

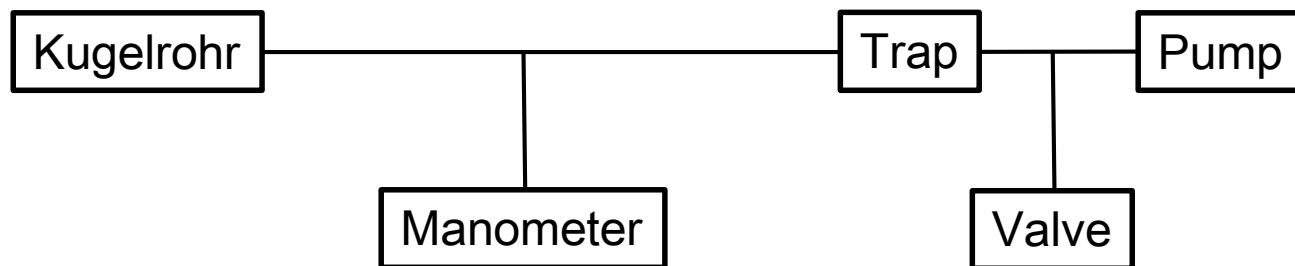
# Kugelrohr

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# What's this?

- You can isolate volatile compound from the crude mixture under reduced pressure with Kugelrohr apparatus.
- The distillation with this apparatus is **not** rigorous, so you can isolate a volatile substance from non-volatile substance.
- This apparatus is suitable for small-scale distillation.
- Temperature control is easy with this apparatus.



Valve:

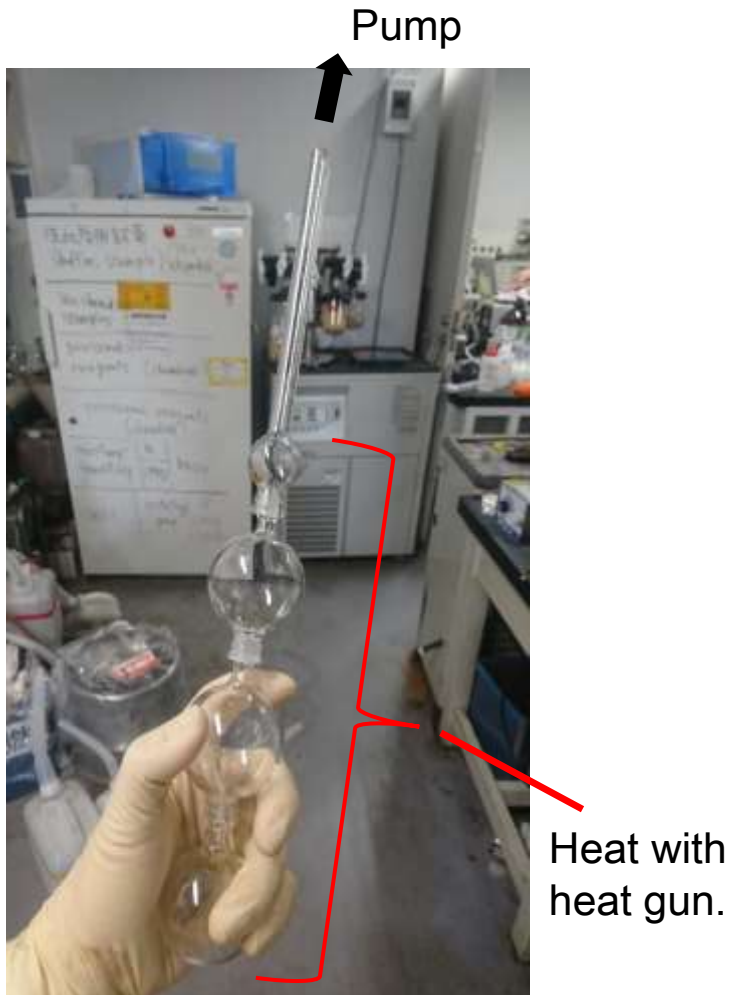


Manometer:

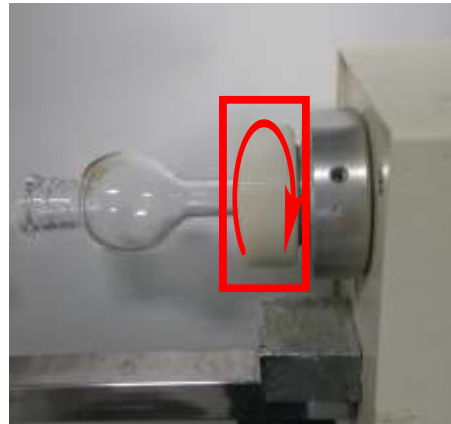


# How to Use

1. Dry the bulbs as necessary.



2. Set up apparatuses.



Insert the stick and **lock** it.



The opposite side should not touch the joint.

3. Place the crude mixture.



8 mL of the crude  
in the biggest bulb.  
(maximum amount)

4. Set up apparatuses.



Apply grease to joints as necessary.  
(especially for using high vacuum pump)

You can concentrate  
the solution containing  
target compound with  
rotary evaporator in the bulb.

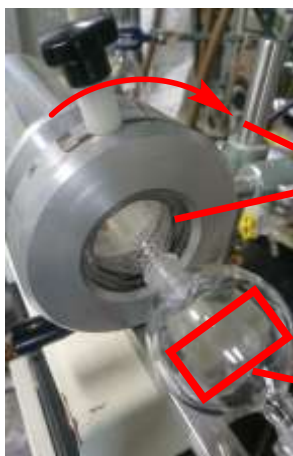


## 5. Distill the compound.



1<sup>st</sup> distillation

2<sup>nd</sup> distillation



① Reduce the pressure & start rotation

② Adjust the space

③ Cool the adjacent bulb with dry ice.

④ Raise temperature **gradually**, or you will see bumping.

⑤ Condense your target compound.

↓ Next bulb

further distillation and purification



heat

rotate

6. Take out distilled compound.



↓ Disconnect pump.



Let Ar in as necessary.  
(Be careful not to blow off bulbs.)



Take out the compound.

This type bottle can be used to store the compound.



Sealed

When you discard the bottle, the cap can be removed with pliers.