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Iron Oxide Magnetic Nanocrystals with Rhodamine B (Catalog # IRB)

Introduction

IRBs are water soluble iron oxide nanocrystals with fluorescence dye Rhodamine B on their surfaces. Their zeta potential is near neutral. The overall thickness of the organic layers is about 6 nm. The hydrodynamic size established using a Zeta Trac DLS is about 12-14 nm larger than the inorganic core size that is measured with TEM.

IRBs are excellent reagents for cell labeling and tracking. They can be visualized by both MRI and fluorescence (ex. 555nm; em. 580 nm). IRBs show stability and resistance to aggregation in commonly used biocompatible buffers such as borate, Tris, HEPES, PBS and MES buffers.

Catalog number: IRB

Product name: water soluble iron oxide nanocrystals with Rhodamine B.

Solvent: DI H₂O

Surface Group: Rhodamine B

Storage: 4°C; Do not freeze.

pH stability: 2-14

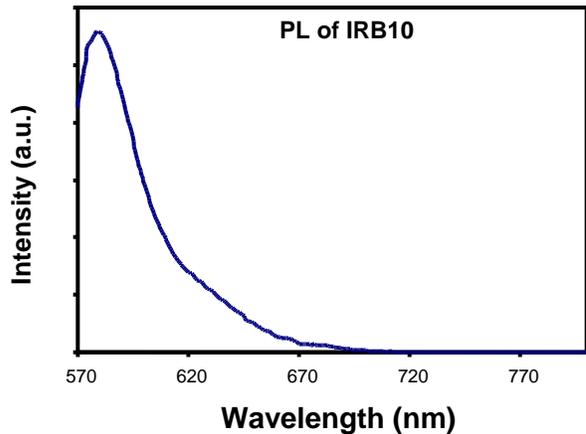
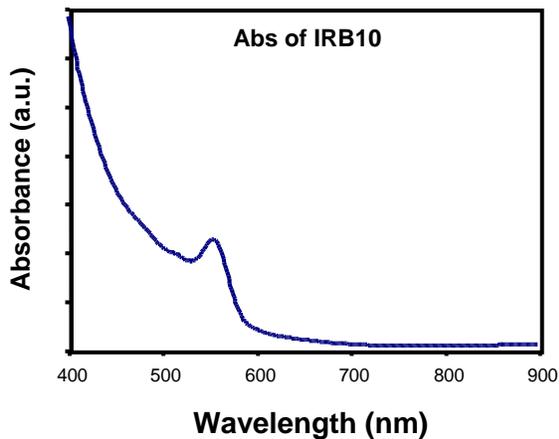
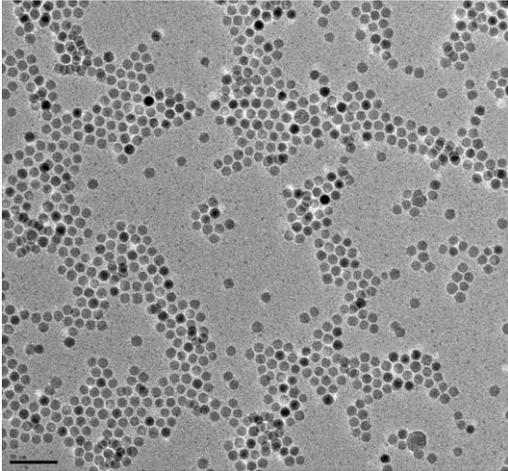
Buffer stability: Borate, Tris, HEPES, PBS, MES etc.

Shelf life: 3 months

Concentration: 1 mg/mL (Fe)

IO size (nm)	10
Size tolerance (nm)	2.5
Size distribution	~10%
Molar concentration (uM) of 1 mg/mL (Fe)	0.86
Structure	Maghemite
Chemical Formula	Fe ₂ O ₃

TEM image of 10 nm IO nanocrystals



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WARRANTY

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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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