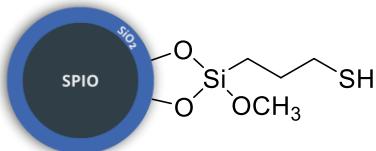


Product data sheet

Name of the product: SPIO@SiO₂-SH, suspended in deionised water, 5 mg/mL or powder.

Product number: SP2SH18

Product representation:



Guarantee: 6 months in suspension or 1 year in powder from manufacture, under the specified storage conditions.

Storage: 4 – 25°C. DO NOT FREEZE.

Usage: Ensure the nanoparticles are well dispersed in the medium prior to use.

In **suspension**, shake vigorously before use, bath sonication is strongly recommended.

In **powder**, to use in suspension, bath sonication is needed.

Product specifications:

| Property | Unit | Specifications | |
|-------------------------------------------------------------|---------------------|----------------|-------|
| Characterization technique | | Min. | Max. |
| Appearance (Black or brown powder) | - | - | - |
| <i>Visual Inspection</i> | | | |
| Magnetic | - | - | - |
| <i>Test with magnet</i> | | | |
| Presence of the molecule at the surface | - | - | - |
| <i>Infrared analysis (IR)</i> | | | |
| Loading of -SH at the surface of the nanoparticles | Nb*/nm ² | | |
| <i>Thermogravimetric analysis (TGA)</i> | Nb*/nm ² | 2 | 10 |
| Phase of SPIO (Magnetite) | - | - | - |
| <i>X-ray Diffraction (DRX)</i> | | | |
| Crystallite size of SPIO | nm | 10 | 20 |
| <i>X-ray Diffraction (DRX)</i> | | | |
| Mesh parameter | Å | 8.370 | 8.390 |
| <i>X-ray Diffraction (DRX)</i> | | | |
| Oxygen stoichiometry | - | 0 | 0.111 |
| <i>X-ray Diffraction (DRX)</i> | | | |
| Fe²⁺/Fe³⁺ratio | - | 0 | 50 |
| <i>X-ray Diffraction (DRX)</i> | | | |
| Mean size of the silica layer | nm | 1 | 8 |
| <i>Transmission Electron Microscopy (TEM)</i> | | | |
| Mean particle size of the SPIO with the silica layer | nm | 10 | 30 |
| <i>Transmission Electron Microscopy (TEM)</i> | | | |

*Nb = number of molecules