**5: Where is that smell coming from?**

Many artificial flavours as well as natural scents are made from chemicals that evaporate easily, and react with our noses. Artificial scents can be manufactured by reacting two different liquids, with the addition of a few drops of acid to make things go faster.

**Instructions:**

1. Take a clean plastic reaction tube, push it into the hole in the styrofoam float and stand it up in the jar.
2. Use the squeeze dropper to put 1mL of rubbing alcohol (isopropyl alcohol) into the plastic reaction tube.
3. Use the other dropper to add 1mL of vinegar (acetic acid).
4. Using a dropper, CAREFULLY add two drops of the hydrochloric acid, and put the dropper back in the holder.
5. Push the lid closed on the plastic tube, and place the float into the hot water bath, where the reaction will occur.
6. After two minutes, take the float out using the tongs, and place it on the jar.
7. Remove the plastic tube from the float, and carefully open the lid - have a sniff, and see if a new scent has been made.
8. Close the lid on the plastic tube, and put it in the bin (some acid will remain in the liquid, so do not splash it on your skin, or take it home).

**What us happening?**

Most fruit and many floral scents are made of chemicals called esters. An ester is made of an acid and an alcohol reacting together. Different combinations make different smells (but not all are nice – rancid butter smell is also an ester). This reaction is very slow, so heating and a bit of acid are needed to make it happen faster.