

Microbes on the Menu – making yoghurt

Microbes are essential in the production of food and we actually eat food everyday that they help produce, including bread, cheese and yoghurt. Yoghurt is made by two microbes called *Lactobacillus bulgaricus* and *Streptococcus thermophilus* which change the texture of milk. In milk, these microbes use the sugar lactose for energy, creating an acidic waste product. It's this waste that lowers the pH, changing milk proteins that give yoghurt that thicker texture. By lowering the pH, microbes that cause food to go off don't grow, which is why it keeps in the fridge for a few days.

Create your own yoghurt with a little helping hand from some marvellous microbes!

Materials

- 1 pint of pasteurised or UHT milk
- Around 500ml of 'live' yoghurt (probiotic yoghurt)
- Fruit puree (optional)
- Thermos flask or heavy ceramic saucepan
- Food thermometer
- Containers to store yoghurt



Method

1. Heat pasteurised milk to 85 degrees and allow to cool to 46 degrees. This will kill most unwanted microbes and is a nice temperature that your yoghurt-making microbes will love. If using UHT milk, just heat to 46 degrees.
2. Add around 3 tablespoons of your live yoghurt to the milk and pour into a Thermos flask or a heavy ceramic saucepan.
3. Leave for around 8 hours or until you like it - the longer you leave it, the sourer it will taste. Add fruit puree to give it more flavour and store in the fridge for a maximum of 5 days.

For more experiments, download the book at

www.meetthemicrobes.co.uk