

Join us in Advancing **Chemistry** and **Sustainable Development!**

www.alumichem.com/innovate

Are you a passionate and driven student eager to make a tangible impact on the world? Look no further! Alumichem is seeking bright minds like yours to collaborate on groundbreaking projects at the intersection of chemistry and sustainable development.

Alumichem is a top provider of water treatment solutions and a producer of functional aluminates and specialty chemicals. With over 40 years of industry experience and a vast network of knowledgeable employees and partners, Alumichem is built on solid expertise in chemistry, equipment and consulting.

Alumichem has headquarter and production in Denmark and offices in Canada, Belgium and Ghana.



Alumichem provides solutions within:

- Drinking water treatment
- Wastewater treatment
- Aquaculture effluent treatment
- Industrial processes
- Circular economy innovations

Our products:

- AluPAC: Poly Aluminium Chloride PAC
- AluSAL: Sodium Aluminate
- AluACH: Aluminum Chlorohydrate ACH
- AluBLEND: Specialized proprietary formulations of coagulant blends
- Development of application specific formulations

Opportunities for students

Contribute to real-world solutions

Work on projects that address pressing global challenges, such as developing eco-friendly materials and processes, water and wastewater treatment, groundwater remediation, and more.

Collaborate with experts

Gain valuable experience by collaborating with great colleagues, world-class researchers, scientists, and industry leaders. Your ideas will be valued, and your contributions will help shape the future.

Hands-on learning

Gain practical, hands-on experience in our state-of-the-art laboratories and our dedicated pilot plant for R&D studies. We provide an ideal environment for you to apply theoretical knowledge to real-world scenarios.

Professional development

Enhance your skills in critical thinking, problem-solving, project management, and teamwork.

Be part of the team!

Be part of our international team of dedicated and passionate researchers located in Denmark, Canada, Belgium and Ghana.



ALUMICHEM
Innovating Environment

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Research and innovation

Our previous projects include:

Sustainable utilization of marine resources

The Marigreen project is a unique approach to utilizing organic fish waste from aquaculture to speed up approval for use in growing media. Additionally, it investigates the use of biochar to improve soil quality, after it is impregnated with extracts of "BLUE" materials to provide nutrients and other beneficial compounds for agricultural soil.

Groundwater remediation

Greencat project: a cost-effective method for in situ remediation of chlorinated solvents present in contaminated soil and groundwaters. Biochar and green rust are the main ingredients of this low cost and environmental friendly technology.

Removal of bacteria from hospital wastewater

In collaboration with DTU and Teknologisk Institut, Alumichem has developed a new technology that makes it possible to remove multi-resistant bacteria from hospital wastewater before it reaches the treatment plant.

Collaboration partners:



PFAS in aquaculture

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Crystalline alternatives

Develop crystalline alternatives to our polyaluminum chlorohydrate, aluminum chlorohydrate and sodium aluminate solutions. This is attractive as it will lower transportation costs significantly. The challenge is to dewater the solution in a cost-effective way.



Metal-based coagulants

Organic alternatives to metal-based coagulants. Application testing and economic feasibility studies. We want to investigate if some of our products can be substituted with organic and biodegradable alternatives.



Uncertainty and sources

How to optimize our analytical work and methods to minimize uncertainty and sources of error in our analysis of products and raw materials.

Research projects

We are interested in getting a better understanding of the following topics:



Process chemistry

Investigations into the process chemistry of our main products (polyaluminum chloride, aluminum chlorohydrate, sodium aluminate). Reaction schemes, unwanted reactions, side reactions, impurities, product stability, handling conditions, stabilizers, polymerization, optimal and acceptable range of process conditions and raw materials compositions. This should be done with the purpose of identifying simplified production processes, improve methodologies, and define quality indicators.