# **DNA Extraction Protocol**

1. Add lysis buffer (=detergent)

-lyse means “break open”; detergent dissolves the cell membrane & nuclear membrane (phospholipid bilayer); best at warm temperature (think about using detergent when washing dishes)

1. Add protease (enzyme) or meat tenderizer.

-breaks down all the protein.

1. Heat

-protease works best at 50 °C.

1. Ice

-help precipitates the DNA

1. Add Salt

-positively charged sodium ions of the salt are attracted to the negative charges of the DNA (due to phosphate backbone), neutralizing the electrical charge of the DNA.

1. Add cold Ethanol

-precipitate nucleic acid (DNA)

2

2

1

2

1

2

**Fats**

**Sugars**

**Protein**

In lysis buffer;

protease (at 50°C);

and salt/ethanol

**+**

*DNA (Nucleic Acid)*

## **Fats**

## **Sugars**

DNA (nucleic Acid)

### in lysis buffer

**+**

#### *Protein*

**Fats**

**Sugars**

**Protein**

DNA (Nucleic Acid)

In lysis buffer &

protease (at 50°C)