

# Progress Together

## A powerful tool for evaluation of detergency

Study on detergency by CR Competence and Biolin Scientific

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In the development of new cleaning formulations time can be saved and new innovative routes can be found when the detergency effect is studied with sophisticated lab methods in addition to traditional standardized methods. CR Competence has several experiences where such observations have led to new ideas for formulation but also for product differentiation and scientific marketing.

### About the study

The method applied by CR Competence is the Quartz Crystal Microbalance with dissipation (QCM-D) technique where a QSense® instrument from Biolin Scientific is used. In addition to the instrument, Biolin Scientific provides sensors pre-coated

with standardized soils from the Center For Testmaterials in the Netherlands to be used for cleaning studies.

In a recent study, Biolin Scientific and CR Competence ventured to study the detergency of one commercial high-performance detergent (DWM, full formulation) against four different standardized grease soil targets coated on top of a porcelain mimicking QSense sensor.

Sensors were evaluated to quantify, with high precision, the swelling and removal process as well as details in the underlying mechanism of soil removal. The study revealed that degreasing followed two different mechanisms of action.



### Key to understanding our client's systems

"We are very proud and happy for the collaboration with Biolin Scientific since we are extensive users of the QCM-D technique and have learned much of what we build our services upon from studies with their QSense instruments. The molecular interactions that can be followed and the interplay of bulk and surface is key to our way of understanding the context of our client's system, be it the surface or the formulation.

The more industrial groups that want to use this technique the better and we are happy to be part of that development! Learning how to interpret data from QCM-D takes time. It is a technique to be used by people knowledgeable of surface and colloidal chemistry. That is why we are very grateful to be one of Biolin Scientific's partners for feasibility studies and other services."

**Roberto Ortiz, PhD and Senior Scientist at CR Competence**



### Why Biolin Scientific?

"We value working with Biolin Scientific and their QSense Instruments because they have the longest experience with the technology and have developed a versatile and practical instrument. In addition, they have a good customer service and can produce several different sensors for different applications."

**Anna Stenstam, PhD and CEO at CR Competence**



### Support from a trusted partner

"It happens that industrial customers, who are new to the QCM-D technique, request either more significant feasibility studies prior to purchasing an instrument or additional help designing protocols and learning how to interpret data. Since Biolin Scientific and our distribution partners are not always able to take-on larger project, it is vital for us to be able to refer customers to a trusted partner."

**Eva Ekerot, Global Portfolio Manager at Biolin Scientific**



### Why CR Competence?

"CR Competence, clearly and conclusively, presented the outcome from the mentioned study. The presented results aligned all expectation, without any exception! I can highly recommend CR Competence as a collaboration partner within the field of QCM-D."

**Kenneth Olesen, PhD and Senior Application Specialist at Biolin Scientific**

### Contact us

Interested in the work of CR Competence and Biolin Scientific? Feel free to reach out to us. Visit [cocom.se](http://cocom.se) and [biolinscientific.com](http://biolinscientific.com)!