



Application

All domains

Objective

Study the effect of stirring power on emulsification efficiency

Device

TURBISCAN® ONLINE

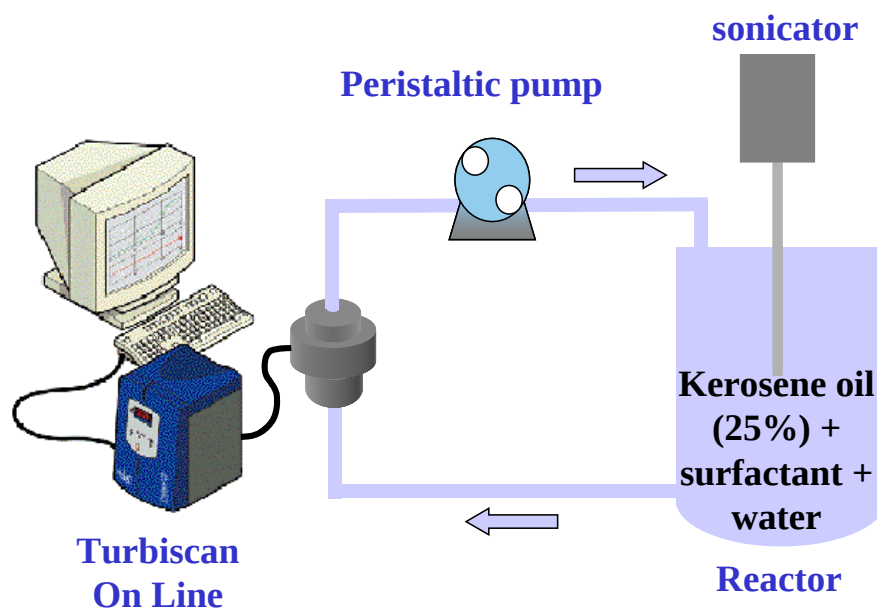
Effect of the Stirring Power on the Emulsification Efficiency

METHOD

We follow the emulsification of kerosene oil (25%) in water with three different powers (ultrasonic agitation measured with the consumed power).

- 59 W
- 82 W
- 125 W

We follow the evolution of the backscattering with the Turbiscan ONLINE light intensity as a function of time for each stirring power. The time T_0 corresponds to the moment when we began the ultrasonic agitation.



RESULTS

Turbiscan ONLINE measures, in real time, the backscattering increases which correspond to the droplet size decreases during the emulsification processes (Figure 1).

It allows to draw the l^* measurement as a function of time (Figure 2) : the mean path length of photons in the dispersion is decreasing (characteristic of the particle size decrease : Figure 4).