Sphere Scientific Corporation

MonoPS Microspheres

Styrene monomer polymerized into hard rigid latex spheres for ideal calibration aid at high magnifications. Latex particles are fairly inert and do not distort under vacuum or other normal operating conditions.

Particle Composition	Polystyrene
Nominal Diameter (µm)	0.1, 0.3, 0.5, 0.8, 1, 3, 5
Particle Density (g/cm^3):	1.05
Refractive Index(@589)	1.59
Content	Polystyrene Microspheres Aqueous Suspension
Concentration (W/V)	0.1%
Volumn (ml)	5
Additives	Trace surfactant to inhibit agglomeration and promote stability
Storage & Handling	Refrigerate when not in use, do not freeze. Store upright and keep bottle tightly sealed.

Application

1. Latex particles are used as an internal concentration standard for estimating particle concentrations by combining equal size drops of latex particles and of a specimen solution.

2. It is possible to derive an internal standard of size by mixing a suitable concentration of these particles with the particles of unknown size being studied.

3. Adding a tiny amount of the working solution to the specimen surface makes accurate sizing and measurements possible. This is quite useful for all types of microscopy and especially so in SEM when the specimen is not flat and large size errors are possible because of perspective and varying working distances.

4. It is also possible to make up a mixed size solution and this may be employed for comparative measurements of larger and smaller structures.

Remarks

Number of particles /ml = 6W x 10^{12} / 3.14x p x D^3

　　　　　　　W = grams of polymer per ml in latex (0.1 % solids W=0.001g/ml)

　　　　　　　 D = latex particle diameter(µm)

　　　　　　　P = density of polystyrene microsphere (1.05 g/cm^3)

www.spherescientific.com