

Hints for Lab 12 – Physical Properties of Cells

Molecular weight has an effect on diffusion rates

HCl



NH₃

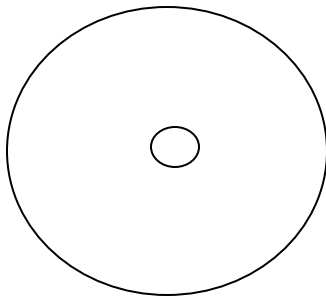
weighs 36.5

weighs 17

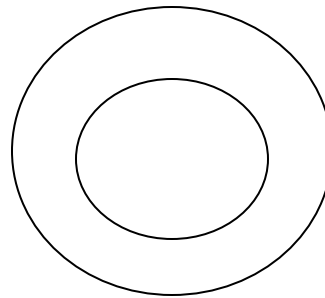
lighter substances diffuse faster and farther

Temperature has an effect on diffusion rates

ice cold



room temperature



at colder temperatures diffusion rates are reduced

Hypotonic, isotonic and hypertonic solutions

Place 3 pieces of potato in beakers with hypotonic, isotonic and hypertonic solutions

Do they get lighter, stay the same or get heavier and why?

If the potato has an internal salt concentration of about 1% what is an appropriate salt concentration for a(n):

hypotonic solution?

isotonic solution?

hypertonic solution?

Vocabulary to know

Know the definition for these words:

diffusion

plasmolysis

cytolysis