

acorn drop™



Droplet size without dilution

xigo™
nanotools

The Acorn Drop™ measures emulsion or foam droplet size and distribution, entirely without dilution. Simply place 0.5 ml of sample in a

5mm tube, insert it into the Drop and press START. The results are available a few minutes later. In contrast, conventional particle sizing techniques such as laser diffraction require extensive dilution of the emulsion in order to measure droplet size.

The measuring range of the Acorn Drop is extremely broad - from 10nm to 100microns. High concentration, highly viscous,

10% PDMS O/W Emulsion Comparison

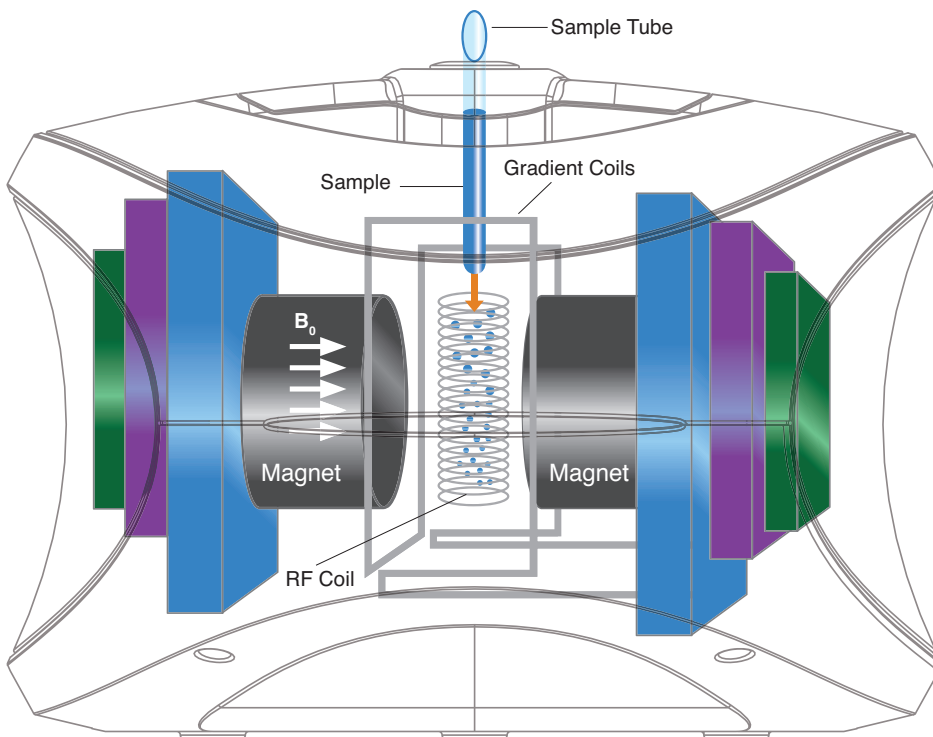
	Mean Dv (µm)	Polydispersity
Acorn Drop (undiluted)	0.32±2%	0.50±5%
Light Scattering (diluted)	0.30±2%	0.35±5%

to their composition dependence). Our approach is nondestructive - the same sample emulsion can be studied minutes, days or weeks later, facilitating analysis of emulsion stability. A Time-mode function enables drop size measurements as a function of time. A Flow-thru Mode enables the user to circulate the sample thru the device.

opaque and light-sensitive emulsions can be measured directly as well as nano or micro emulsions (that cannot be diluted due

How it works

The XiGo Acorn DropT is a nuclear magnetic resonance spectrometer (NMR) configured to provide 1-dimensional imaging and diffusion. The spin-echo of the emulsion or foam is measured as a function of the space between magnetic field gradient pulses. The attenuation of the echo as a function of gradient spacing determines the diffusion coefficient and the corresponding droplet size.



To see how the Acorn Drop can help with your emulsion application, contact us!

Call to discuss your application with our technical staff. Send us a sample – we will be happy to make a measurement. If you would like a demonstration, we can arrange to visit your facility or let you view the Acorn Drop in action via the Internet. See for yourself the incredible cost-performance benefits that the Acorn Drop provides.

For more information, please contact:

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