



<b>NMR Tube Cleaning</b>	<b>Identifier:</b>	<b>CSP-0010</b>
	<b>Revision:</b>	<b>0</b>
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ISU Chemistry Department	Stockroom Procedure	Effective Date: 05/01/2020
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## 1. INTRODUCTION

This procedure provides guidance for cleaning NRM tubes in the ISU Chemistry Stockroom.

## 2. PRECAUTIONS AND LIMITATIONS

- 2.1. Use caution when working with concentrated acids.
- 2.2. Wear proper personal protective equipment (PPE).

## 3. APPARATUS AND MATERIALS

- 3.1. Pasteur pipettes, 9"
- 3.2. Beaker, 400mL
- 3.3. Beaker, 250mL
- 3.4. Beaker, 100mL
- 3.5. NMR tube rack
- 3.6. NMR tube cleaning apparatus
- 3.7. Kimwipe
- 3.8. Parafilm
- 3.9. Plastic wrap

## 4. REAGENTS

- 4.1. Acetone
- 4.2. Deionized water

## 5. INSTRUCTIONS

- 5.1. Cleaning NMR tubes
  - 5.1.1. Empty NMR tube contents into halogenated waste.
    - 5.1.1.1. If contents do not pour out remove using a 9" Pasteur pipette
  - 5.1.2. Place NMR tubes in the NMR tube cleaner
  - 5.1.3. Attach NMR tube cleaner to suction apparatus
  - 5.1.4. Add acetone to well of the NMR tube cleaner
  - 5.1.5. Begin suction until the well has been emptied of acetone.
  - 5.1.6. Place acetone rinsed NMR tubes open end down in an NMR tube rack
  - 5.1.7. Allow to dry
  - 5.1.8. Clean exterior of NMR tube with acetone dampened Kimwipe.



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5.1.9. If the tube contains stains or remnants of material proceed to step 5.10, otherwise place the NMR tube(s) into the desiccator where clean NMR tubes are kept.

5.2. Cleaning NMR tube caps

5.2.1. Label a 250mL beaker as “acetone.”

5.2.1.1. Fill beaker with approximately 100mL of acetone.

5.2.2. Place NMR tube cap(s) into the beaker.

5.2.3. Cover beaker with parafilm or plastic wrap.

5.2.4. Let soak for at least 2 hours

5.2.5. Decant the acetone into a halogenated waste container.

5.2.6. Pour caps onto paper towels in the fume hood.

5.2.7. Allow to dry

5.2.8. Place clean cap(s) in the desiccator where clean NMR tubes are kept.