

THIN LAYER CHROMATOGRAPHY (TLC)

- THE THREE STEPS -

- (1) SPOTTING: APPLYING SAMPLE TO THE TLC PLATE.

A TINY DROPLET OF A VERY DILUTE SOLUTION OF SAMPLE IN A VOLATILE (EASILY EVAPORATED) SOLVENT IS APPLIED TO THE PLATE.

THIS "SPOTTING" SOLVENT EVAPORATES AND LEAVES BEHIND A TINY SPOT OF THE SAMPLE ON THE PLATE.

- (2) DEVELOPMENT: THE PLATE IS PLACED INTO A SHALLOW POOL OF "DEVELOPMENT" SOLVENT. SOLVENT MOVES UP PLATE AND OVER THE SPOT BY CAPILLARY ACTION. AFTER DEVELOPMENT IS COMPLETE, REMOVE PLATE AND ALLOW SOLVENT TO EVAPORATE.

- (3) VISUALIZATION: COLORED COMPOUNDS SHOW UP DIRECTLY AS DISTINCT SPOTS.

COLORLESS COMPOUNDS MUST BE MADE VISIBLE BY TWO METHODS:

- (1) U.V. LIGHT
- (2) IODINE VAPOR