



IRON –OXIDE TITANIUM Oxide CORE Shell

99.9%
(Purity)



Composites with magnetic core and functional shell structures have received special attention because of their potential applications in catalysis, selective separation, chromatography, chemical or biologic sensors, yielding also multiple function systems. Generally, the interactions between different components can improve the performance of the multi-components system and even generate new synergetic properties.

Due to their good optical and photocatalytic properties, good chemical and photochemical stability, capacity to control porosity by adding different organic additive, low cost and toxicity TiO₂ nanocomposites have been widely studied making them suitable for outer shell within a core-shell system. Their integration with magnetic nanoparticles attracts a great interest because improved properties can be achieved by combining superparamagnetic behavior with luminescent and photocatalytic attributes of semiconductor TiO₂ nanocrystals. The TiO₂ coating of magnetic nanoparticles not only protect the core against environmental damaging but also render the particles stable, desired functional and biocompatible.

Stock no:
NS6130-12-000552

CHEMICAL IDENTIFIERS

Purity	:	99.9%
Chemical name	:	Fe ₃ O ₄ /TiO ₂
Core Diameter	:	80-100nm
Shell Thickness	:	20-30nm

Applications

- ✓ In biotechnologies,
- ✓ In bioseparation,
- ✓ Bio-imaging,
- ✓ Targeted drug delivery,
- ✓ Tumor cell localization,
- ✓ Hyperthermia,
- ✓ Malignant cells destruction



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