

Safe Working Procedure for the Distillation of Ethyl Acetate and Hexane

This procedure is written for vertically mounted stills.

Preparation

Fill the flask to the indicated level with the desired solvent. Heat at the indicated power level so that the solvent distils into the collecting flask. When the collecting flask is full, turn the still off. The distilled solvent may be collected.

Precautions

Before starting

1. ensure there are no sources of ignition (e.g. heat guns) in the vicinity

When pouring solvent into the flask:

1. the contents of the flask must be well below boiling so that hot vapour does not escape and ignite
2. use a funnel to avoid spills
3. ensure that the solvent bottle is entirely in the fume cupboard during pouring so that, if it is dropped, any spill will be contained in the fume cupboard

After filling the flask:

1. Check that all joints are tight and that the still is firmly held by the clamps
2. Ensure that the collection stopcock is closed
3. Ensure that the cooling water is on (check water flow monitor)
4. Do not overheat
5. Remove the bottle of solvent from the fume cupboard
6. Check that the still contains anti-bumping granules

During distillation

1. Periodically check that cooling water is flowing and that the solvent is not refluxing at too high a point in the condenser.
2. Periodically check that the solvent is boiling smoothly.

When distillation is complete

1. After turning off the power, wait for the still to cool before draining the solvent into a bottle. The remaining solvent in the flask must be well below boiling during this process.
2. The bottle of distilled solvent must be taken to the solvent store

The following personal protective equipment (PPE) are to be used:

Safety glasses, Labcoat, Latex gloves, Long pants, Covered shoes

Be aware of the location of the fire extinguisher, the fire blanket and the safety shower

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