

Safe Operating Procedure

Chemical Name: Multi-walled Carbon Nanotube (MWCNT) Solution

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Description: Carbon nanotube powder purchased from Sigma Aldrich is dissolved in Water and sodium deoxycholate (DOC) in our lab to prepare Carbon nanotube solution, this material is going to be used primarily to coat samples to prepare the films.

Hazards: This material is not a hazardous substance or mixture.

Required precautions:

PPE: Wear safety glasses and mask for *Eye/face protection* and protective gloves for *skin protection*.

First Aid precautions: *After inhalation: fresh air. In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. In case of eye contact: rinse out with plenty of water. Remove contact lenses. If swallowed, make victim drink water. Consult doctor is feeling unwell.*

Work Location precautions: *This chemical should be used in a workplace with good ventilation such as a vented wet bench or fume hood.*

Procedure:

- 1-Wear proper PPE (safety goggles, mask, nitrile gloves and flame-resistant lab coat preferably made of antistatic material) at all times.
2. Use the polymer spinner. It is recommended that the spinner be lined with aluminum foil to minimize contamination and to simplify clean-up.
- 3- Open the cap of the tube containing MWCNT solution, take solution using pipets and dispense on your sample on the chuck of spin coater. Close the cap of the tube. Make sure ventilation arm is above the spin coater.
- 4- Set spinning parameters and do spinning, after spin coating, take sample and bake at desired temperature.

Storage: The MWCNT solution will be stored in **the flammables cabinet** *under dry and cool conditions.*

Disposal:

- clean up: Carefully remove contamination aluminum foil from the spin coater. Wipe the spin coater and any spills using acetone and Isopropyl alcohol and dispose of

pipets, foil and tissues in the “Noxious Chemicals” beaker in wet bench. When the solvent has evaporated, remove the solid waste (wipes, pipets) into a garbage bag or zip lock bag placed inside the wet bench. Close and seal the garbage bag or zip lock bag before removing it from the wet bench. Place the bag with other garbage for disposal.

- If materials are spilled, refer to the treatment method in the “clean up” section of the SDS.

Special instructions, warnings: *No special instructions.*