

Technical Data Sheet

ACS Material PEG-NH2 Modified Upconverting Nanoparticles

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1. Characterizations

| Composition | PEG-NH2 Modified Upconverting Nanoparticles | |
|-----------------------------|--|---------------|
| Diameter | 35 nm | |
| Appearance | Ivory white solution | |
| Crystal formula | NaYREF4(RE: Yb, Er, Tm, Gd, Mn, Lu) @PEG-NH2 | |
| Concentration | 5 mg/mL | |
| Solvent | Water | |
| Dispersity of powder | Water or aqueous medium | |
| Excitation wavelength | 975 nm | |
| Sensitizer | Ytterbium (Yb ³⁺) | |
| Activator | Emission wavelength | Fluorescence |
| Thulium (Tm ³⁺) | 365/475 nm | Purple-Blue |
| Erbium (Er ³⁺) | 545/660 nm | Green-Yellow |
| Thulium (Tm ³⁺) | 804 nm | Near-infrared |



Fluorescence Image of ACS Material PEG-NH₂ Modified Upconverting Nanoparticles, Excitation at 975 nm (reference only)



Upconversion Emission Spectra upon Excitation at 975 nm: a) 365/475nm, b) 545/660 nm, c) 804 nm of ACS Material PEG-NH₂ Modified Upconverting Nanoparticles for reference only



TEM Image of ACS Material PEG-NH2 Modified Upconverting Nanoparticles

3. Application Fields

For scientific research only. Not to be used for any animal or human diagnostic/therapeutic purposes.

- ♦ Fluorescence imaging.
- Biodetection.
- Photodynamic therapy.
- Photoactivation of anti-cancer drugs and biomolecules *etc*.

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