FUNDAMENTAL
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Lab.343

Experiment (7)

Three component system

Types of liquides

- Miscible

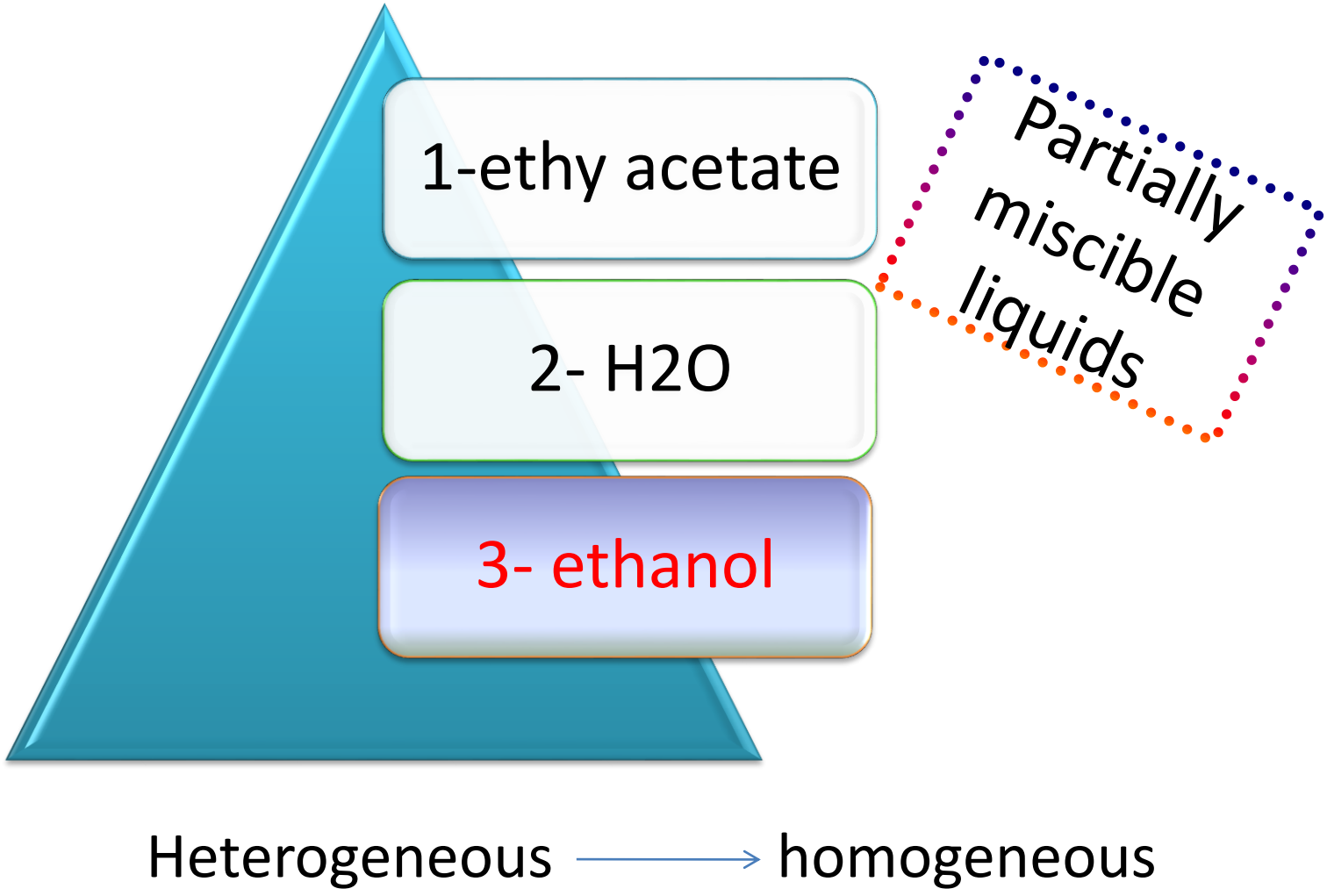
  Ex. $H_2O + CH_3COOH$

- Partially miscible

  Ex. H_2O + Phenol

- Immiscible

  Ex. H_2O + Oil


1-ethy acetate
2- H2O
3- ethanol
Partially miscible liquids
Heterogeneous
homogeneous

1- H_2O

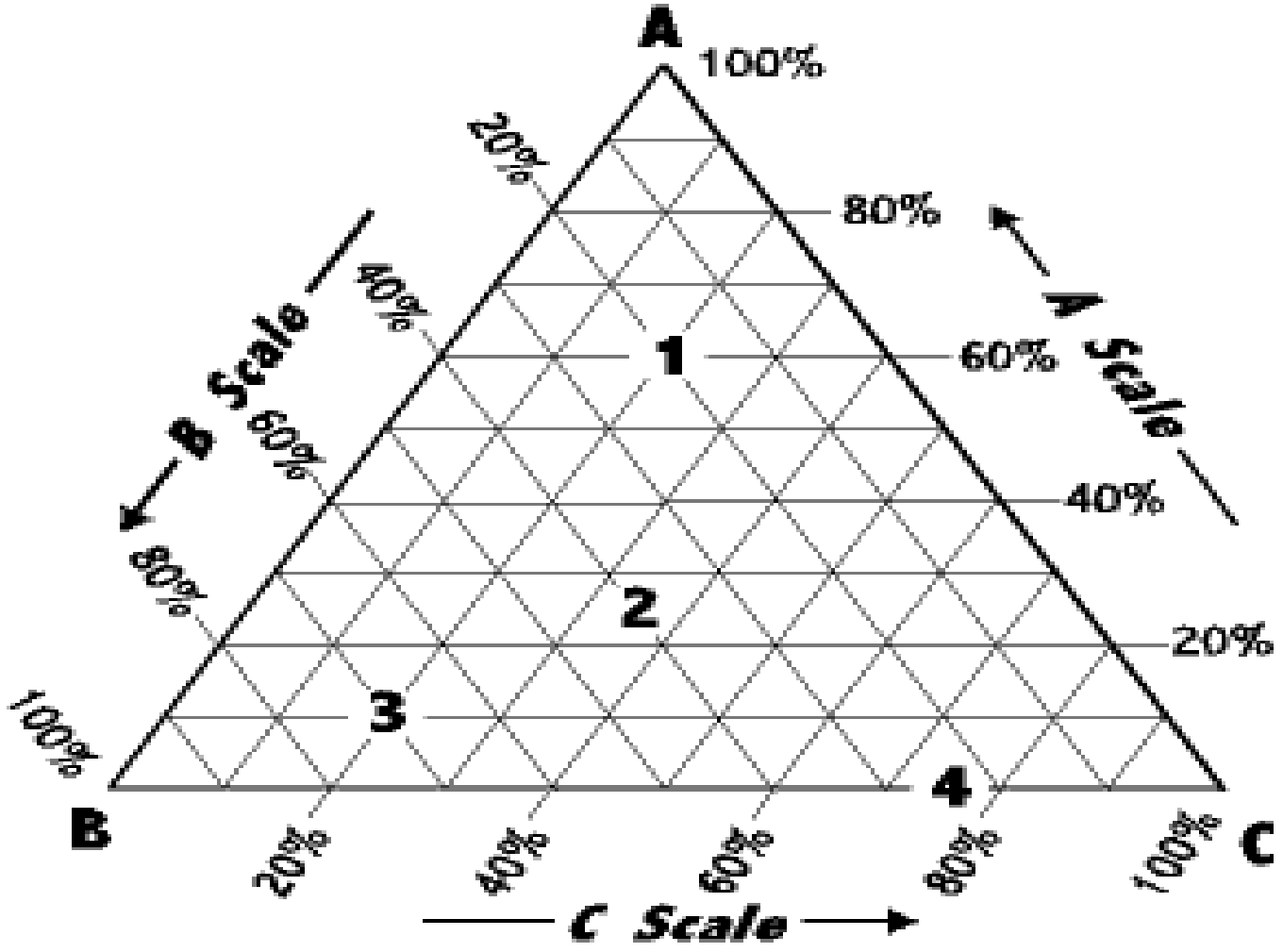
2- ethanol

3-ethy acetate

miscible liquids

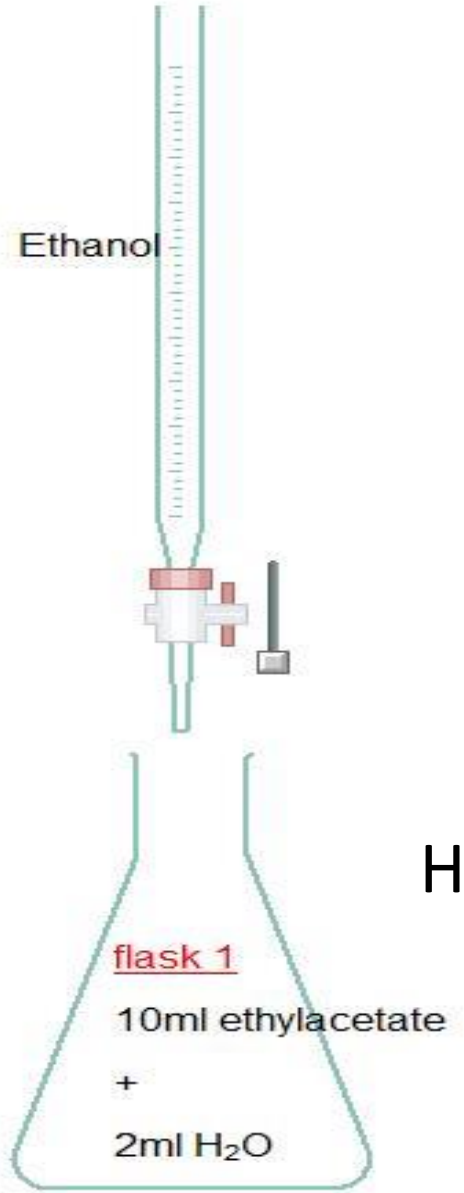
Homogeneous ⟶ Heterogeneous

Equatorial triangle



Procedure:

No. of flask	1	2	3	4	5
Ethyl acetate (ml)	10	8	6	4	2
Water (ml)	2	4	6	8	10
Ethanol	From burtte				



Heterogeneous → homogeneous

Calculation

- Calculate the percentage composition by weight of each mixture.

% by weight = (wt of substance/Total weight)×100

Density of ethyl acetate = 0.894

Density of ethanol= 0.789

Density of water = 0.996

Flask 1

1. % by weight ethyl acetate

$$= (v_1 d_1/(v_1d_1+v_2d_2+v_3d_3))\times 100$$

Ex. (10×0.894/(10×0.894+ 2×0.996+ burtte ×0.789)

)×100 = ……%

2. % by weight water

$$= (v_2 d_2/(v_1d_1+v_2d_2+v_3d_3)\times 100$$

3. % by weight ethanol

$$= (v_3 d_3/(v_1d_1+v_2d_2+v_3d_3)\times 100$$

No. of flask	1	2	3	4	5
% ethyl acetate					
% water					
% ethanol					