

Brief Bio-data of Dr. Samsul Alam, Specialist (Analytical), IPFT

Dr. Samsul Alam (b. 05 Jan, 1979) is working as Specialist (Analytical) in the Analytical Division of Institute of Pesticide Formulation Technology (IPFT), (Autonomous Institute under Department of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, Govt. of India). He joined this institute on 30th March 2007 as a Scientist and served in that post for nearly four years and then on 01 March, 2011, he joined in the post of Specialist (Analytical). He has a total experience of more than 15 years (excluding research experience of PhD). He obtained his Ph.D. degree (Ph.D. thesis title: Studies on persistence, degradation and phytoremediation of some selected pesticides) in Agricultural Chemicals from Bidhan Chandra Krishi Viswavidyalaya (BCKV) in 2010.



Key Functions and Research Areas:

- Functioning as Dy. Test Facility Management (Dy. TFM) in OECD GLP certified facility of IPFT
- Technical Manager in NABL Accredited laboratory as per ISO/IEC 17025.
- Development and validation of Analytical Methodologies.
- Novel methodologies for pesticide and trace metal residue analysis.
- Synthesis and application of nanoparticles for pesticides decontamination and analysis.
- Persistence, dissipation and degradation behaviour of pesticides and other related chemicals

Projects undertaken:

- Magnetic core-shell nanoparticles based extraction coupled with Gas / Liquid Chromatography- Tandem Mass Spectrometry for trace level analysis of pesticides” Project duration: Sept., 2013 to Mar 2017. (Principal Investigator)
- Differences in hormonal composition of camel at various stages. MoU with National Research Centre for camel, Bikaner. (Co- Principal Investigator)
- Monitoring of Pesticide Residues in Air. MoU with IIT, Kanpur. (Co- Principal Investigator)
- Successfully completed and submitted reports for more than 50 industry sponsored residue field trials data generation projects.

Publication, Patents:

Research Papers: International – 35 nos., National – 2 no. , conference proceedings – 2 no.

Book chapters: 4 no, Patents- 2 no. (filed), Conference presentations: 20 no.,

Five best Research Publications:

1. **Samsul Alam***, Neha Srivastava, Nusrat Iqbal, Mahesh K Saini and Jitendra Kumar. Magnetic Solid Phase Extraction (MSPE) using magnetite-based core-shell nanoparticles with silica network (SiO₂) coupled with GC-MS/MS analysis for determination of multiclass pesticides in water. *J. AOAC Int.* 104(3): 633-644 (2021). doi: 10.1093/jaoacint/qsaa156.
2. Neha Srivastava, Supriya Kumari, Kishore Nair, **Samsul Alam*** and S K Raza. Determination of organophosphorous pesticides in environmental water samples using surface engineered C-18 functionalized silica coated core-shell magnetic nanoparticles based extraction coupled with GC-MS/MS analysis. *J AOAC Int.* 2017 Jan 12. doi: 10.5740/jaoacint.16-0312.
3. Nilanjan Sanyal, **Samsul Alam**, Saswati Pradhan, Kaushik Banerjee, Ashim Chowdhury, Md Wasim Aktar. Metabolism and dissipation kinetics of a novel protoporphyrinogen IX oxidase herbicide [oxadiargyl] in various buffered aqueous system under laboratory-simulated condition. *Environ Monit Assess.* 2015 Jul;187(7):433.
4. Kishore K Nair, Ranjeet Kaur, Nusrat Iqbal, Abshar Hasan, **Samsul Alam*** and S K Raza. High yield, facile aqueous synthesis and characterization of C18 functionalized iron oxide nanoparticles. *Material Research Express.* 2(2015) 045014.
5. **Samsul Alam**, D Sengupta, R K Kole and A Bhattacharyya. Dissipation kinetics of tetraconazole in three types of soil and water under laboratory condition. *Environ Monit Assess* (2013) 185: 9819-9824.

Honors, Societies and Certifications:

<i>S. No.</i>	<i>Award Name</i>	<i>Awarding Organization</i>	<i>Awarded Work / Project</i>
1.	Lead Assessor & Technical Assessor of NABL	National Accreditation Board for Testing and Calibration Laboratories (NABL)	Successfully completed the Assessor course as per ISO/IEC 17025 and empanelled with National Accreditation Board for Testing and Calibration Laboratories (NABL) as Lead Assessor (since 2020) & Technical Assessor. (since 2015).
2.	Invited Lecture	4 th IUPAC International Conference on Agrochemicals Protecting Crops, Health and Natural Environment – “Discovery and development of synthetic and natural products for health and pests management”, New Delhi, 7-10 January 2020.	Design and fabrication of magnetite-based core shell nanoparticles with silica network (SiO ₂): A novel material for technology development of effective extraction of multi-class pesticides, its analysis and detoxification of environmental water
3.	Academic Counsellor	Indira Gandhi National Open University (IGNOU)	Course Title: Post Graduate Diploma in Analytical Chemistry (PGDAC) during 2015 – 2019.
4.	Technical Consultant	Directorate of Horticulture, Govt. of Haryana	Establishment of Instrumentation labs in centre of excellence in Sirsa and Karnal during 2014 – 2016.
5.	Best Poster Presentation (3 rd prize)	International conference on frontiers of Mass spectrometry (6-9 September, 2013 at Mahatma Gandhi University, Kottayam, Kerala)	Determination of 25 pesticides by GC-ECD and MSD with measurement of uncertainty in tomato and banana using modified QuEChERS technique
6.	Director's Award	IPFT	Designation of IPFT by OPCW in 2011
7.	Certificate of Appreciation	ACS Publications, USA	Valuable contribution and dedicated service in the peer review of manuscripts submitted to ACS journals

8.	Escort officer	National Authority Chemical Weapons Convention, Cabinet Secretariat	OPCW Inspection (2010)
9.	OPCW Inspection Team member	National Authority Chemical Weapons Convention, Cabinet Secretariat	OPCW Sample & Analysis Inspection (2011)
Co-authorship in the following Research works presentation which got awarded			
10.	First Prize (Oral Presentation)	4 th IUPAC International Conference on Agrochemical Protecting Crops, Health and Natural Environment. 7 – 10 January 2020, New Delhi-INDIA	Modified QuECHERS based approach for the analysis and estimation of the Gibberellic acid (GA-3) residues in chilli and its soil using LC-MS/MS. (Oral Presentation-44)
11.	First Prize, Poster presentation	4 th IUPAC International Conference on Agrochemical Protecting Crops, Health and Natural Environment. 7 – 10 January 2020, New Delhi-INDIA	Development and validation of LC-MS/MS method for simultaneous determination of 81 pesticides in Rice (Poster Presentation-36)
12.	First Prize, Poster presentation	IUPAC conference, APCHNE-2016, 6-9 April at NAS complex Delhi-India	Residual Fate and Dissipation of Fipronil 80% WG in Grapes Beries and Field Soil
13.	Second Prize, Poster Presentation	International conference on Agrochemicals protecting crop, health and natural environment (8-11 January, 2008 at IARI, New Delhi)	Multiresidue analysis of 17 organophosphorous pesticides using accelerated solvent extraction coupled with Gas chromatography- Flame photometric detection

Membership of Professional Societies / Institutions:

<i>Name of the Professional Institute / Society</i>	<i>Type of Membership</i>
i. Working Group of the Standing Committee on Monitoring, under Ministry of Environment, Forests and Climate change, Ozone cell. (since May 2020)	Nominated member
ii. Working Group for National Chemicals and Petrochemicals Disaster Management Plan (2021)	Nominated member
iii. MSD 20- Reference Materials Sectional Committee of Bureau of Indian Standards. (since 2021).	Nominated member
iv. Pesticide Residues Analysis Sectional Committee, Fad 27 of Bureau of Indian Standards. (since 2016).	Nominated member
v. Justification-cum-Specification Committee, IPFT	Member Secretary
vi. Project Monitoring & Evaluation Committee (PMEC) and Institute Technology Management Unit (ITMU), IPFT	Member
vii. Purchase Advisory Committee, IPFT	Member
viii. Website Maintenance & Updation Committee, IPFT	Member
ix. Social Media Handling, IPFT	Nodal person
x. MSME support and Outreach programme	Nodal person