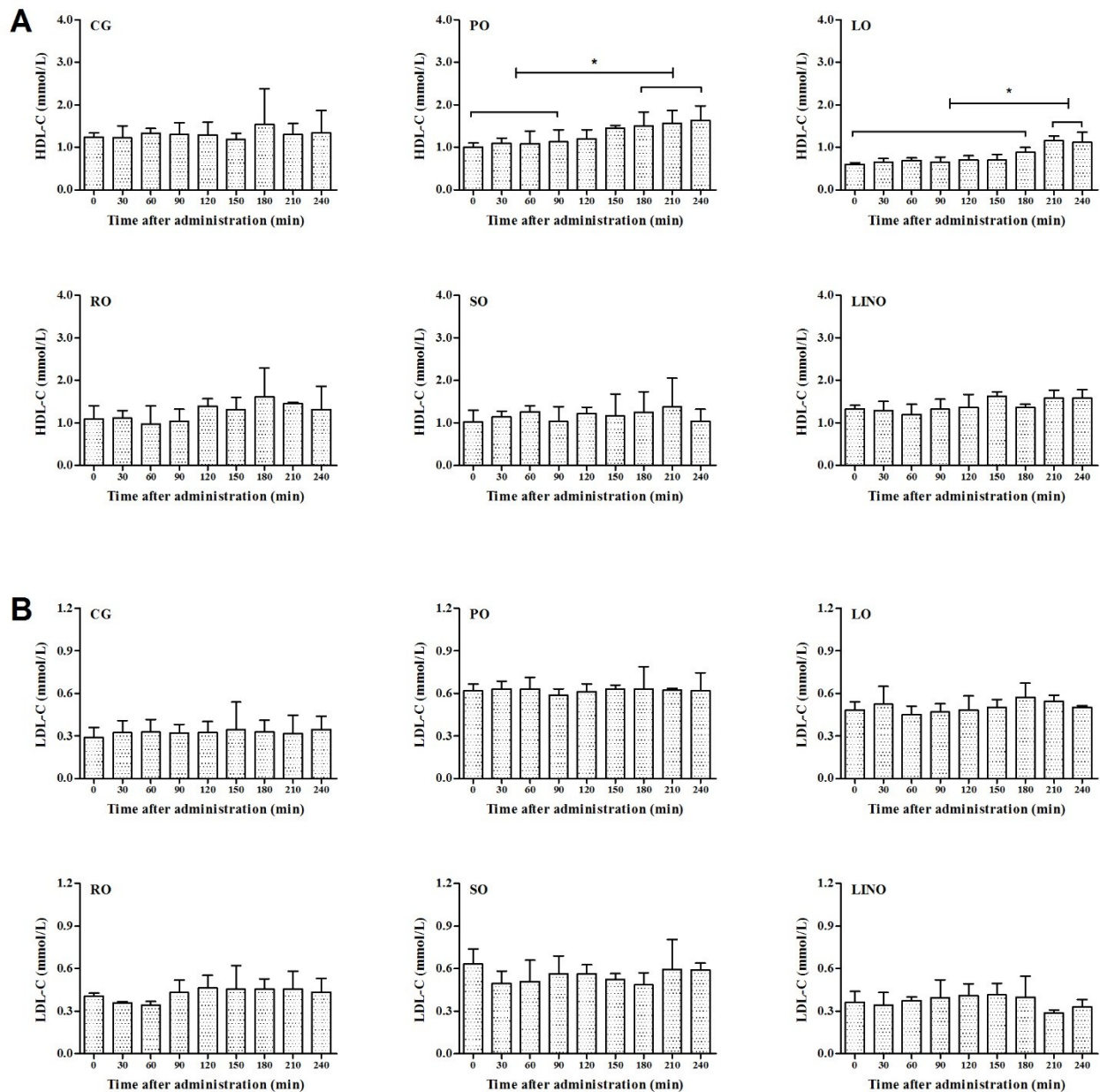


Electronic supplementary information

Highlights:

1. Fatty acid species and locations within TAGs molecules could affect lipid digestion rate and extent.
2. Maximum FFA release extent upon pancreatic lipase reaction: PO > RO > LINO > SO > LO.
3. Apparent FFA release constants were PO > SO ≈ RO > LO ≈ LINO during in-vitro digestion.
4. PO and LO were more prone to affect serum TG level and LDL-C: HDL-C ratio.
5. Lipids which were digested faster seemed to be more likely to affect serum lipid profiles.
6. Correlations were observed between lipid fatty acid composition and serum lipid profiles.

Supplementary Fig. 1



Supplementary Fig. 1 Changes in serum HDL-C and LDL-C profiles obtained before and after gavage administration in healthy adult male SD rats. A. for serum HDL-C; B. for serum LDL-C. Error bars represent the standard deviation calculated from six independent tested sample rats. “*” indicated significant difference ($P < 0.05$) between the groups. Figures without “*” above the bars indicated that no significant differences could be observed between groups under $P = 0.05$. CG, control group; PO, palm oil group; LO, lard oil group; RO, rapeseed oil group; SO, sunflower oil group; LINO, linseed oil group.