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Lipid based Iron Oxide Magnetic Nanocrystals (Catalog # ILP)

Introduction

Lipid based iron oxide magnetic nanocrystals, ILP, are lipid-coated iron oxide nanocrystals with no functional groups on their surfaces. Their zeta potential ranges from -10 mV to -20 mV. The overall thickness of the organic layers is about 1-2 nm. The hydrodynamic size established using a Zeta Trac DLS is about 3-8 nm larger than the inorganic core size that is measured with TEM.

ILPs has excellent compatibility for *in vivo* studies because these are prepared using physiological lipids. ILPs show stability and resistance to aggregation in commonly used biocompatible buffers such as borate, Tris, HEPES, PBS and MES buffers, as well as in cell culture medium.

Catalog number: ILP

Product name: Lipid coated iron oxide nanocrystals.

Solvent: DI H₂O

Surface Group: none

Storage: 4°C; Do not freeze.

pH stability: 2-14

Buffer stability: Borate, Tris, HEPES, PBS, MES etc.

Cell medium stability: RPMI1640, MEM, T-medium (with or without serum)

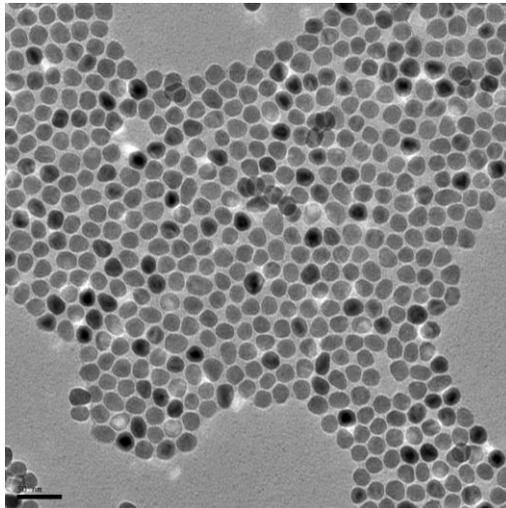
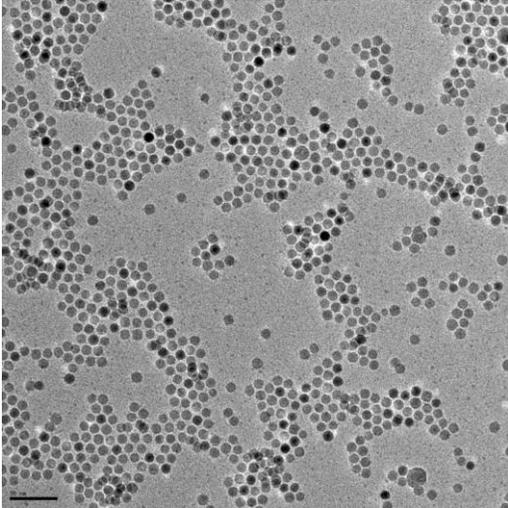
Shelf life: 3 months

Concentration: 1 mg/mL (Fe)

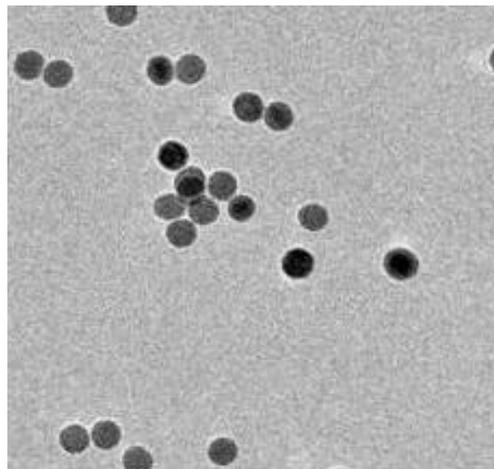
IO size (nm)	10	20	30
Size tolerance (nm)	2.5	2.5	2.5
Size distribution	<5%	<5%	<5%
Molar concentration (uM) of 1 mg/mL (Fe)	0.91	0.11	0.034
Structure	Maghemite	Magnetite	
Chemical Formula	Fe ₂ O ₃	Fe ₃ O ₄	

TEM image of 10 nm IO nanocrystals

TEM image of 20 nm IO nanocrystals



TEM image of 30 nm IO nanocrystals



Related Ocean Nano Tech Products

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Current versions of product instructions are available at www.oceannanotech.com. For a faxed copy, call 479-751-5500.

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