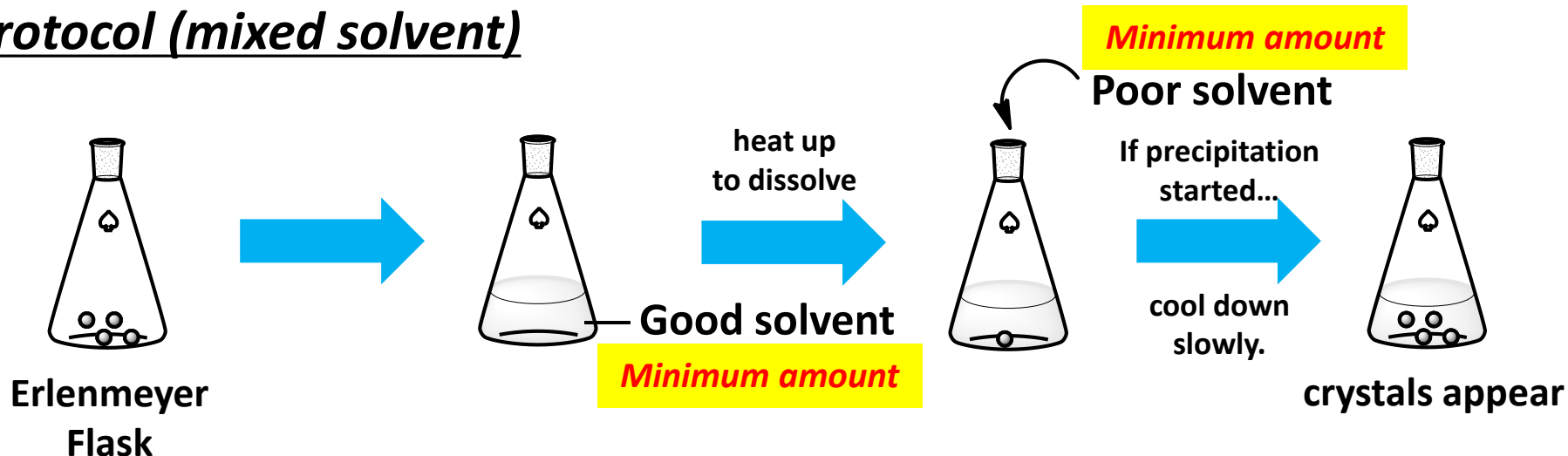


Recrystallization method

Protocol (mixed solvent)



Ex.) Examples of mixed solvent system (poor solvent/good solvent)
hexane/EtOAc, hexane/ CHCl_3 , hexane/ CH_2Cl_2 , $\text{Et}_2\text{O}/\text{CH}_2\text{Cl}_2$

Tips

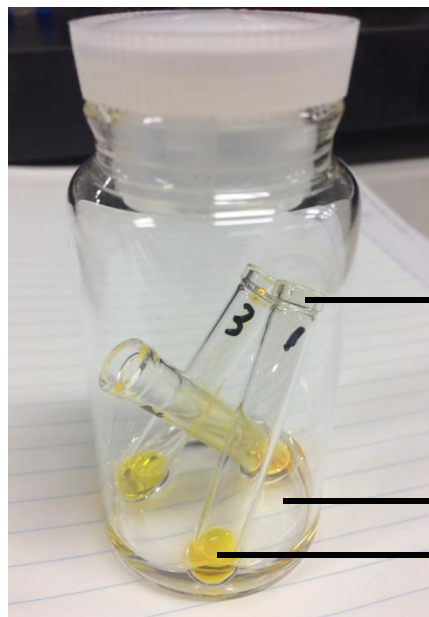
1. **Single solvent system** is often an easier option.
2. To accelerate crystallization, **scrub a inside of flask or put it into refrigerator.**
3. For purification of highly crystalline compounds, **stir the solution** to make precipitation faster. Thus-obtained precipitate is often sufficiently pure.
4. If you find much insolubles, **filter them off before cooling down.**
5. Choose **a suitable solvent** dissolving the compound well at the boiling point.

Recrystallization method

Protocol to obtain a single crystal

Using new glassware is recommended.

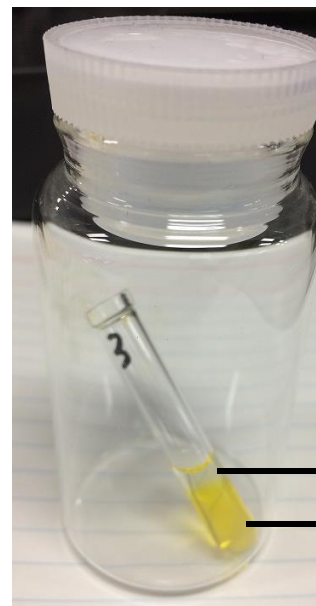
Vapor diffusion



Capping is applicable.

Poor solvent
Good solvent

Liquid-liquid diffusion



Poor solvent
Good solvent

Tips

1. Passing the solution through **syringe filter** is recommended to get a high-grade single crystal.
2. Sometimes **hand-made sealed glass-tube** is a great vessel to get a high-grade single crystal (because it has no scratch inside).