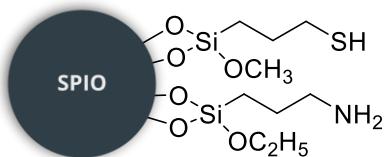


# Product data sheet

**Name of the product:** SPIO-NH<sub>2</sub>/SH, suspended in deionised water, 5 mg/mL or powder.

**Product number:** SP1NS12

**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	
		Min.	Max.
<b>Characterization technique</b>			
<b>Appearance (Black or brown powder)</b>	-	-	-
<i>Visual Inspection</i>			
<b>Magnetic</b>	-	-	-
<i>Test with magnet</i>			
<b>Presence of the molecules at the surface</b>	-	-	-
<i>Infrared analysis (IR)</i>			
<b>Loading of -SH at the surface of the nanoparticles</b>	Nb*/nm <sup>2</sup>		
<i>X-ray fluorescence (XF)</i>	SH/nm <sup>2</sup>	4	5
<i>X-ray fluorescence (XF) (calculated)</i>	NH <sub>2</sub> /nm <sup>2</sup>	4	5
<i>Elemental analysis (EA)</i>	SH/nm <sup>2</sup>	4	5
<i>Elemental analysis (EA)</i>	NH <sub>2</sub> /nm <sup>2</sup>	4	5
<b>Phase of SPIO (Magnetite)</b>			
<i>X-ray Diffraction (XRD)</i>	-	-	-
<b>Crystallite size</b>	nm	10	20
<i>X-ray Diffraction (XRD)</i>			
<b>Mesh parameter</b>	Å	8.370	8.390
<i>X-ray Diffraction (XRD)</i>			
<b>Oxygen stoichiometry</b>	-	0	0.111
<i>X-ray Diffraction (XRD)</i>			
<b>Fe<sup>2+</sup>/Fe<sup>3+</sup>ratio</b>	-	0	50
<i>X-ray Diffraction (XRD)</i>			
<b>Mean particle size</b>	nm	10	20
<i>Transmission Electron Microscopy (TEM)</i>			

\*Nb = number of molecules