

Purification

Chemistry

Separating and purifying a solid product.

Recrystallising a crude solid.

1

Dissolve in minimum hot solvent

Minimum, or the yield falls.

2

Hot filter if needed

Removes insoluble impurities while everything else stays dissolved.

3

Cool slowly

Slow cooling gives larger, purer crystals.

4

Filter under reduced pressure

Büchner funnel; soluble impurities stay in the filtrate.

5

Wash with cold solvent, then dry

Cold, or you redissolve the product.

PURITY CHECK

Melting point: sharp and matching the literature

Impure solids melt lower and over a range

A depressed and broadened melting range is the classic sign of impurity, and is why melting point is the standard purity check.