

Reaction of Glycerin and Potassium Permanganate

What is even happening?

Chemicals and Equipment Needed

- Glycerin – **N3**
 - Small plastic squeeze bottle
 - Also called glycerine and glycerol. Refill from large bottle
- KMnO_4 – **F3**
 - Special labeled bottle of finely divided KMnO_4
- Ceramic Mat – **U4**
- Scoopula – **U1**

Hazards

- This reaction is vigorous and produces smoke. It must be done in a room with an in-bench hood
- Provide an ABC fire extinguisher

Preparation

- Weigh 4-5 g KMnO_4 into a weighboat and label.
- On delivery: Place the ceramic mat next to the in-bench hood. Pour the KMnO_4 into a mound on the mat. Use the scoopula to create a large dimple on top of the mound. Place the bottle of glycerin next to the mat

Presentation

- Drop 5-6 drops glycerin in the dimple. The reaction produces white smoke and purple (or lavender) flame. The color of the flame is due to the potassium. Interestingly, the reaction is not instantaneous, but depends on the fineness of the solid crystal.



Clean-Up

- Scrape the resulting compounds into the WWC, rinse the mat if needed. If the mat is too gross, throw it away

NOTES: Glycerol, glycerin and glycerine are all the same compound