

# SUPPORTING INFORMATION

(*PLoS ONE*)

## Fatty acid profile of Romanian's common bean (*Phaseolus vulgaris* L.) lipid fractions and their complexation ability by $\beta$ -cyclodextrin

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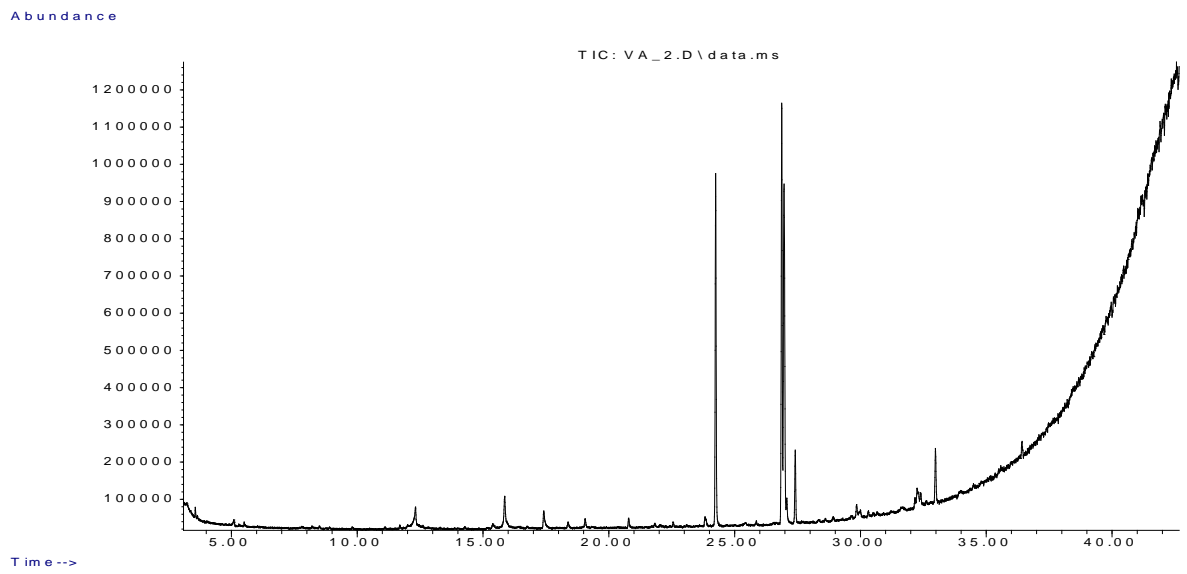
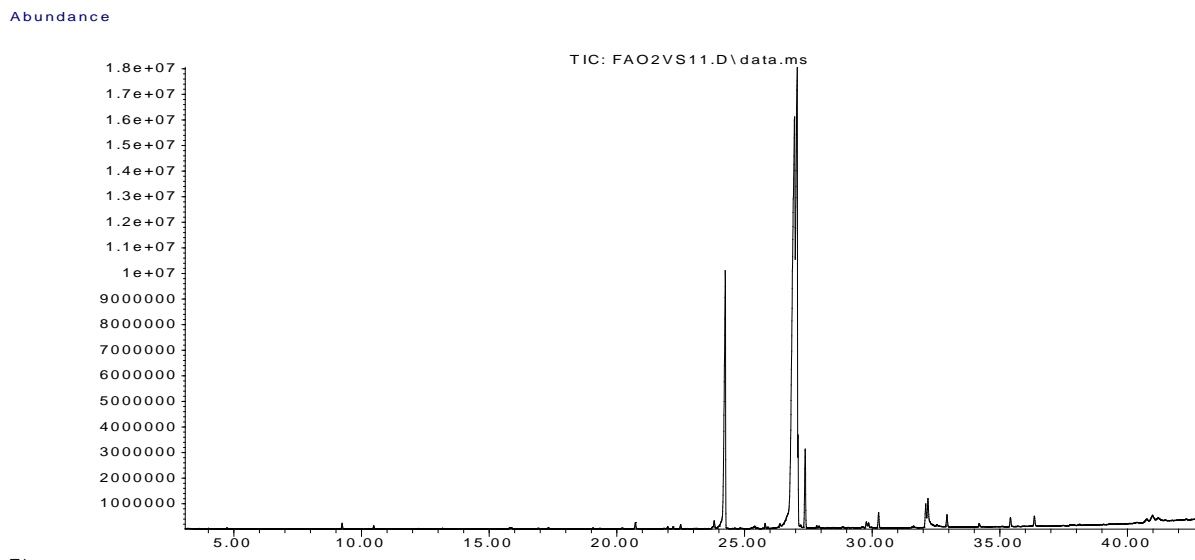
<sup>6</sup> Department of Applied Chemistry, Organic and Natural Compounds Engineering, Polytechnic University of Timișoara, Timișoara, Romania

\* Corresponding author

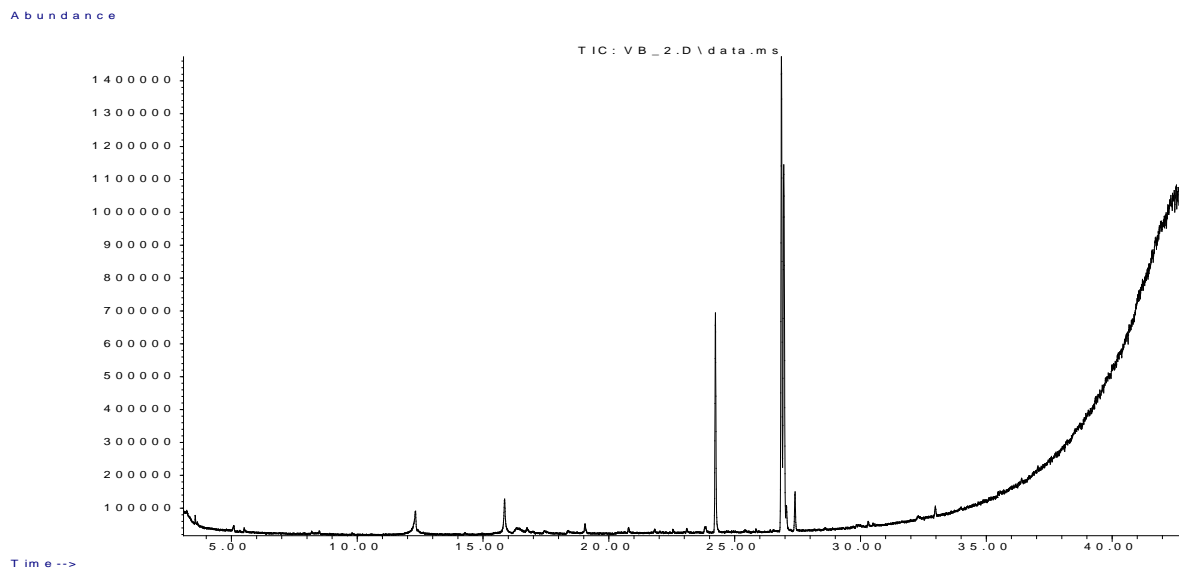
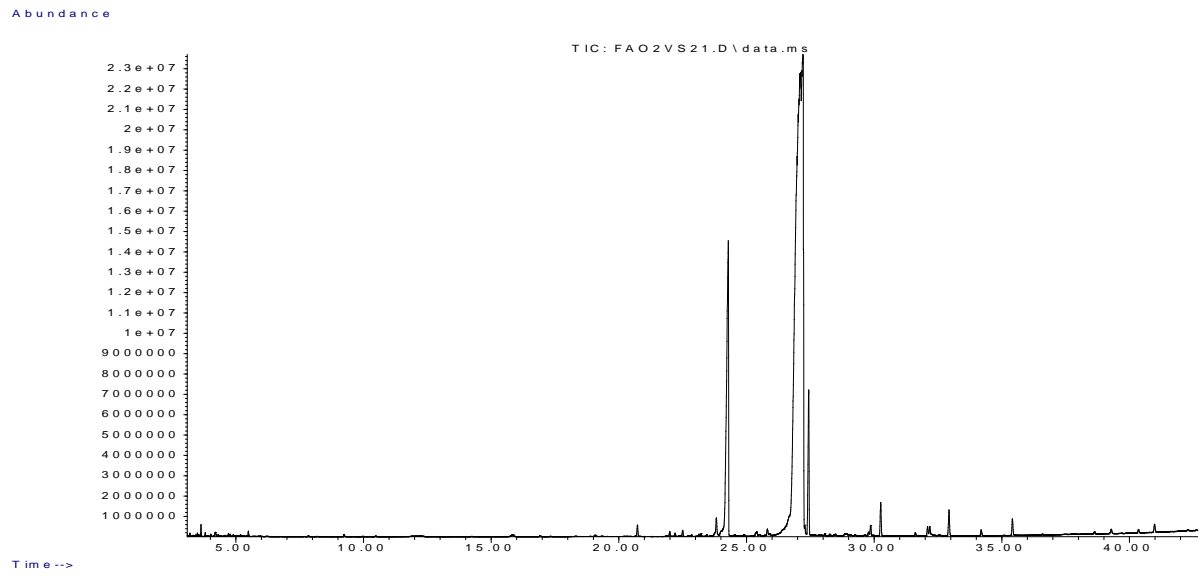
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¶ These authors contributed equally to this work. They are both principal authors.

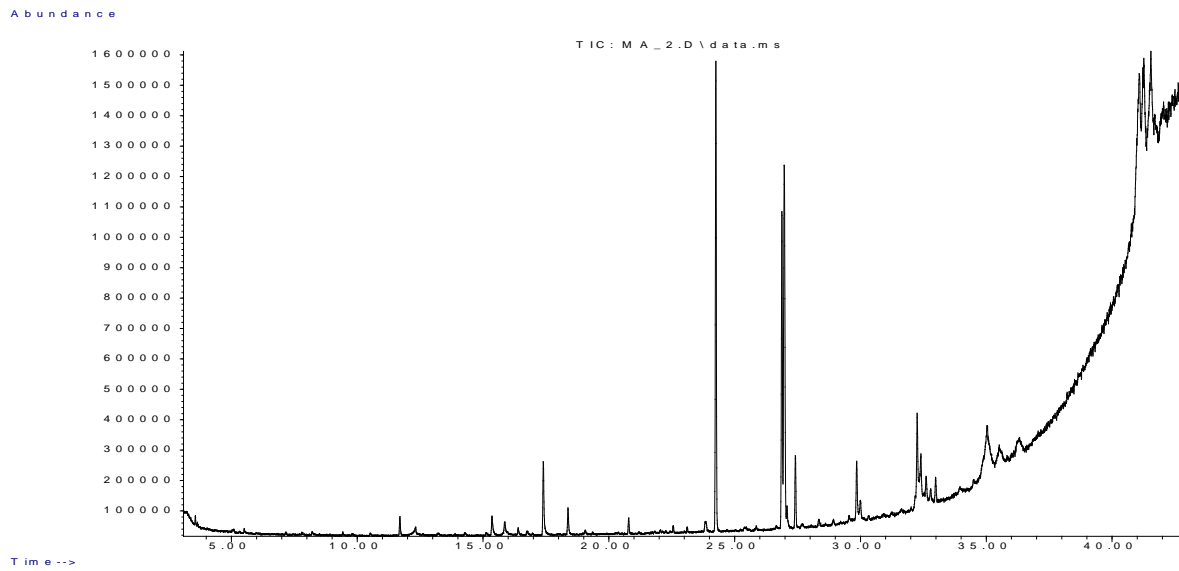
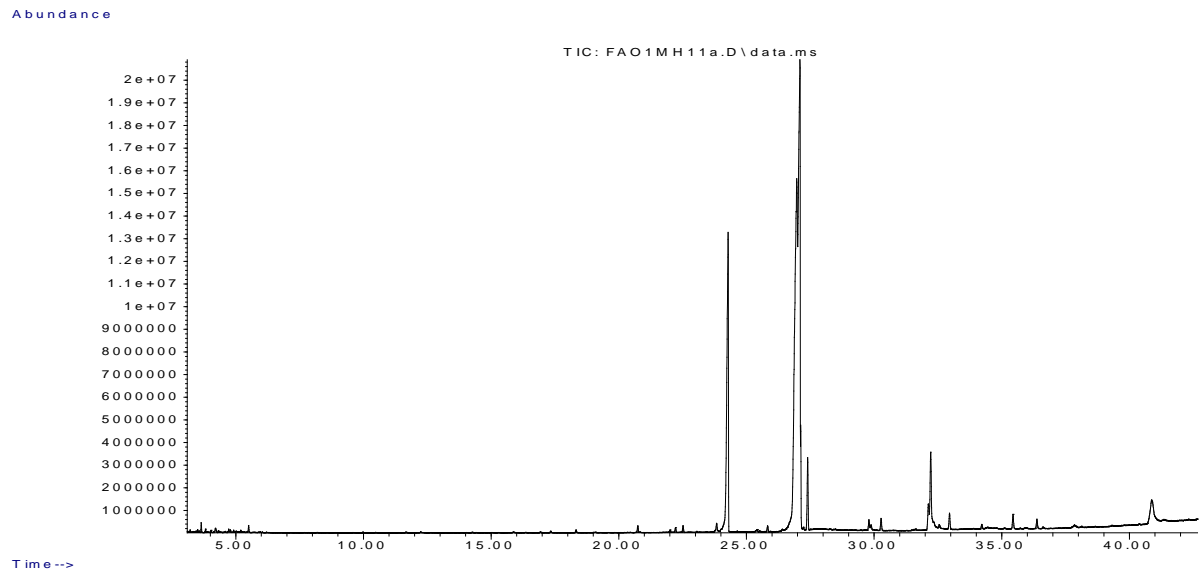
# Gas chromatography – mass spectrometry (GC-MS) data for the derivatized common bean lipid fractions



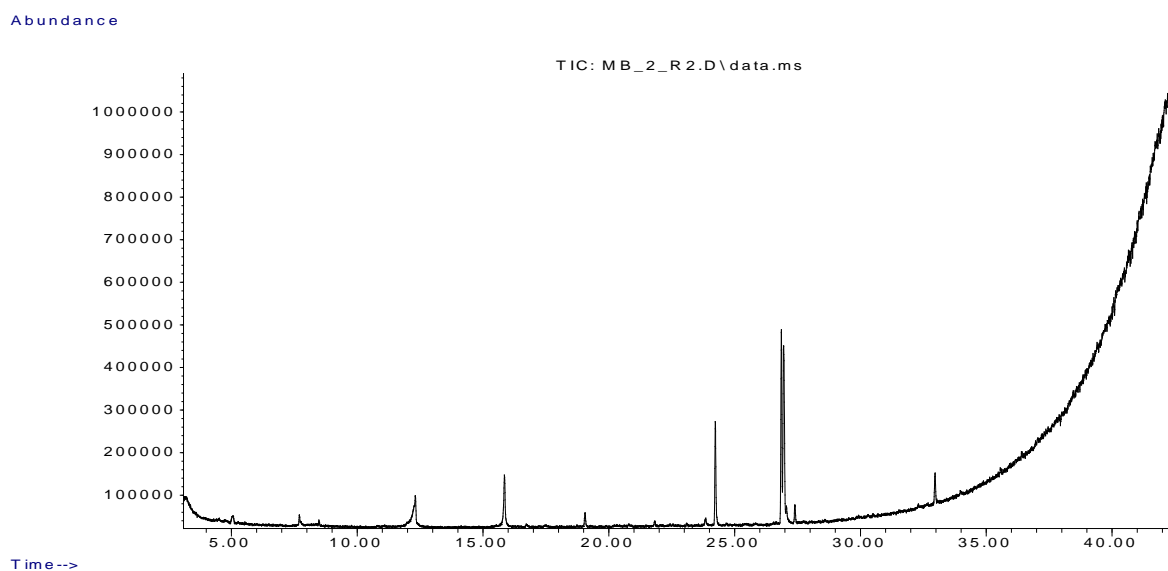
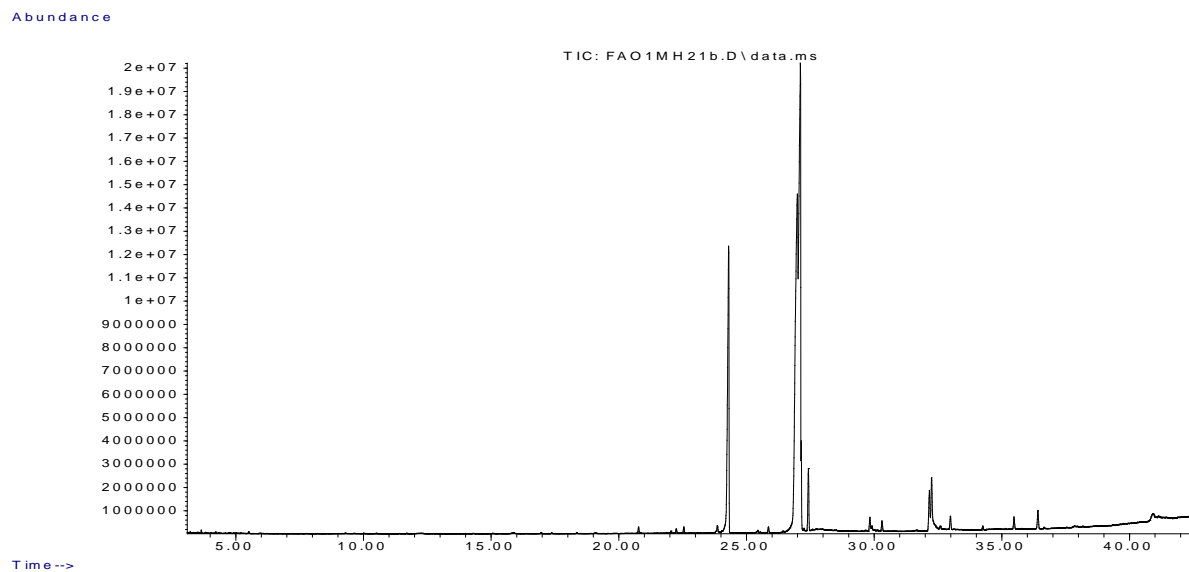
**Figure A. Gas chromatogram from the GC-MS analysis of the derivatized lipid fraction of beans (code CBO-NE, duplicate “a”; raw – top, and encapsulated - bottom)**



**Figure B. Gas chromatogram from the GC-MS analysis of the derivatized lipid fraction of beans (code CBO-NE, duplicate “b”; raw – top, and encapsulated - bottom)**



**Figure C. Gas chromatogram from the GC-MS analysis of the derivatized lipid fraction of beans (code CBO-SW, duplicate “a”; raw – top, and encapsulated - bottom)**



**Figure D. Gas chromatogram from the GC-MS analysis of the derivatized lipid fraction of beans (code CBO-SW, duplicate “b”; raw – top, and encapsulated - bottom)**

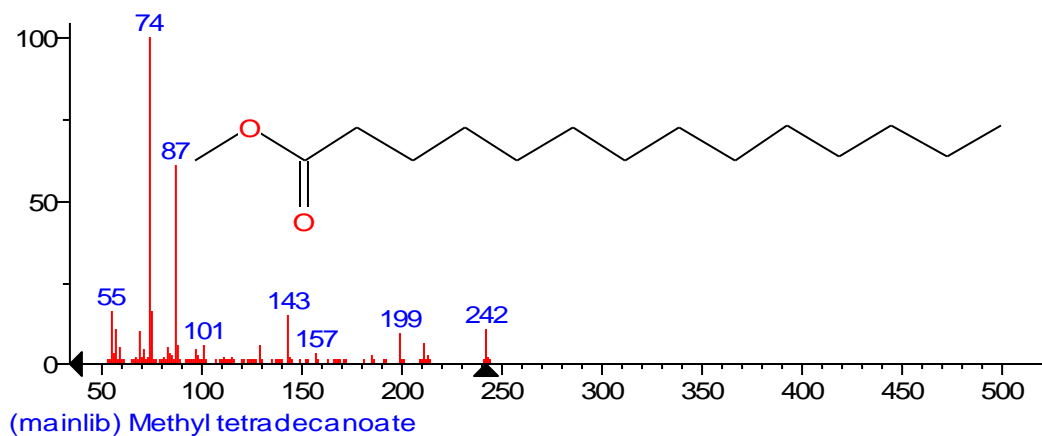
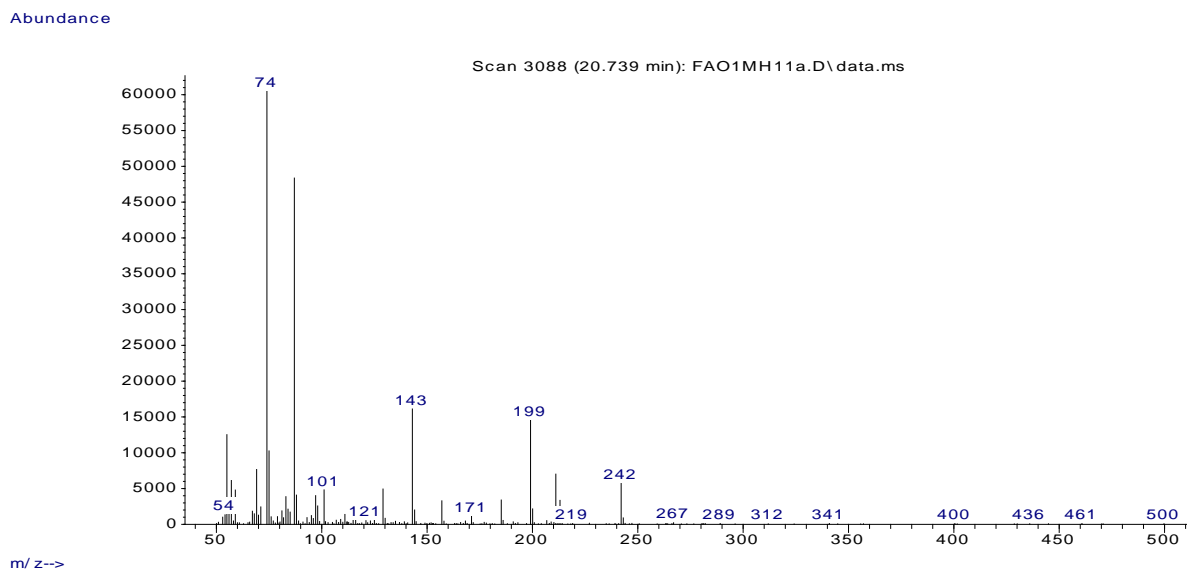


Figure E. MS spectra of myristic acid (methyl ester) from the GC-MS analysis of the derivatized beans lipid fractions (experimental – top and from the NIST database – bottom)

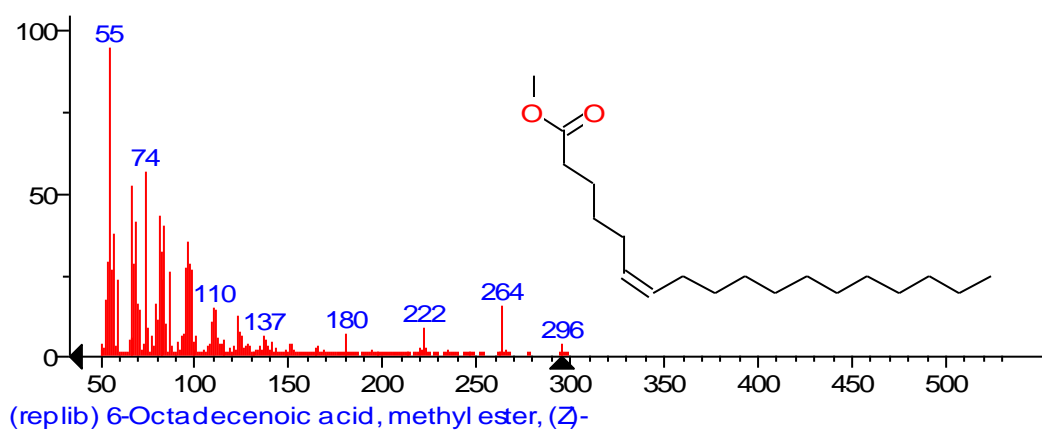
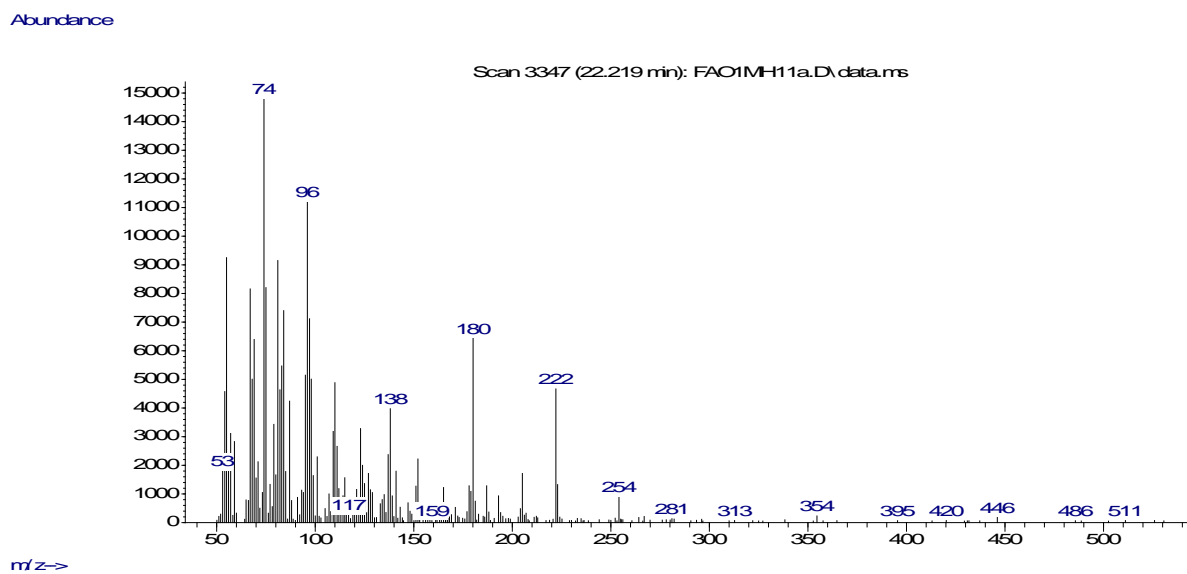


Figure F. MS spectra of petroselinic acid (methyl ester) from the GC-MS analysis of the derivatized beans lipid fractions (experimental – top and from the NIST database – bottom)

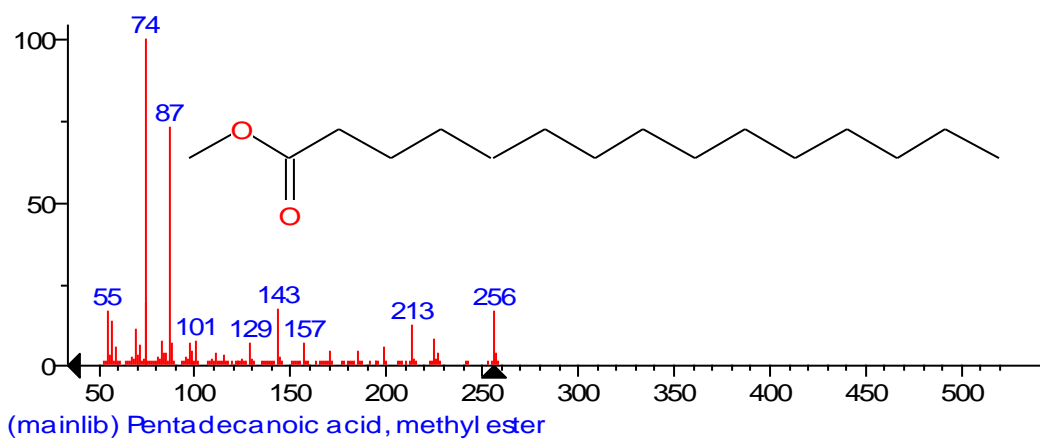
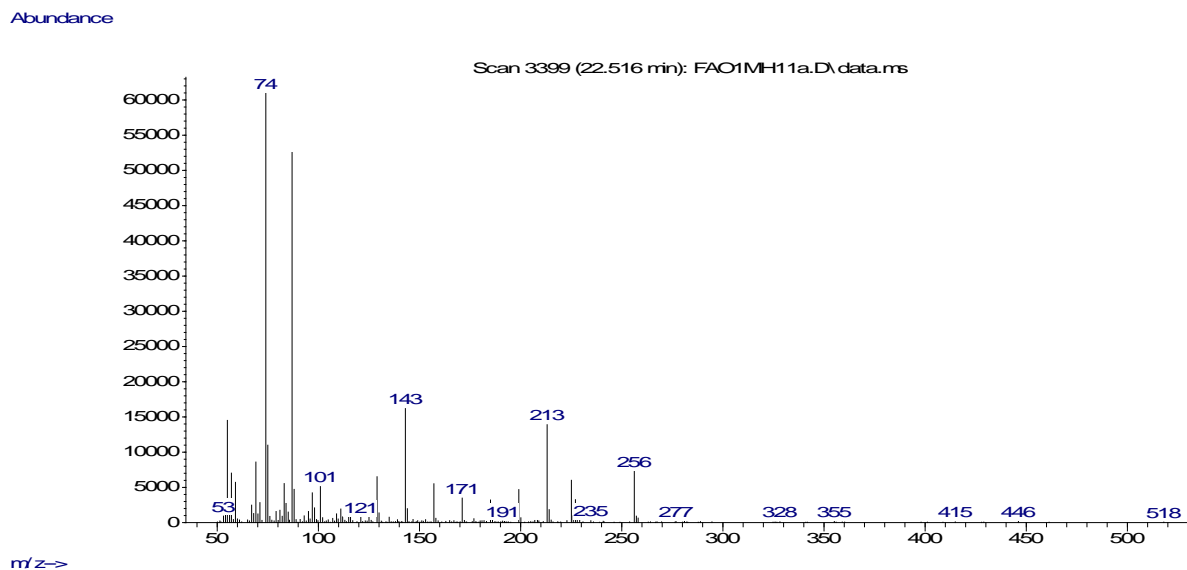
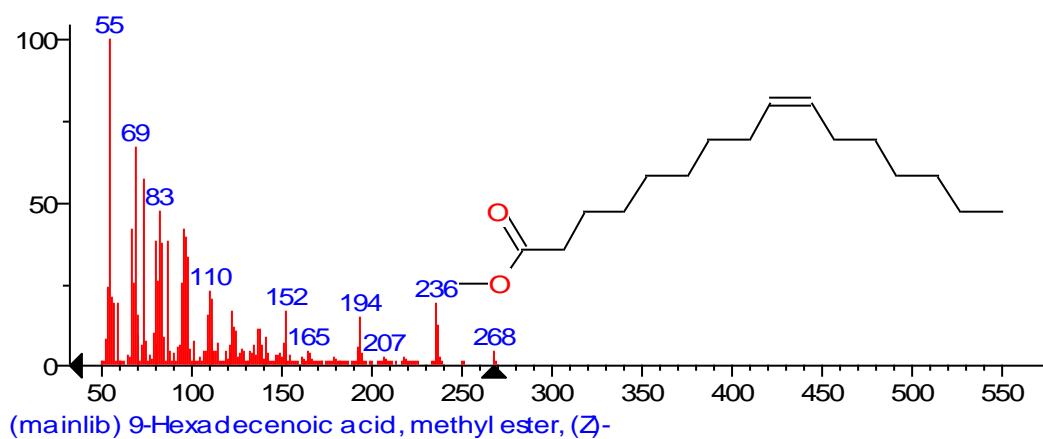
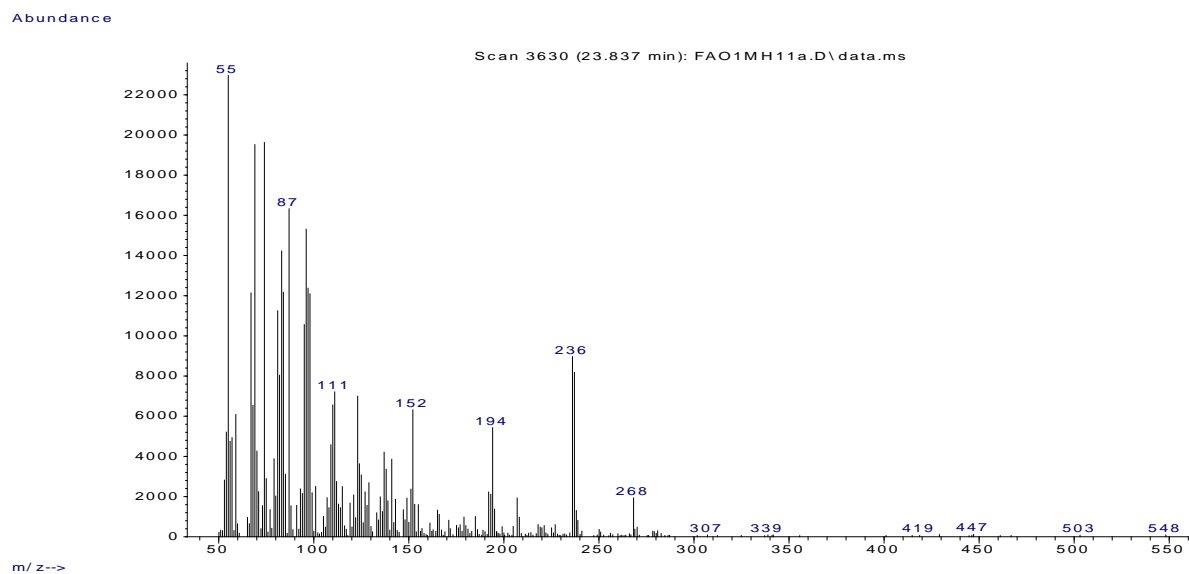


Figure G. MS spectra of pentadecanoic acid (methyl ester) from the GC-MS analysis of the derivatized beans lipid fractions (experimental – top and from the NIST database – bottom)





**Figure H. MS spectra of palmitoleic acid (methyl ester) from the GC-MS analysis of the derivatized beans lipid fractions (experimental – top and from the NIST database – bottom)**

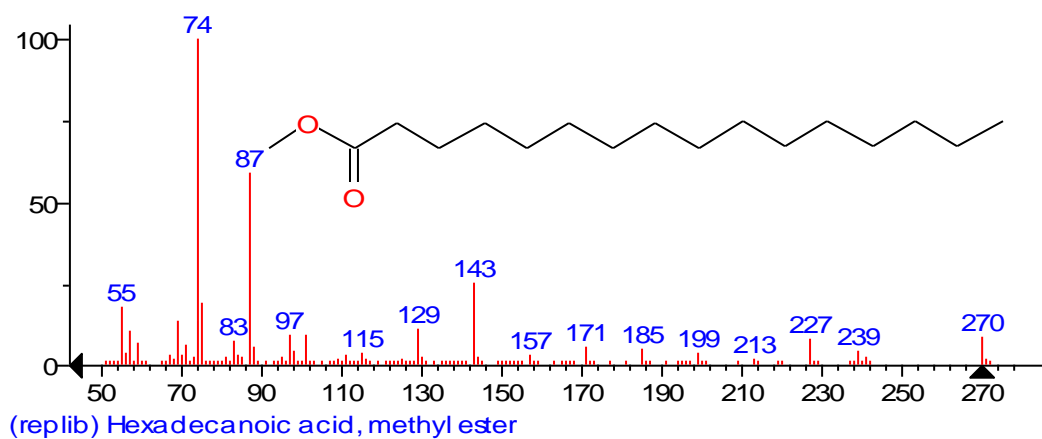
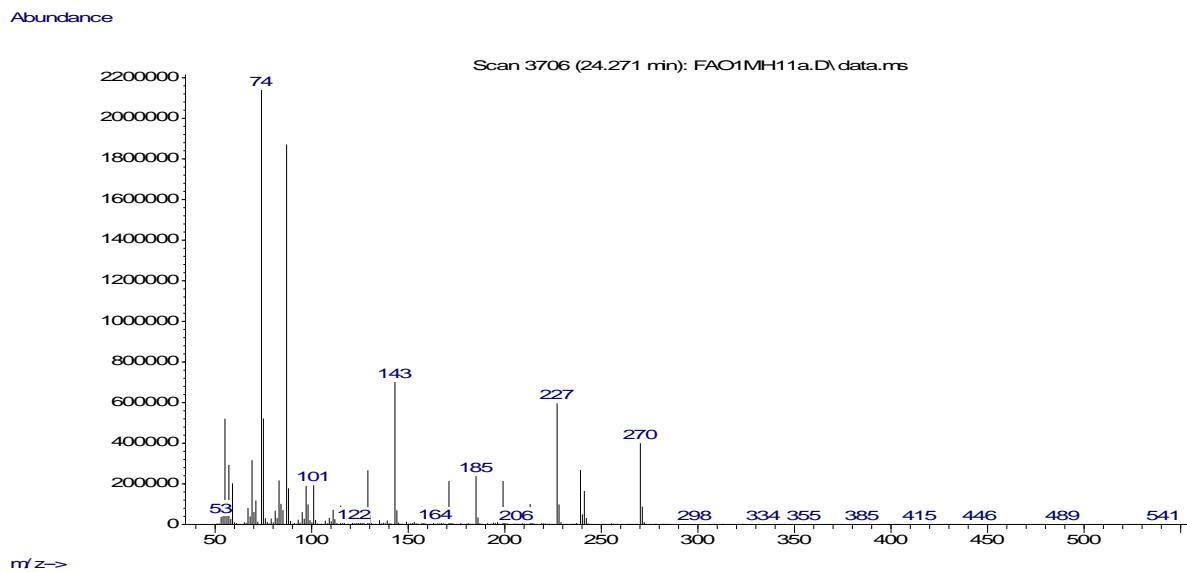


Figure I. MS spectra of palmitic acid (methyl ester) from the GC-MS analysis of the derivatized beans lipid fractions (experimental – top and from the NIST database – bottom)

Abundance

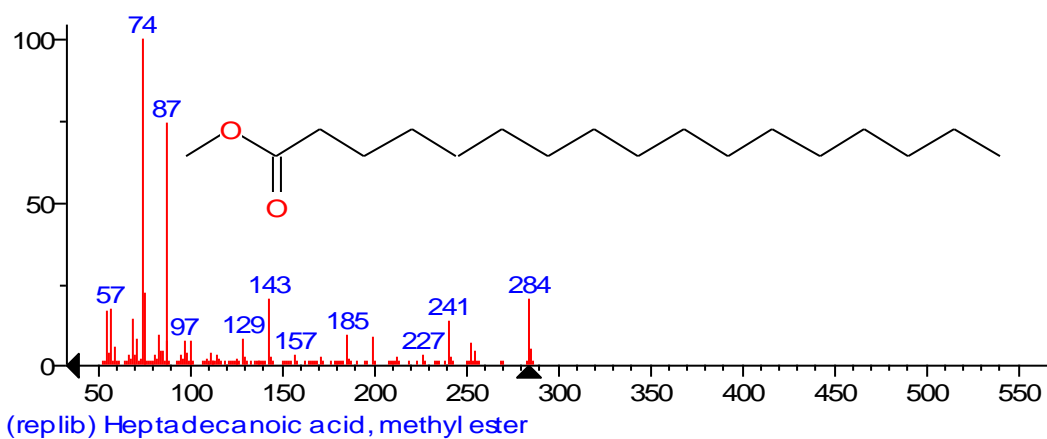
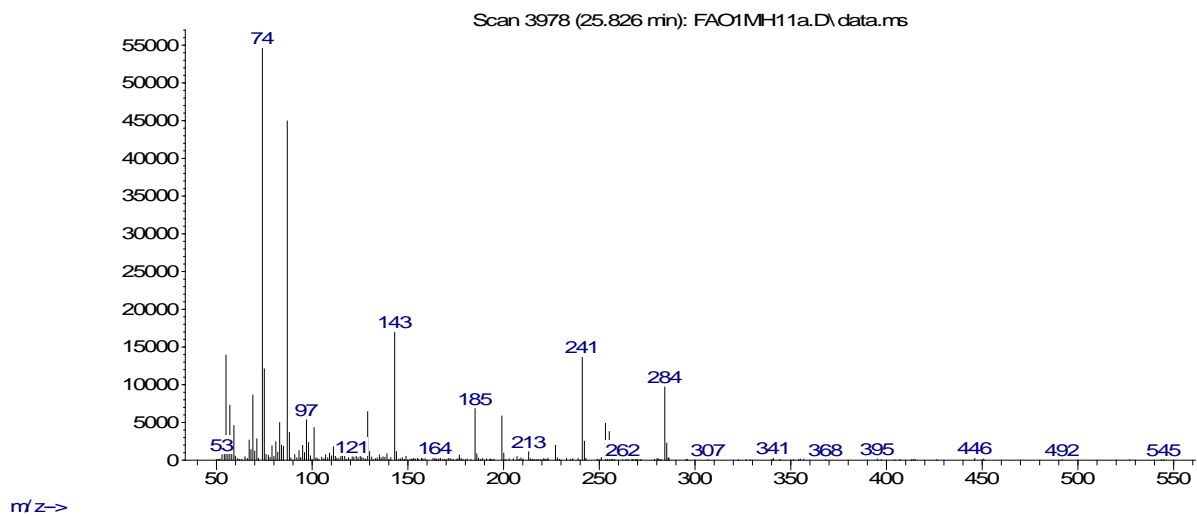


Figure J. MS spectra of margaric acid (methyl ester) from the GC-MS analysis of the derivatized beans lipid fractions (experimental – top and from the NIST database – bottom)

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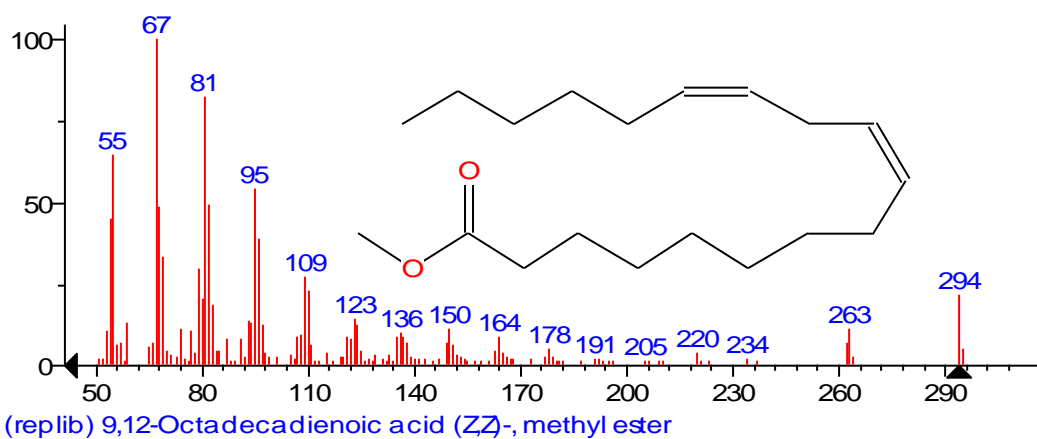
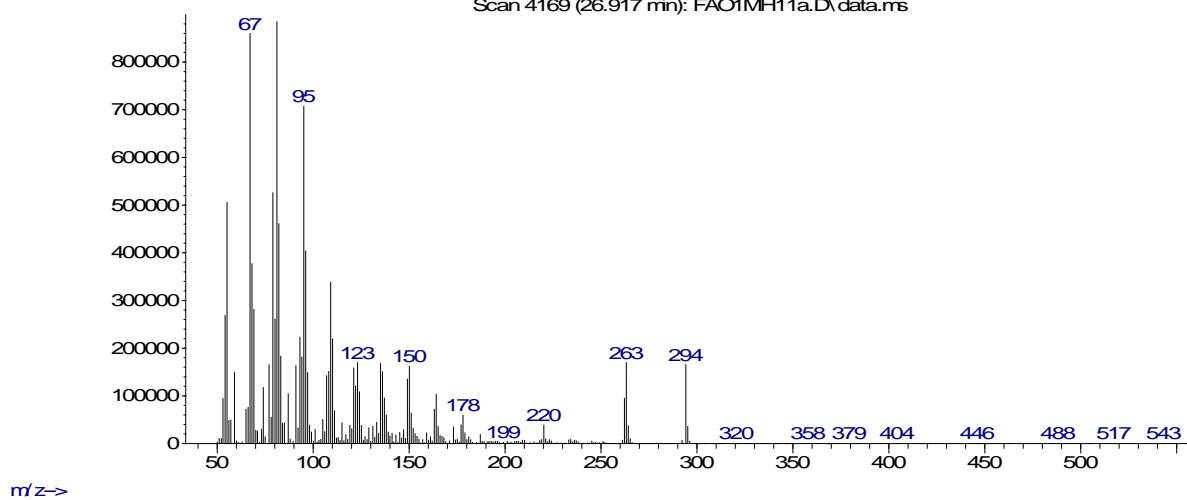
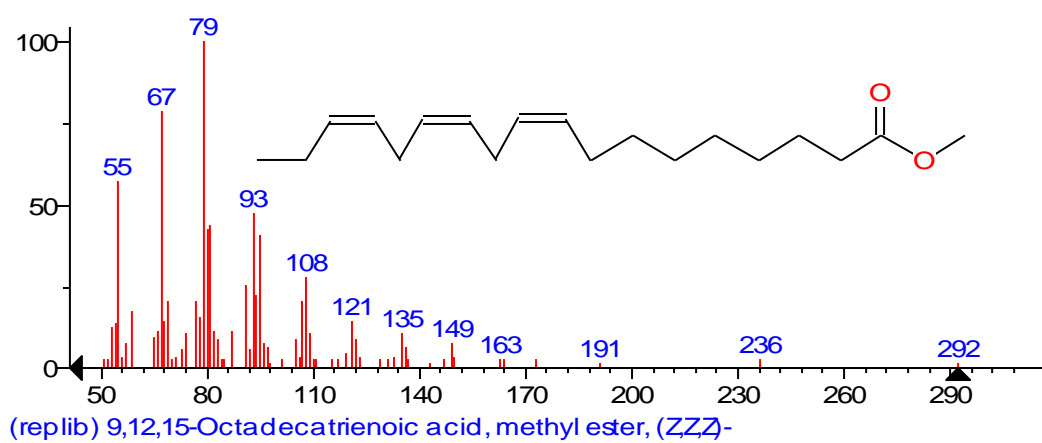
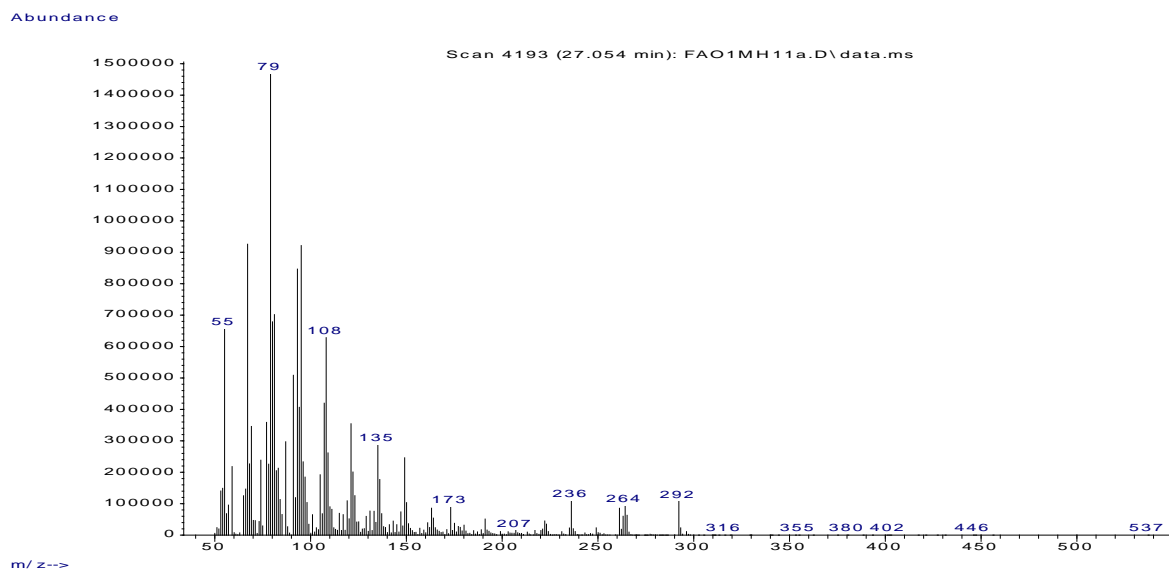


Figure K. MS spectra of linoleic acid (methyl ester) from the GC-MS analysis of the derivatized beans lipid fractions (experimental – top and from the NIST database – bottom)



**Figure L. MS spectra of  $\alpha$ -linolenic acid (methyl ester) from the GC-MS analysis of the derivatized beans lipid fractions (experimental – top and from the NIST database – bottom)**

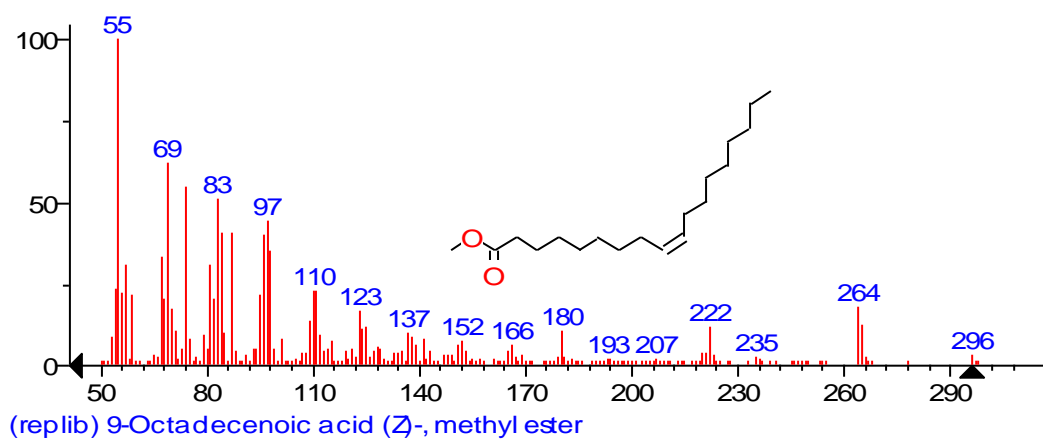
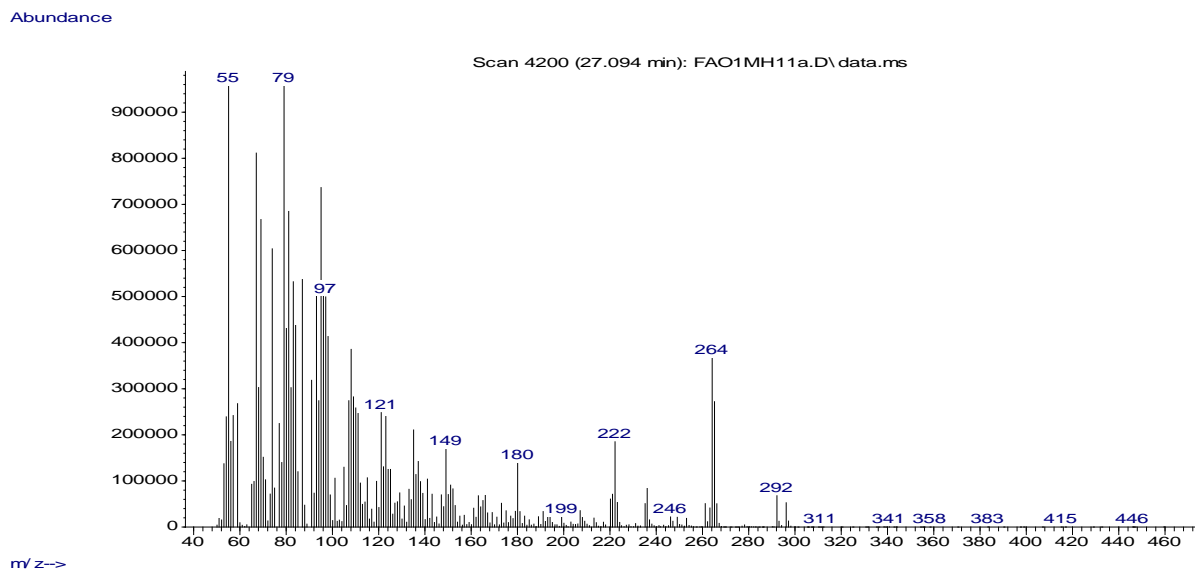


Figure M. MS spectra of oleic acid (methyl ester) from the GC-MS analysis of the derivatized beans lipid fractions (experimental – top and from the NIST database – bottom)

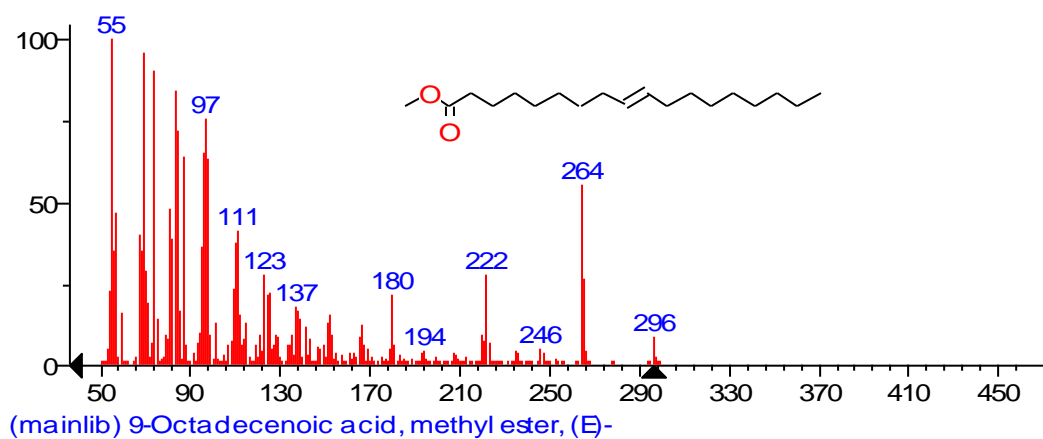
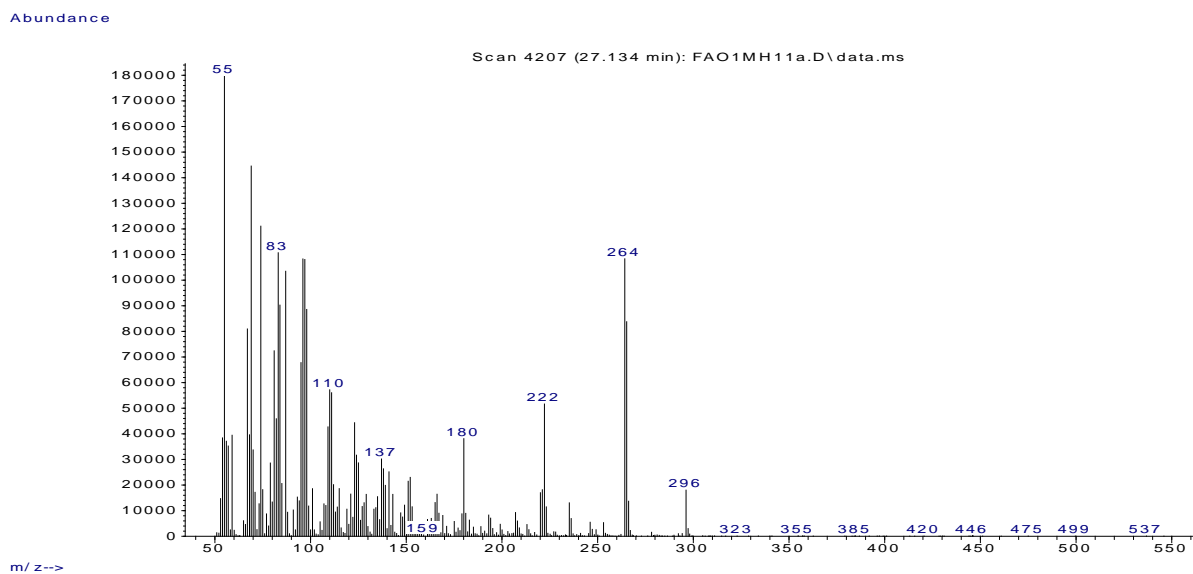


Figure N. MS spectra of elaidic acid (methyl ester) from the GC-MS analysis of the derivatized beans lipid fractions (experimental – top and from the NIST database – bottom)

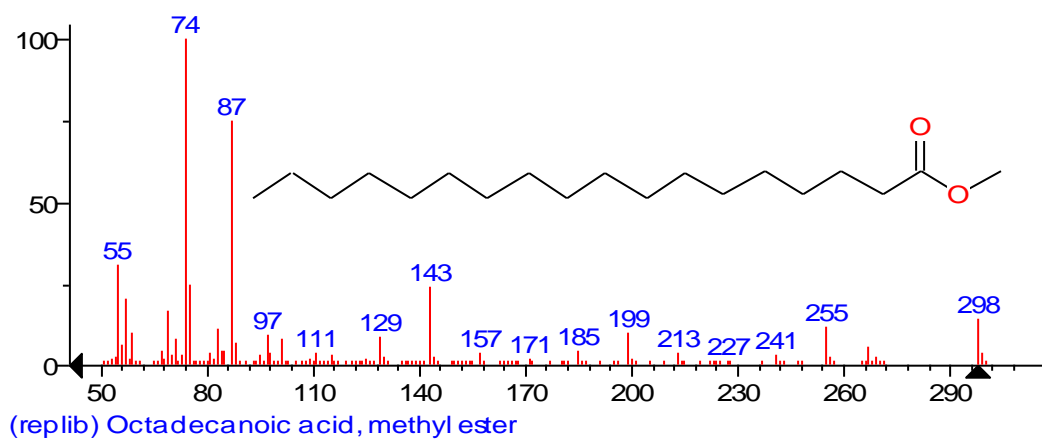
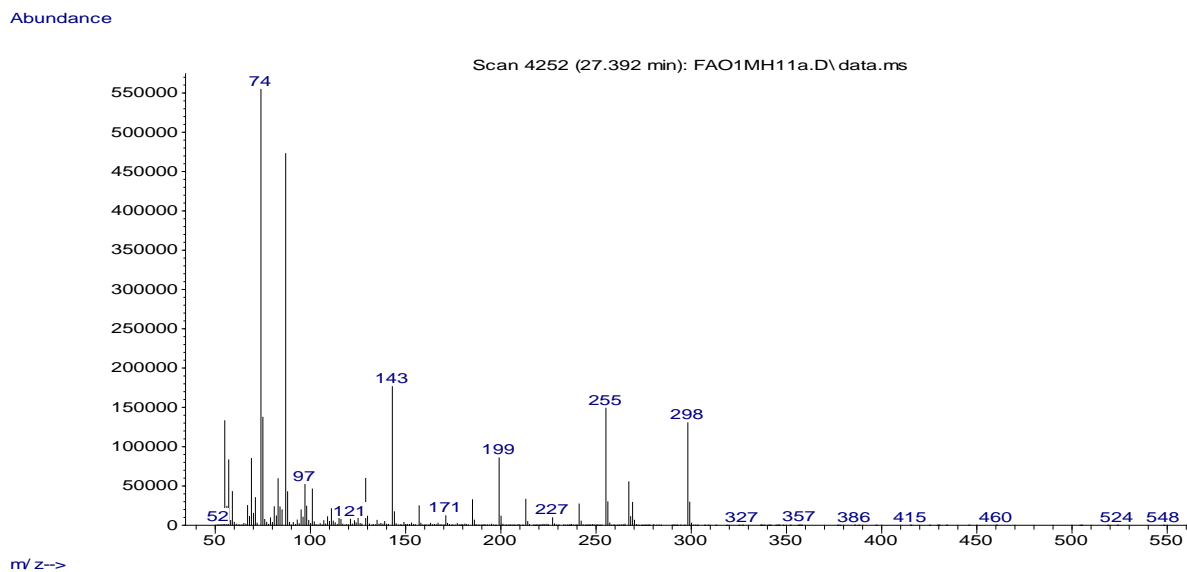


Figure O. MS spectra of stearic acid (methyl ester) from the GC-MS analysis of the derivatized beans lipid fractions (experimental – top and from the NIST database – bottom)



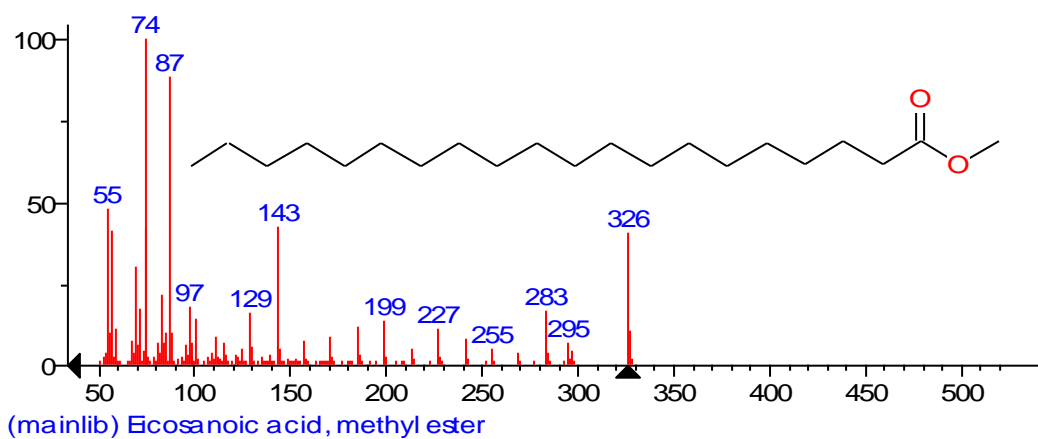
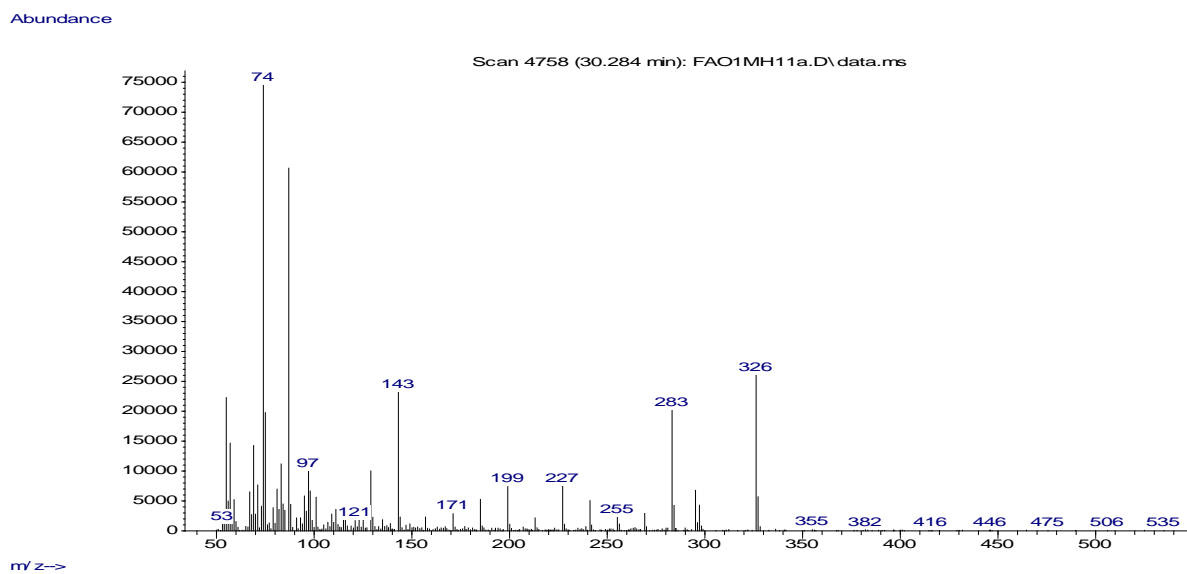


Figure P. MS spectra of arachidic acid (methyl ester) from the GC-MS analysis of the derivatized beans lipid fractions (experimental – top and from the NIST database – bottom)

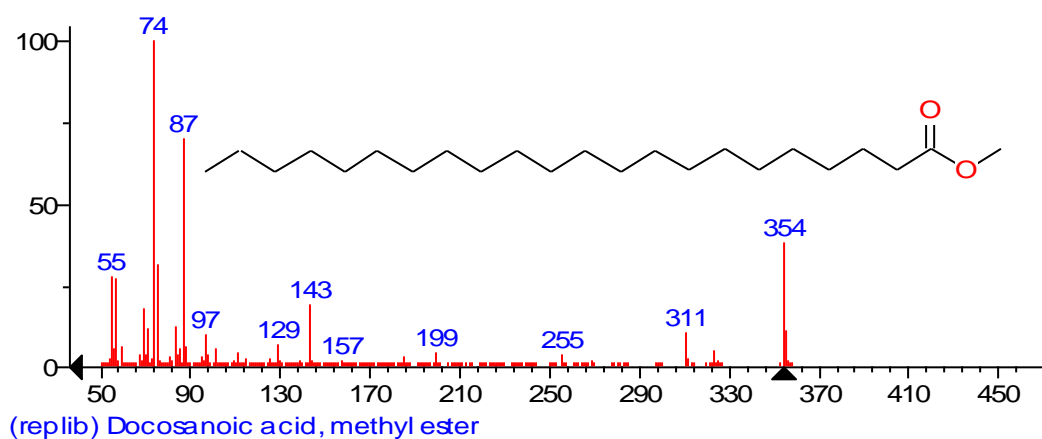
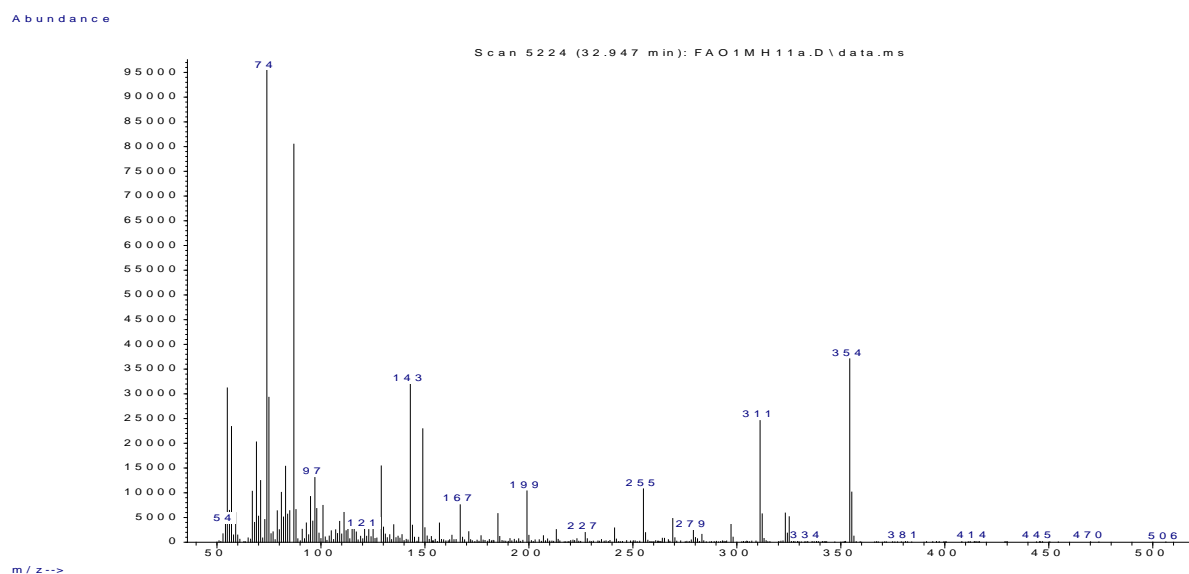


Figure Q. MS spectra of behenic acid (methyl ester) from the GC-MS analysis of the derivatized beans lipid fractions (experimental – top and from the NIST database – bottom)

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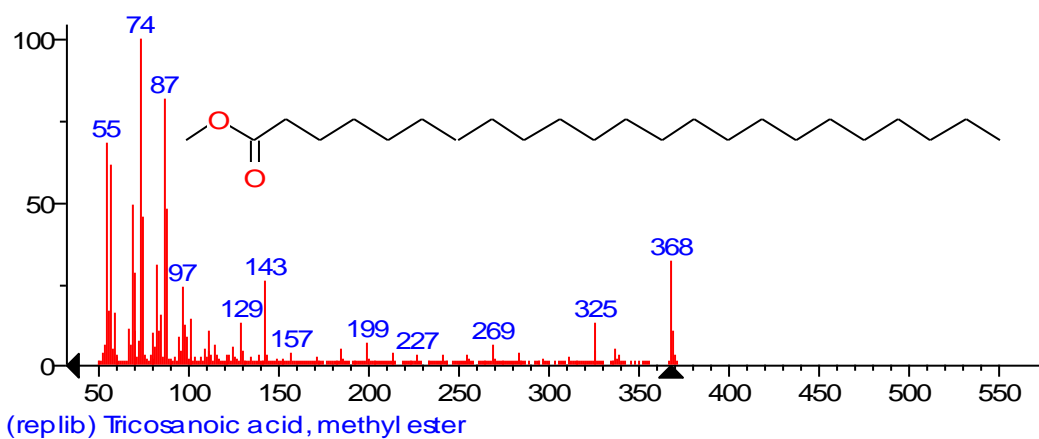
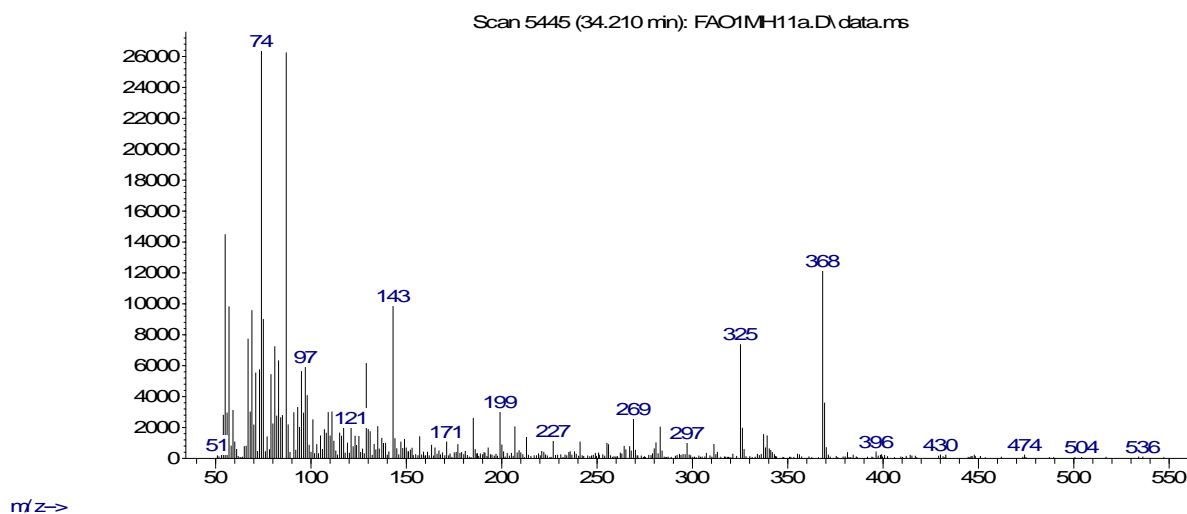


Figure R. MS spectra of tricosanoic acid (methyl ester) from the GC-MS analysis of the derivatized beans lipid fractions (experimental – top and from the NIST database – bottom)

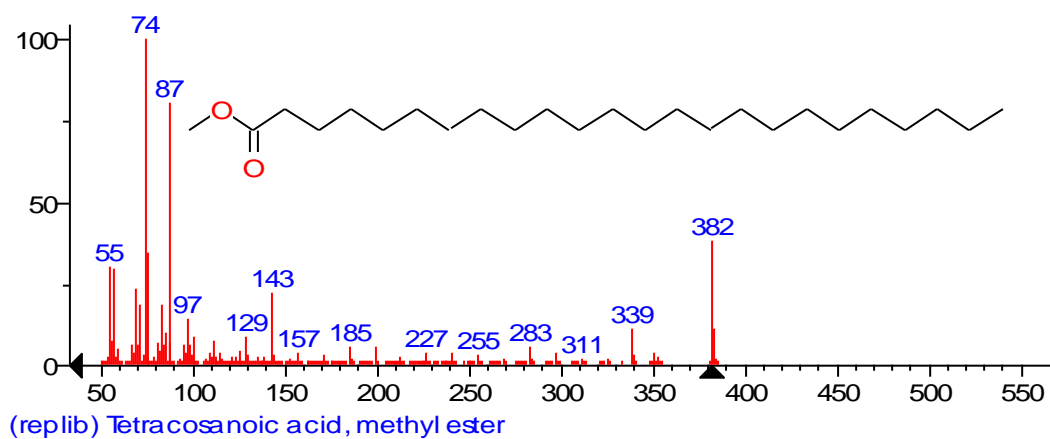
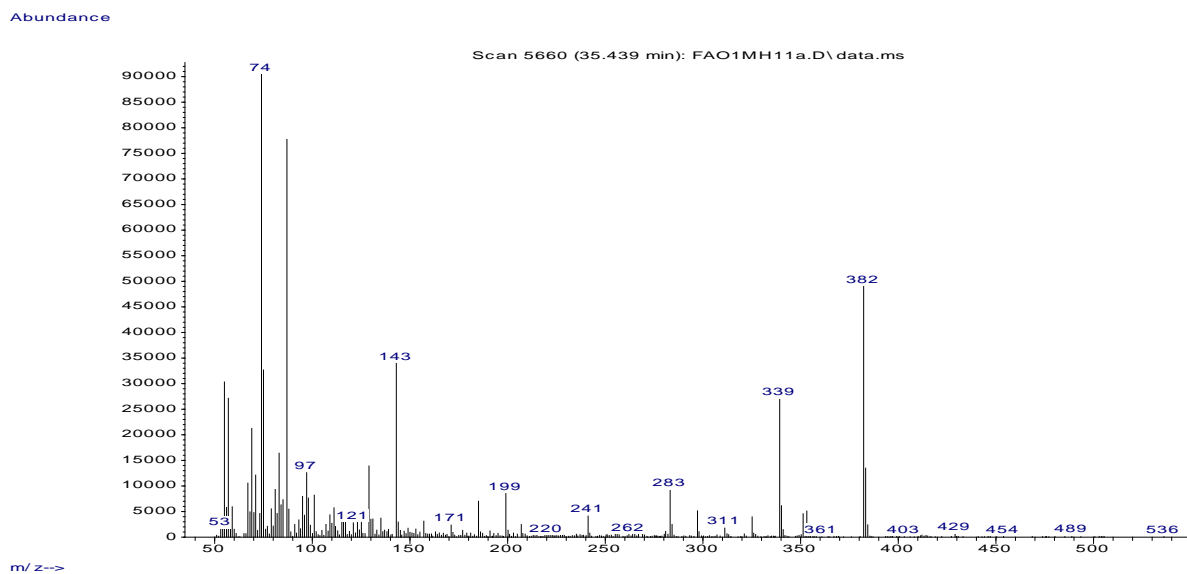


Figure S. MS spectra of lignoceric acid (methyl ester) from the GC-MS analysis of the derivatized beans lipid fractions (experimental – top and from the NIST database – bottom)

## Fourier transform infrared spectroscopy (FTIR) analysis of $\beta$ -cyclodextrin/common beans oil complexes

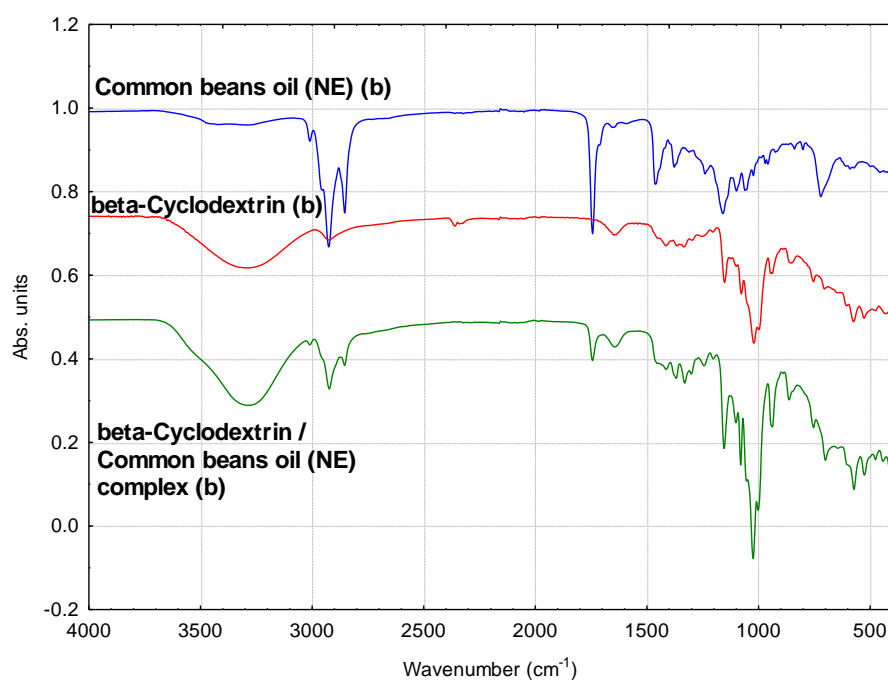


Figure T. Fourier transform infrared spectroscopy (FTIR) data for CBO-NE (blue),  $\beta$ -CD (red) and  $\beta$ -CD/CBO-NE complex (green) (duplicates “b”)

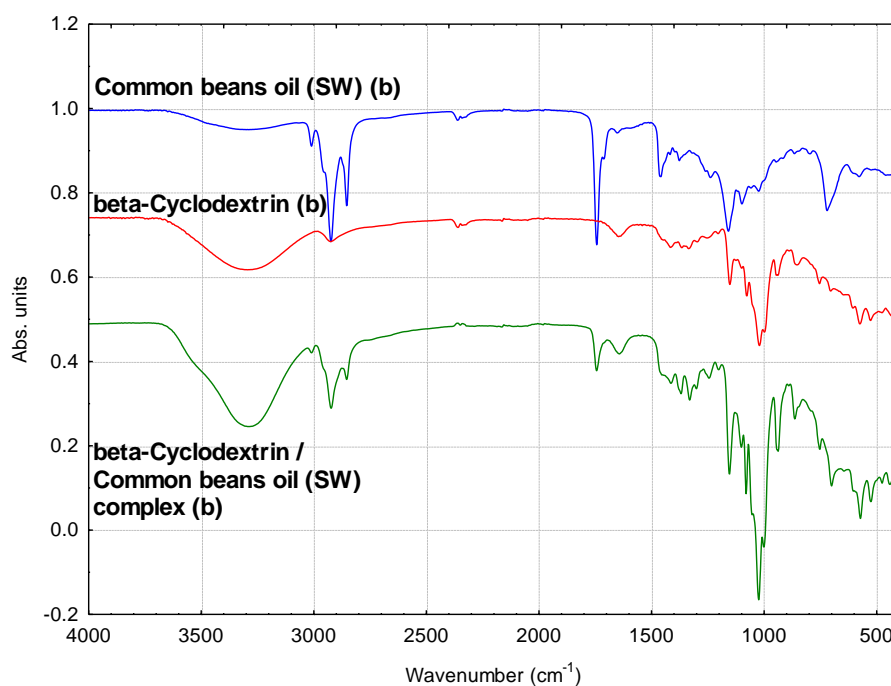


Figure U. Fourier transform infrared spectroscopy (FTIR) data for CBO-SW (blue),  $\beta$ -CD (red) and  $\beta$ -CD/CBO-SW complex (green) (duplicates “b”)

## Powder X-Ray diffractometry (PXRD) analysis of $\beta$ -cyclodextrin/common beans oil complexes

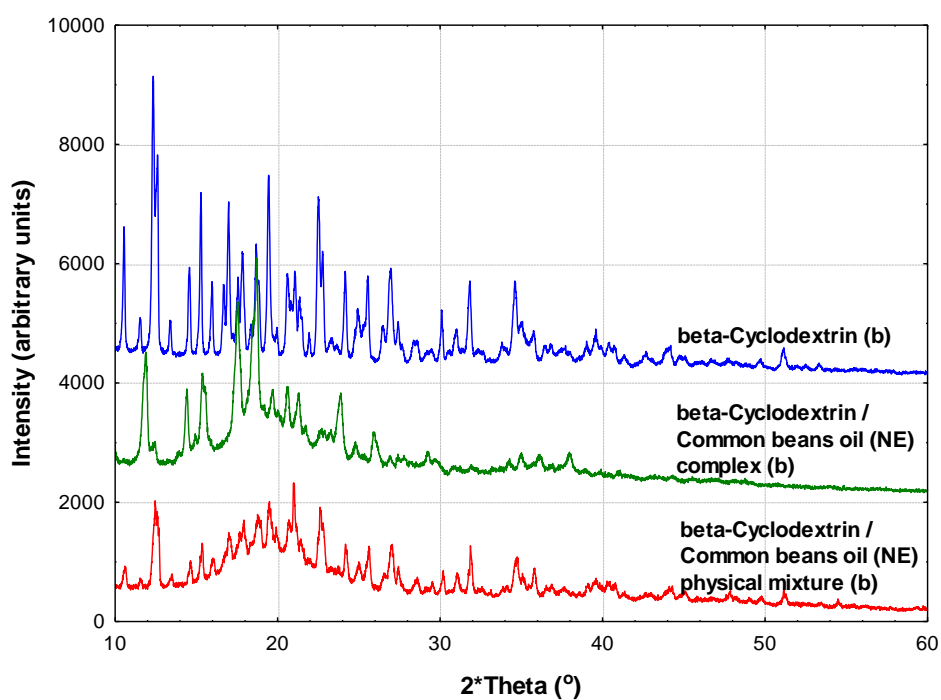


Figure V. Powder X-Ray diffractometry (PXRD) data for  $\beta$ -CD (blue),  $\beta$ -CD/CBO-NE complex (green),  $\beta$ -CD + CBO-NE physical mixture (red) (duplicates “b”)

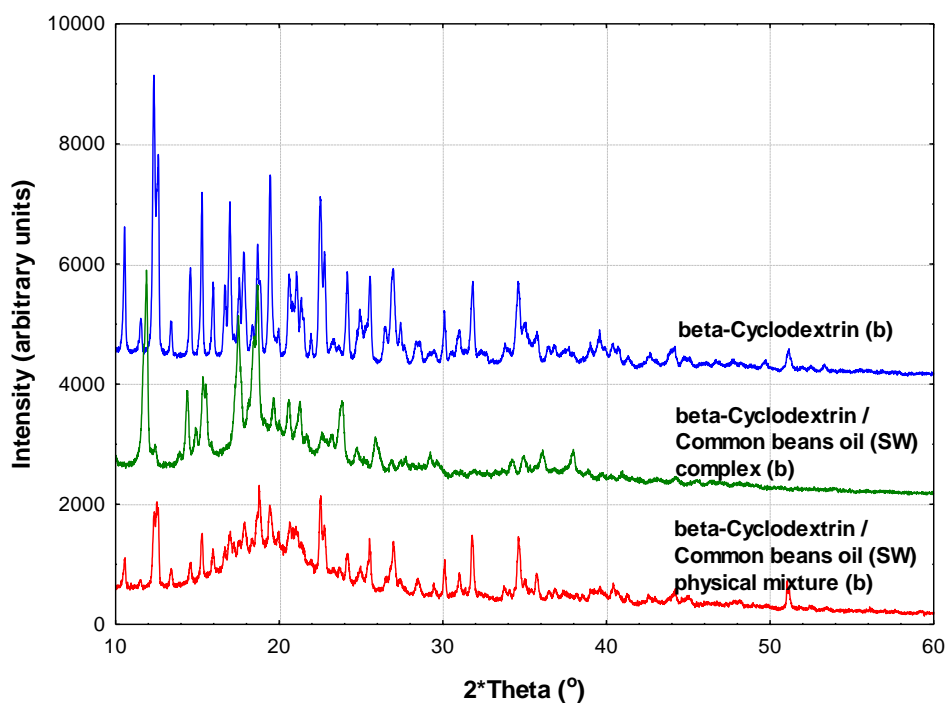


Figure W. Powder X-Ray diffractometry (PXRD) data for  $\beta$ -CD (blue),  $\beta$ -CD/CBO-SW complex (green),  $\beta$ -CD + CBO-SW physical mixture (red) (duplicates “b”)

# Thermogravimetry-Differential Thermogravimetry (TG-DTG) data of $\beta$ -cyclodextrin/common beans oil complexes (duplicates “b”)

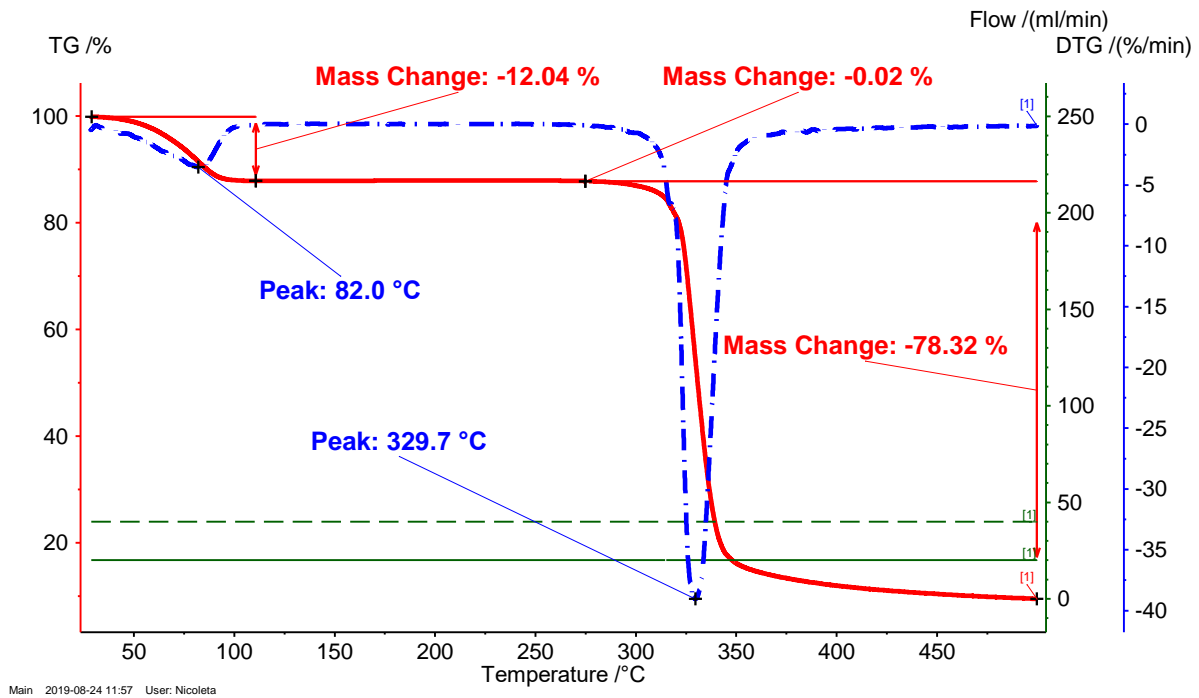


Figure X. Thermogravimetry-differential thermogravimetry (TG-DTG) analysis of  $\beta$ -cyclodextrin ( $\beta$ -CD, duplicate “b”)

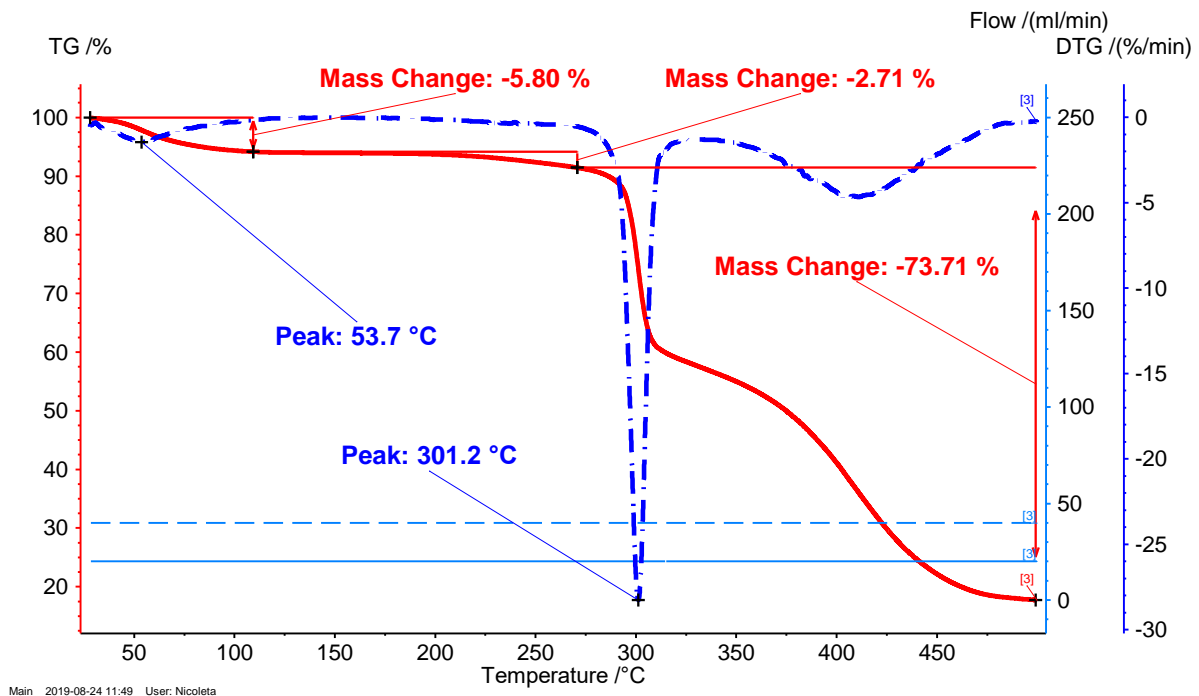
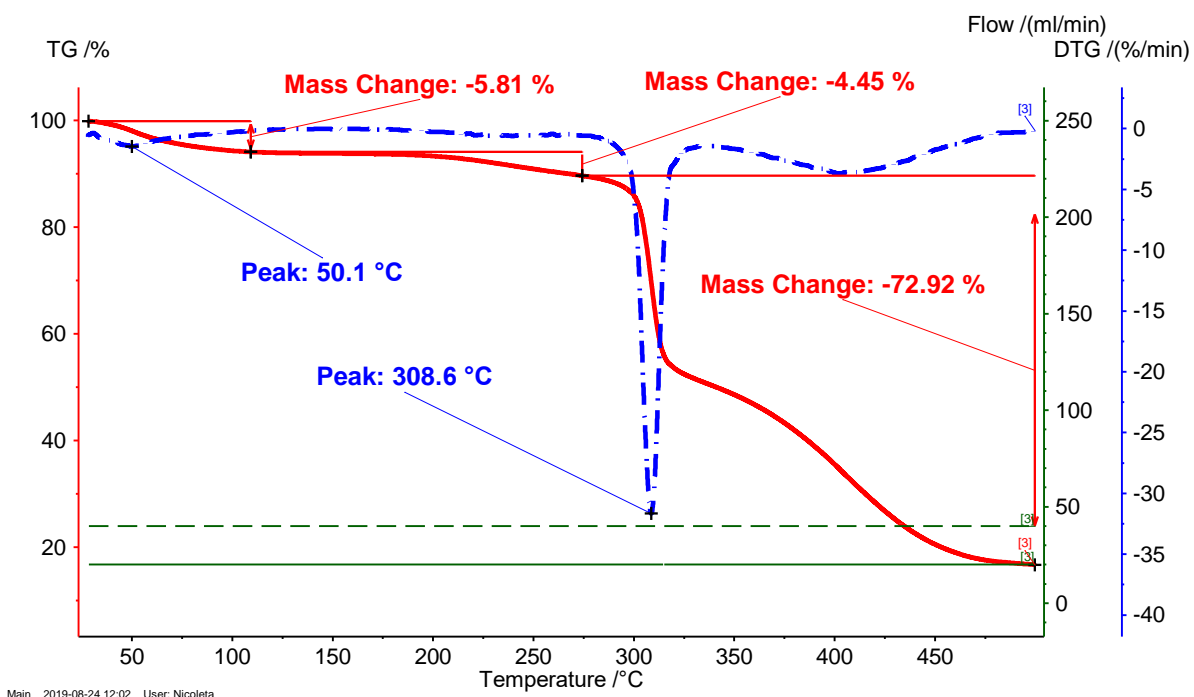


Figure Y. Thermogravimetry-differential thermogravimetry (TG-DTG) analysis of  $\beta$ -cyclodextrin / common beans (North-East) oil complex ( $\beta$ -CD / CBO-NE, duplicate “b”)



**Figure Z. Thermogravimetry-differential thermogravimetry (TG-DTG) analysis of  $\beta$ -cyclodextrin / common beans (South-West) oil complex ( $\beta$ -CD / CBO-SW, duplicate "b")**



# Differential Scanning Calorimetry (DSC) data of $\beta$ -cyclodextrin/common beans oil complexes (duplicates “b”)

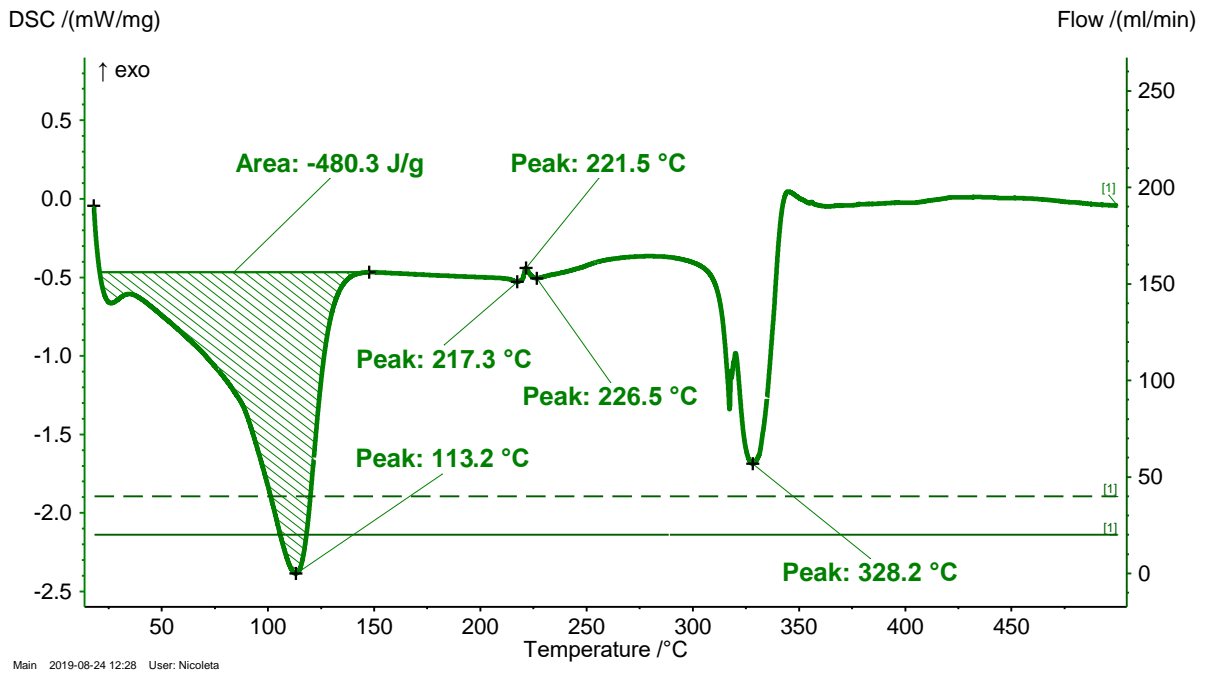


Figure AA. Differential scanning calorimetry (DSC) analysis of  $\beta$ -cyclodextrin ( $\beta$ -CD, duplicate “b”)

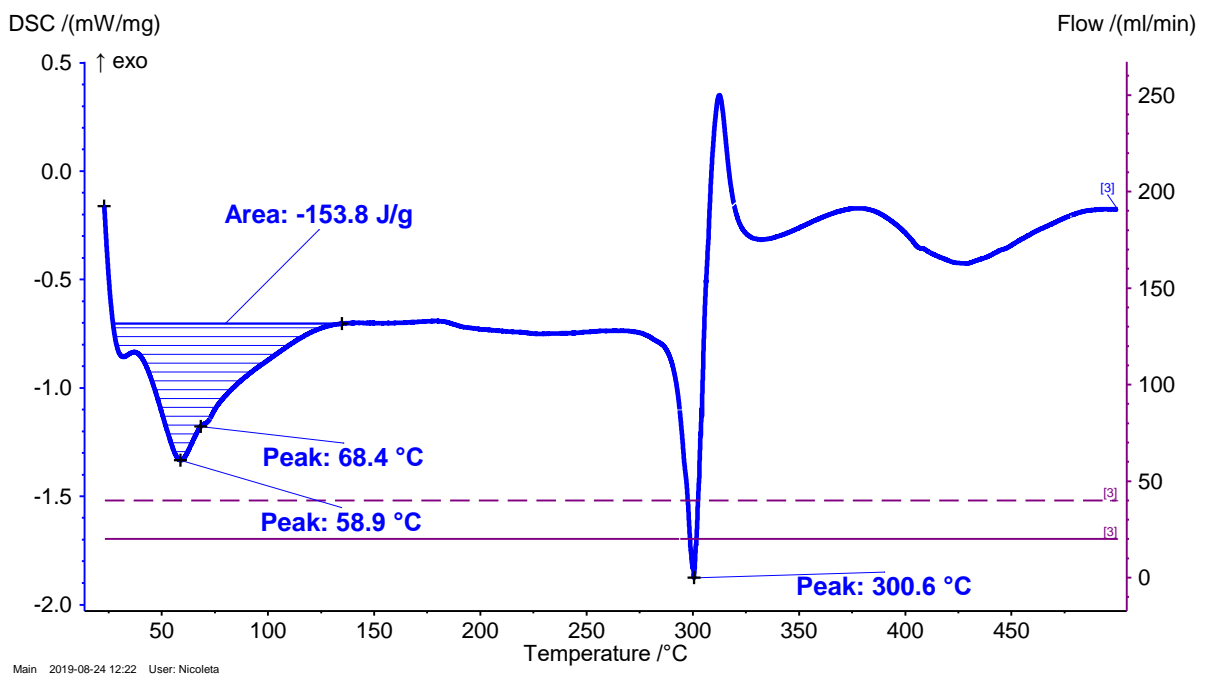
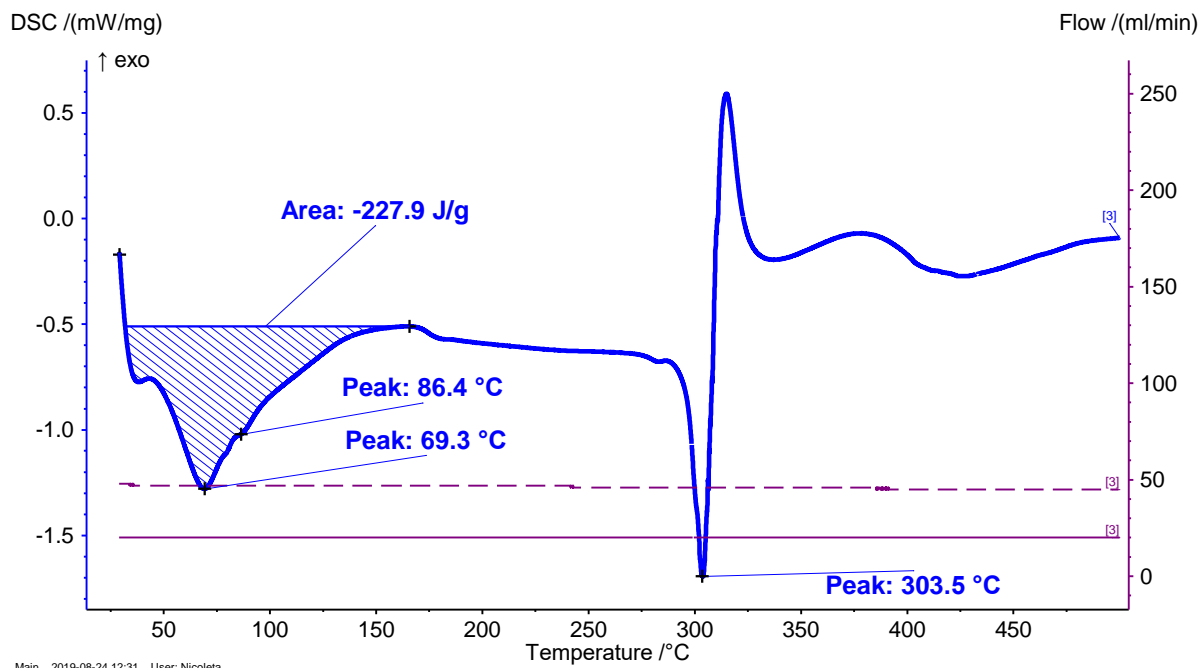


Figure AB. Differential scanning calorimetry (DSC) analysis of  $\beta$ -cyclodextrin / common beans (North-East) oil complex ( $\beta$ -CD / CBO-NE, duplicate “b”)



**Figure AC. Differential scanning calorimetry (DSC) analysis of  $\beta$ -cyclodextrin / common beans (South-West) oil complex ( $\beta$ -CD / CBO-SW, duplicate “b”)**