



Additional Information

Gel electrophoresis is a commonly used technique to separate fragments of DNA, RNA or proteins and has many applications in various fields. A few examples of its numerous applications are provided below.

In the pharmaceutical industry, DNA analysis can be used to help determine which genes may play a role in cancer or certain diseases.

In evolutionary biology, DNA profiles can be used to compare different species in order to determine the relationships between species and construct phylogenetic trees.

In zoology, DNA profiling can be used to examine kinship between individuals or populations. This information can also be used to minimize the negative effects of inbreeding in captive breeding programs.

In medicine, analyzing DNA can determine if an individual has certain genes that make him or her more susceptible to certain types of cancer or certain disease. For example, possessing a mutated form of the BRCA1 gene is known to increase susceptibility to breast cancer.

In forensics, DNA, which is known to vary among individuals, can be used to identify suspects when compared to DNA left at a crime scene.

In screening for disease, gel electrophoresis can be used to test for certain genetic diseases such as Huntington's disease, sickle cell anemia and Duchenne muscular dystrophy.