Experiment 7: Phenylketonuria

- 1. You will be provided with a silica gel plate, standard of phenylalanine, and 2 urine samples.
- 2. With a pencil draw a line about 2 cm. Draw the line gently so as not to break the surface of the gel. At equally spaced intervals mark the line at three different places using the tip of the pencil on the silica gel plate.
- 3. Carefully spot the standard, urine patient and normal urine with a 5 μ l pipette or spot it by capillary tube.
- 4. Place the gel coated plate in the chamber.
- 5. When the solvent front is between 1 and 2 cm from the top of the gel, remove the chromatogram from the chamber and mark the position of the solvent front.
- 6. Dry the plate in a stream of cold air in the fume cupboard. Locate the spot by spraying the plate with 0.2% ninhydrin and heating the plate briefly at 100° C in an oven.
- 7. Calculate the Rf value for each spot.
- 8. Determine which urine sample containing phenylalanine

Sample	Relative flow
standard of phenylalanine	
Urine Sample 1	
Urine Sample 2	

Relative flow= Distance of migration of solute	
Distance moved by solvent	
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