

How to get DNA from Plant Cells

Some background

DNA, the genetic material, is a nucleic acid located in the cell's nucleus and is bound to several types of proteins. The nuclear and the cell membranes are a tough protective barrier, made of lipids and proteins, which need to be eliminated in order to release the DNA. The process of extracting DNA from a cell is the first step for many laboratory procedures in biotechnology. The scientist must be able to separate DNA from the unwanted substances of the cell gently enough so that the DNA is not destroyed.

Your objective . . .

. . . is to design a procedure to extract DNA from plant cells. There are two important considerations to keep in mind as you work. First, think about the type of plant cell you want to use. Second, be aware of the membranes that surround and protect DNA as well as the proteins that DNA is bound to. You may have to look back at your notes on macromolecules to help you decide how to handle these membranes and proteins.

You will be evaluated based on the success of your extraction.