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SYNTHESIS OF STRUCTURED LIPID AND IMPROVING ITS OXIDATIVE STABILITY USING POTENT ANTIOXIDANT EXTRACTED FROM OLIVE LEAVES

Thesis Submitted

by

AHMED IBRAHIM MOHAMED ABD ELGAWAD

For

Ph.D. Degree of Science in Chemistry

To

Department of Chemistry

Faculty of Science, Ain Shams University

2021

تحضير إحدى الليبيدات المعدلة وتحسين ثباتها ضد التأكسد بإستخدام إحدى مضادات الأكسدة المستخلصة من ورق الزيتون

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SPECIAL DEDICATION

This thesis is dedicated to my father and Mother

Who supported me with everything they have and for their faith in me and allowing me to be as ambitious as I want.

And

My brother Ibrahim and my sisters

for their support and encouragement

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List of Abbreviations

A.A.	Antioxidant activity
ADL	NovoCor ADL
ALA	Alpha linolenic acid; C18:3 n-3
BPI	The relative base peak ion chromatogram
CO	Canola oil
DPPH	2,2-Diphenyl-1-picrylhydrazyl radical
FA	Ferulic acid
FAGs	Feruloylated acylglycerols
FCO	Feruloylated canola oil
FFAs	Free fatty acids Feruloylated structured lipids
FLS	Feruloylated linseed oil
FPS	Feruloylated palm stearin
FSLs	Feruloylated structured lipids

LA	Linoleic acid; C18:2 n-6
LCSFA	Long chain saturated fatty acid
LCUFA	Long chain unsaturated fatty acid
LS	Linseed oil
N435	Novozyme435®
OA	Oleic acid; C18:1 n-9
PA	Palmitic acid; C16:0
PS	Palm stearin
SFS	Solvent free system reaction
TAGs	Triacylglycerols
TLL	Lipozyme TL 100L

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