

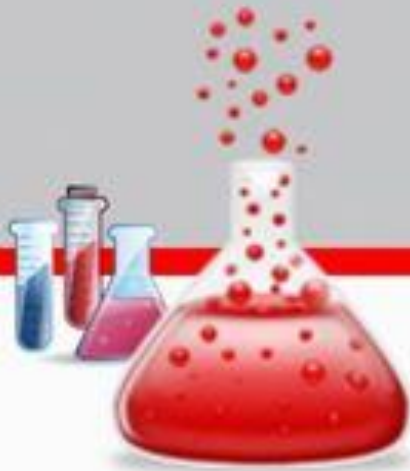
# National University –SUDAN

Faculty of Clinical and Industrial Pharmacy  
Second Year (**Batch-PA-14**)-Semester Four  
Professional Skills-2- Laboratory Skills-1  
(**PA-SKILL-221**)

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# **Recrystallization**

## Practical, No.8

# Objectives

**By the end of this lesson the student is expected....**

- 1- To define recrystallization
- 2- To practice the procedure of recrystallization
- 3- To recognize the application of recrystallization

## **Purpose:**

To remove impurities from a sample of solid crystalline compound in order to render it as pure as possible.

One way of testing for the degree of purity is to determine the **melting “point”**, or **melting range**, of the sample.

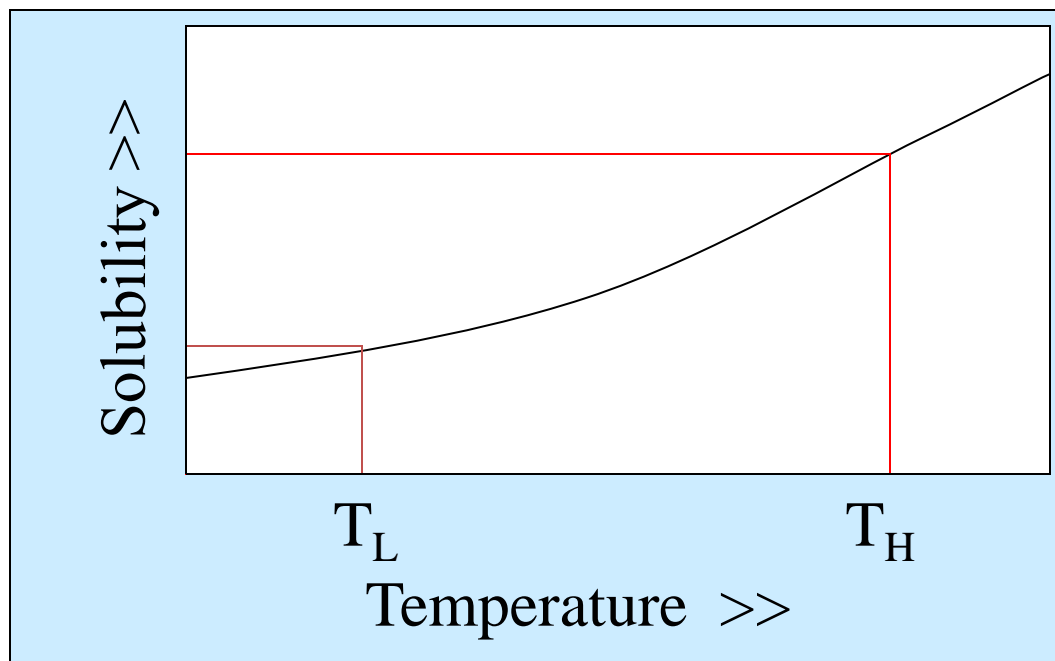
If the sample is very pure then the melting point will be a sharp one, but with impurities present (and this can include solvent from the recrystallisation process) the melting point will be lowered and the sample will melt over a range of several degrees Celsius.

Comparing an experimentally determined melting point value with one quoted in a data source will verify the degree of purity.

## Theory:

The degree of solubility of most compounds in a given solvent rises with temperature. In other words, the higher the temperature the greater the mass of the compound which will remain in solution. This can be represented in general terms in graphical form as follows.

Hence an appropriate solvent (or solvent mixture) is one which will dissolve both compound and impurities at or near its boiling point **and** one in which the compound itself does not dissolve well at or near room temperature.

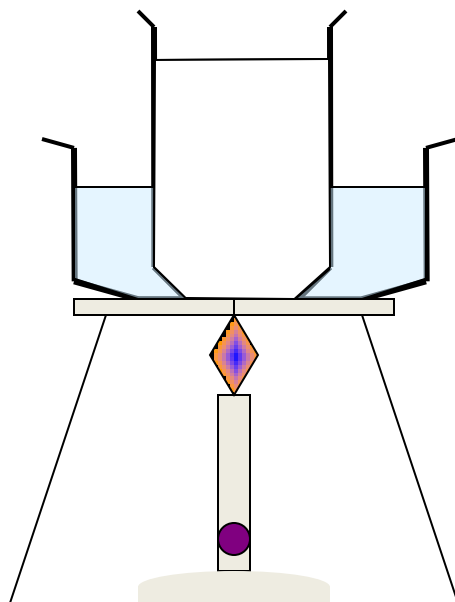


Dissolve the impure compound in a minimum volume of hot (near boiling) solvent.

Add solid to solvent

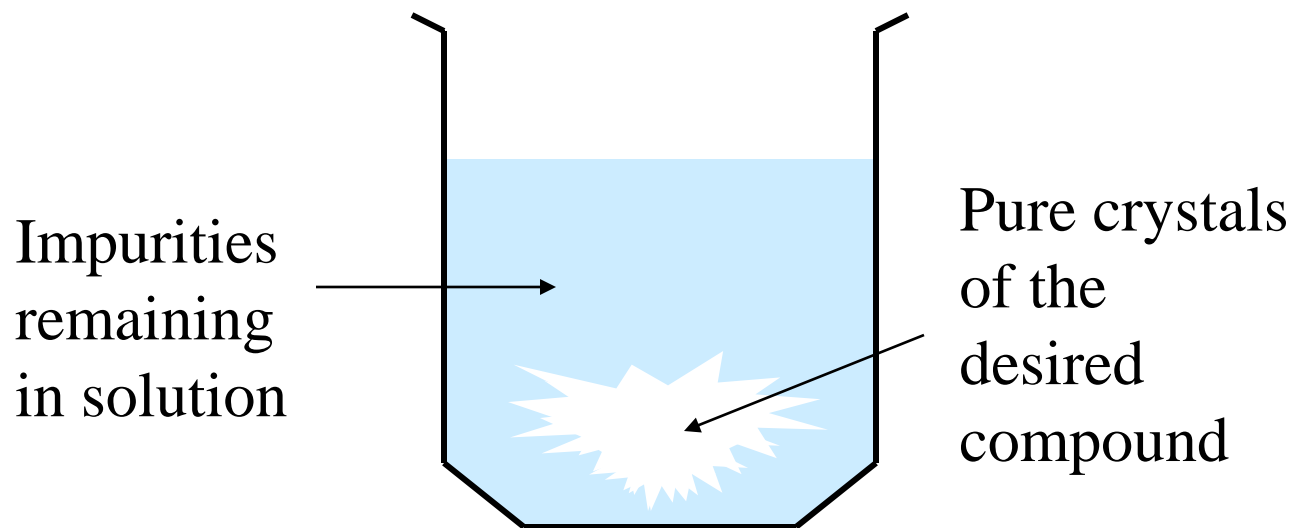
Heat mixture to dissolve solid with stirring

Place beaker in water bath

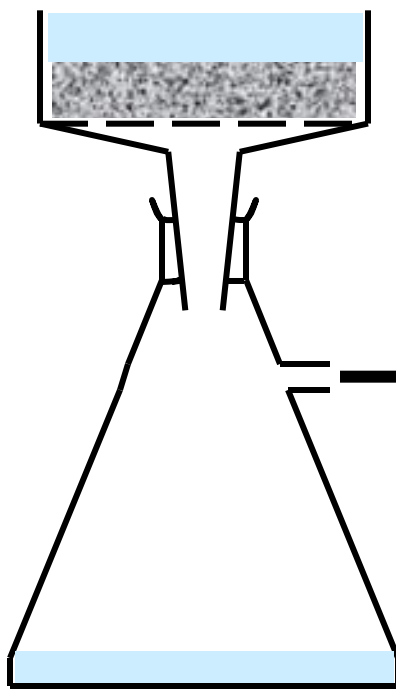


Add additional solvent until fully dissolved

Solution cooling slowly



Transfer  
crystals  
into funnel



Followed by  
remainder of  
solution

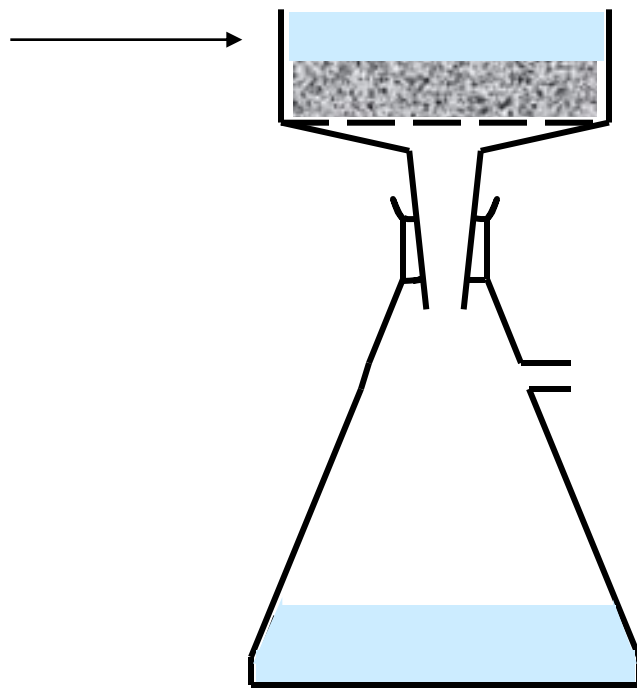


Apply suction





Cover crystals  
with a little cold  
solvent



Apply suction

**For more information's please watch video P-8**

*THANK YOU*