

## Water purification from organic contaminants, 30-60 hp

Waste water streams from waste sewage treatment plants and industry, as well as leakage from landfill sites contaminate our rivers and ground water supply. This is a big problem in some areas and is something we would like to change.

Chromafora is a small innovation company that solves clients waste issues. Mainly, the company deals with recycling of metals and purification of water. Our goal is always to make all processes as environmentally friendly as possible and, at the same time, cost effective to be attractive for the clients.

At Chromafora, we have developed methods utilizing ultrafiltration to extract metals from waste streams. This master project is a spin-off of said method where we would like to adapt it for organic contaminants, such as pharmaceuticals and classic contaminants like PCBs. This is a project that may very well fail, but we think we will get there in the end.

The project will start using synthetic waters and will mainly focus on finding a good reaction chemical and to be able to strip the substance from the reaction chemical after extraction. The goal is, as always in our projects, to try and find reaction chemicals that can be re-used over and over. If successful, the project can move on to real samples from potential sources.

There project will involve wet chemistry carried out at our facility in Solna as well as, instrumental analysis at Chromafora and/or at SU. Analysis with preferably be carried out with LC-MS and GC-MS.

We have ideas for the project but are open for your ideas and input as well. For me, a Master project is a way to learn lab skills but primarily to use your mind and collected knowledge.

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