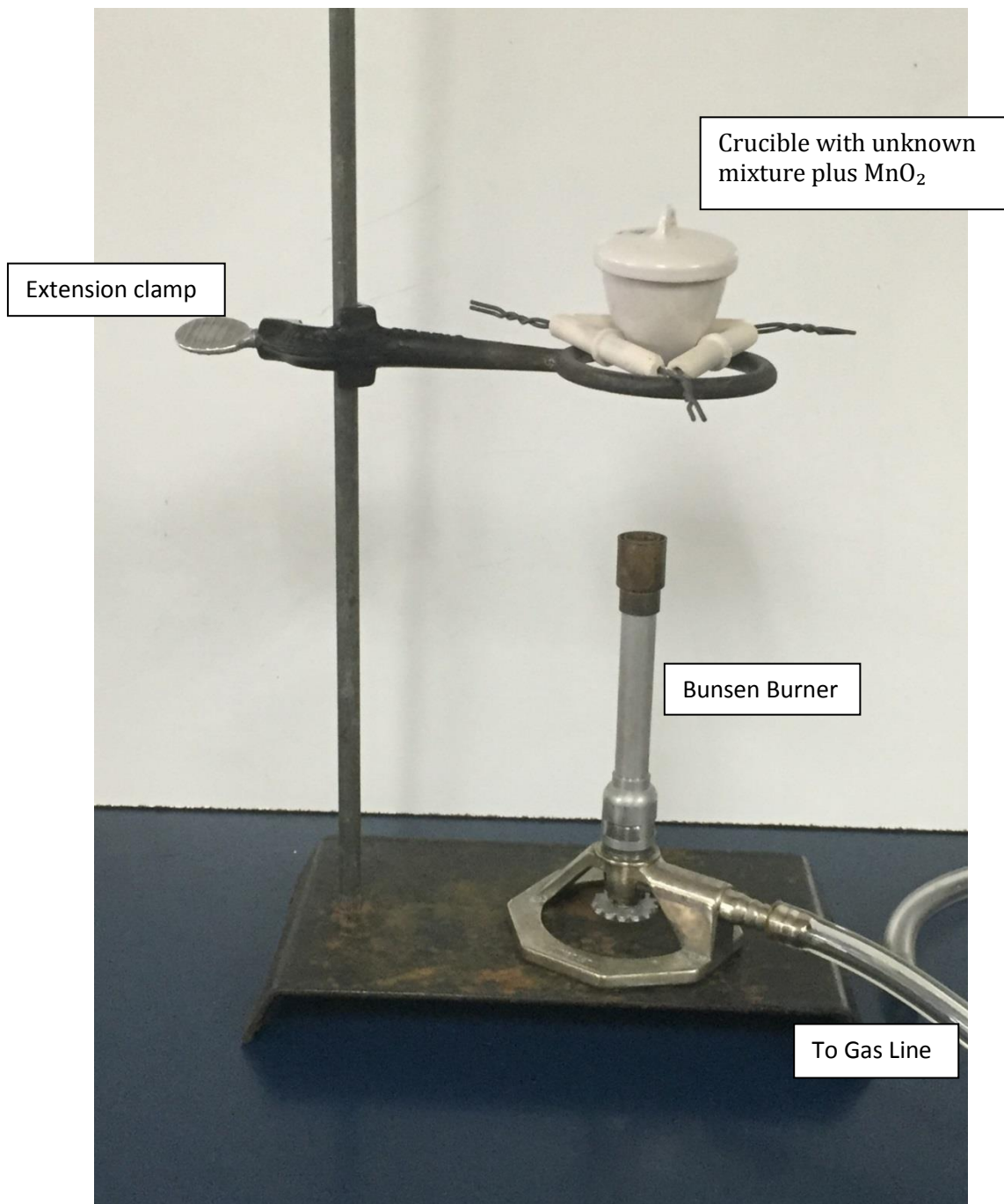


Set Up for heating KCl + KClO₃



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Procedure:

Obtain a porcelain crucible, crucible lid, and a clay triangle. Clean the crucible, removing any loose particulate matter, and check the crucible for cracks. It is not necessary to remove all debris from the crucible as most of it has been fused to the porcelain and cannot be removed. In your fume hood, set up the apparatus as shown in Figure 5.

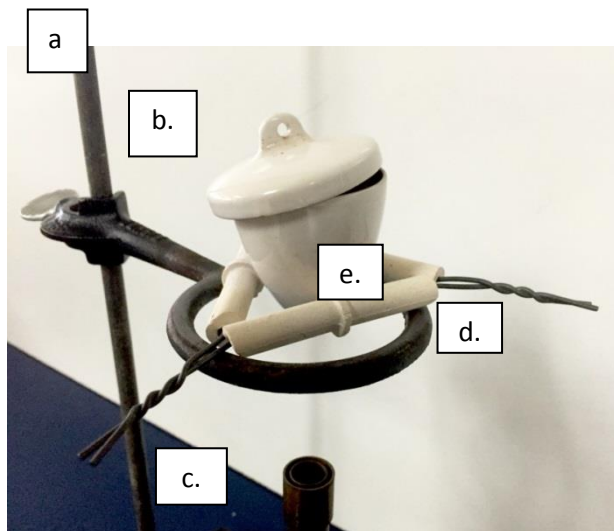


Figure 5: Crucible setup

- a. Ring stand
- b. Crucible lid
- c. Iron ring
- d. Clay triangle
- e. Crucible

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Using your crucible tongs, practice the following techniques on the cool crucible:

- Lifting the lid from the crucible
- Placing the lid ajar so that the crucible is slightly open, but the lid will not fall off, as in Figure 5.
- Quickly, but gently, pushing the lid from its ajar position to completely cover the crucible
- Lifting the crucible, with its lid, from the clay triangle
- Carrying the crucible and lid while supporting from underneath with your wire gauze.

Practicing these techniques may seem silly, but it is worth your time to do so. Would you rather repeat a trial because you dropped a crucible, shattering it into a million pieces?

With your covered crucible in the clay triangle, fire the crucible for 3-5 minutes. “Firing a crucible” is the process of heating the crucible with a Bunsen burner to remove water, oils from your hands, and any other potentially volatile contaminants. Use a soft flame; hot enough to turn the bottom of the crucible orange, but not so hot that you risk cracking the crucible. Turn off your burner and allow the crucible and lid to completely cool to room temperature. You should allow the crucible to cool for at least 15 minutes. You can test whether the crucible is cool by placing your hand one inch over the crucible and sensing for radiant heat. At no point after firing the crucible should you touch the crucible with your hands, even after it has cooled.