

CHARACTERIZATION OF SUNFLOWER OIL FOR ITS OLEIC ACID CONTENT

Submitted to University of Management and Technology Lahore

In partial fulfillment of the requirements

For the award of degree of

MS IN CHEMISTRY

BY

MEHWISH SHAHZADI

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SESSION: 2013-2015

DEPARTMENT OF CHEMISTRY

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ACKNOWLEDGEMENT

All my love and praises belong to **ALLAH**, Who has been always with me through thick and thin of life and Who enabled me to achieve this status. A lot of respect and love for His beloved Prophet **HAZRAT MUHAMMAD P.B.U.H** Who Himself has been sent as a teacher for the whole world to enable us to recognize our Creator and understand the philosophy of life

Firstly, I would like to express my sincere gratitude to my respected and kind research supervisor Dr. **AYESHA MOHY-UD-DIN** who allowed me to work on such an important topic and by whom efforts and guidance I am able to complete my research work successfully. I am thankful for her guidelines, patience, motivation and delivering immense knowledge. I will owe my special regards to **Dr.MUHAMMAD AZHAR IQBAL (Dean of School of Science, UMT,)** who takes special interest in research activities.

I feel a great honour in expressing my profound gratitude to **Dr. SAMMIA SHAHID (Chairperson of Chemistry Department, UMT Lahore)** for her learned guidance and kind behaviour during the course of my studies. Without her precious support and encouragement, it would not be possible to conduct my research work.

I am very grateful to **M.TALIB MEHMOOD** (Govt. College) who helped me in the characterization of my experimental work.

I am very much thankful to my loving father **ABDUR RASHEED** and who has always helped me and showed me the right way in every aspect of my life, to my sweet mother **SAJIDA**

PARVEEN who has always prayed for me and under her feet is my paradise. I can never forget the love of my brothers **MUBASHAR, MUZAMMIL, MUDASAR** and **MUAZ**.

Finally, I think that I have a good fortune to have true whom company has made many positive changes in me. I would always remember the time I spend with them. I am also thankful to all my dear fellows for their co-operation.

Despite these acknowledgements the weaknesses and limitations of this thesis are remain all mine.

MEHWISH SHAHZADI

ABSTRACT

Sunflower is cultivated all over the world not only as an ornament plant but also for the purpose of getting oil. It is the third most cultivated plant in the history because its oil considered best for health.

The present study deals with the analysis of sunflower oil sample which was obtained from local market. The physicochemical properties of the oil were determined which included saponification value, acid value and ester value. Results showed that saponification value of the oil was 191.675, acid value was 0.94 and ester value to be 190.735 for the sample under observation.

GC-MS analysis of sunflower oil was carried out to check its composition. Oleic acid was determined with linoleic acid and isopropyl palmitate. Other compounds detected were p-toluylic acid, pregn-4-en-18-oic acid, 11-(acetyloxy)-6,7-epoxy-9,20-dihydroxy-3-one-, gamma-lactone, 1,2-benzenedicarboxylic acid, benzoic acid, 2,4,6-trimethyl-, 2,4,6-trimethylphenyl ester and linoleic acid.

