



a WOW Lab

BLUEPRINT

Gel Electrophoresis

Glossary

agar - an uncharged complex network of carbohydrates which is extracted from a type of seaweed.

buffer agent - a weak acid or base that resists changes in pH.

buffer solution - water mixed with a buffer agent that gives a solution properties such that it can resist pH changes when exposed to strong acids and bases.

control sample - used to verify that the set-up is running correctly and used at the end to compare the distance that the samples travelled.

deoxyribonucleic acid (DNA) - self-replicating material present in all living organisms. DNA is made up of nucleotides.

electrode - a conductor that allows electricity to enter or leave the object or substance. There are two electrodes: positive and negative.

gel - a mixture of water and agar that creates a solid substance once heated and then cooled.

gel electrophoresis chamber - plastic container in which the experiment takes place.

gel electrophoresis - a scientific method used to separate DNA, RNA or proteins.

protein - a chain of amino acids made during translation that have numerous roles inside a cell.

ribonucleic acid (RNA) - a biological molecule consisting of a long chain of nucleotides transcribed from DNA molecules and used during translation to make proteins.

sample - a small quantity intended to represent an entire substance.

sample comb - styrofoam piece that is used to create sample wells in the gel.

sample wells - holes in gel where samples are placed.