

## Protein G nanoSPA™

### Product Description

nanoSPA™ is a proprietary nanoparticle scintillator that presents several advantages over traditional liquid scintillation cocktails and solid scintillation materials. nanoSPA™ is small, has an intermediate density compared to polymer or inorganic crystal scintillators, and is readily dispersed in water compared to inorganic particles which settle and organic particles which can aggregate. The particles are functionalized at the surface with protein G. nanoSPA-LA™ is further modified to reduce non-specific adsorption of ligands in some situations and can be stored and used in the same way as nanoSPA™.

### Storage

Protein G nanoSPA™ is shipped in 10 mM HEPES pH 7.4 at 10 mg/mL. Store nanoSPA™ in the refrigerator (4 °C).

### Support

Please contact [info@sntnano.com](mailto:info@sntnano.com) or call 1.833.768.6266, extension 1 for product support.

### General Guidelines

- The function of Protein G nanoSPA™ has not been tested after freezing or heating to temperatures above 30 °C.
- Protein G nanoSPA™ is not compatible with many organic solvents including acetone, ethyl acetate, toluene, benzene, dimethylsulfoxide, and acetonitrile.
- Protein G nanoSPA™ is a polymer-based scintillator and will yield lower total counts per unit of radioactivity than scintillation cocktail or inorganic crystal-based scintillators.
- Protein G nanoSPA™ is shipped in 10 mM HEPES pH 7.4, but the water can be replaced by an aqueous buffer of choice. Collect the nanoSPA™ particles by centrifuging the nanoSPA™ slurry at approximately 4,000 × g, then disperse the particles in the chosen buffer.
- Mix the Protein G nanoSPA™ slurry by shaking the vial immediately before use.
- Protein G nanoSPA™ slurry can be added directly to aqueous samples. Thoroughly mix the nanoSPA™ and sample by gently aspirating the sample with a pipette or swirling the vial if the sample contains protein or other component that may cause foam to form, or by shaking if no such agent is present.
- Protein G nanoSPA™ can be used in scintillation vials or multi-well plates.
- Protein G nanoSPA™ is typically used at a concentration of 0.5 to 5.0 mg/mL final per sample for most measurements. However, the concentration should be optimized depending on the conditions of the experiment.
- Light emission from nanoSPA™ can be measured in existing liquid scintillation counter instrumentation.