

Materials List for:

Highly Stable, Functional Hairy Nanoparticles and Biopolymers from Wood Fibers: Towards Sustainable Nanotechnology

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Materials

Name	Company	Catalog Number	Comments
Q-90 softwood pulp	FPIInnovations	-	-
Sodium periodate	Sigma-Aldrich	S1878-500G/CAS7790-28-5	Light sensitive, strong oxidizer, must be kept away from flammable materials
Sodium chloride	ACP Chemicals	S2830-3kg/7647-14-5	-
2-Propanol	Fisher	L-13597/67-63-0	Flammable
Ethylene glycol	Sigma-Aldrich	102466-1L/107-21-1	-
Sodium hydroxide	Fisher	L-19234/1310-73-2	Strong base, causes serious health effects
Sodium chlorite	Sigma-Aldrich	71388-250G/7758-19-2	Reactive with reducing agents and combustible materials
Hydrogen peroxide	Fisher	H325-500/7722-84-1	Corrosive and oxidizing agent, keep in a cool and dark place
Ethanol	Commercial alcohols	P016EAAN	Flammable
Hydrochloric acid	ACP Chemicals	H-6100-500mL/7647-01-0	Strong acid, causes serious health effects
Hydroxylamine hydrochloride	Sigma-Aldrich	159417-100G/5470-11-1	Unstable at high temperature and humidity, mutagenic
Centrifuge	Beckman Coulter	J2	High rotary speed
Fixed angle rotor	Beckman Coulter	JA-25.50	Tighten the lid carefully
Dialysis tubing	Spectrum Labs	Spectra (Part No. 132676)	Cutoff Mw = 12-14 kD, Length ~ 30 cm, width ~ 4.5 cm
Aluminum cup	VWR	611-1371	57 mm
Titration	Metrohm	836 Titrand	-