

Dr. Muhammad Makshoof Athar

PERSONAL DETAILS:

NAME	Dr. Muhammad Makshoof Athar
Father's Name	Muhammad Latif
Date of Birth	25-09-1958
Present Position	Associate Professor, Institute of Chemistry, University of the Punjab, Lahore, Pakistan.
Domicile	Punjab (Distt. Rahimyarkhan)
Religion	Islam
N.I.C. No.	31202-7659437-7
Corresponding Address	Associate Professor, Institute of Chemistry, University of the Punjab, Lahore, Pakistan.
Permanent Address	A-15, Satellite Town Rawalpindi

QUALIFICATION:

<u>INSTITUTION</u>	<u>CERTIFICATE / DEGREE</u>	<u>YEAR</u>	<u>SUBJECTS</u>
1. Muslim Model Secondary School Rawalpindi.	Matric	1973	Science Subjects
2. Govt. College Rawalpindi	F.Sc.	1975	Chemistry, Physics, Biology.
3. Govt. College Rawalpindi.	B.Sc.	1978	Chemistry, Botany, Zoology.
4. Quaid-i-Azam University, Islamabad.	M.Sc.	1982	Chemistry, (Analytical/Inorganic)
5. University of the Punjab, Lahore.	M.Phil.	1988	Analytical chemistry.
6. Islamia University, Bahawalpur.	Ph.D.	1996	Chemistry.

MEMBERSHIP OF SCIENTIFIC SOCIETIES:

1. Member of Pakistan Institute of Chemists.
2. Member of Chemical Society of Pakistan.

TEACHING EXPERIENCE:

1. Associate Professor, Institute of Chemistry, University of the Punjab, Lahore since 31st May 2005 to date.
2. Associate Professor, Department of Chemistry, Islamia University, Bahawalpur since 11 August 2001 to 30th May 2005.
3. Assistant Professor, Department of Chemistry, Islamia University, from 30th July 1999 to 29th February 2000.
4. Lecturer, Department of Chemistry, Islamia University, from 1st February 1984 to 29th July 1999.
5. Taught Environmental Education at postgraduate level in the department of Education Islamia University Bahawalpur on part time basis since 1991 to 29th February 2000.

RESEARCH EXPERIENCE

1. **Principal Scientific Officer**, Center for Environmental Protection Studies ,PCSIR Laboratories Complex , Lahore Since 1st March 2000 to 10th August 2001.
2. **Ph.D.** Research experience from 1989 to 1995 under the supervision of Prof. Dr. Misbahul Ain Khan. Thesis entitled, "Degradation Studies of Heterocyclic Compounds"
3. **M. Phil.** Studies from 1984 to 1987 under the Supervision Dr. Jamil Anwar. M.Phil. Thesis entitled "Indirect Determination of Nitrate and Ammonia by Atomic Absorption Spectroscopy"
4. Research Fellow from May 1983 to February 1984 under the Supervision of Dr. M. Jaffer on **PSF research project** entitled "Water Pollution Control Parameter studies local Waters 80 km around Islamabad".
6. One year **M.Sc. Thesis** under the Supervision of Dr. Muhammad Jaffar at Quaid-I-Azam University, Islamabad. M.Sc Thesis entitled "Estimation of Physico-Chemical Parameters And trace metal Contamination levels in the public utility waters through atomic absorption Spectrophotometer".

RESEARCH IN PROGRESS

1. Six students are working under my supervision for their **Ph. D.** degrees in the field of Environmental Chemistry. (Titles):
 - *Synthesis and Environmental Applications of Some Novel Ion Exchange Chelating Resins of Hydrazones. Imran Ghaffoor, 2002.*
 - *The Study of Hazardous Gaseous Emission from Thermal Power Plant and its Effect on Ambient Air Quality. Mahboob Ali 2004*
 - *Characterization of Potential Contaminants & Geochemistry of Water of Potohar Region. Mohammad Younas Kaleem, 2004.*
2. FOUR **M.Phil** students have completed their research work in the field of Environmental Chemistry and Chromatography.
3. More than 55 students have successfully done their **M.Sc** thesis under my supervision and FIVE are working at the moment.

RESEARCH PROJECTS (FUNDED/INHOUSE)

1. Synthesis of Arylfurans and Their Degradative studies” funded by University Grants Commission.
2. Development of Technologies, design data and design of plant for the treatment of industrial waste (PCSIR in-house project).
3. On-site and ambient monitoring of environmental pollution industrial wastes characterization (PCSIR in-house project)
4. Pollution Monitoring in River Ravi (PCSIR in-house project).
5. Pollution Monitoring of Dek Nullah (PCSIR in-house project).
6. Environmental Policy Planning and Technical Documentation preparation (PCSIR in-house project).
7. Preparation of Analytical/Laboratory Grade Chemicals (PCSIR in-house project).
8. Brackish Water Reclamation into Potable form by using Agricultural wastes.

COURSES/WORKSHOP ATTENDED:

1. 7th course on “Nuclear and other advanced techniques in agricultural and biological research”, held at NIAB, Faisalabad from Nov. 12 to Nov. 26, 1989.
2. Paper entitled “Water pollutants and its effects” presented at the workshop on “Environmental pollution”, held at Islamia University Bahawalpur in collaboration with ministry of Education Islamabad from Feb. 23 to 24. 1991
3. In service training course on Analytical and environmental chemistry held at UGC Lahore from 24th Feb.-2nd March 1992.
4. A course was attended at the Training Institute of NARC Islamabad on Mushroom cultivation”, from July 17 to July 21, 1988.
5. Participated in the 4th National chemistry conference held at Islamia University Bahawalpur in 1992.
6. Participated in the 8th National chemistry conference held at PCSIR Laboratories Lahore 1997.
7. Participated and presented a paper entitled “Water Quality control parameters on the local public utility waters of Bahawalpur” in the 5th National conference on Analytical and Environmental chemistry held at Baragali 1998.
8. Presented a paper entitled “ Indirect Determination of Nitrate by Cold Vapour Atomic Absorption Spectroscopy of Mercury” in the 10th. National Chemistry Conference held at Karachi University in December 1999.
9. Participated And presented a paper entitled “Simple Technique for the Reduction of Biochemical-Oxygen Demand from the Textile Industries Effluents” in the Executive Seminar on Clean Environment from 26-28 February 2001 organized by PAEC at Islamabad.
10. Participated in the First National Conference on Non-Destructive Testing organized by NCNDT. Pakistan Atomic Energy Commission at Islamabad from 24-26 October 2001
11. Participated in Six-Day Training Workshop on Environmental Concerns and its Management Strategies organized by Fatima Jinnah Women University Rawalpindi from 16-21 August 2003.
12. Participated and presented a research paper in the chemical society international conference held at B.Z. University Multan in March 2006.
13. Participated and presented a research paper in the Ninth symposium on analytical/environmental chemistry held at Baragali Peshawar University 24-26 July, 2006.

14. Participated in the workshop on new instrumentation and applications of mass spectrometry organized by National core group in chemistry at HES research institute of chemistry, Karachi 7-9 August 2006.
15. Attended a seminar on Quality assessment of coloured food items and drinking water consumed by school going children organized by PCSIR Laboratories Lahore June 2006.
16. Attended a seminar on “Water for Tomorrow” Organized by the Institute of Chemistry, University of the Punjab, Lahore, on 13th June 2006.
17. 1st International Chemistry Conference Organized by G.C. University Faisalabad & presented a paper entitled “Development of a Novel Spraying Reagent for the Detections of Certain Organic Compounds” 1st to 3rd Nov.2006.

OFFICIAL / ADMINISTRATIVE ASSIGNMENTS:

1. Member Syndicate Islamia University Bahawalpur from Nov. 1992 to June 1993.
2. Member Senate Islamia University, Bahawalpur from Nov 1992 to June 1993.
3. Confidential printing officer at the Examination officer Islamia University, Bahawalpur from Jan 1989 to June 1993.
4. Member University Budget Committee Islamia University Bahawalpur from 1992 – 1995.
5. Member University Loan Committee Islamia University Bahawalpur from 1992 to 1994.
6. Member Department Admission Committee from 1988 to 1992.
7. Member University Tender Opening Committee from 1992 to 1993.
8. Member/Secretary University Committee to deal with in-discipline and misconduct (CIM) from Dec 1997 to 29th February 2000.
9. Confidential Printing Officer at the Examination Office Islamia University Bahawalpur from 1st Sept 1997 to 29th February 2000.
10. Confidential Printing Officer at the Examination Office Islamia University Bahawalpur from 11th January 2002 to May 2005.
11. Member Board of Studies Institute of Chemistry, Punjab University, Lahore from 1st June 2005 to Date.
12. Member departmental admission committee Institute of Chemistry, University of the Punjab, Lahore.

REFERENCES:

1. Prof. Dr. Misbahul Ain Khan, H.No 459-A, Block C, Faisal Town. Lahore. Pakistan.
2. Prof. Dr. Jamil Anwar Ch. Director Institute of Chemistry. University of the Punjab, Lahore.
3. Prof. Dr. M Latif Mirza, Deptt. of Chemistry Islamia University, Bahawalpur.

M.Phil RESEARCH THESIS SUPERVISED:

1. Development of low cost Treatment Methodology for the Textile Industry Effluent *Nosheen Anwar 2005*
2. Preparation Of Chelating Agent Form Wheat Straw By Microwave Radiations For The Removal Of Heavy Metals *Mehnaz Sakina 2005*
3. Eucalyphus bark: A new Biosorbent for the Removal of Heavy Metals from Aqueous Solutions *Afshe Aram 2005*
4. Comparative Study Of Some Novel Spraying Reagents For The Detection Of Aminophenols & Related Compounds *M. Nasrullah 2005*.

M.Sc. RESEARCH THESIS SUPERVISED:

1. Studies on water quality control parameters and trace metal levels for the local public utility waters. M. Shafiq, 1984.
2. Spectrophotometric determination of iron from the cane sugars available in Pakistan. M.Asif, 1985.
3. Spectrophotometric determination of metal cations from fruits and vegetables of local market. M.Anwar Hussain, 1985.
4. Spectrophotometric determination of cyanocobalamin using mixed solvent system. Abdul Rehman, 1986.
5. Chemical analysis of Euphorbia granulata M.Rafi Raza, 1986.
6. Water quality studies on certain local public utility waters around Bahawalpur. M. Mansha, 1988.
7. Spectrophotometric determination of cobalt using 2,2-biquinoline as ligand . M.Sohail, 1989.
8. Use of 8-aminoquinoline for the spectrophotometric determination of vanadium. M. Shahid Nawaz, 1989.
9. Spectrophotometric determination of aminophenols. Khalid Javaid Kiani, 1990.
10. Detection of aminophenols and related compounds using a novel spraying agent. Liaquat Ali, 1990.
11. Spectrophotometric determination of 2-aminophenol with magnesium ferricyanide. M. Nasar, 1991.

12. Spectrophotometric determination of 2-aminophenol with cadmium ferricyanide.
Arif Javed, 1991.
13. Thermal analysis of certain pyridine compounds. Abrar Hussain, 1992.
14. Quality Control parameters studies of the local public waters. Murad Ali, 1993.
15. Thermal fragmentation studies of some substituted hydrazones of fur-fur-aldehydes.
Miss. Uzma Ch. 1993.
16. Analytical pyrolysis of fur-fur-aldehyde benzoyl hydrazones. Mirza Nasir Inam Ahmad, 1993.
17. Thermal analysis of some substituted hydrazones. Rais Ahmad, 1993.
18. Evaluation of nutrient values of poultry feed available in local market. Asif, 1994.
19. Effect of water channel (Abbasia Canal) on the quality of underground water. Asghar Ali, 1996.
20. Effects of various plant species on the quality of soil in Cholistan desert.
Shafquat Mahmood, 1996.
21. Studies on the seasonal variation in the quality of water in the Rivers of Pakistan.
Fazal Ahmed. 1997.
22. Effects of various shrubs on the quality of soil in Cholistan desert. Basit, 1997
23. Spectrophotometric determination of Aluminum with alizarin Red Riaz Ahmad 1997
24. Spectrophotometric determination of chromium (III) with pyridine-2,6-dicroboxylic acid M.
Wakeel Hussain 1997.
25. Chemical analysis of rain harvested water in the Tobas of Cholistan Desert Farzana Sarwar 1998.
26. A modified Spectrophotometric method for the estimation of copper (II) with rubeanic acid
Maqsood Ahmad 1998.
27. Spectrophotometric determination of Cobalt (II) with rubeanic acid Noreen Ajiz 1999.
28. Chemical Analysis of Lisurus Indicus(A Desert Plant). M. Saeed 1999
29. Brackish water reclamation by using cheap/useless wastes of vegetation.M. Bashir. 1999.
30. Effect of Organic matter on the Soil fertility (A controlled study of Desert Plants).
M Bashir 1999.
31. Spectrophotometric Determination of 2-Aminophenols. Asma Rashid. 1999.
32. Chemical Analysis of Canola Oil. Zeeshan Ali.1999.
33. Antibacterial Study of some Medicinal Plants. Kamran Munir. 1999.
34. Chemical Analysis of Lisurus Indicus(A Desert Plant). M. Saeed. 1999.
35. Separation of Amino Acids by Using High Pressure TLC. Farzana.2000.

36. Impact of Organic Matter on Soil Fertility (Controlled Study of Desert Plants) Awais. 2000.
37. Soil Chemical Heterogeneity and its relation to plant growth in Cholistan Desert. Aurang Zeb.2000
38. The Use of 2-Hydroxy-benzilidene) Anilines as Ligand for Transition Metals. Tahir.2000.
34. Use of 2-Hydroxy benzilidene) 4-methoxy Aniline as Analytical reagent. Sajid.2000.
35. Effect of sewerage water on the quality of soil and crops in Bahawalpur. Farah Majeed 2002.
36. Water Quality Control Parameter Studies for the Local Public Utility Waters around Yazman. Munazza Bajwa 2002.
37. Cotton Biomass: A New Biosorbent for the Removal of Heavy metals. Saadat Majeed, 2003
38. Removal of Some Heavy Metals by Using Neem Bark (*Azadirachataindicum*)asBiosorbent Baqir Hussain, 2003.
39. Spectrophotometric Determination Of Iron By Using A Novel Pyridine Hydrazide. Saima Anjum, 2003.
40. Studies Of The Effect Of Some Traditionally Used Herbs For The Dissolution/Removal Of Kidney Stones. Umar Farooq, 2003.
41. Evaluation Of Some Unani Medicines Against Kidney Stones. Hafiz Faiz-Ur-Rehman, 2003.
42. Comparative Biosorption Studies of Nickle and Zinc Using Various parts of Cotton Plant, Mahboob Ahmad 2004
43. Preparation of Some Novel Spraying Reagents for Amino-Phenols & Related Componds, Saif-ur-Rehman, 2004.
44. Removal of Hardness of water using Biosorption technique, Rubina Naz, 2004.
45. The use of Neem as Biosorbent for the Removal of Nicle and Zinc from Aqueous Solutions, Umar Qudus, 2004
46. The Removal of Nickle and Zinc by using Swanjna biomass, Saleem Akhtar, 2004.
47. The Use of *Syamopsis tetragonoloba* (Gawara) Biomass for the Removal of Heavy Metals from Aqueous Solutions, Farzana Kousar Abbasi, 2005
48. Spectrophotometric Determination of o-Benzenediamine Using a Novel Reagent, Shumaila Zafar, 2005
49. Water Quality Control Parameters & Trace Metal Levels Studies for the Public Utility Waters of D.G. Khan, Memoona Munawar, 2005.
50. Ferric-Ferricyanide: A Novel Spraying Reagent for the Detection of Aminophenols and Related Compounds, Muhammad Saqib Rashid, 2005

51. Spectrophotometric Determination of 3-Aminophenol Using Ferric-Ferricyanide, Muhammad Azam Qamar, 2005
52. Comparative Study of Metals in a Citrus Orchard of District Layyah, Malik Mubeen Akhtar Manzoor, 2005
53. Quality control parameters for portable water from diverse localities of Lahore city Abid Ali Meo 2006
54. Removal of lead and nickel from aqueous solution using oryzasativa (rice straw) as biosorbant. Liaqat Bashir 2006
55. Ambient air monitoring of earth quake affected areas of NWFP & Azad Kashmir. Muhammad Nadeem 2006
56. Spectrophotometric determination of Cobalt (II) with 4-hydroxy chalcone. Kamran Zafar 2006
57. Determination of pollution load around the Lahore City. Muhammad Afzal 2006
58. One step synthesis of paracetamol. M. Asim Anayat 2006

PUBLICATIONS:

1. M. Jaffer and M. Makshoof Athar
Inorganic mercury determination in local public utility water by flameless atomic absorption technique. Pak. J. Sci. Inds. Res (27(3), 1984.
2. M. Jaffar, M. Makshoof Athar and M. Ashraf
Water quality studies on certain local public utility waters. Physical Chem. 4(1), 1985.
3. M. Jaffer and M. Makshoof Athar
Estimation of physico-chemical parameters and trace metal contamination levels for local public utility water Published in the proceedings of UNEP conference held on International Environment Day at Karachi University from June 3 to June 5, 1983.
4. Jamil Anwar, Saeed A. Nagra, Shahbaz Ahmad and M. Makshoof Athar
Determination of cyanocobalamine in the therapeutic injections by atomic absorption spectrophotometry. J. Sci. Res. 16(1&2), 1987.
5. Jamil Anwar, M.I.Farooqui and Makshoof Athar
Indirect determination of ammonia by atomic absorption spectroscopy. J. Chem. Soc. Pak. Vol. 1, 1989.
6. A. Majeed, R.N. Asma, N. Firdous, F.H. Nasim, M. Athar.

Spectrophotometric Determination of Microconcentration of strontium with Xylenol orange. J. chem. Soc. Pak. 19(3), 218. 1997.

7. Munawar Ali Munawar, Rafiq Shahid, M. Siddique, Makshoof Athar
Benzoin condensation in Boiling DMSO. J. Pure & Appl. Sci., Vol. 17 (2), 45-48, 1998.
8. Makshoof Athar, Liaquat Ali, M.A. Munawar, Irshad Ahmed.
“Detection of Aminophenols and Related compounds with Nickel Ferricyanide.,
Science, Technology and Development” Vol. 18 (2), 28-29, 1998.
9. Makshoof Athar, Liaquat Ali, M.A. Munawar, Irshad Ahmed
“Detection of Aminophenols and Related compounds with Cadmium Ferricyanide.
J. Pure & App. Sci. Vol.17 (2), 56-57, 1998.
10. Irshad Ahmad, Misbah-ul-Ain Khan, and Makshoof Athar.
Complexes of Substituted Benzoyl Hydrazones 1,3-Diphenylpyrazole-4-Carboxaldehyde 2-
Hydroxybenzoyl Hydrazone As Chelating Agent with Transition and Non-Transition Metals.
J.Pure Appl.Sci., Vol. 17, No.2, pp. 67-72, December 1998
11. Munawar Ali Munawar, Azhar Masud Chaudhary, Makshoof Athar, Muhammad Siddique and
Abdul Rauf, The Synthesis of 6-Aryl-2,4-dioxoperhydro-1,3,5-triazines, Bull. Korean Chem.
Soc. Vol.20(5),528-530, 1999.
12. Munir Ahmed, M.A. Munawar, Makshoof Athar
“Analysis of Rocks and Mineral Deposit from Khewra standstone”. J. Pure and Appl.Sci.Vol.18
(1 & 2) 1999.
13. Irshad Ahmed, Misbah ul Ain Khan, Makshoof Athar
“Pyrazole Aroyl Hydrazones As Ligands” (Complexes of 1,3-Diphenylpyrazole-
4-carboxaldehyde 2-Hydroxy benzoyl Hydrazone with Fe(III), Co(II), Ni (II), Cu(II), Cd(II),
Hg(II), Sn(II), Bi(III) and Pb(II). Pak. J. Sci. Ind. Res. 43 (1) P-38-41. 2000.
14. Makshoof Athar, M. Tahir Butt,
Simple Technique for the Reduction of Bio-Oxygen Demand from the Textile Industries Effluents
Published in the Proceeding of the seminar on Clean Environment published by PAEC
2001.
15. Irshad Ahmad, Misbah Ul Ain Khan and Makshoof Athar.
“Pyrazole Aroyl Hydrazones as Ligands-I 1,3- Diphenylpyrazole-4-Carboxaldehyde Benzoyl
Hydrazone as ligand for Metal complexes” Pak. J. Sci. Ind Res. 44(5) 268-272, 2001.
16. Makshoof Athar, Misbahul Ain Khan, Suzano Mario Leitao Uberti,
Arylfuran Chemistry ii .Synthesis of Some Furylbenzoic Acid Derivatives. J. Pure and Appl. Sci.
Vol 22 (1) 2003.

17. Imtiaz Ahmed, Makshoof Athar and Farzana Sarwar
Surface water suitability for Drinking purposes in Cholistan Desert, Journal of Biological Sciences
4 (1) 2004.
18. M. Tahir Butt, Makshoof Athar, Naz Imtiaz
Water Quality Control Parameter Studies for the Local Public Utility Waters of Lahore
J. Pure & App. Sci., 23 (1) 49-56 2004.
19. M. Tahir Butt, Makshoof Athar, Anwar Saeed
Assessment of Pollution Load on Under Ground Water in Distt. Jehlam, Chakwal and Sargodha
Acta. Sci., 14 (2) 39-46, 2004.
20. M. T. Butt, Ahmed, T. Shafique and M. Athar
The Use of CO₂ for the Production of Precipitated Lightweight Calcium Carbonate,
Jour. Chem. Soc. Pak. Vol 28 No. 4 2006.
21. M. T. Butt, Makshoof Athar and Naz Imtiaz
Assessment of Pollution Load on Underground Water in Distt. Gujrat due to Chloride, Iron,
Flourinde and Nitrate Pakistan J. of Science, 58(3&4) 121-127 2006.
22. Maboob Ali, Makshoof Athar, Ehsan Ali
Impact of Hazardous gaseous emission of thermal power station around Raiwind Pakistan on ambient
air quality , **“Ekoloji” (Turkey)** 16(63) 74-80 2007
23. Malik Mubeen, A. Manzoor, M. Makshoof Athar
Study of concentration of trace elements in kinnow and mosambi of district Layyah
Indus Journal of plant sciences, 5 (2) 773-778 April 2006.
24. Younas Kalim Makshoof Athar, Mushtaq Ahmed
Role of Distribution System in Safe Water Supplies A Case Study of Rawalpindi
Accepted in Journal of Pak. Chem. Soc. (2007)
25. Mahboob Ali, Makshoof Athar, Ehsan Ali
Air Pollution Due to Traffic, Air Quality Monitoring along Three Sections of National Highway
N-5. **Accepted in Environmental Monitoring and Assessment. (2007) DOI**
26. Makshoof Athar, Baqir Hussain & Umar Farooq
Azadirachata Indicum (Neem): An Effective Biosorbent for the Removal of Lead (II) from the
Aqueous Solutions, **Accepted in Bulletin of Environmental Contamination and Toxicology.**
(2007) DOI
27. Makshoof Athar, Saadat Majeed
Cotton Biomass; A new Biosorbent for the Removal of Copper from Aqueous Solution.
Submitted to Environ. Sci. Technol 2005.

28. Younis Kaleem, Makshoof Athar, Mushtaq Ahmed
Geochemistry of Ground Water Of Potwar. A study case of Rawalpindi Pakistan. Submitted to Journal of American Water Works Association 2005.
29. Younis Kaleem, Makshoof Athar, Mushtaq Ahmed
Effect of Sewage of Rawalpindi/Islamabad on Soan River in Terms of BOD, COD
In process with Jour of the chem. Soc. of Pakistan.