (+4°C for MPL/Rapeseed (RO) and SL/RO, RT for MPL/Coconut oil (CO)) followed by 24 hrs at RT



- Day 0 MPL+Coconut, 18. december 2013 17:20:01
- Day 1 MPL+Coconut (40C), 19. december 2013 14:58:18
- Day 1 MPL+Coconut (20oC), 19. december 2013 15:07:37
- Day 2 MPL+Coconut, 20. december 2013 14:33:26



- Day 0 MPL+Rapeseed, 18. december 2013 17:06:45
- Day 1 MPL+Rapeseed (4oC), 19. december 2013 14:30:40
- Day 1 MPL+Rapeseed (20oC), 19. december 2013 14:39:42
- Day 2 MPL+Rapeseed, 20. december 2013 14:24:55



- Day 0 SL+Rapeseed, 18. december 2013 17:15:16
- Day 1 SL+Rapeseed (4oC), 19. december 2013 14:35:15
- Day 1 SL+Rapeseed (20oC), 19. december 2013 14:52:56
- Day 2 SL+Rapeseed, 20. december 2013 14:29:02

Figure S2 Particle size [μm] distribution of lipid droplets in emulsions. A: MPL/CO, B: MPL/RO, C: SL/RO. Colors refer to: day 0 (red) corresponding to the production day, day 1 after storage at $+4^\circ\text{C}$ for 24 hrs (green), day 1 after 24 hrs at $+20^\circ\text{C}$ (light blue) and day 2 after storage at $+4^\circ\text{C}$ for 24 hrs followed by 24 hrs at $+20^\circ\text{C}$ (dark blue).

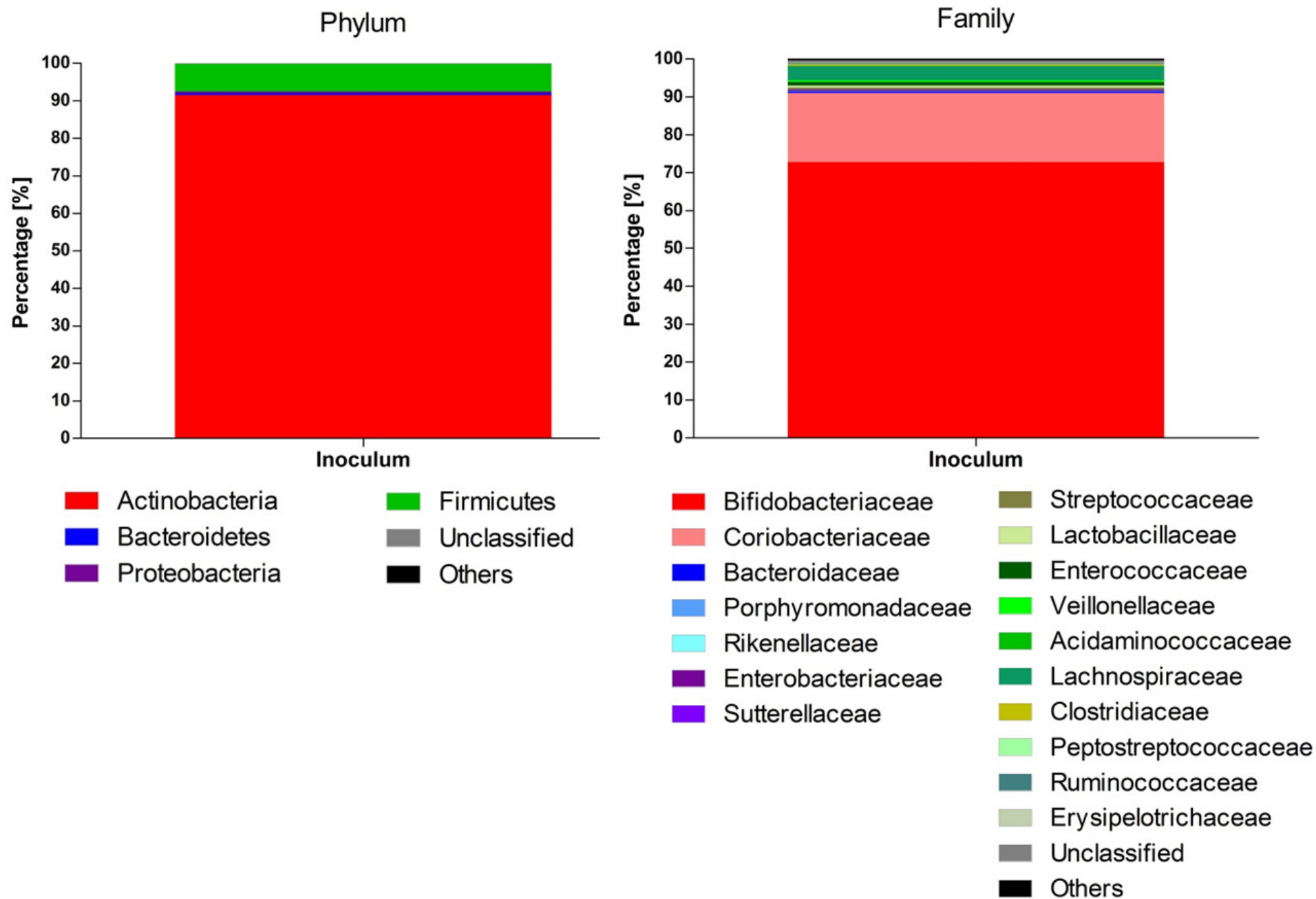


Figure S3 Bacterial distribution in inoculum. Left: phylum level, Right: Family level. Color matches between families and their corresponding phylum.

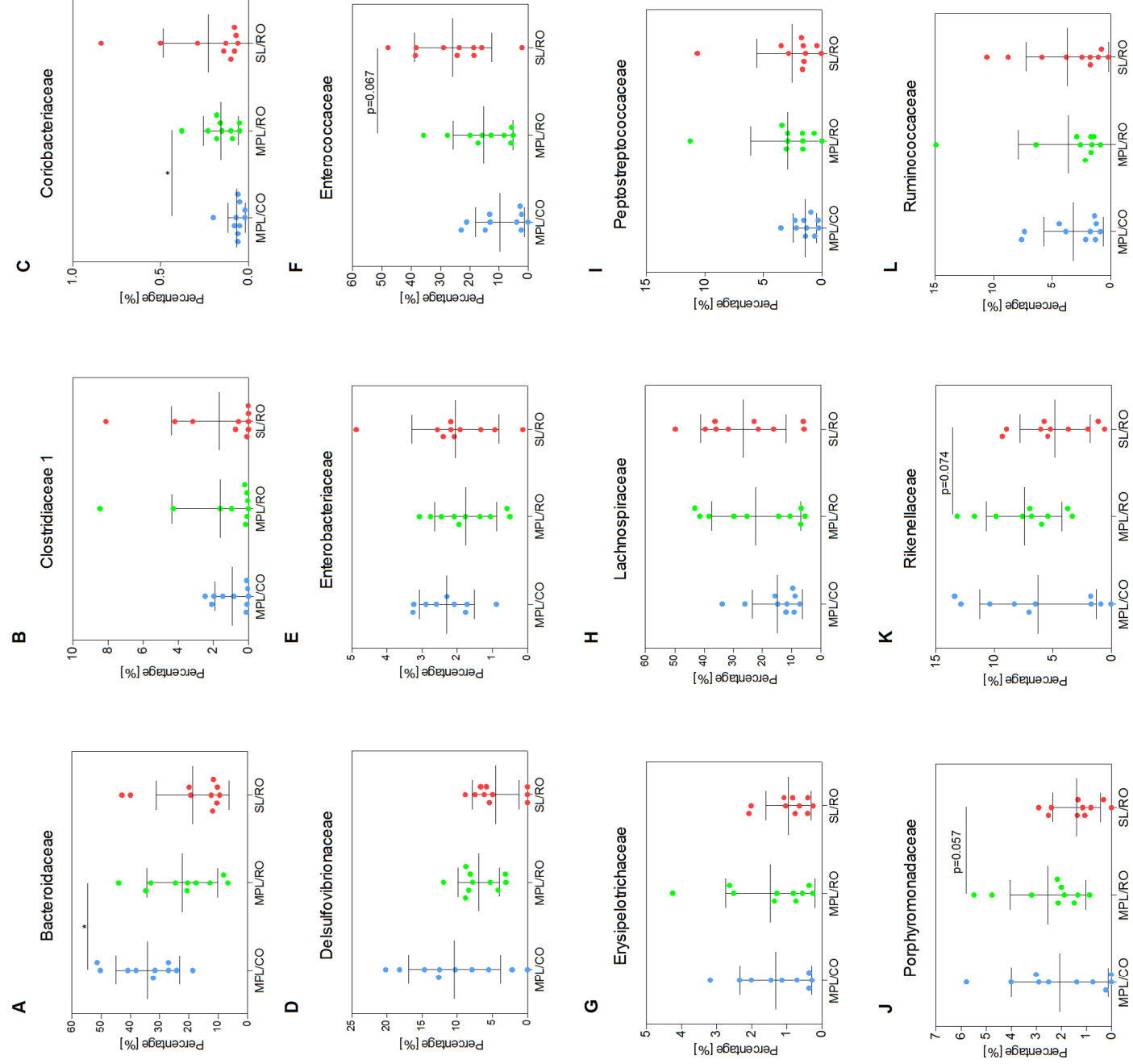


Figure S5 Percentage-wise bacterial distribution in cecum. Distributions are shown for A: Bacteroidaceae, B: Clostridiaceae 1, C: Coriobacteriaceae, D: Desulfovibrionaceae, E: Enterobacteriaceae, F: Enterococcaceae, G: Erysipelotrichaceae, H: Lachnospiraceae, I: Peptostreptococcaceae, J: Porphyromonadaceae, K: Rikenellaceae and L: Ruminococcaceae. Data are shown as percentage with mean \pm SD, n = 10. Number of asterisks indicate significant p-values (* p<0.05). No differences were found between groups within the same day. Any significant difference within groups over time is not illustrated. NB: Y-axes are not identical.

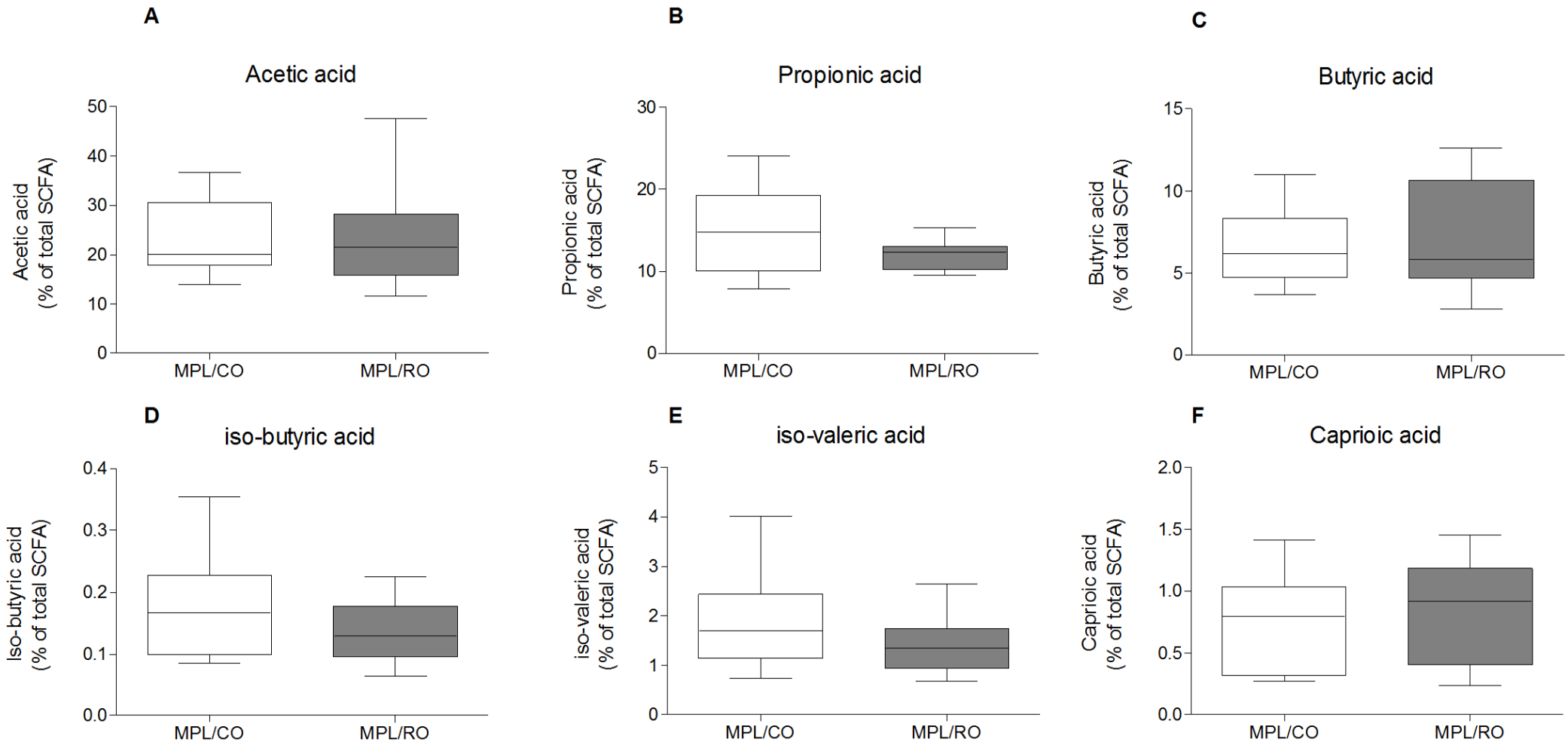


Figure S6 Effect of oil on short-chain fatty acid (SCFA) production in cecum. Levels of SCFAs are illustrated as percentage of total SCFAs. A: Acetic acid, B: Propionic acid, C: Butyric acid, D: iso-Valeric acid, E: iso-Butyric acid, and F: Caprioic acid. Differences between groups are calculated using student's t-test using a significance level of $p=0.05$. No differences were observed between groups.