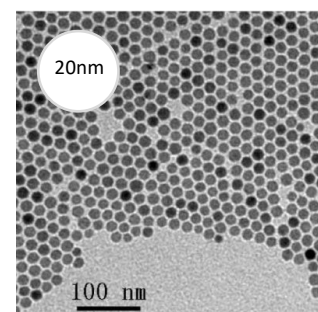
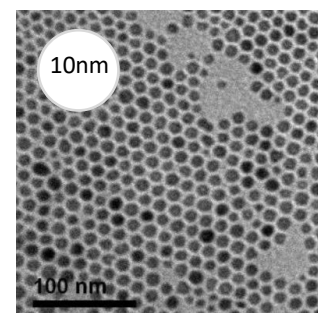
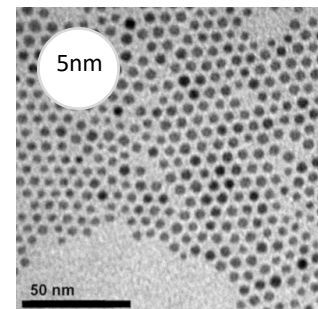


# IRON OXIDE nanoparticles

are superparamagnetic magnetite nanoparticles ( $\text{Fe}_3\text{O}_4$ ) that are colloidally stable. These nanoparticles show no net magnetic moment or magnetic coupling between each other, but the intrinsic ferromagnetic character allows the individual nanoparticles to exhibit a high magnetic moment. The magnetic properties of these iron oxide nanoparticles are near comparable to pure iron oxide.

CytodiagnosTics Iron Oxide nanoparticles are monodispersed and are available in 3 sizes, ranging from 5 – 20nm. These nanoparticles are also available as both organic-soluble and water-soluble formulations. With all these parameters combined, CytodiagnosTics Iron Oxide can be used in a variety of applications that require stringent control over the nanoparticles' properties and characteristics. The availability of both organic- and water-based solvents also allows for further surface modifications. Some applications of iron oxide include drug delivery, biosensing, contrasting agents, and even environmental remediation.



## APPLICATIONS

- Drug delivery
- Magnetic hyperthermia
- Biosensing
- Contrasting agent (MRI, TEM)
- Environmental clean-up (heavy metal and organic pollutant removal)
- Anode material for lithium-ion batteries and supercapacitors

## PROPERTIES

- Monodisperse, uniform shape, narrow size distribution
- Superparamagnetic ( $\text{Fe}_3\text{O}_4$ , magnetite)
- Colloidally stable
- Magnetization of >45 emu/g
- Water-soluble and organic-soluble options
- 5nm, 10nm, and 20nm size options
- Biocompatible (water-soluble product only)

## PRODUCTS

- Water-soluble iron oxide (5 – 20nm)
- Organic-soluble iron oxide (5 – 20nm)

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