

37 Thin-layer chromatography – Part 1

Name: _____ Class: _____ Date: _____

Vocabulary

Write each word three times.

English**Write it 3 times** (English)

Chromatography

stationary phase

mobile phase

thin-layer chro-
matography

baseline

solvent front

Recall

Chromatography separates a mixture using two phases – one that stays still and one that moves.

New ideas

Read these first, then do the Practice.

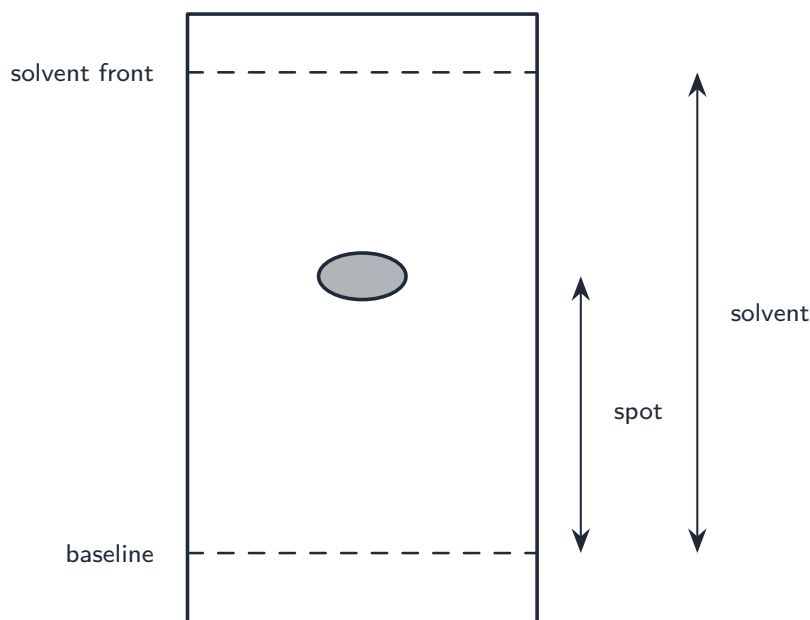
■ 1 The two phases

stationary phase
stays still

mobile phase
moves (the solvent)

- the **stationary phase** stays still (e.g. on a TLC plate);
- the **mobile phase** moves (a solvent travelling up the plate).

■ 2 A TLC plate



In **thin-layer chromatography** (TLC), spots are placed on the **baseline**; the solvent rises to the **solvent front**, carrying each substance a different distance.

Watch out: every method has a *stationary* phase (stays still) and a *mobile* phase (moves). A substance separates by how strongly it sticks to the stationary phase versus how well it dissolves in the mobile phase.

Practice

Try these in order.

37.1 What does *chromatography* separate?

[1]

37.2 Which phase stays still? [1]

37.3 Which phase moves? [1]

37.4 Where are the spots placed on a TLC plate? [1]

37.5 What is the highest level the solvent reaches called? [1]

37.6 Challenge. On a TLC plate, two substances travel *different* distances up the plate. Explain why, in terms of the two phases. [2]
