

## NITmagold COOH-PEG 50nm

#5100084 & #5100085

STORE AT 4°C away from light. DO NOT FREEZE

### Description

Magnetic nanoparticles coated with gold add new properties (inertness, protection of the magnetic core against oxidation, optical properties) to those of the magnetic particles, without modifying their superparamagnetic behavior. Gold shell is functionalized with poly(ethylene glycol)-thiol (PEG-SH) ligands (3000 and 5000 Da) having a carboxylic acid end group, which can be further used to immobilize covalently biomolecules by formation of stable amide bonds with primary amines.

### Technical Specifications

**Particle Surface:** PEG<sub>5000</sub>-COOH or PEG<sub>3000</sub>-COOH

**Peak SPR wavelength:** 534 nm

**Hydrodynamic Diameter (DLS):** 54.3 nm

**Polydispersity index:** 0.176

**Core diameter:**<sup>1</sup> 13.6 ± 1.2 nm

**Gold thickness:**<sup>1</sup> 38.2 ± 3.5 nm

**Molar Concentration:**<sup>2</sup> 0.05 nM

**O.D.:** 1

**Particle Concentration:** 3.2×10<sup>10</sup> particles/mL

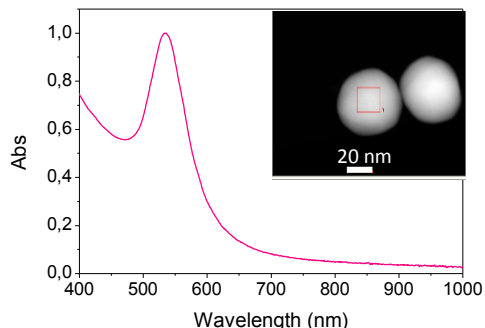
**Solvent:** Water Type I

1 Determined by Scanning Electron Microscopy (SEM).

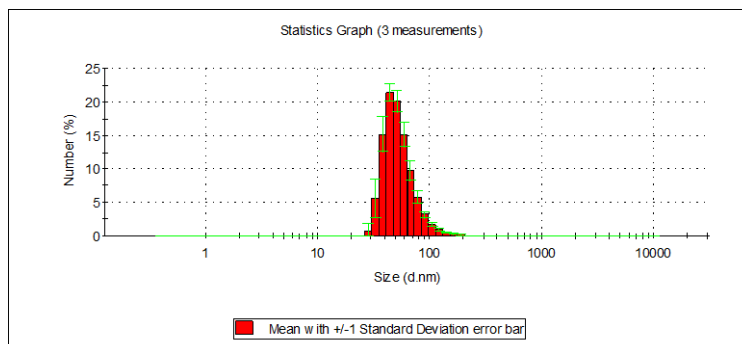
2 Determined according to a  $\epsilon = 1.9 \times 10^{10} \text{ M}^{-1} \cdot \text{cm}^{-1}$ . Werts et al. Analyst 2013,138, 583-592.



### UV/visible absorbance spectrum



### Size Distribution (DLS)



### Suggested Application(s)

- Magnetic separation
- Biosensing
- Magnetic hyperthermia
- Drug delivery

### Ordering Information

Product Name	Nº Nanoparticles/mL	O.D.	$\epsilon$ (M <sup>-1</sup> cm <sup>-1</sup> )	Quantity	Catalogue No.
NITmagold COOH-PEG 3000Da 50nm	3,17E+10	1OD	1,90E+10	1mL	51008415S
NITmagold COOH-PEG 3000Da 50nm	3,17E+10	1OD	1,90E+10	5mL	51008415W
NITmagold COOH-PEG 3000Da 50nm	3,17E+10	1OD	1,90E+10	25mL	51008417V
NITmagold COOH-PEG 5000Da 50nm	3,17E+10	1OD	1,90E+10	1mL	51008515S
NITmagold COOH-PEG 5000Da 50nm	3,17E+10	1OD	1,90E+10	5mL	51008515W
NITmagold COOH-PEG 5000Da 50nm	3,17E+10	1OD	1,90E+10	25mL	51008517V

### Product disclaimer

This nitparticles® product is to be used for research purposes only. Unless stated in the documentation of on an individual product label, catalog or other information provided to the buyer, IT IS FORBIDDEN TO USE IT for different purposes, including but not limited to them: in vitro diagnostic, use in food, pharmaceutical purposes, medical purposes, or use in cosmetic products, neither for use in humans nor animals, nor for any commercial purposes. Please refer to [www.nitparticles.com](http://www.nitparticles.com) for the Material Safety Data Sheet of the product.

