

Experiment: Preparation of the PEDOT:PSS based semiconductor solution

Safety Precautions: Safety goggles, lab coat, well-ventilated room

Materials:

PEDOT:PSS, 2-propanol, ethylene glycol, 5 mL screw-cap vial, 3 dropper pipettes

Experimental Procedure:

The following preparation yields **2.1 mL of suspension**, sufficient for a class with **8 student groups**. For larger batches, scale the quantities accordingly.

1. Using a dropper pipette, dispense **1.2 mL of PEDOT:PSS suspension (PH1000)** into a screw-cap vial.
2. Using a separate dropper pipette, add **0.3 mL of ethylene glycol**.
3. Using another dropper pipette, add **0.6 mL of 2-propanol**.
4. Close the screw-cap vial and shake the suspension vigorously for **5 seconds**.



Mixing ratio: PEDOT PH1000 : ethylene glycol : 2-propanol = **4:1:2**

The suspension can be stored in the **refrigerator** for an extended period.

Source of supply:

- PEDOT:PSS (PH1000) was obtained from Osilla, CAS-No: 155090-83-8
- Ethylene glycol was obtained from Merck (Aldrich), CAS-No: 107-21-1
- 2-Propanol was obtained from Merck (Aldrich), CAS-No: 67-63-0