



Technical Data Sheet

PRODUCT INFORMATION

Product Name	β -Manganese Dioxide
Synonym	Pyrolusite Manganese(IV) Oxide - Beta
CAS Number	1313-13-9, 301678-04-6
Formula	MnO ₂
Molecular Weight	86.94 g/mol

PRODUCT PROPERTIES

Purity (XRF analysis)	> 99.5%
Particle size (TEM analysis)	Rods hundreds of nanometers long

Supply form 1

Appearance (form)	Powder
Appearance (color)	Black



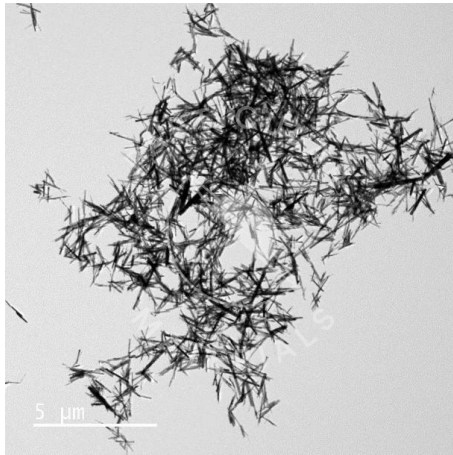
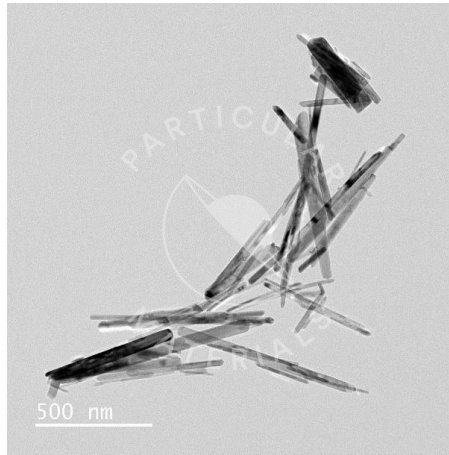
ANALYSIS

TEM

Rods hundreds of nanometers long

Length: 414 ± 256 nm

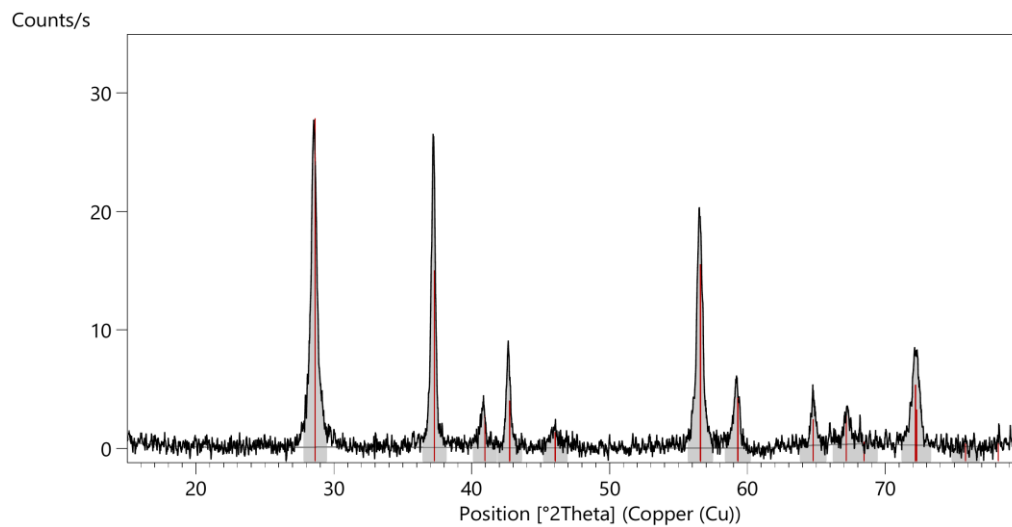
Diameter: 39 ± 23 nm



XRD

ICSD: 98-007-3716

Manganese(IV) Oxide - Beta





QUALITY CONTROL

When stored as recommended, most nanoparticles are stable for 6 months to > 1 year. Be sure to visually inspect your materials before each use. If there are any visible particulates floating in the solution, if the color of the solution has changed, or if the color intensity has decreased, the nanoparticles may have aggregated. These materials should be analyzed via UV-Visible spectroscopy, DLS, or TEM for quality verification.

HANDLING NANOPARTICLE COLLOIDS

Shake prior to use. During storage the nanoparticles may settle to the bottom. Resuspend the settled nanoparticles by vigorously shaking the bottle until the solution is homogenous.

HANDLING DRY NANOPOWDERS

Storage away from excess moisture and humidity is recommended until the materials are ready for use or redispersion.

QUESTIONS & SUPPORT

If you have any questions, please don't hesitate to contact us by email at we.are@particularmaterials.com.