

Digestion characteristics of structural lipid monomers rich in α -linolenic acid from silkworm pupae oil

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These study on the digestion characteristics of TAG monomer of silkworm pupae oil in vitro is helpful to guide the intake and supplement of structural lipids rich in α -linolenic acid. The separation and preparation of TAG is one of the important steps in this study. According to the difference of polarity, reversed-phase high-performance liquid chromatography (RP-HPLC) was used to analyze and prepare different TAGs. The in vitro digestion model of pH-stat simulates the digestion process of oil in small intestine with short time, high efficiency, simple operation and easy control. The results showed that seven kinds of TAGs were successfully separated from SPO by semi-preparative chromatography. In summary, the study of the digestion characteristics of different TAG monomers of SPO is very important to fully understand the function of SPO, and can provide necessary theoretical basis for the development of efficient supplement of ALA structural lipids.

Key words: Silkworm pupae oil, α -linolenic acid, triacylglycerols, pH-stat system, *in vitro* digestion.