

Standard Operating Procedure

for work with High Shear Mixer

PI: Dr. Jitendra Sarjerao Tate	Building(s): Roy F. Mitte
PI Signature:	Room Number(s): 1218
Date: 5/30/18	SOP Revision Date: 5/30/18

Work involves a Particularly Hazardous Substance (PHS)? <input type="checkbox"/> Carcinogen <input type="checkbox"/> Reproductive Toxin <input type="checkbox"/> High Acute Toxicity <input type="checkbox"/> Air Reactive/Pyrophoric <input type="checkbox"/> Water Reactive <input type="checkbox"/> Explosive/Unstable
Prior Approval: This procedure is considered hazardous enough that prior approval is needed from the Principal Investigator: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Designated Work Area: RFM 1218

1. Hazard Identification

a. Preparation and Use:

Use of Personal Protection Equipment while dispersing nanoparticles in the liquid polymer resin

Note: If identified as a **process**, provide additional detailed procedural steps for the use of **each** hazardous chemical in **Section 5**, below.

b. Potential Hazards and Risk:

Dry nanoparticles and liquid resin spill during mixing/dispersion.

2. Hazard Control

a. Selection and Purchasing:

Dr. Tate only may purchase potentially hazardous Nano-materials.

b. Engineering Controls:

☒ Fume hood ☐ Biosafety cabinet ☒ Glove box ☐ Vented gas cabinet

☐ Other (List below: include controls such as pressure relief valves, intrinsically safe hot plates, auto shut-offs):

c. Required Personal Protective Equipment (PPE): List any specific PPE required for this chemical/procedure.

☒ Safety Glasses

☐ Face shield

☒ Lab Coat (type)

☐ Chemical apron

☒ Gloves (type): Mechanical work gloves when handling heavy parts and during testing.

☒ Chemical Splash Goggles

☐ Respirator (type):

☐ Other:

d. Administrative and Work Practice Controls: *List any specific work practices needed to perform this procedure (e.g., cannot be performed alone, must notify other staff members before beginning, etc.).*

e. Storage and Transportation:

3. Emergencies, Spill Procedures, and Exposures/Unintended Contact

4. **Waste:** *How will any waste that is produced be properly disposed.*

5. **Details of Process:** *A journal article or other document describing the process can be attached.*