Specification Sheet

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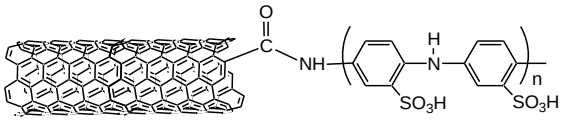
P8-SWNT

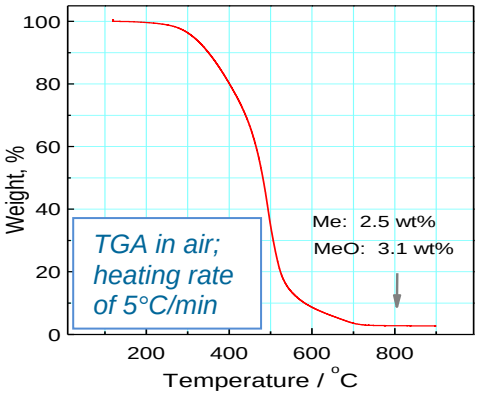
Product Description: Water Soluble SWNTs covalently functionalized with polyaminobenzene sulfonic acid (PABS).



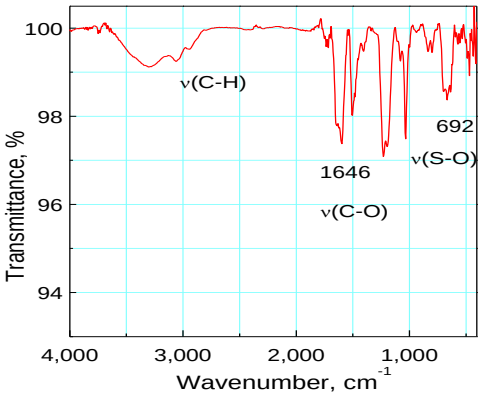
Weight Content of SWNT:	*35% ± 10 wt%*
Metal Content*:	*1 – 3%*
Typical Bundle Length:	*500 – 600 nm*
Typical Bundle Diameter:	*4 – 5 nm*
Typical Diameter of Individual SWNT:	*1.55 ± 0.1 nm*
Dispersibility in water:**	*up to 5 mg/mL*

* Weight % estimated from the residual of the thermal gravimetric analysis (TGA) in air at 900°C, corrected for metal oxide.
** From solution phase NIR spectroscopy

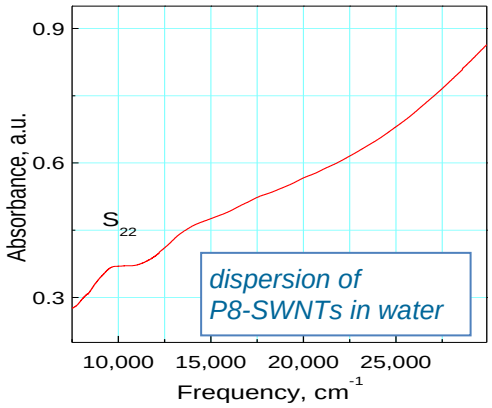
Thermogravimetric Analysis (TGA)



Mid IR Spectrum



Near Infrared (NIR) Spectrum



Areas of applications:

- Biomedical research
- Chemical sensors

Selected References:

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2. Lee, H.; Shaker, G.; Naishadham, K.; Song, X. J.; McKinley, M.; Wagner, B.; Tentzeris, M., Carbon-nanotube loaded antenna-based ammonia gas sensor, *IEEE Trans. Microw. Theory Tech.* **2011,** *59*, 2665.
3. Bekyarova, E.; Kalinina, I.; Itkis, M. E.; Beer, L.; Cabrera, N.; Haddon, R. C. Mechanism of ammonia detection by chemically functionalized single-walled carbon nanotubes: in-situ electrical and optical study of gas analyte detection, *J. Am. Chem. Soc.* **2007**, *129*, 10700.
4. Zhao, B.; Hu, H.; Mandal, S. K.; Haddon, R. C., A bone mimic based on the self-assembly of hydroxyapatite on chemically functionalized single-walled carbon nanotubes, *Chem. Mater.* **2005**, *17*, 3235.
5. Amiran , **J.,** Nicolosi, V. , Bergin , S. D., Khan, U. , Lyons , P. E., N. Coleman, J. N. High quality dispersions of functionalized single walled nanotubes at high concentration, *J. Phys. Chem. C* **2008***, 112,* 3519.