



Icahn School of Medicine at Mount Sinai LINCS Center for Drug Toxicity Signatures

Standard Operating Procedure: Preparation of Stock Solutions for Drug Treatment of Cells

DToxS SOP Index: CE-3.0

Last Revision: May 6, 2015

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Quality Assurance/Control (QA/QC) steps are indicated with **green highlight**.

Metadata recording is highlighted with **yellow highlight and superscript indices**.

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1. Place the drug of interest (in powder form)¹, the sterile solvent², a 1.5 mL Protein LoBind tube (Eppendorf, Cat: 022431081), and an autoclaved spatula (Fisherbrand, Cat: 14-373) under a sterile hood (or glove box, if available).
 - a. Label the tube with the name and lot of the drug and the date
 - b. We use a Scienceware clear view glove box with air lock (Sigma Aldrich, Cat: Z681598), and saturate the environment with nitrogen before starting the next step
 2. After tare with the LoBind tube, weigh an appropriate amount of drug in the tube
 3. Dissolve the powder to prepare master stock³
 - a. Given the molecular weight of the drug, calculate the appropriate volume of solvent
 - i. Final concentration of the drug is determined based on the peak plasma concentration of the commonly used dose of the drug
 - b. Add solvent to the tube and mix with vortexing (use pipette for antibodies)
 4. Seal remaining powder under nitrogen and store at -20°C
 5. Aliquot master stock aseptically in 1.5 mL Protein LoBind tubes in one-time use volume amounts (to avoid freeze-thaw); the exact volume depends on the experimental design. Store aliquots at -20°C.

Metadata

1. **Drug:** name, LINCX ID, drug form or salt, PubChem ID, SMILES number, molecular mass, vendor, lot number, purity
2. **Solvent:** name, manufacturer, lot number. Almost all the small molecules in DToxS are dissolved in **Dimethyl sulfoxide, DMSO (Sigma Aldrich, Cat: D2650-100ML)**: lot number
3. **Stock Solution:** concentration, preparation date