

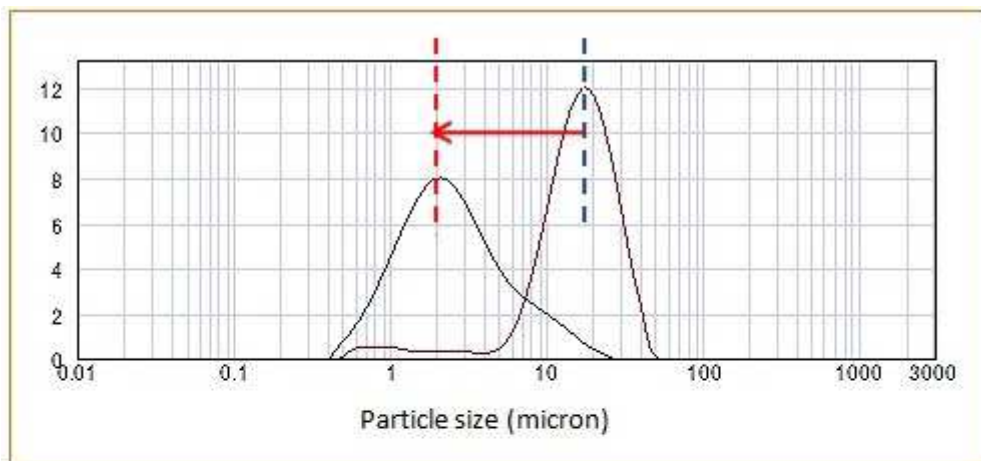
## Thinky Application Datasheet 18

### Suspension

**Process - Particle size reduction, Dispersion**

**Parameter - 2000rpm, 3min**

Materials: Phenytoin as API  
THINKY Mixer: Mixer ARE-250  
Container: 150ml cup  
Tool: Zirconia Oxide balls



Commonly a pestle and mortar are used for oral dosage formulations. While this method is generally accepted and effective, this hand process is tedious and tiring, and lacks any degree of repeatability or consistent quality. In Japan, Dr. Niwa and Dr. Hashimoto developed a new and better process. The technique is called "nh-Step" The nh-Step makes the mixing process, easy, fast, improves physiochemical properties and it can be applied to many oral suspension studies.

The above graph shows the results of particle reduction. The initial particle size was 18 micron. Utilizing the "nh-Step" process the particle distribution was reduced to 2 microns after only 3 minutes with Thinky's ARE-250.