

## PRODUCT DATA SHEET

### Cadmium Selenide/Zinc Sulfide Quantum Dots 540nm - Alkyl

#### Catalog Numbers:

- QD-540-A-5MG (5 mg, 5 nmol)**
- QD-540-A-10MG (10 mg, 10 nmol)**
- QD-540-A-25MG (25 mg, 25 nmol)**

#### Description

The vial(s) contain toluene dissolved CdSe/ZnS core/shell fluorescent nanocrystals at a concentration of 5 mg/ml (1nmol/mg).

- Proprietary surface passivation and ligand technology isolates the core from oxygen and harmful ions that can degrade quantum dot performance over time.
- Photostable (no bleaching)
- Narrow and sharp emission peaks
- Comparable quantum efficiencies (>40%) throughout the visible spectrum

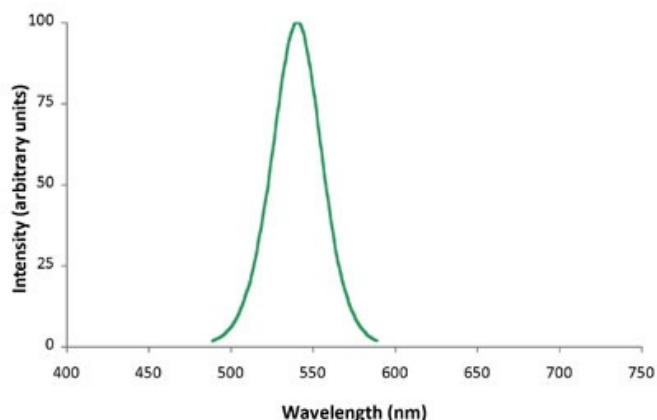
#### Characteristics

**Diameter:** 10-11nm  
**Concentration:** 5mg/ml (5nmol/ml)  
**Emission ( $\lambda$  max):** 530-550nm  
**Full width at half maximum (FWHM):** 21-24nm  
**Supplied in toluene**

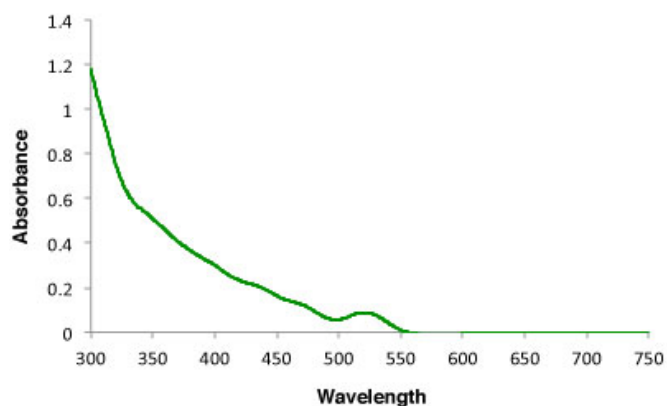
#### Storage

This product should be stored at 4°C in the dark. If stored as specified, Cytodiagnos<sup>t</sup>ics Quantum Dots have a shelf life of approximately one year.

#### Emission Spectra



#### Excitation Spectra





## **Precipitation of Quantum Dots (Solvent Exchange & Concentration)**

If required, solvent exchange or concentration of the quantum dots can be performed by either evaporation or by precipitation followed by resuspension in a suitable solvent (*e.g.* chloroform). Described below is a basic protocol for precipitation of 500  $\mu\text{l}$  of quantum dots.

### *Procedure*

1. Transfer 500  $\mu\text{l}$  of quantum dots stock solution into a new vial.
2. Add 500  $\mu\text{l}$  of methanol and mix well.

*Note: A final concentration of 50% or more of methanol is needed for efficient precipitation).*

3. Incubate for 10 minutes at room temperature to allow the quantum dots to precipitate.
4. Centrifuge for 10 minutes at 10,000 x *g*.
5. Remove and discard supernatant.
6. Resuspended pellet to a desired concentration in a suitable solvent for your particular application.

## **Product Safety and Handling**

This product is for R&D use only, not for drug, household, or other uses. Please review the safety datasheet (SDS) available online for proper safety and handling procedures

## **Ordering Information**

For ordering call 866-344-3954 or visit us online at [www.cytodiagnosics.com](http://www.cytodiagnosics.com)