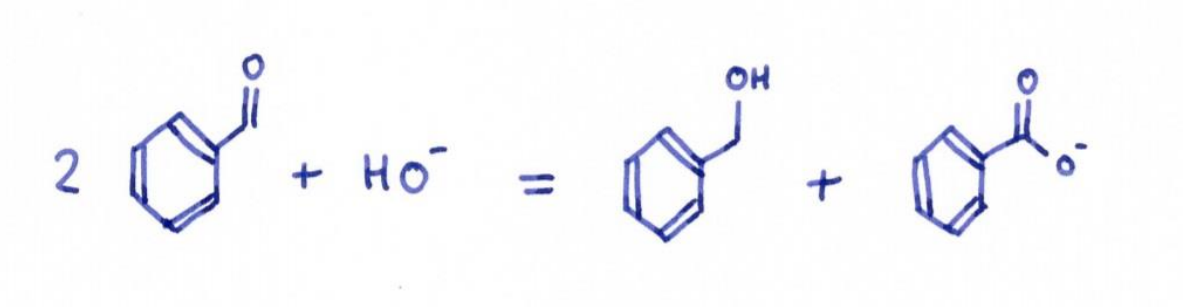
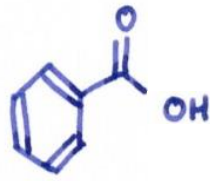
Documents pédagogiques :
Séparations, purifications, contrôles de pureté

Réaction de Cannizzaro

Equation bilan

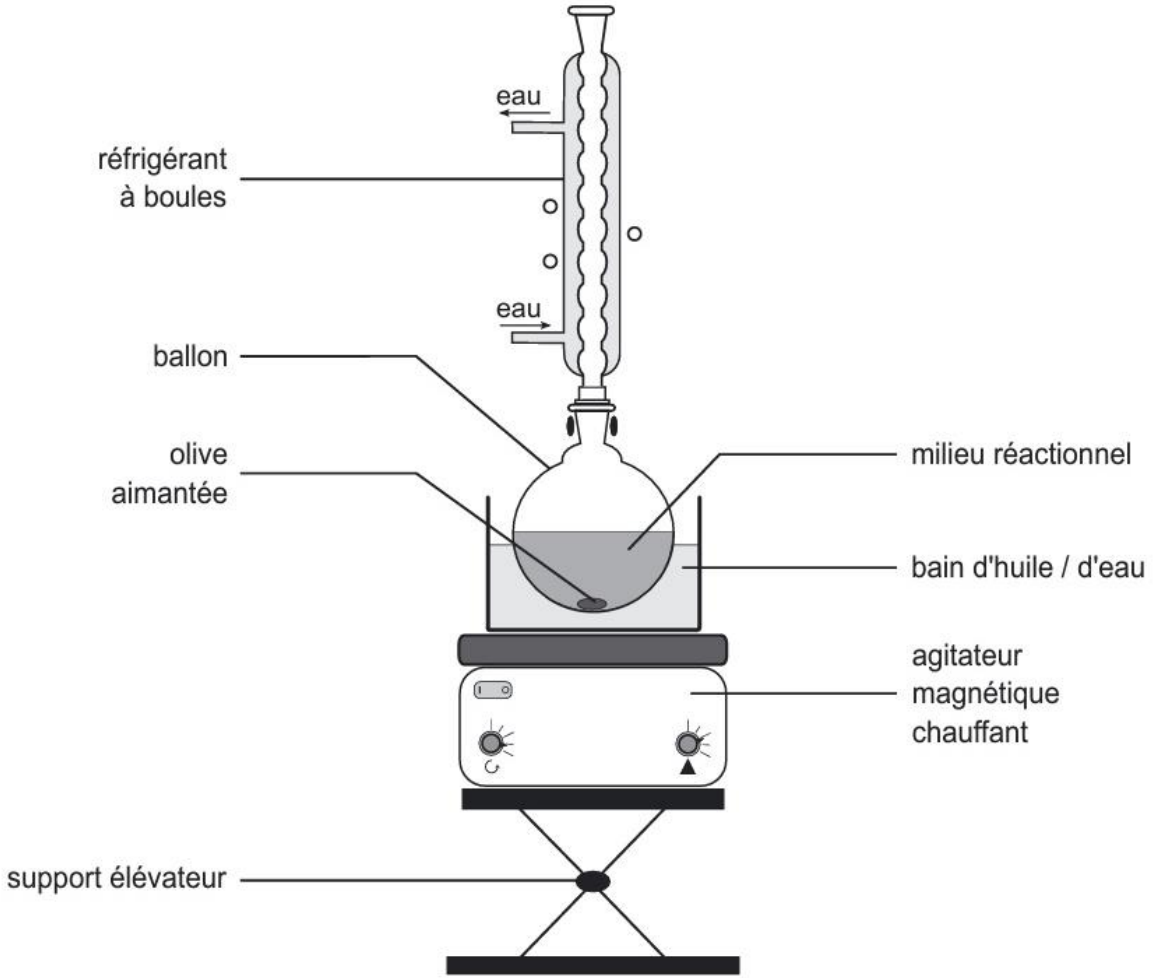


Benzaldéhyde Alcool benzylique Ion benzoate

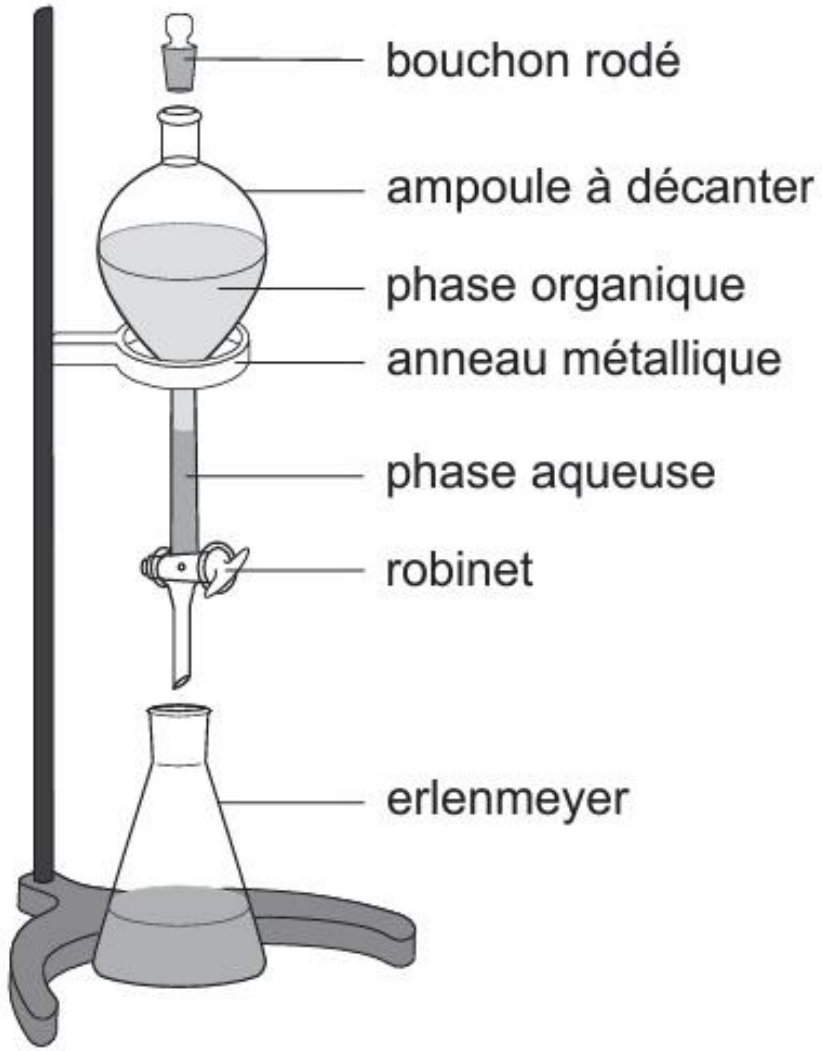


Acide benzoïque

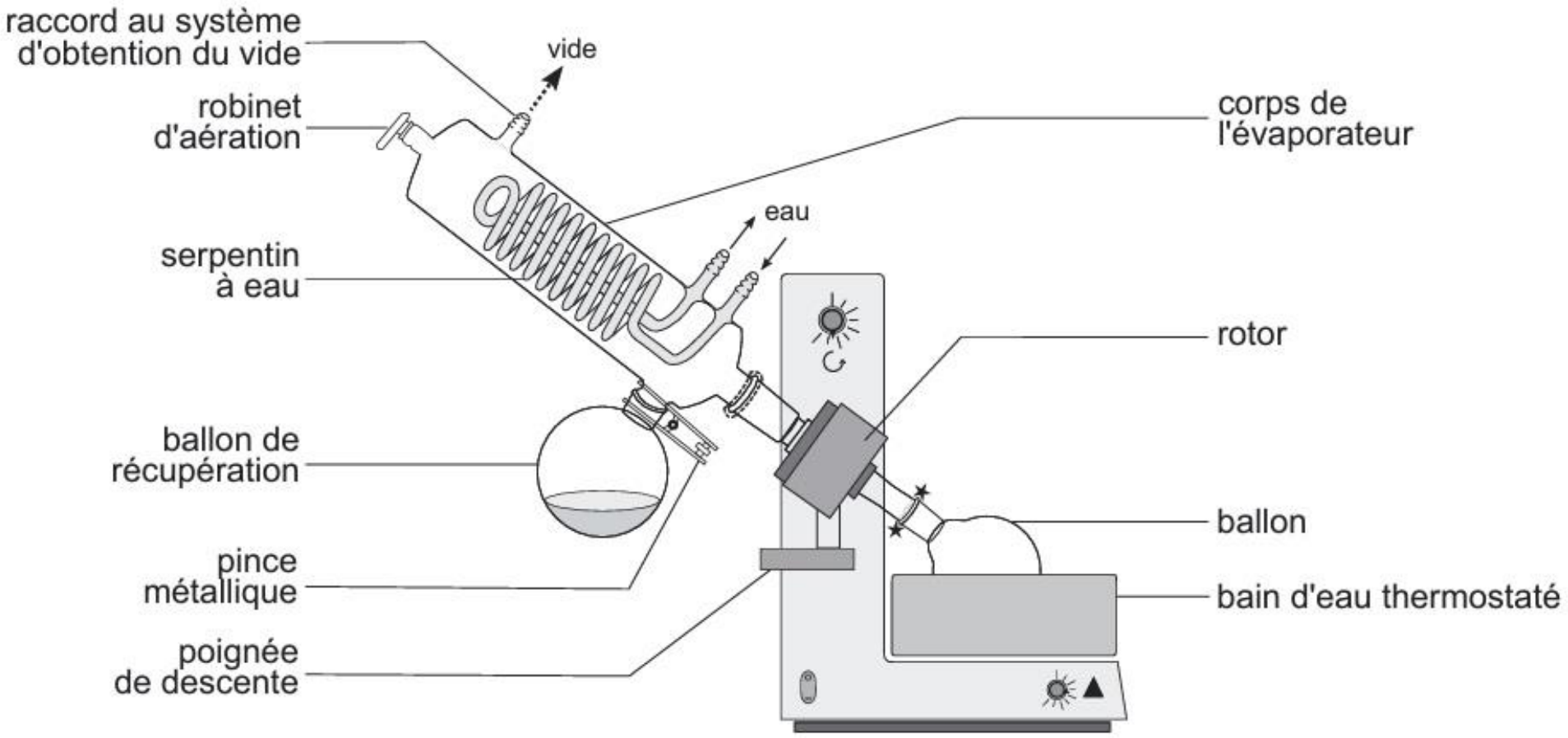
Montage à reflux



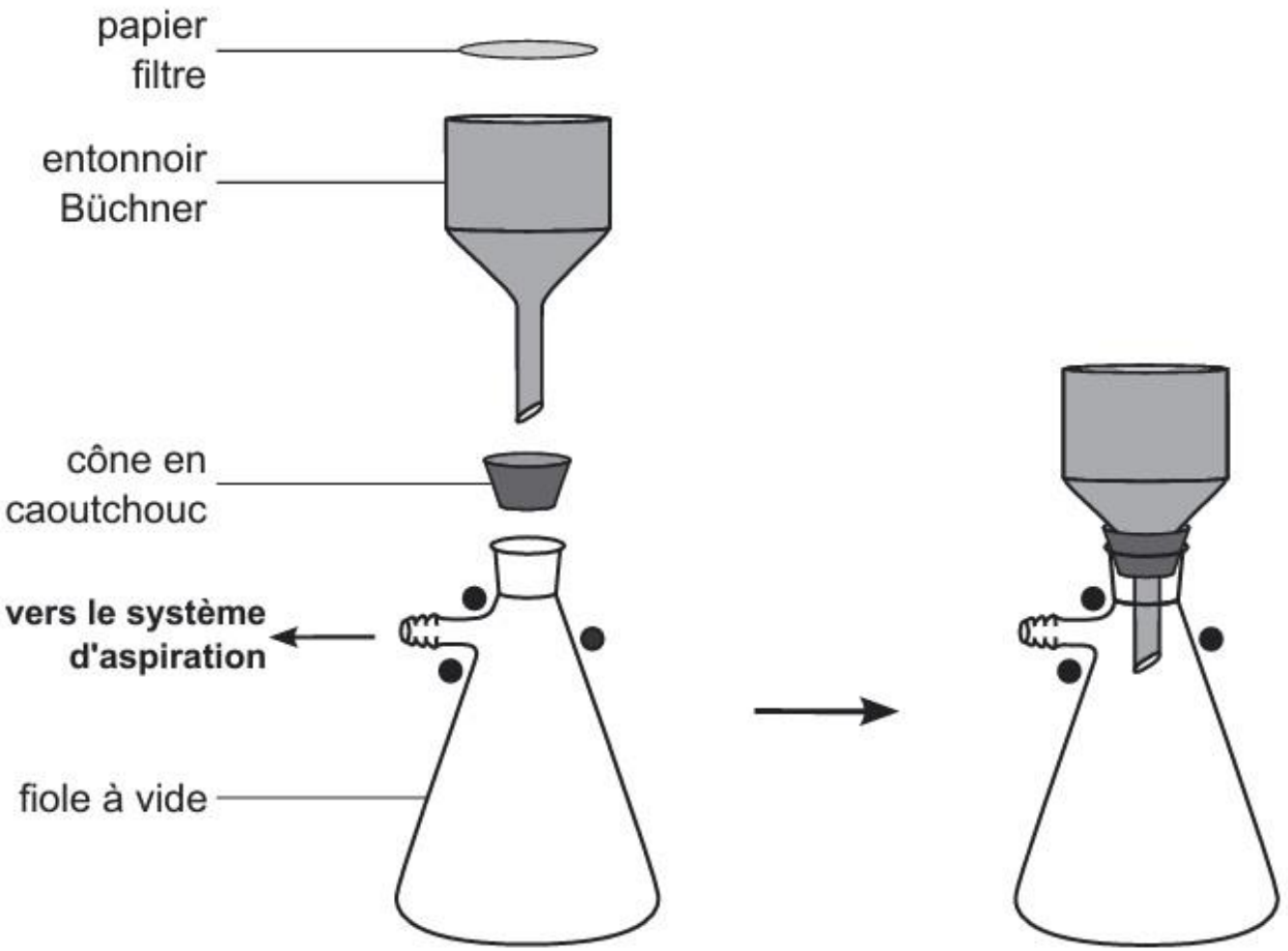
Ampoule à décanter



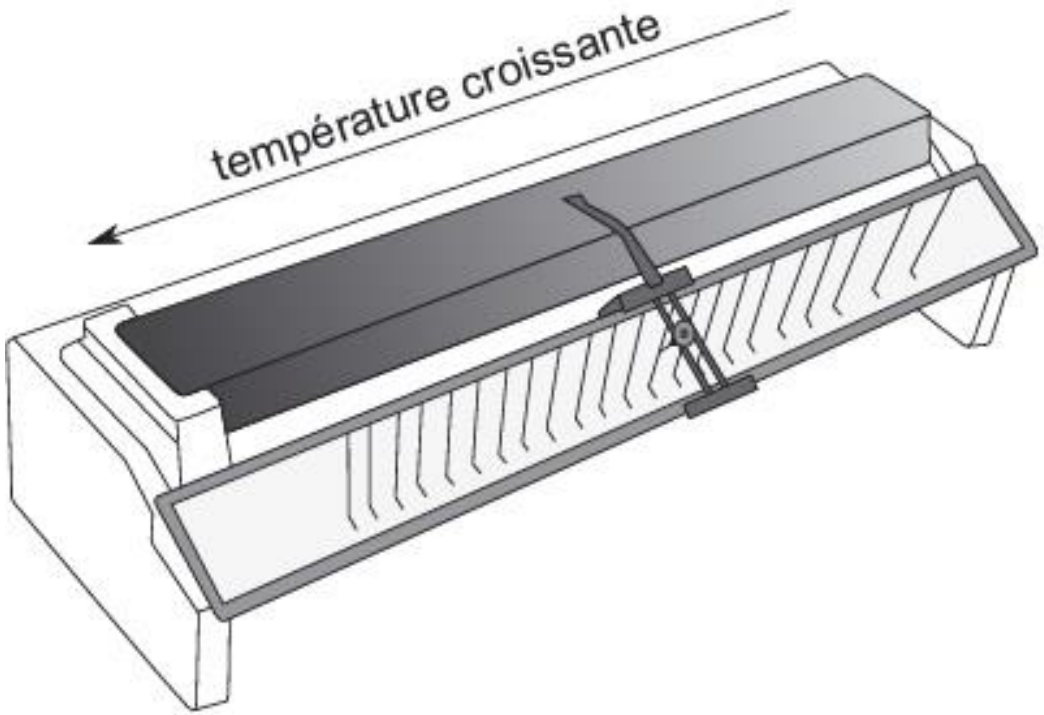
Evaporateur rotatif

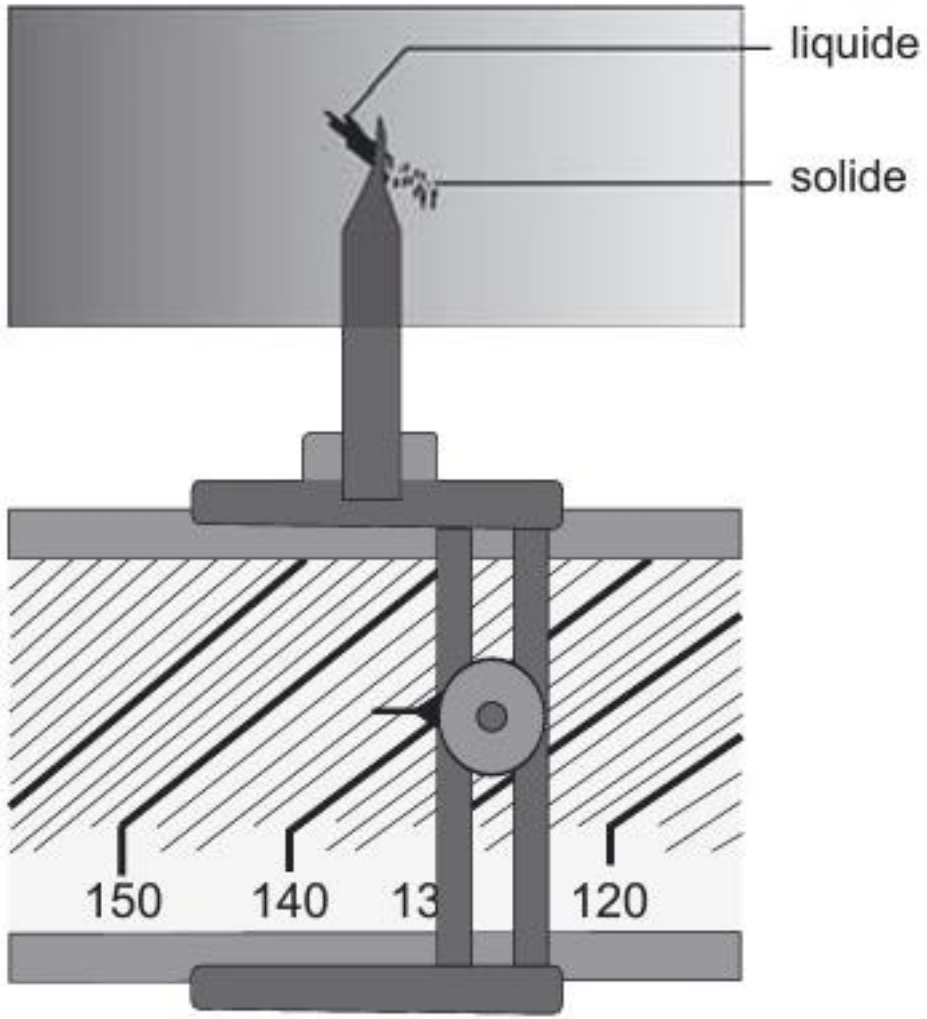


Filtre Büchner

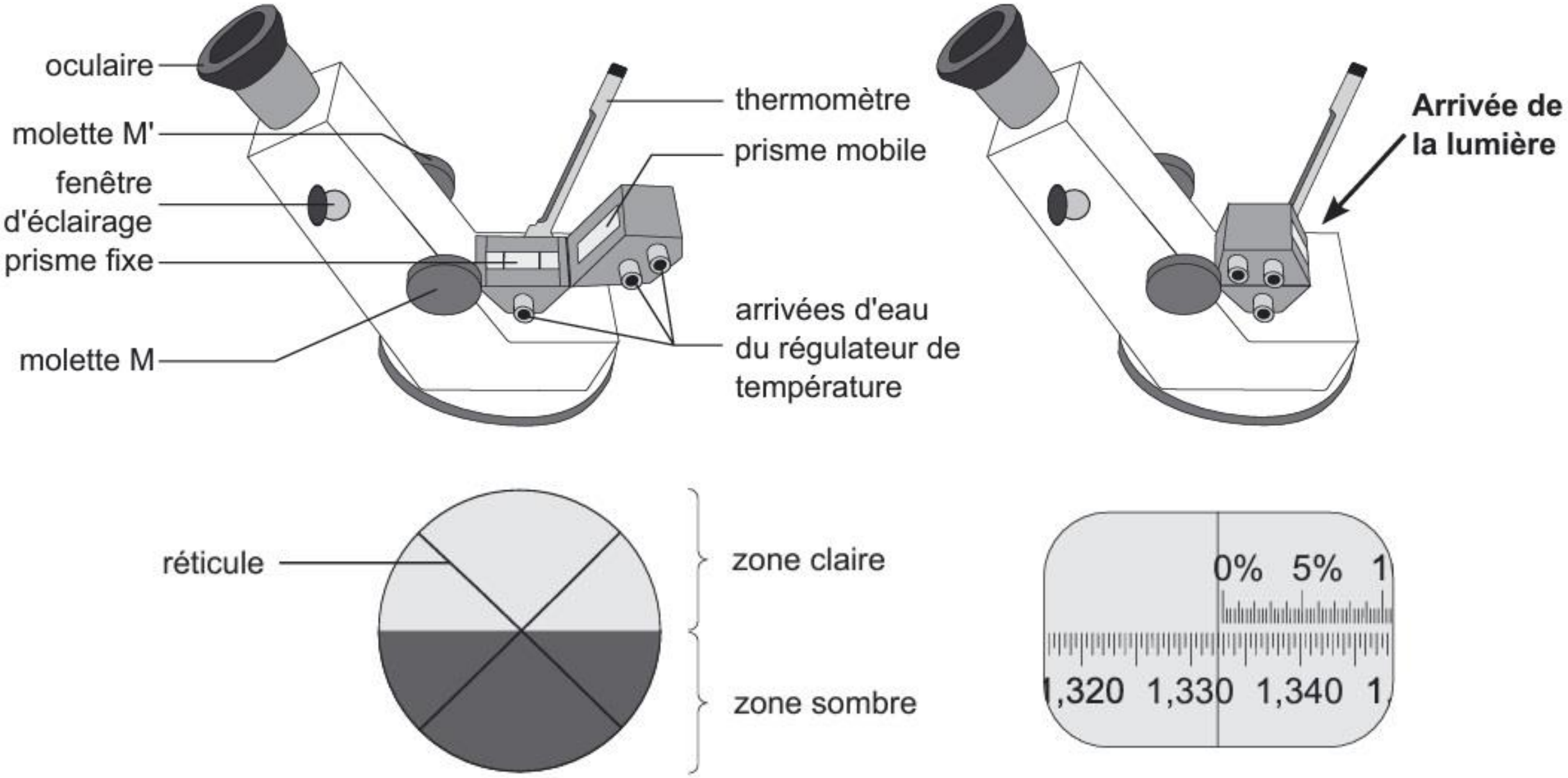


Banc Kofler

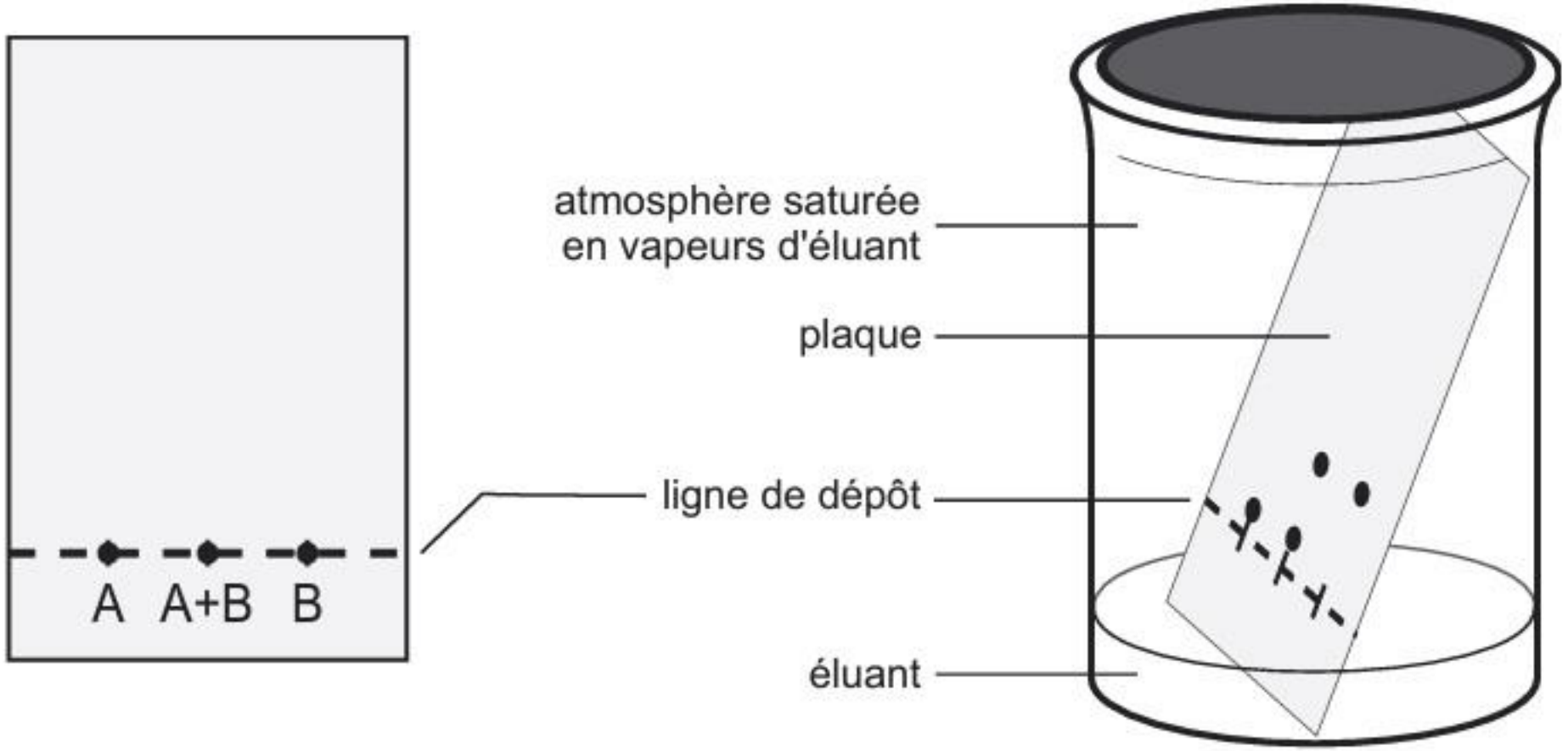




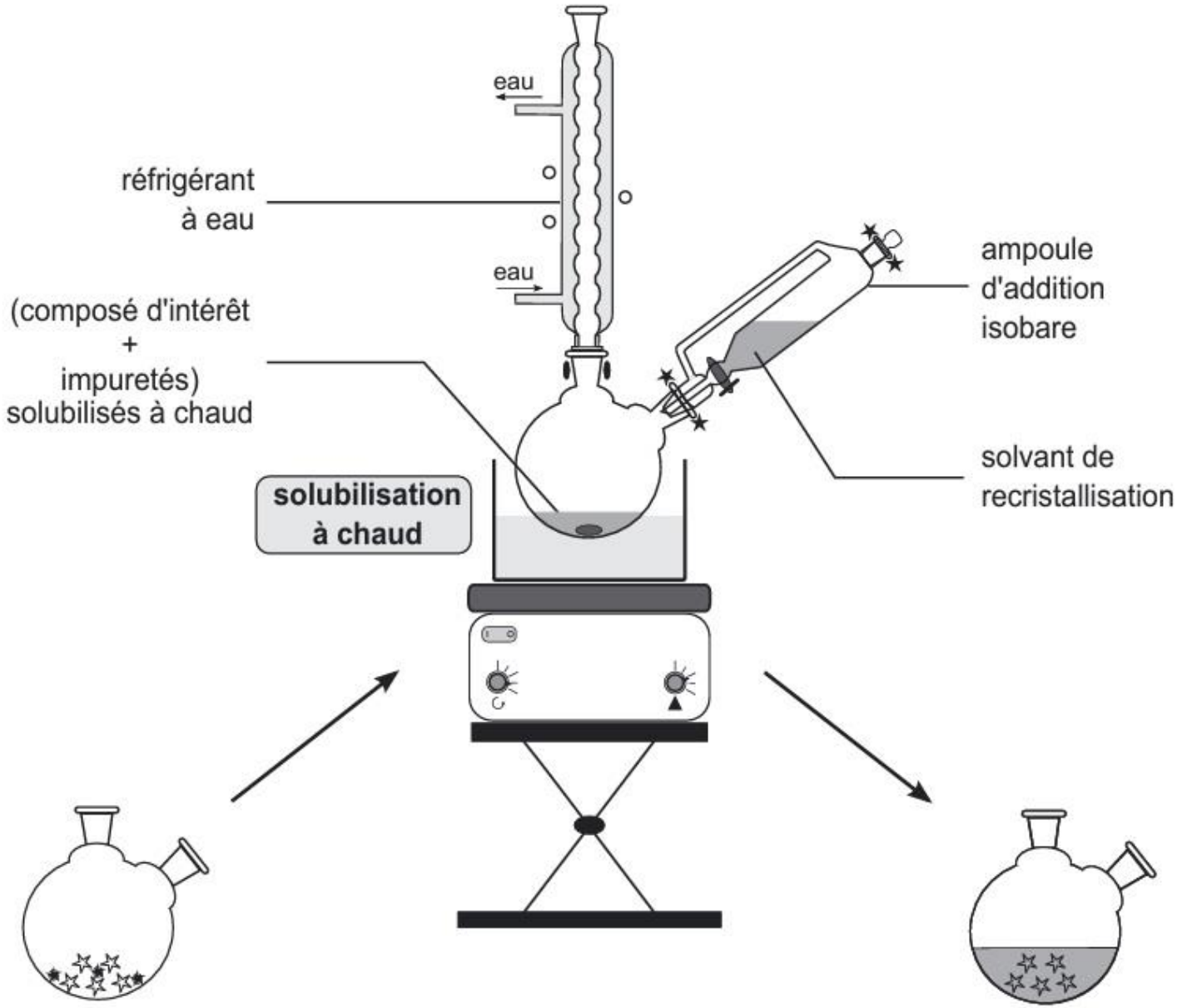
Réfractomètre



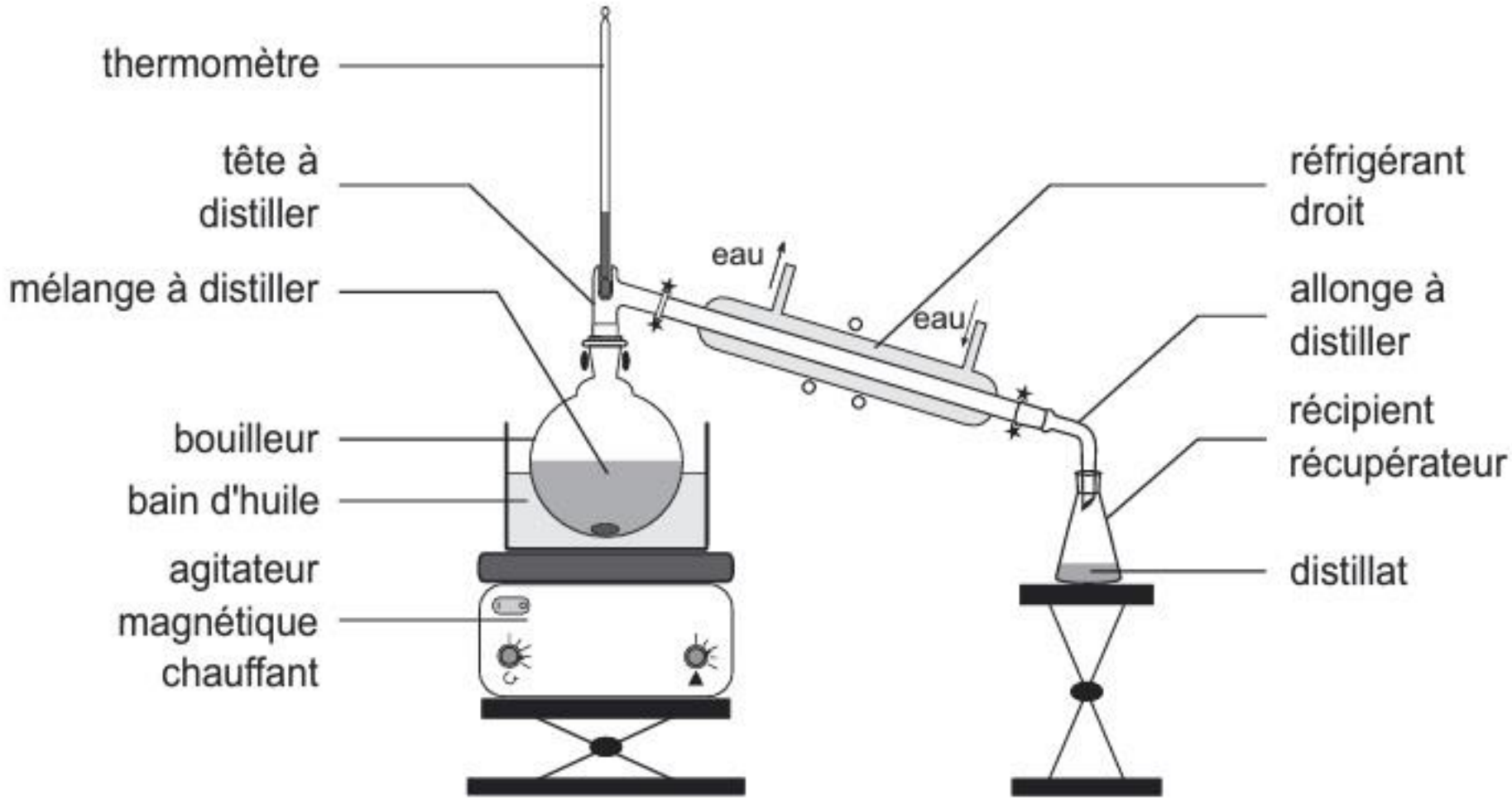
Chromatographie sur couche mince



Recristallisation



Distillation

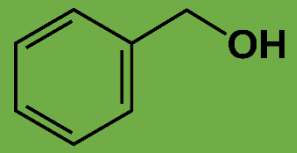
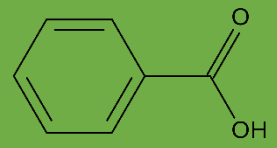


Rendements des transformations

	2 benzaldéhyde	HO^-	=	Alcool benzylique	Ion benzoate
État initial	n_0	excès		0	0
À t	$n_0-2\xi$	excès		ξ	ξ
État final	0	excès		$n_0/2$	$n_0/2$

$$\eta_{sol} = \frac{n_{acide\ benzoïque\ pur}}{n_0/2} = \frac{m_{acide\ benzoïque\ pur}}{M_{acide\ benzoïque}} \frac{2M_{benzaldéhyde}}{V_{benzaldéhyde}\ \rho_{benzaldéhyde}}$$

$$\eta_{liq} = \frac{n_{alcool\ benzylique\ pur}}{n_0/2} = \frac{m_{alcool\ benzylique\ pur}}{M_{alcool\ benzylique}} \frac{2M_{benzaldéhyde}}{V_{benzaldéhyde}\ \rho_{benzaldéhyde}}$$

	Produit liquide *Alcool benzylique* 	Produit solide *Acide benzoïque* 
Séparation	1. Extraction liquide-liquide 2. Séchage 3. Évaporation du solvant	1. Essorage sur filtre Büchner 2. Lavage 3. Etuvage
Contrôles de pureté	• Chromatographie sur couche mince • Réfractométrie	• Chromatographie sur couche mince • Mesure de température de fusion sur banc Kofler
Purification	• Distillation simple • Distillation fractionnée • Chromatographie sur colonne	• Recristallisation
identification	• Spectres d'absorption IR/UV/Visible • RMN	• Spectres d'absorption IR/UV/Visible • RMN