

Product data sheet

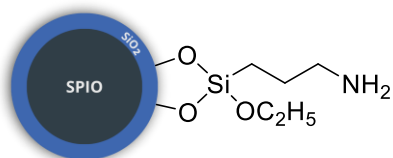
Name of the product: SPIO@SiO₂-NH₂,
suspended in deionised water, 5 g/L.

Guarantee: 1 year from manufacture, under the
specified storage conditions.

Product number: SP2NH18

Storage: 4 – 25°C. DO NOT FREEZE.

Product representation :



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

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

Product specifications:

| Property | Unit | Specifications | |
|---|---------------------|----------------|-------|
| | | Min. | Max. |
| <i>Characterization technique</i> | | | |
| Appearance (Black or brown) | | | |
| <i>Visual Inspection</i> | - | - | - |
| Magnetic | | | |
| <i>Test with magnet</i> | - | - | - |
| Presence of the molecule at the surface | | | |
| <i>Infrared analysis (IR)</i> | - | - | - |
| Loading of -NH₂ at the surface of the nanoparticles | Nb*/nm ² | | |
| <i>Thermogravimetric analysis (TGA)</i> | Nb*/nm ² | 3 | 8 |
| Isoelectric point (pH) | | | |
| <i>Zetametry</i> | pH | 8 | 11 |
| Zeta potential at physiological pH (pH =7,4) | | | |
| <i>Zetametry</i> | mV | 25 | 45 |
| Phase of SPIO (Magnetite) | | | |
| <i>X-ray Diffraction (DRX)</i> | - | - | - |
| Crystallite size of SPIO | | | |
| <i>X-ray Diffraction (DRX)</i> | nm | 10 | 20 |
| Mesh parameter | | | |
| <i>X-ray Diffraction (DRX)</i> | Å | 8.370 | 8.390 |
| Oxygen stoichiometry | | | |
| <i>X-ray Diffraction (DRX)</i> | - | 0 | 0.111 |
| Fe²⁺/Fe³⁺ratio | | | |
| <i>X-ray Diffraction (DRX)</i> | - | 0 | 50 |
| Mean particle size of the SPIO | | | |
| <i>Transmission Electron Microscopy (TEM)</i> | nm | 10 | 20 |
| Mean size of the silica layer | | | |
| <i>Transmission Electron Microscopy (TEM)</i> | nm | 1 | 10 |

*Nb = number of molecules