

Sharkar Mohammad Mahamudul Hassan

mahmud311279@yahoo.com; Mobile & WhatsApp: +88-01711-027714

Office: Chemical Research Division, BCSIR Dhaka Laboratories
Bangladesh Council of Scientific & Industrial Research (BCSIR)
Dr. Qudrat-I-Khuda Road, Dhaka-1205, Bangladesh

Education

M. Sc. in Chemistry National University, Gazipur, Bangladesh	2001
B. Sc. (Hons.) in Chemistry National University, Gazipur, Bangladesh	2000

Professional Experience

Principal Scientific Officer

Chemical Research Division, BCSIR Dhaka Laboratories
Bangladesh Council of Scientific & Industrial Research (BCSIR)

November 2022 to Present

Senior Scientific Officer

Chemical Research Division, BCSIR Dhaka Laboratories
Bangladesh Council of Scientific & Industrial Research (BCSIR)

August 2011 to November 2022

Scientific Officer

Chemical Research Division, BCSIR Dhaka Laboratories
Bangladesh Council of Scientific & Industrial Research (BCSIR)

June, 2006 to August 2011

Technical Skill and Competences

Conduct research on Chemical investigation, Natural product Chemistry, Waste management, Synthesis Chemistry Process Modeling & Research Design; Scientific Leadership & Research Management; Sustainability & Circular Economy Integration

Skills on Research Tools & Techniques

- Isolation of pure compounds from the plant and its associated endophytic fungi.
- Characterization of pure isolated compounds by various modern spectroscopic techniques like UV, IR, ID & 2D NMR and Mass.
- Bioactivity study of pure isolated compounds.
- Advanced materials characterization: FT-IR, NMR, UV-VIS Spectrometer, GC-ECD, GC-FID, Chromatography and Viscometer, etc.
- Independent research leadership, grant writing, and laboratory supervision at Bangladesh Council of Scientific & Industrial Research (BCSIR)

Processes (Selected)

1. A process for the production of Microcrystalline cellulose.
2. A process for the production of Mouth wash.
3. A process for the production of Ethyl salicylate.
4. A process for the production of Alcohol soluble curcumine.
5. A process for the production of Water soluble curcumine.
6. A process for the production of Lead acetate from lead oxide.
7. A process for the production of Magnesium acetate from magnesium carbonate.
8. Preparation of Copper sulphate from spent lime liquor.
9. A process for the production of Bio-fertilizer from press mud and spent wash.
10. A process for the production of herbal face wash.
11. A process for the production of Antibacterial hand wash.
12. Formulation of Hair and Scalp cleanser.
13. A process for the production of Herbal Powder Mouth wash.

Publications (Selected)

1. M. Mostafa*¹, Hemayet Hossain¹, S.M. Mahmudul Hasan¹, M. Anwer Hossain¹ and Sahana Parveen²., Antibacterial activity of six medicinal plants used in traditional medicine growing in Bangladesh. International Journal of Pharmaceutical Science and Research, 2014; vol. 5(6): 2210-2215
2. Shamsun Naher*¹, Md. Mizanur Rahman¹, Shahin Aziz², S.M. Mahmudul Hasan², Md. Nurul Huda Bhuiyan², Md. Matiur Rahim², Aminul Ahsan²., Comparative studies on physicochemical properties and GC analysis of fatty oil of the two varieties of the *Myristica fragrans* Houtt (Nutmeg) seed. International Journal of Pharmaceutical and Phytopharmalogical Research, 2013; 3(2): 80-82
3. Bishwagith Kumer Paul, Md. Moshfekus saleh-e-In, S.M. Mahmudul Hassan, Md. Zamilur Rahman, Gour Chandra Saha and Sudhangshu Kumar Roy., Chemical Composition and Biological Activities of

Carum roxburghianum Benty. (Raduni) seed of three Bangladeshi Ecotypes. Taylor & Francis, 16(2) 2013 pp 201-211

4. Shahin Aziz¹, S.M. Mahmudul Hasan¹, Sudum Nandi, Shamsun Naher², Sudhangshu Kumar Roy, Ram Proshad sarkar and Hemayet Hossain¹, Comparative studies on physicochemical properties and GC-MS analysis of Essential oil of two varieties of Ginger (*Gingiber officinale*). International Journal of Pharmaceutical and Phytopharmalogical Research, 2012; 1(16): 367-370

5. Sudhangshu Kumar Roy, S.M.M. Karim, Md. Zamilur Rahman, Shahin Aziz² and S.M. Mahmudul Hasan², The fatty acid composition and properties of oil extracted from cotton (*Gossypium herbaceum*) seed of Bangladesh. Bangladesh Journal of Scientific and Industrial Research, 47(3), 303-308,2012

6. Shamsun Naher^{*1}, Md. Mostak Ahmed¹, Shahin Aziz², S.M. Mahmudul Hasan², Mala Khan², Mirola Afroze², Comparative studies on physicochemical properties and GC-MS analysis of Essential oil of two varieties of *Allium sativum* Linn (Garlic). International Journal of Pharmaceutical and Phytopharmalogical Research, 2014; 4(3): 173-175

7. Shamsun Naher^{*1}, Tanvir Ahmed¹, Md. Abu Salam¹, Shahin Aziz², S.M. Mahmudul Hasan², Shahin Aziz² and Mala Khan² “Studies on physico-chemical properties, GC-MASS and ED-XRF analysis of fatty oil of *CAPSICUM ANNUM LINN* (DRY CHILI) in Bangladesh. International Journal of Pharmaceutical and Phytopharmalogical Research, 2015; 5(1): 1-6

8. Mrinal Kanti Kabiraz^{1,2*}, Ismet Ara Jahan¹, Shah Md. Masum², Md. Monarul Islam¹, S.M. Mahmudul Hassan¹, Badhan Saha¹ and Husna Purvin Nur¹ “Effective Removal of Chromium (VI) Ions from Tannery Effluent using Chitosan-Alumina Composite. International Research Journal of Pure and Applied Chemistry, 2015;

9. S.M.M. Karim¹ A. Samad¹. S. K. Roy² Z. Rahman², S. M. M. Hassan² “Comparative Assessment on physico-chemical properties and mineralogical analysis of different type of cotton seed available in Bangladesh” Jagannath University Journal of Science, 2020;

10. Md. Monarul Islam a,^{*}, Rashedul Islam a, **S M Mahmudul Hassan** a, Md.Rezaul Karim a, Mohammad Mahbubur Rahman b, Shofiur Rahman c,d, Md. Nur Hossain e, Dipa Islam f, Md. Aftab Ali Shaikh g,h, Paris E. Georghiou d “Carboxymethyl chitin and chitosan derivatives: Synthesis, characterization and antibacterial activity, Carbohydrate Polymer Technologies and Applications <https://doi.org/10.1016/j.carpta.2023.100283>

11. Monarul Islam,^[a, b] Khondoker Shahin Ahmed,^[a] Rezaul Karim,^[a] Bikash Dev Nath,^[a, c] Shyama Prosad Moulick,^[a] Rashedul Islam,^[a] Sharkar Md. Mahmudul Hassan,^[a] Hemayet Hossain,^[a, b] Mohammad Moniruzzaman,^[a, b] M. Sarwar Jahan,^[a] Aftab Ali Shaikh,^[d, e] and Paris E. Georghiou^[f] “Alcohol-based Hand Sanitizers amid COVID-19: Chemical Formulation, Analysis, Safety” *ChemistrySelect* **2022**, *7*, e202203290 (1 of 7) doi.org/10.1002/slct.202203290

Conference Presentations (Selected)

- Oral Presentation in JNU-2026, Jahangirnagar University, Savar, Dhaka-1342.
- Oral Presentation in BCSIR Congress-2023, BCSIR Campus, Dhaka-1000
- Poster Presentation in ICEPSD-2022, Senate Bhaban, Dhaka University, Dhaka-1000

Thesis Supervision

- Supervised more than 10 M.S theses on Natural Products and Mouth wash.

Professional Memberships (Selected)

- Member of Bangladesh Chemical Society, Dhaka, Bangladesh

Professional Trainings

Project Management (Selected)

- Management Skill for Project Executives, NAPD, Dhaka-1000.
- Learning Session on Patent Drafting & Industrial Process, BCSIR, Dhaka-1000

Training on Scientific Instrumentation (Selected)

- Training on “**35th Training Programme of NITUB, on the use and maintenance of Gas Chromatograph (GC)**”, at the department of Chemistry, University of Dhaka and Research Division, BIRDEM, Dhaka, Bangladesh.
- Training on “**Operating System and maintenance of X-Ray Diffractometer (XRD)**” held at Bangladesh Council of Scientific and Industrial Research (BCSIR)
- Training on “**Operating System and maintenance of Atomic Absorption Spectrophotometer (AAS)**” held at Bangladesh Council of Scientific and Industrial Research (BCSIR)
- Training on “**Operating System and maintenance of UV-VIS Spectrophotometer**” held at Bangladesh Council of Scientific and Industrial Research (BCSIR)
- Training on “**Operating System and maintenance of Nuclear Magnetic Resonance (NMR)**” held at Bangladesh Council of Scientific and Industrial Research (BCSIR)

References

Available up on request

Last Updated: Tuesday, 17 February, 2026