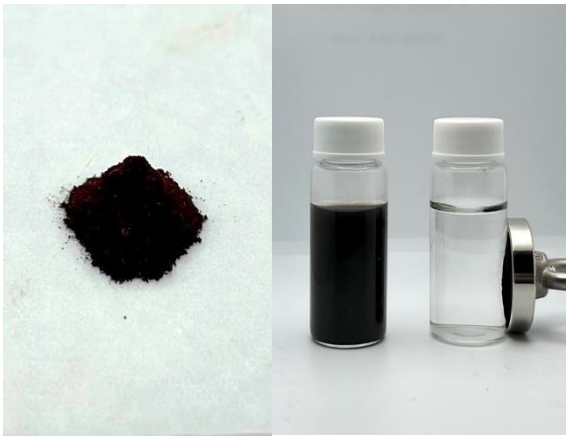
# Iron (II, III) Oxide Nanoparticles

**CAS # 1317-61-9**

## Description

Our iron (II, III) oxide magnetic nanoparticles are highly pure $Fe_3O_4$ nanoparticles that exhibit strong magnetic response and have a long shelf life. The particles have large specific surface area and their surfaces can be easily modified to possess specific properties. Their common applications include ferrofluids, probing, recording media, soil/wastewater contamination treatment, bio-separation, and medical diagnostics.



## Product Specifications

| Related Categories | Nanomaterials, superparamagnetic materials, magnetic carriers. |
|---|---|
| Chemical Formula | $Fe_3O_4$ |
| Synonym | Magnetite |
| Molecular Weight | 231.53 g/mol |
| Colour | Dark brown or black |
| Forms | Slurry* (typical concentration: 3 w/w%)<br>or powdered solids |
| Particle Size | < 10 nm (average TEM particle size) |

* Dispersion medium of slurry is water. Dispersion medium and slurry concentration may vary as requested/needed.

## Packaging

~3 w/w % nanoparticles solution in Nalgene bottle or nanoparticles powder in glass vials.

**Characterization Data**

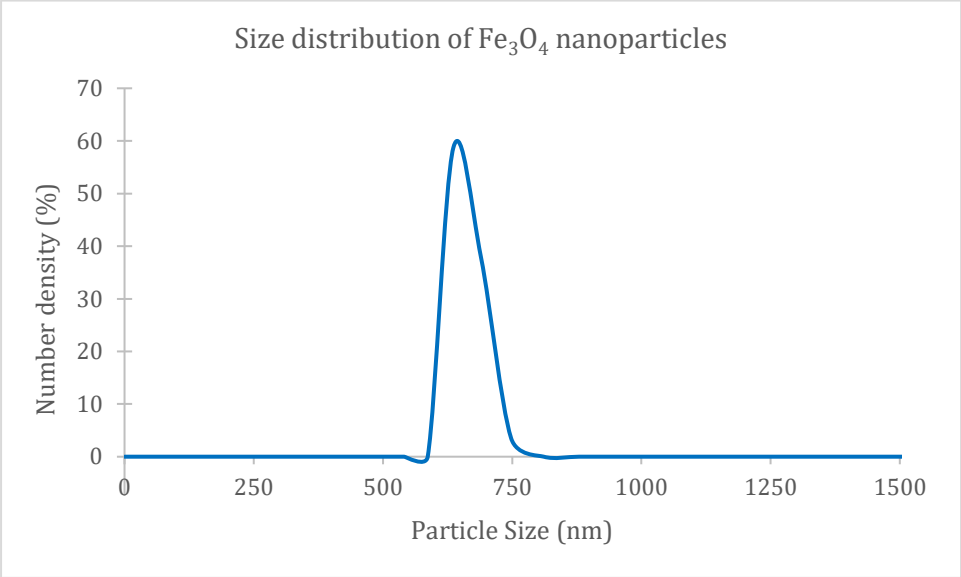



Figure 1. Dynamic light scattering (DLS) hydrodynamic radius of AQM Iron (II, III) oxide magnetic nanoparticles in water, indicating size distribution. (Note that DLS size distribution of $Fe_3O_4$ nanoparticles solution may vary for each measurement due to different test conditions.)

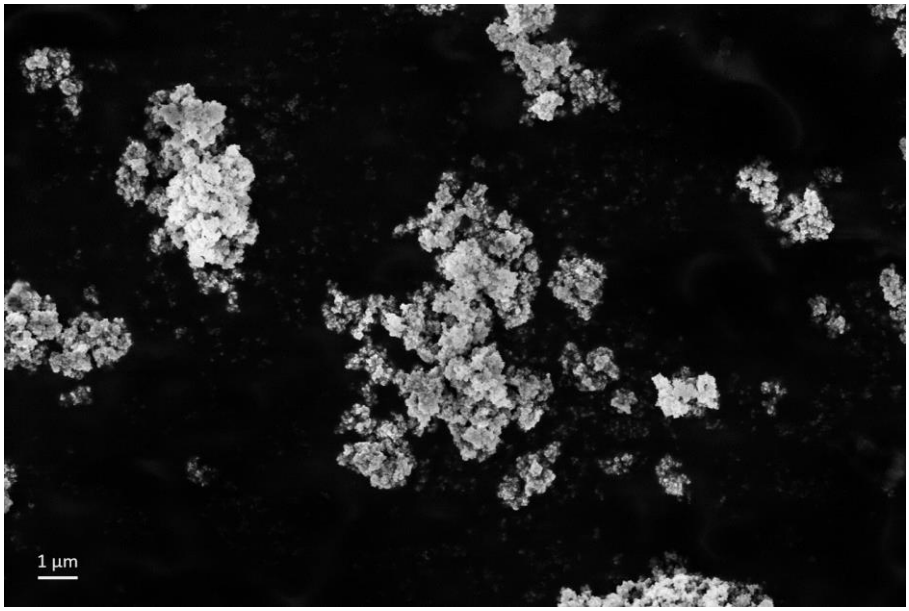



Figure 2. Darkfield TEM imaging of aggregated magnetic nanoparticles.