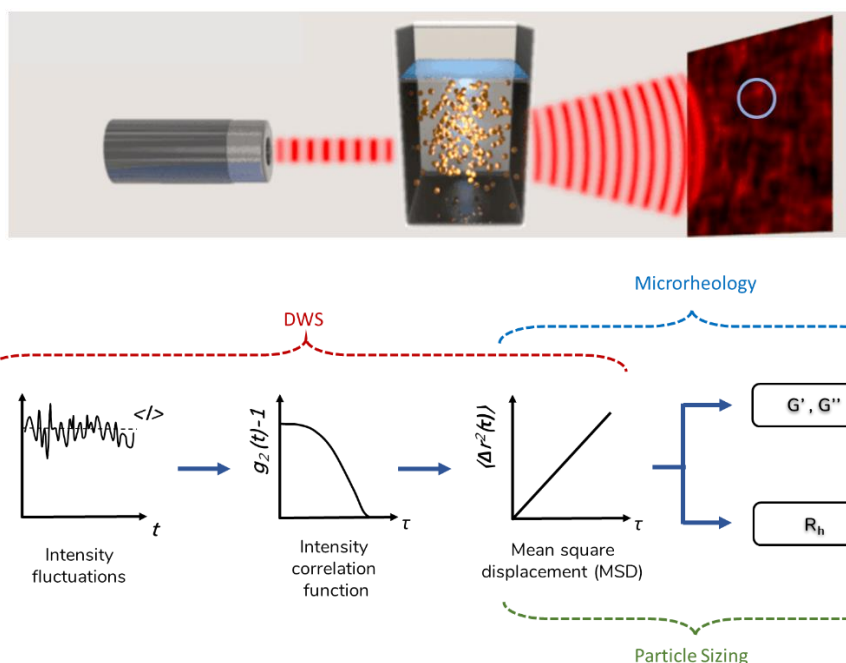


Formulation Design of Cosmetic Products through Diffusing Wave Spectroscopy

Webinar Q&A Transcript

1 Can you briefly summarize the principle of DWS Microrheology?

The DWS RheoLab measures the Brownian motion of particles in the sample and then computes the Mean-Squared Displacement. From there, one can already obtain information on the viscoelasticity and presence of a microstructure in the sample. Then, DWS Microrheology analysis can be performed to obtain the storage and loss moduli versus the frequency, as obtained via a mechanical rheometer. One can also perform particle sizing in purely viscous samples. More detailed information can be found under the technology section on our website.



2 What is the frequency range of the RheoLab?

0.01 rad/s to 10^5 rad/s (with an option to extend it to 10^6 rad/s). The actual accessible range is sample dependent, although the sensitivity range can be tuned over a wide range by selecting an appropriate cell thickness L or tracer particle concentration.

3 What is the upper frequency range of a mechanical rheometer?

Mechanical rheometers are limited to a maximum of 100 rad/s. The data that might be obtained above this value is unreliable due to inertia effects.

4 Can one perform in-line DWS measurements?

In principle, this is possible. Please get in touch at info@lsinstruments.ch to discuss in more details.

5 How many samples can you analyze at once?

Currently the DWS RheoLab is limited to one sample per measurement. However, we are constantly developing our products. For specific custom solutions, please do not hesitate to reach out to us!

6 How friendly is the software in your device? I am currently using a DWS instrument from another company and this is a real pain point.

We can imagine how much frustration a poorly designed software brings. LsLab was developed leveraging on the best tools available and with user-friendliness as the main priority. You can get a first overview of our software through the recording of our webinar from April 2020 “An Introduction to the DWS RheoLab”. For a specific demo, please get in touch!