



International pharmaceutical company

## Challenge

To replace offline quality control and achieve real-time release testing for liquid pharmaceutical formulations

## Priorities

Reduction of waste due to the time lag inherent with manual quality control; getting a better understanding of production processes.

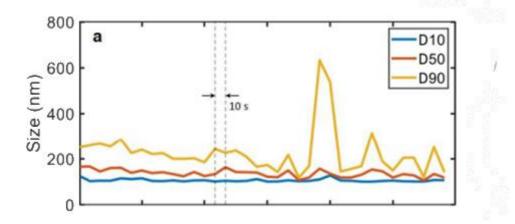
## **Sample properties**

Emulsions with a particle size from 100 nm to 600 nm undergoing high-pressure homogenization processes

## Statement

"Where current reference technologies meet their limits the BRAVE OF2i technology is just getting started. For this reason, the move from laser diffraction to the OF2i sensor was a quantum leap for us. We can now go way beyond our previous capabilities and see great potential to replace several devices. We are investing in a future which will provide us with real-time information about the product quality and may deliver insights beyond currently established controls. We are looking forward to developing this further with the BRAVE Analytics team."

BRAVE solution: B1 online sensor (including continuous and automated online sample preparation unit).



This figure shows continuous monitoring of an oil-in-water emulsion process. The D-values are given as a function of time. The values are extracted from the cumulative particle size distribution which is accumulated over a time period of ten seconds. The D-values represent the diameter below which 10 %, 50 % and 90 % of all particles are detected. With increasing particle size, the D-values increase according to the size distribution.

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