

Section 1.6: Plant Oils and Their Uses

Plant Oils

- That some plants contain oils, which you can extract.
 - How to get oils out of nuts, seeds and fruits by crushing and pressing them.
 - How to get oils out of other plant material using distillation.
 - That vegetable oils in food provide you with energy and useful nutrients.
 - Why you might choose to cook food in vegetable oil rather than boiling water.
 - That you can make fuels (like biodiesel) from vegetable oils because they contain lots of energy.
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Unsaturated Oils

- That unsaturated oils have double bonds in their carbon chains.
 - That an unsaturated oil will decolourise bromine water.
 - That an unsaturated oil will react with hydrogen in the presence of a nickel catalyst at 60 °C, opening out its double bonds.
This is called hydrogenation.
 - That hydrogenation makes oils harder.
 - Some of the uses of hydrogenated vegetable oils.
 - Why unsaturated oils are better for you than saturated fats.
 - That all oils are fattening because they contain lots of energy.
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Emulsions

- That oil does not dissolve in water.
- That an emulsion is a mixture where lots of tiny droplets of one liquid are suspended in another liquid.
- That you can make an emulsion by shaking water and oil in a sealed container.
- That an emulsion will be thicker than either the oil or water it was made from.
- That salad dressings, mayonnaise, ice creams, moisturisers and paints are examples of emulsions.
- That emulsifiers make emulsions more stable and stop them from separating out.
- That an emulsifier molecule has a hydrophilic end and a hydrophobic end.
- How emulsifier molecules stop emulsions from separating out.
- Some of the advantages and disadvantages of using emulsifiers in food products.