Figure 4 - Schematic of the tissue sample preparation protocol.

1. **Rat Lung**
   - N$_2$(L), pulverize
   - grind and homogenize

2. **N$_2$(L)**
   - 2.5 mg 70 nm SiO$_2$
   - 1.25 mg 250 nm SiO$_2$
   - Incubate 1 hr at RT

3. **Collagenase**
   - Hyaluronidase
   - Incubate @ 37 °C for 24 hrs

4. **Tissue digestion #1**

5. **Tissue digestion #2**
   - SDS
   - Protease K
   - Incubate @ 85 °C for 2 hrs

6. **Tissue/Particle separation #1**
   - Layer sample over saturated sucrose cushion and spin 25 min @ 21000 x g
   - Supernatant: Low density hydrophilic organics

7. **Phenol Wash**
   - Tissue/Particle separation #2
   - Spin 25 min @ 21000 x g
   - Lipids, nucleic acids and other organics

8. **Ethanol**
   - Tissue/Particle separation #3
   - Spin 25 min @ 21000 x g
   - Residual phenol

9. **Final sample**
   - SdFFF