

6/ distillation of an organic mixture

procedure

- 1 Place 1.25 mL of cyclohexane, 1.25 mL of toluene and a spin vane into a 5 mL conical vial. Attach a Hickman head and a water condenser as shown by your instructor. Finally, place a thermometer into the apparatus so that its bulb is in the middle of the joint between the vial and the Hickman head.

- 2 With water running slowly through the condenser, *gently* heat the mixture on an aluminum block. If the mixture is heated too rapidly, the separation will be poor.

- 3 As it collects in the Hickman head, distillate can be removed through the small opening in the side of the distillation head. Collect a total of 3 fractions - each of about 0.7 mL. Label each fraction with the temperature range at which it was collected.

- 4 As the apparatus cools to room temperature, take your three fractions to room 108 for analysis by gas chromatography.

health & safety notes

Cyclohexane and toluene are flammable liquids. Cyclohexane is an irritant. Toluene is toxic.