

Project 1 Mouldy bread experiment health and safety

Equipment list

Equipment	Quantity
Marker pen	1
Knife	1
Sandwich bags	9 (this includes repeats if you don't want to do repeats you can just use 3)
Bread slices	9 (this includes repeats if you don't want to do repeats you can just use 3)
Ruler	1 (at least 10cm)
Plastic grid	1 (I used a slightly larger sandwich bag)
3 different temperature areas	In a room, in the fridge, in a freezer

Associated risks

We advise that these practicals are done under adult supervision.

Hazard	Risk
Sandwich bags	Can be a choking hazard for smaller children
Knives	Sharp and can cause serious cuts
Mould grown	The microorganisms grown are hazardous. It is really important that the sandwich bags are not opened after they are initially sealed.

Method

1. Using the sticky labels and the marker pen label the bags. Mark 3 bags as 'A', 3 as 'B' and 3 as 'C'. You also need to label each set of bags 1 to 3.
2. Cut the bread into 10cm x 10cm squares using the chopping board and knife.
3. Put one slice of this bread into each bag and seal the bags tightly.
4. Put the 3 'A' bags into the freezer, the 3 'B' bags into the refrigerator and the 3 'C' bags somewhere safe in a warm room. Because the bags in the freezer and fridge will not be getting much light it is best to cover the 'C' bags to make sure that light is a constant.
5. Every 24 hours, preferably at exactly the same time every day, using the plastic grid, count the number of square centimetres of mould on each slice of bread. If the mould covers more than half a square, count it as 1cm, if less than half a square, count as 0 cm. You must never open the bags.
6. You should repeat these counting processes for 10 days or until there are significant measurable results.
7. Keep a careful note of your results for each slice of bread for the entire duration of the experiment. You can even take pictures or draw the slices if you want to be really scientific!
8. Average the results for sample types A, B and C.
9. Once you have finished, throw out all of the bags without opening them.