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A quantitative method for the determination of α -linolenic acid and linoleic acid in by high-performance liquid chromatography

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Alpha-Linolenic Acid (ALA) and Linoleic Acid (LA), abundant in chia seed oil are useful Polyunsaturated Fatty Acids (PUFA) with numerous health benefits. The objective of the present study was to explore the possibilities of the direct analysis of ALA and LA in chia seed oil by reverse-phase HPLC-UV. The results showed that the HPLC-UV method proposed allowed for determining the concentrations of ALA and LA in chia seed oil without applying any isolation or derivatization step. The method was found to be direct, sensitive (LOQ 0.34 mg/ml for ALA and 0.04 mg/ml for LA), precise (RSD \leq 5%). Thus, the proposed experimental designs were shown to offer considerable advantages over traditional derivatization approaches.

Biography

Bingbing Liu is currently pursuing PhD at Department of Chemistry, Zhejiang University, China. Her research interests are food chemistry, natural products and HPLC. She has completed several researches, including synthesis of a new antioxidant that can be applied to food and cosmetic industry.

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