



← How to use this form

Certified Reagent Operation Form

First-year Chemistry

<p><input checked="" type="checkbox"/> Pipetting a Liquid</p> <p><input checked="" type="checkbox"/> Mass of liquid transferred is measured on a balance and documented properly (assume a density of 1.00 g/mL)</p> <p><input checked="" type="checkbox"/> All measured volumes are within $\pm 5\%$ with respect to the target volume</p> <p><input checked="" type="checkbox"/> No liquid is spilled on the bench surface</p> <p><input checked="" type="checkbox"/> No obvious errors are committed, particularly contamination</p>	<p><input type="checkbox"/> Weighing a Solid</p> <p><input type="checkbox"/> Measured mass of solid is documented properly</p> <p><input type="checkbox"/> No solid is spilled in the balance</p> <p><input type="checkbox"/> Solid is transferred <i>only</i> off the balance and spillage is minimal</p> <p><input type="checkbox"/> All measured masses are within $\pm 5\%$ with respect to the target mass (or, all masses round to the target mass in the protocol)</p> <p><input type="checkbox"/> No obvious errors are committed</p>
<p><input type="checkbox"/> Volumetric Preparation of a Solution</p> <p><input type="checkbox"/> Stock solution or solid solute is transferred to volumetric flask without spillage</p> <p><input type="checkbox"/> Solvent is added to the volumetric flask to bring the solution volume <i>exactly</i> to the mark. Reject the operation if the bottom of the meniscus is not sitting on the mark!</p> <p><input type="checkbox"/> Flask is capped and inverted three times to mix the solution</p> <p><input type="checkbox"/> Completed solution is free of debris and homogeneous</p>	<p><input type="checkbox"/> Obtaining a Visible Absorption Spectrum</p> <p><input type="checkbox"/> Deionized water blank is obtained</p> <p><input type="checkbox"/> Cuvette is filled at least 2/3 full with the solution to be analyzed</p> <p><input type="checkbox"/> Cuvette is appropriately aligned with the incident light beam</p> <p><input type="checkbox"/> Wavelength of maximum absorbance (with units) and maximum absorbance value are appropriately documented</p> <p><input type="checkbox"/> Spectrometer is returned to the LabQuest box at the end of lab</p>
<p><input type="checkbox"/> Titration to an Endpoint</p> <p><input type="checkbox"/> Buret is filled and titrant is delivered without spilling</p> <p><input type="checkbox"/> Initial and final volumes are recorded to appropriate precision</p> <p><input type="checkbox"/> Titration is halted <i>exactly</i> at the endpoint (i.e. the endpoint is not overshot)</p> <p><input type="checkbox"/> Re-filling the buret with titrant is not necessary</p>	<p><input type="checkbox"/> Heating a Solid with a Bunsen Burner</p> <p><input type="checkbox"/> Apparatus includes crucible with lid, clay triangle, ring stand and ring, Bunsen burner, and tubing</p> <p><input type="checkbox"/> Initial and final masses are recorded to appropriate precision</p> <p><input type="checkbox"/> Bunsen burner is set to produce a flame of moderate size with a clearly visible inner blue cone</p> <p><input type="checkbox"/> Crucible is positioned at the tip of the inner blue cone of the flame</p>

Operator's Name

Rudra Guel

Signature

Observer's Name

Darshu Ahn

Signature

TA's Signature

Today's Date

10/2/23

Submission Instructions. The student performing the operation should scan and submit completed form(s) for the current experiment using the Certified Reagent Operations assignment for the current experiment on Canvas.