

What are the steps for writing scientific research?



❖ Title the experiment or Title the research

❖ Summary or Abstract

❖ Introduction

1-The Purpose and Objectives of studying the experiment

2-The aim of studying the experiment

❖ Materials and Methods

❖ Results and Discussion

1- Tables and Figures

2- Problem statement

❖ References



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In this study, a simple, stable and sensitive **method** for the simultaneous **determination** of
 saturated and unsaturated FFAs from **edible oils** using 2-(11H-benzo[a]carbazol-11-yl)- ethyl-4-
 methylbenzenesulphonate (BCETS) as labelling reagent with **fluorescence detection** has been
 established.



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G Li, J You, Y Suo, C Song, Z Sun, L Xia, X Zhao, J Shi - Food chemistry, 2011 - Elsevier

Free fatty acids (FFAs) in edible oils are one of the most frequently determined quality indices during production, storage, and marketing. In this study, a simple, stable and sensitive method for the simultaneous determination of saturated and unsaturated FFAs from edible oils using 2-(11H-benzo [a] carbazol-11-yl)-ethyl-4-methylbenzenesulphonate (BCETS) as labelling reagent with fluorescence detection has been established. FFAs are derivatized by BCETS and separated on a reversed-phase Eclipse XDB-C 8 column with a ...

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Analytical Methods

A developed pre-column derivatization method for the determination of free fatty acids in edible oils by reversed-phase HPLC with fluorescence detection and its application to *Lycium barbarum* seed oil

Guoliang Li^{a,b,c}, Jinmao You^{a,b,*}, Yourui Suo^a, Cuihua Song^b, Zhiwei Sun^{a,c}, Lian Xia^b, Xianen Zhao^d, Junyou Shi^{a,c}

^aNorthwest Plateau Institute of Biology, Chinese Academy of Sciences, Xining 810001, PR China

^bThe Key Laboratory of Life-Organic Analysis, Qufu Normal University, Qufu, Shandong 273165, PR China

^cGraduate School of the Chinese Academy of Sciences, Beijing 100039, PR China

^dShandong Analysis and Test Center, Shandong Academy of Sciences, 19 Keyuan Street, Jinan, Shandong 250014, PR China



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Analytical Methods

A developed pre-column derivatization method for the determination of free fatty acids in edible oils by reversed-phase HPLC with fluorescence detection and its application to *Lycium barbarum* seed oil

1. Introduction

High quality edible oil is not only healthy but can also increase the delicious flavour to dishes. The quality of edible oil is determined by various factors such as flavour, free fatty acids (FFAs) content, oxidation, hydrolysis and so on (Keurentjes, Doornbusch, & Riet, 1991). FFAs are one of the most frequently determined quality indices during production, storage, and marketing (price dictated by FFA content) (Saad et al., 2007). FFAs in edible oils are undesirable, it results in lower flavour quality and stability of the

2. Material and methods

2.1. Instrumentation

The HPLC system was Agilent HP 1100 series (Waldbronn, Germany) with a fluorescence detector (FLD) (model G1321A). The mass spectrometer 1100 Series LC/MSD Trap-SL (ion trap) from Bruker Daltonik (Bremen, Germany) was equipped with an atmospheric pressure chemical ionisation (APCI) source. Derivatives were separated on a reversed-phase Eclipse XDB-C₈ column (150× 4.6 mm, 5 µm, Agilent) by a gradient elution. Fluorescence excitation and emission spectra were obtained at a F7000 fluorescence spectrophotometer (Hitachi, Japan).



❖ Discuss the experiment

High quality edible oil is not only healthy but can also increase the delicious flavour to dishes. The quality of edible oil is determined by various factors such as flavour, free fatty acids (FFAs) content, oxidation, hydrolysis (Li et al. 2011)

❖ References

Li, G., J. You, Y. Suo, C. Song, Z. Sun, L. Xia, et al. 2011. A developed pre-column derivatization method for the determination of free fatty acids in edible oils by reversed-phase HPLC with fluorescence detection and its application to *Lycium barbarum* seed oil. *Food chemistry* 125(4): 1365-1372.

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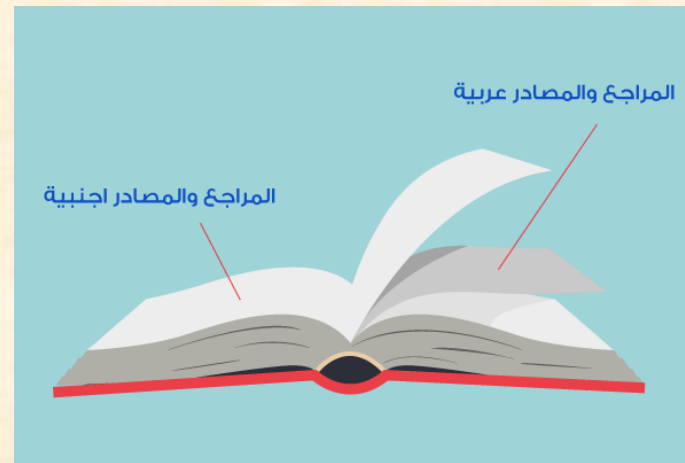
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*Thank
you*

