

How to Sonicate

Part Numbers:

All products.

Introduction

Nanoparticles in solution will naturally sediment due to size or agglomerate due to ionic, magnetic, or chemical induced attractions. As opposed to aggregation, these are all natural occurrences that are reversible through sonication. Depending on the size, charge, and other parameters, sonication is recommended before each and every use.

Important Product Information

In order to minimize these reversible occurrences, please make sure to store and handle your product as recommended in the Storage and Handling Instructions.

Materials

Sonicator: Branson 5510 Ultrasonic Cleaner/Water bath or a Cole Parmer 08890-01 42kHz 1-2 Amps

Mixer: Table top mixer, typically a pad with a touch activated rotation device.

Procedure

We typically use a Branson 5510 Ultrasonic Cleaner/Water bath or a Cole Parmer 08890-01 42kHz 1-2 Amps for 30 seconds. We make sure the water level is at a point where you can see visible sonication ripples in the water.

Typical sonication/shake times are 15 seconds to 1 minute.

Alternate sonicating and shaking/mixing of the microcentrifuge tube to resuspend gold nanoparticles into solution.

Testing can be visual, or through UV/VIS absorbance spectra.