

# INDIAN INSTITUTE OF FOOD PROCESSING TECHNOLOGY

Ministry of Food Processing Industries, Government of India



## FOOD TESTING LABORATORY

[NABL Accredited Laboratory as per ISO/IEC 17025:2005]

## FSSAI REFERRAL LABORATORY

Pudukkottai Road, Thanjavur-613 005.

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No: D/4/10

Date: 27.06.2017

### Test Report

Name & Address of the Customer	Mr.Jubaid Babu Managing Director 107 ,Dr.Radhakrishnan Road Sivanandha Colony Gandhipuram, Coimbatore -641012 E.Mail:zohanandco@gmail.com
Customer Reference	Mr.Jubaid Babu
Name of the sample	Sesame oil
Packing Condition	Plastic bottle
Quantity	1 lit
Sample Code No.	126
Date of Receipt	23/05/17
Date of completion	27/06/17
Sampling	Sample not drawn by us

### RESULT

Result enclosed in Annexure – I

Thanjavur  
Date: 27.06.2017

- Sd-**Dr.K.Suresh Kumar**  
Quality Manager  
Food Testing Laboratory

Note: This result relates only to the sample tested. The contents of this report are meant for your guidance and should not be used for Advertisement, Evidence and Litigation. This test document shall not be reproduced without the permission of this Institute.

## Annexure – I

### \*Chemical analysis result of Sesame Oil sample (Sample code –126)

S. No.	Parameter Analyzed	Method of Analysis	Result (g/100g)
1	Fat	AOAC, 19 <sup>th</sup> Edn, 2012, 920.39	98.76
2	Moisture	AOAC, 19 <sup>th</sup> Edn, 2012, 930.15	1.24
3	Protein	AOAC, 19 <sup>th</sup> Edn, 2012, 976.05	Not Detected
4	Carbohydrates	Biochemical Methods by S. Sadasivam, <i>et. al.</i> , Revised Second Edition; 2005; pg. 8-9	1.00
5	Energy (Kcal)	Food Labeling – Requirements for FDA Regulated products, by James L. Vetter, E. M. Melran, Ed., AIB International. Manhattan, K.S, 2007	888.84
6	Iodine Value	William Horowitz, (Ed) (1975).Official Methods of Analysis of AOAC, Association of Official Analytical Chemists, Washington, (12 <sup>th</sup> Ed.)P.488	111.67

\*Parameters tested are not covered under the scope of NABL accreditation

IIFPT

## \*HPLC ANALYSIS OF CHOLESTEROL (Sample code -126)

Shimadzu CLASS-VP V6.13 SP2

*Area % Report*

Method Name: C:\CLASS-VP\Methods\2013\Commercial\Cholesterol\Cholesterol calibrated

Data Name : C:\CLASS-VP\Data\2015\commercial\cholesterol\Commercial 126

User : System

Acquired : 6/14/2017 2:20:24 PM

Printed : 6/14/2017 4:59:48 PM

Sample : Cholesterol

### Chromatographic conditions

**Column** RP C18, 5um,

**Mobile phase** Acetonitrile (HPLC grade) and Isopropanol (50:50.v/v.)]

**Flow rate** 0.8ml/minute.

**Injection volume** 10ul

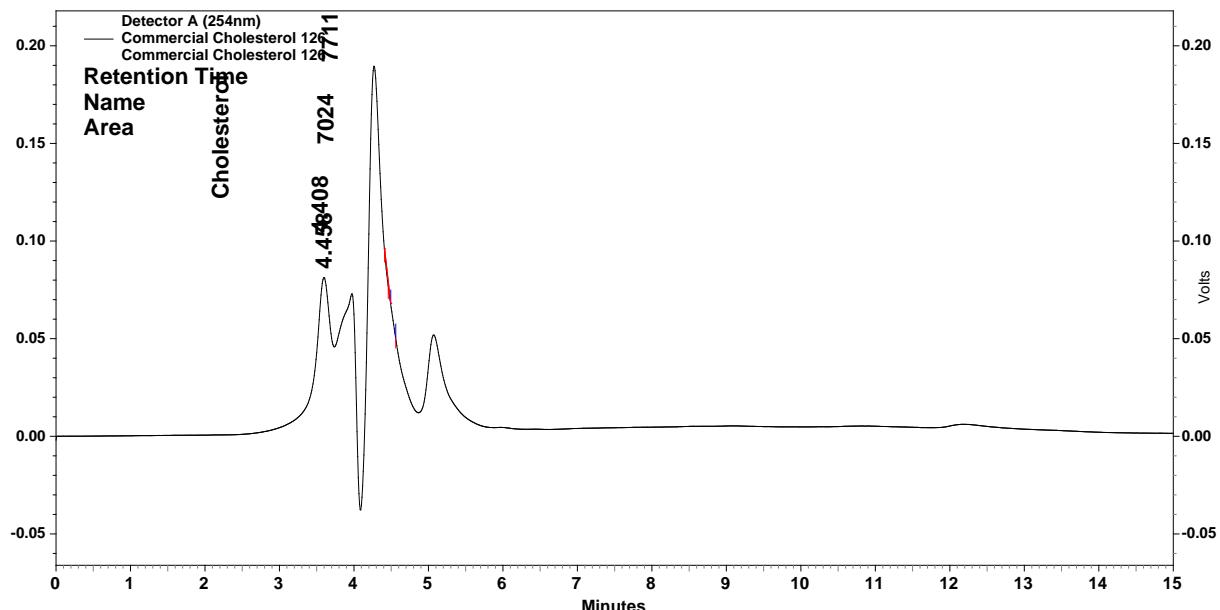
**Detector** UV Detector @ 254 nm

**Temperature** 40 °C.

### Reference:

- Toshiaki Ohshima *Current Protocols in Food Analytical Chemistry* (2001) D1.3.1-D1.3.14

### HPLC Chromatogram (Sample code -126)



Detector A (254nm)				
Retention Time	Area	Height	Result (mg/L)	Name*
4.458	7711	1881	0.202	Cholesterol

\*Parameters tested are not covered under the scope of NABL accreditation

### \*ICP-OES analysis of Na Content in Sesame oil -(Code 126)

Samples	Sample Code	Minerals (mg/l)
		Sodium Wavelength(589.592)
Sesame oil	126	431.7

\*Parameters tested are not covered under the scope of NABL accreditation

## GC MS Analysis of Sesame Oil (Code no. 126)

### Analysis of Samples

The given sample was extracted with ethanol and analyzed through Gas Chromatography – Mass Spectrometry/ Mass Spectrometry for identification of different compounds.

### 1. GC Programme

Column BR-5MS (5% Diphenyl / 95% Dimethyl poly siloxane), 30m x 0.25mm ID x 0.25 $\mu$ m df

Equipment Scion 436-GC Bruker

Carrier gas 1ml per min, Split 10:1

Detector TQ Quadrupole Mass Spectrometer

Software MS Work Station 8

Sample injected 2 $\mu$ l

Oven temperature Programme -

110° C hold for 3.50 min

Up to 200° C at the rate of 10 ° C/min-No hold

Up to 280 ° C at the rate of 5° C / min- 12 min hold

Injector temperature 280° C

Total GC running time: 40.50 min

### 2. MS Programme

Library used NIST Version-11

Inlet line temperature 290° C

Source temperature 250 ° C

Electron energy 70 eV

Mass scan (m/z) 50-500 amu

Solvent Delay 0 - 3.5 min

Total MS running time: 40.50 min

### Reference for GC method:

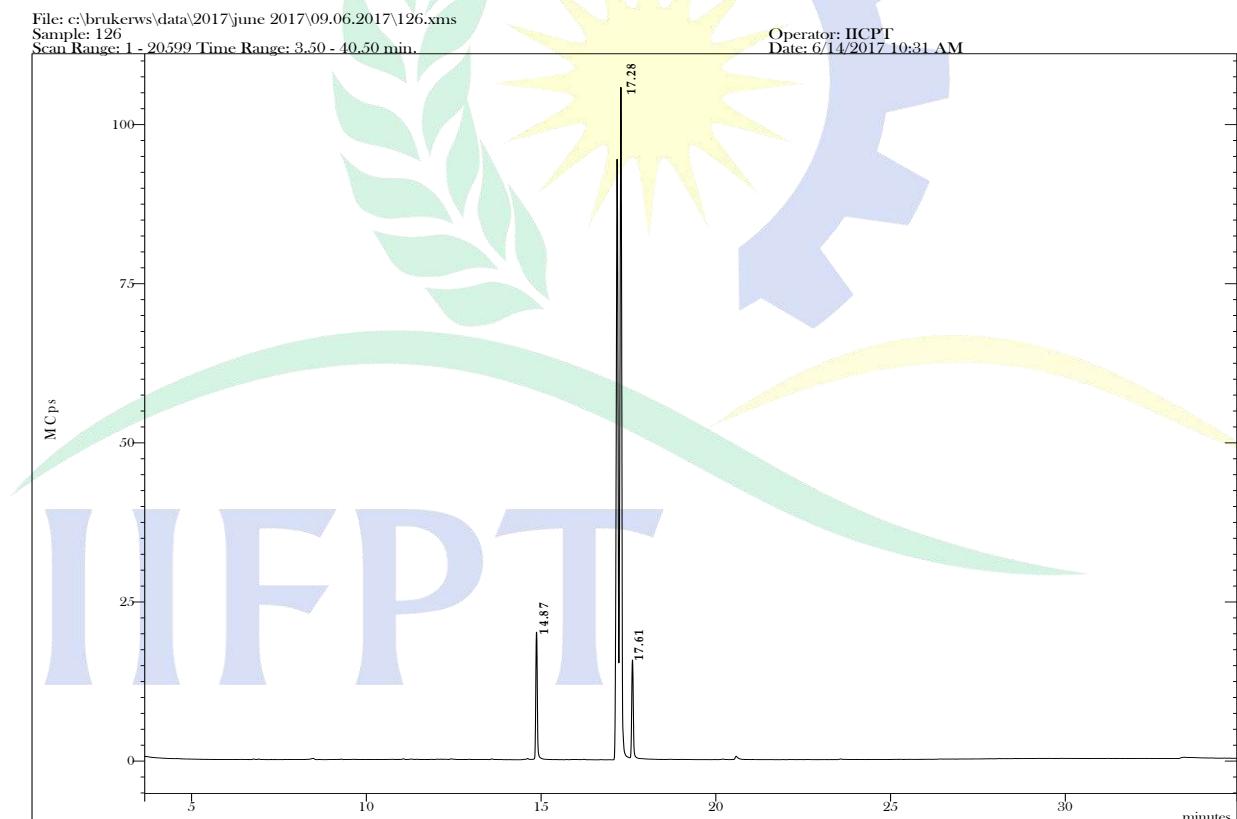
AOCS: Ce-1.62- Ce-2.66

## Compounds identified in the Sesame Oil sample (Code no. 126)

No.	RT	Name of the compound	Molecular Formulae	Molecular Weight	Peak Area %
1.	14.87	Hexadecanoic acid, methyl ester	C <sub>17</sub> H <sub>34</sub> O <sub>2</sub>	270	7.43
2.	17.17	9,12-Octadecadienoic acid, methyl ester, (E,E)-	C <sub>19</sub> H <sub>34</sub> O <sub>2</sub>	294	39.88
3.	17.28	9-Octadecenoic acid (Z)-, methyl ester	C <sub>19</sub> H <sub>36</sub> O <sub>2</sub>	296	46.63
4.	17.61	Stearic acid, methyl ester	C <sub>19</sub> H <sub>38</sub> O <sub>2</sub>	298	6.05

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### GC- MS/MS Chromatogram



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