Recrystallization method

Protocol (mixed solvent)

Ex.) Examples of mixed solvent system (poor solvent/good solvent)
hexane/EtOAc, hexane/CHCl₃, hexane/CH₂Cl₂, Et₂O/CH₂Cl₂

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

Vapor diffusion

Liquid-liquid diffusion

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).