



DR. MOHAMMED ASIF AHMED
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PERSONAL

Indian, Married, Born July 14th, 1964.

EDUCATION

<i>Ph.D.* Chemistry</i>	<i>Aligarh Muslim Univ.</i>	<i>Awarded June 1993</i>
M.Phil. Chemistry	A.M.U.	1988
M.Sc. Organic Chemistry	A.M.U.	1987
B.Sc. (Chemistry & Biology)	Osmania	1984

*Title of the thesis "CHEMISTRY OF NATURAL PRODUCTS" Evaluated by Prof. L.L. Smith, University of Texas, USA

NPST-NATIONAL PLAN FOR SCIENCE, TECHNOLOGY AND INNOVATIONS PROJECTS

- (1) Detection of Pork, Lard and Pig-derived Gelatin in Processed Foods. **10-AGR1311-02**
(Work include the Fat extraction and determination of fatty acid using GC at beta position of Triglycerides) **(2011-2014) Co-Investigator.**
- (2) Extraction and Characterization of Gelatin Derived from Camel Carcasses and Application of Nanotechnology in the final Product. **12-AGR2487-02**
(Using GC-MS and LC-MS) **(2014-2016) Co-Investigator.**
- (3) Estimates of Dietary Exposure of Children to Artificial Food Colours in Saudi Arabia (Using LC-MS) **(2014-2017) Principal-Investigator-(PI).** **08-MED569-02**

NATIONAL PROJECTS PARTICIPATED IN:

- Utilization of Controlled Atmosphere (CA) Technology in Shelf Life Extension of Fresh Barhi Dates at Khalal Stage of Maturity at a Semi- Commercial level, funded by KACST **(2008-2011)**
- Production of High Quality Frozen Rutab from Selected Saudi Dates Cultivars, funded by KACST **(2004-2006)**
- Survey on Chemical and Microbiological Residues in Food Commodities, funded by Ministry of Municipally and Rural Affairs **(2002-2005).**
- Use of Irradiation Technology in Food Preservation, funded by KACST **(1995-1998)**

EXPERIENCE

Presently working as Assistant Professor at Department of Food Science and Nutrition.

• **Nov.1998 to May 2014:** Department of Food Science & Nutrition, King Saud University, Job responsibilities are **teaching** (Undergraduate & Post graduate students) and **research**, cooperating with the faculty members and government organization in project design, implementation and execution etc.

Teaching Courses: Labs

352-FSN (Subj: Effect of Food preservation on Lipids, Proteins etc.)

514-FSN (Subj: Food Analysis e.g. Sugars, FAMES, Amino Acid, Minerals using modern instruments)

501-FSN (Subj: Food Chemistry, particularly lipids)

• **April 1995- Nov.1998:** Department of Food Science & Nutrition, King Saud University with KACST project. Work responsibilities are to develop and establish the physical and chemical methods for the identification of irradiated food. Following analytical technique were used for the methods development.

- **HPLC** of Shimadzu LC-10A used for the Amino Acid, Sugars and Vitamins Analysis in Fish, Chicken, Potato and Dates samples. (Irradiated and unirradiated).
- **GC** of Hewlett-Packard 5890 A for the detection of hydrocarbons derived from lipid degradation due to Gamma-rays irradiation.
- Thermo Luminescence reader (TLD) of Harshaw/Bicron QS-3500, USA for the luminescence measurements of mineral contamination of irradiated and unirradiated food.
- Chemi Luminescence reader of BioOrbit 1251 for the measurements of luminolysis.
- EMS 104 EPR Analyzer for the ESR measurements of chicken/fish bone powder.
- Brookfield DVIII Viscometer USA for the viscosity measurements.
- Pharmacia Electrophoresis EPS 3500 XL for the protein pattern identification.
- DNA comet assay identification method.

• **June 1994 to March 1995 (9 Months):** *Research Scientist* at Asra Educational Society, Research Laboratories, Hyderabad, India.

• **July 1991 to June 1994 (3 Years):** *Chemist* at Water Quality Laboratory, Ministry of Water Resources Sultanate of Oman. Duties includes the routine analysis of ground and surface water samples for the testing of organochlorine and organophosphorous pesticides residues, besides the major/ minor cations & anions using EPA & Standard methods. A number of automated instruments e.g. Atomic Absorption, Inductively Coupled Plasma Spectrophotometer, Flow injector analyzer etc. were used. I am also responsible for the training to Omani technicians and as acting supervisor chemist.

TRAINING AND MEMBERSHIP/AWARDS:

LC-MS (Single quad) Agilent technologies @ Chicago, **USA-2011**

LC-MS (Triple quad) Agilent technologies @ Chicago, **USA-2013**

SSFN (Saudi Society for Food and Nutrition), Riyadh

Junior Research Fellowship, ICAR-USDA-**1989**

COMMITTEE MEMBER:

Dept. Computer and Web portal. (Advising, Implementation of decisions for College and Dept. Website)

Purchasing of Laboratory Instruments (Specification proposal, and quotation evaluation)

College new building lab furniture (Technical specification and implementation)

LANGUAGES KNOWN

ARABIC
ENGLISH

READ

Good
Excellent

WRITE

Good
Excellent

SPEAK

Good
Excellent

EXPERIENCE IN ADVANCE INSTRUMENTS OPERATION AND ANALYSIS

FTIR-BRUKER VERTEX 70 (FTIR analysis of Fat and oils in NPST Pork project)

Agilent LC-MS-MS 1260/6420 Triple Quad (Food Protein Identifications using full scan and SIM)

Agilent LC-MS 1260/6120 Single Quad (Amino Acid and Proteins Analysis in Camel milk and processed Food)

GC Agilent 7890A with 5975 MS (Fatty Acid and triglycerides Analysis of the processed food samples)

ICP GBC Integra (Mineral Analysis of the food samples, see water etc.)

HPLC (Shimadzu) LC 10AD & Prominence (Amino Acid in Food hydrolysate, Food Proteins, Vitamins in Processed and Irradiated Food, Catechins in Green Tea etc.)

HPLC Waters (USA) (Carbohydrates and Vitamin analysis of date and food samples)

RT-PCR Rotor gene (For the detection of the source of gelatin in processed food)

ICP, Pye Unicame PU7000 (Repair and operation, during the Municipality and Rural Affairs Project)

GC Tracor 540 USA (Fatty Acid Analysis during Ph.D. research)

GC (HP) 5890 with MSD (For Hydrocarbons analysis in Irradiated Samples)

GC Varian 6000 & 6500 Vista Series (Pesticides Analysis in ground and well water Samples)
Dionex DX-100 Ion Chromatograph (Determination of Anions and Cations in ground and well water)

Atomic Absorption GBC 906 (For teaching to students of BS, food analysis course)
ESR BRUKER Germany EMS 104 (Identification and dose determination of Irradiated samples)
Thermoluminescence (TLD Reader) HARSAHW USA (Detection of Irradiated Food)
IR 408 SHIMADZU (Detection of Oil Contamination)

EDITOR/REVIEWER

Reviewer Food Chemistry (Elsevier Publication) Since March 2006 till to date

PUBLICATIONS

Google Scholar citation index <http://scholar.google.com/citations?hl=en&user=zZIYlasAAAAJ>

- 1- Distinguishing lard in binary mixtures of animal fat and vegetable oils and in some commercially processed Foods using FTIR (**Food Chem.** 219, 54-60, **2017**)
- 2- Green Fabrication of Co₃O₄ Nanoparticle-Decorated Reduced Graphene Oxide Sheets: Evaluation of Biocompatibility on Human Mesenchymal Stem Cells for Biomedical Applications. **Journal of Inorganic and Organometallic Polymers and Materials**, (2017). doi:10.1007/s10904-017-0562-4
- 3- Identification of lard in vegetable oil binary mixtures and commercial food products by FTIR. **Quality Assurance and Safety of Crops & Foods**, 9(1), 11-22, **2016**.
- 4- Nutritional composition, extraction, and utilization of wheat germ oil: A review, **European Journal of Lipid Science and Technology**, 118, 1600160 (1-9), **2017**.
- 5- Structural Characteristics of Camel-Bone Gelatin by Demineralization and Extraction. **International Journal of Food Properties**, <http://dx.doi.org/10.1080/10942912.2016.1244543>
- 6- Detection of Lard in Binary Animal Fats and Vegetable Oils Mixtures and in Some Commercial Processed Foods , **International Journal of Biological, Veterinary, Agricultural and Food Engineering** Vol:8 No:11, **2014**
- 7- Nutritional Composition, Antinutritional factors and in vitro protein digestibility (IVPD) of Goat Pea (*Securigera Securidaca* L.) as affected by some traditional processing. (**Plant Foods for Human Nutrition-2017**)
- 8- Long Life Preservation of Camel Meat under Normal Conditions Using Food Irradiation Technology. (**Journal of Food Protection-** July-2014)
- 9- Polyphenoloxidase and Peroxidase Activities in four Saudi Date Cultivars Frozen by Different Freezing Methods Followed by Long Term Frozen Storage (**Journal of Food Science** -2009)
- 10- Chemical and proximate composition of (*Zizyphus spina-christi*) nabag fruit. **Nutrition and Food Science**, 39(1): 70-75, (2009).
- 11- Amino acid composition and rheological properties of dough of wheat flour and cowpea protein isolate modified chemically and enzymatically. **J. Saudi Soc. for Food and Nutrition**, 2, 2, (2007)
- 12- Degradation of the acaricides abamectin, flufenoxuron and amitraz on Saudi Arabian dates. **Food Chemistry**, 100(4): 1590-1593, (2007).
- 13- Desert Locust (*Schistocerca gregaria*): Proximate Composition, Physiological Characteristics of Lipids, Fatty Acids and Cholesterol Contents and Nutritional Value of Protein. **J. King Saud Univ.**, 13(1), 21-40, (2001).
- 14- Irradiation and Storage Effects on Some Properties of Potato Starch and Use of Thermo luminescence for Identification of Irradiated Tubers. **Am., J., of Potato Res.**, 77: 245-259, (2000).
- 15- Irradiation of Dates: Insect Disinfestations, Microbial and Chemical Assessments and Use of Thermo luminescence technique. **Radiation Physics and Chemistry**, 53, pp 181-187, (1998).
- 16- Amino Acid and Protein Changes in Tilapia and Spanish Mackerel after Irradiation and Storage. **Radiation Physics and Chemistry**. 51(1), pp. 107-114, (1998).

- 17- Irradiation and Post-irradiation Storage of Chicken: Effect on Fat and Proteins. *Egypt. J. Food Sci.*, 25, pp61-81, (1997).
- 18- 1,3-Cycloaddition of Nitrile Oxide to α,β -Unsaturated fatty acid and Santalbic acid: Preparation of Isoxazole and Isoxazoline. (J.Chem. Soc. Chem. Comm.)
- 19- 1,3-Cycloaddition of nitrile oxide to olefinic fatty acid esters, synthesis of isoxazoline. *J. Am. Oil Chem. Soc.*, 68 (11),886 (1991).
- 20- Manganese (III) acetate mediated one pot synthesis of some Novel Macrolides from long chain fatty acids. *J. Chem. Res.* 2, 48 (1991).
- 21- Flavonol Glycosides from the leaves of *Sterculia urens* (Roxb.), *J. Ind. Chem. Soc.*, 66(4),287 (1987).

PRESENTATIONS IN CONFERENCES/ABSTRACTS

- 1-“Chalcone derivatives as potent New organochlorine insecticides” 26th annual convention of Chemists held at Indore, India December, 1989.
- 2-“Formation of long chain spirodilactones from Olefinic fatty acids” 45th annual convention and symposium of oil technologist associations of India held at New Delhi, February, 1990.
- 3-“N-Heterocycles from fatty acetylenic compounds” 46th annual convention and symposium of Oil Technologist Association of India held at IICT Hyderabad, *India* September 1991.
- 4-“Synthesis of methyl-5-methylenonanoate-3-isoxazoline carboxylate (II) and methyl cis-4 (5)-methyl octanoate-5 (4)-Octanyl-3-isoxazoline carboxylate (IV) from Olefinic fatty ester” 46th annual convention and symposium of Oil Technologist Association of India held at IICT Hyderabad, *India* September, 1991.
- 5-“A Novel flavonoid-O-Glycoside from *Cupressus glabra* 2nd ISBOC-IUPAC held at *Fukuoka, Japan*, June 1993.
- 6- Fatty Acid Derivatives (IV): 1,3-Cycloaddition of Nitrile Oxide to α,β -Unsaturated Fatty Acid & Santalbic Acid.87th AOCS (*American Oil Chemists' Society*) Annual Meeting &Expo, April 28-May1,1996, *Indiana, USA*.
- 7- Tubers discoloration intensity as detection method of irradiated potatoes. International Symposium on New Frontier for Irradiated Food and Non-Food Products. 22 – 23 September 2005, *Bangkok, Thailand*.

COMPUTER KNOWLEDGE

Microsoft Windows and Office All version	Basic/GWBasic programming	Hardvard graphics
dBase III Plus	Chem. Windows v 1.2	KSU-MADAR

REFERENCES

Prof. Hassan A. Al-Kahtani Ex-Dean Coll. of Food & Ag. Sci. King Saud University P.O. Box 2460 Riyadh 11451 K.S.A. Tel. +966-1-467-8398 Mobile: 0505482143 hkahtani@ksu.edu.sa	Prof. Hamza Abu-Tarboush Ex-Director Agriculture Research Center King Saud University P.O. Box 2460, Riyadh 11451 K.S.A. Tel. 467-8399 Mobile: 0505320504 tarboush@ksu.edu.sa	Prof. Abdul Rahman Al-Khalifa Ex-Chairman Dept. of Food Science & Nutrition King Saud University P.O. Box 2460 Riyadh 11451 K.S.A. Tel. 467-4421 Mobile: 0505206133 akhalifa@ksu.edu.sa
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