# Curriculum Vitae

# of

# Md. Abdur Razzaq

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## RESEARCH INTERESTS:

Leather Engineering, Environmental Science and Pollution Control, Polymer Chemistry, Analytical Chemistry.

## EDUCATION:

M.S. in Applied Chemistry & Chemical Technology, Islamic University, Bangladesh, 2017
**Result:** CGPA 3.76

B.Sc. (Hons.) in Leather Engineering, University of Dhaka, Bangladesh | 2011 (Held in 2012)
**Result:** CGPA 3.47

## RESEARCH EXPERIENCE:

- Worked as a researcher 06 years 03 months (as a Scientific Officer) at Leather Research Institute in Bangladesh Council of Scientific and Industrial Research (BCSIR), Dhaka, Bangladesh form 12$^{th}$ July, 2015 to 09$^{th}$ October, 2021.
- 01 year as a Senior Scientific Officer) at Leather Research Institute in Bangladesh Council of Scientific and Industrial Research (BCSIR), Dhaka, Bangladesh form 10$^{th}$ October 2021 to till now.

## LANGUAGE PROFICIENCY:

IELTS Result: Overall 6.5 (Listening 7.0, Reading 6.6, Speaking 6.5 and Writing 6.0)

## IMPORTANT RESEARCH WORK:

Development of Environmentally Friendly Tanning Agent from locally available plants for Leather Industry.

- ✓ The stem barks of Trema Orientalis (L.) were extracted at different extraction condition to attain phenolic-rich extractives.
- ✓ To ascertain appropriateness as a vegetable tanning agent, the obtained extracts were characterized in respect to yield, total phenolic content, tannin content and molecular structure.
- ✓ Leather retanning tendency of the extracts were compared with the commercial tannins.

Development of Environmentally Friendly deliming agent for leather processing.

- ✓ A new deliming agent was developed using mixture Glycolic Acid and EDTA to minimize the pollution load of tannery waste water.
- ✓ The effectiveness of developed deliming agent, the quality of delimed liquor and the properties of resultant leather were analyzed.

Preservation of Raw Goat Skin Using Swietenia Mahogany Seed Oil

- ✓ Goat skin was preserved using Swietenia mahogany seed's oil and thus reduced the total dissolved solids (TDS) and salinity of water during leather processing.
- ✓ The preservation efficiency and the properties of the skin preserved with mahogany seed extract were examined.

Extraction of Dye from Natural Source (LAC) & its Application on Leather

- ✓ Development of Natural dye using locally available source
- ✓ Application of natural dye to lessen environmental pollution caused during leather dyeing.

Microcrystalline Cellulose Reinforced Chitosan Coating on Kraft Paper

- ✓ Utilization of waste product of leather industry in paper industry
- ✓ Minimization of tannery solid waste to save the environment.

**SKILLS:**

- Capable in handling of analytical instruments such as FT-IR, UV-Visible Spectrophotometer, STA, ICP-OES, HPLC, Rheometer, Synthesis Reactor, Potentiometric Titrator, GC-MS and so on.
- Trained on ISO/IEC 17025, Project management etc.
- External Teacher of University of Dhaka.

## CURRENT WORKS:

- Preparation of antifungal fat liquor for leather processing from Mahogany (Swietenia Macrophylla) seed oil.-Project leader.
- Preparation of antifungal dye from seed pods of sky fruit.-Project Leader.
- Preparation of fat liquor for leather processing from Rubber (HeveoBrasiliensis) seed oil. –Project associate
- Phytoremediation of heavy metals of tannery wastewater using local plant species. -Project associate
- An eco-friendly method for preservation of hides/skins using Tomarindus indica leaf. - Project associate
- Development of technique to preserve hides/skins from Gossypium hirstum seed.- Project associate

## PUBLICATIONS:

1. **Md. Abdur Razzaq**, Murshid Jaman Chowdhury and Md. Tushar Uddin, "Salt Free Preservation of Raw Goat Skin Using Swietenia Mahogany (Seed) Extract" *Journal of American Leather Chemist Association*, Vol: 117(2), 2022, pp-47-53. https://doi.org/10.34314/jalca.v117i2.4727

2. **Md. Abdur Razzaq,** Murshid Jaman Chowdhury, Md. Tushar Uddin, Ammonia-Free Deliming Using Glycolic Acid And Edta And Its Effect On Tannery Effluent And Quality Of Leather, Journal of Industrial Pollution Control, June 2018, 34(2):1957-1960.
3. Murshid Jaman Chowdhury**, Md. Abdur Razzaq**, Md. Imran Biswas, Ariful Hai Quadery and Md. Tushar Uddin, "Extract of Trema Orientalis (L.) Stem Bark: A Potential Source of Environmentally Friendly Tanning Agent for Leather Industry" *Journal of the American Leather Chemist Association*, Vol: 117(1), 2022, pp-28-34. https://doi.org/10.34314/jalca.v117i1.4696
4. Md. Tushar Uddin, **Md. Abdur Razzaq**, Ariful Hai Quadery, Murshid Jaman Chowdhury, Al-Mizan, Md. Moshrur Raihan, Farid Ahmad, "Extraction of Dye from Natural Source (LAC) & its Application on Leather", American Scientific Research Journal for Engineering, Technology, and Sciences(2017) Volume 34, No 1, pp 1-7.
5. Murshid Jaman Chowdhury, Md. Tushar Uddin, **Md. Abdur Razzaq**, Al-Mizan and Ariful Hai Quadery"Ammonia – Reduced Deliming using Glycolic Acid and EDTA and its Effect on Tannery Effluent and Quality of Leather" Journal of the American Leather Chemist Association, Vol: 113, 2018, pp-212-216.
6. Tawhida Akter, Jannatun Nayeem, Ariful Hai Quadery, **M. Abdur Razzaq**, M. Tushar Uddin, M. Shahriar Bashar And M. Sarwar Jahan, "Microcrystalline Cellulose Reinforced Chitosan Coating On Kraft Paper,'' Cellulose Chemistry and Technology, February 2020 54(1-2):95-102, DOI: 10.35812/CelluloseChemTechnol.2020.54.11

## CONFERENCE PRESENTATION

1. **Md. Abdur Razzaq**, Md. Tushar Uddin and Murshid Jaman Chowdhury, "Role of Mehogany (Swietenia Mahogany L.) seed extract for chrome tanned leather preservation", International Conference on Science and Technology for Celebrating the Birth Centenary of Bangabandhu (ICSTB-2021), 11-13 March, 2021, pp-242, Bangladesh Council of Scientific and Industrial Research (BCSIR), Bangladesh (Oral presentation).
2. **Md. Abdur Razzaq**, Md. Tushar Uddin and Yead Mahmud, "Salt Reduced Preservation of Raw Goat Skin Using Sky Fruit Crush'', International Conference on Environmental Protection for Protection for Sustainable Development (ICEPSD-2022), 2-4 September, 2022, pp-108, Forest and Environmental Affairs Sub-Committee, Bangladesh Awami Leage, (Oral presentation).
3. Chadni Lyzu, **Md. Abdur Razzaq**, Sahana Parveen, Md. Tushar Uddin and Yead Mahmud, Sustainable Eco-friendly Extraction and Gas Chromatography Analysis of Natural Dye from Mahogany (S. macrophylla) Seed Pods for Bio Coloration of Leather, International Conference on Environmental Protection for Protection for Sustainable Development (ICEPSD-2022), 2-4 September, 2022, pp-183, Forest and Environmental Affairs Sub-Committee, Bangladesh Awami Leage, (Oral presentation).
4. Yead Mahmud, **Md. Abdur Razzaq**, Md. Abul Kashem Azad, "An Investigation to Assess Sustainability in the Footwear Sector of Bangladesh Regrading Lining Leather'', International Conference on Environmental Protection for Protection for Sustainable

Development (ICEPSD-2022), 2-4 September, 2022, pp-207, Forest and Environmental Affairs Sub-Committee, Bangladesh Awami Leage, (Oral presentation).

5. Md. Abul Kashem Azad, Tushar Uddin, Kanish Fatama, **Md. Abdur Razzaq**, "Improvement of Cleaner Technology by Producing Metal Free Eco-leather", International Conference on Environmental Protection for Protection for Sustainable Development (ICEPSD-2022), 2-4 September, 2022, pp-184, Forest and Environmental Affairs Sub-Committee, Bangladesh Awami Leage, (Oral presentation).

6. Md. Tushar Uddin, Md. Ashraful Alam, Madhu Sudan Saha, **Md. Abdur Razzaq**, "Estimation of Total Chromium, Trivalent Chromium and Hexavalent Chromium in the Solid Waste of Hemayetpur Tannery Estate Using ICP-OES and UV-Visible Spectrophotometry,"International Conference on Environmental Protection for Protection for Sustainable Development (ICEPSD-2022), 2-4 September, 2022, pp-197, Forest and Environmental Affairs Sub-Committee, Bangladesh Awami Leage, (Oral presentation).

7. Ariful Hai Quadery, Md. Tushar Uddin, Murshid Jaman Chowdhury, **Md. Abdur Razzaq** and Al-Mizan and "Ammonia free deliming agent based on organic acid for leather processing" Symposium on Environmental Chemistry for Secuering water quality (Bangladesh J. Sci. Ind. Res, Vol.52, Special Issue (2017), July 30, 2017, Bangladesh Council of Scientific and Industrial Research (BCSIR), Bangladesh (Oral presentation)

8. Khondoker Tahmina Tasnim, Murshid Jaman Chowdhury, Md. Tushar Uddin, **Md. Abdur Razzaq** and Madhu Sudan Saha, "Characterization and Utilization of Banana Bunch Extract in Exo-Friendly Re-tanning Processing," International Conference on Environmental Protection for Protection for Sustainable Development (ICEPSD-2022), 2-4 September, 2022, pp-117, Forest and Environmental Affairs Sub-Committee, Bangladesh Awami Leage, (Oral presentation).

## REFERENCES:

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