

DNA Extraction from Strawberries

by Tania Blanksby, Jodie Young

Experiment Overview

Ordinary household ingredients are used to extract DNA from strawberries. This experiment enables students to use their knowledge of cellular structure to explain concepts behind DNA extraction. This is a very crude extraction but an effective way to illustrate how DNA extraction works.

Learning Experience

The experiment was submitted to the workshop after survey results of the students rated this practical highly. We are hoping to determine the educational benefits of this practical.

Aims and Objectives

Aims:

This practical class aims to familiarize the students with some basic concepts involved in DNA extraction.

Objectives:

At the end of this class the student should be able to utilize their knowledge of cellular structure to explain concepts behind DNA extraction

Level of Experiment

This experiment can be taught at multiple levels from junior to senior high school or first year university. At the junior levels, students are able to see the DNA, by senior high or first year university they are expected to understand how the extraction is occurring. At the senior levels students can see how this crude extraction compares to how scientists extract DNA.

These methods can vary depending on what the samples are and how they will be used.

Keyword Descriptions of the Experiment

Domain

DNA extraction, Cellular structure, Genetics, Molecular Biology

Course Context and Prerequisite Knowledge and Skills

Description of relationship to the course being taken by the student

Students need to understand cellular structure in plants and animals, where the DNA is

Time Required to Complete

Prior to Lab: 30 minutes

In Laboratory: 60 minutes

Experiment History

This experiment has been run in the department for the past 10 years.