SAMPLE RISK ASSESSMENT (inc COSHH)

Extracting DNA – For Demonstration/Class Activity

Specific ☐ ✓ **Generic** ☐ **Please tick** **Date:** 25/09/06

Attach additional sheets if required at any section.

Substances Involved and Hazards Identified: e.g. Biological*; Radioactive*; Toxic, Explosive, Inflammable, Carcinogenic	
Substance	**Hazard**
Bicarbonate of soda	Irritant
Isopropyl alcohol	Flammable. May be harmful by inhalation, ingestion or skin absorption. May act as an irritant.
Ethanol	Flammable. May be harmful by inhalation, ingestion or skin absorption. May act as an irritant.
Soap	Irritant.

Equipment used & Hazards Identified (Please Tick)		
Apparatus ✓	**Cryogenic**	**Electrical**

Scheme of Work/Procedure

A solution of a teaspoon of bicarbonate of soda, a quarter teaspoon of salt and a teaspoon of detergent in water (120 ml) is made up in a 250 ml beaker. Half a tomato is mashed through a tea strainer with a metal teaspoon into a beaker. 20ml of the soap is added to the mixture which is stirred to break open the cells. The tomato solution is sieved back through the tea strainer into a 50ml beaker. Add a dropper full of ice cold alcohol (Isopropyl alcohol (IPA)/Ethanol) is added to form a layer over the tomato solution. A cocktail stick with a rough edge is used to fish out the DNA formed between the 2 layers. Any DNA found is put into a sample vial to take home.

Particular Control/Safety Measures to be Adopted: Both Engineering and Personnel, e.g. Fume Cupboard, Gloves, Blast screen
Safety goggles, lab coat
EMERGENCY PROCEDURES (a) Spillage (b) Fire (c) Other **a) Wipe up and rinse affected area** **b) Extinguish fire with media appropriate to it's nature**
First Aid Treatment Get medical aid immediately.
Waste Disposal Procedures Domestic Waste.
Information Sources **Material Safety Data Sheets**
Name of Assessor **Signature**