Plant Oils

In a process called photosynthesis, plants use the sun’s energy to produce glucose, a type of sugar, from carbon dioxide and water. It uses a green pigment called chlorophyll to do this.

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\text{carbon dioxide (6CO}_2\text{) + water (6H}_2\text{O) } \rightarrow \text{glucose (C}_6\text{H}_{12}\text{O}_6\text{) + oxygen (6O}_2\text{)}
\]

Other chemicals can be made from the glucose, chemicals such as vegetable oil. These chemical products can be very useful as they can be used as foods and more scientifically, as biofuels.

Oils, such as those found in an oilseed rape plant, can be found in the seeds, and using specific machinery can harvest those seeds. They are pressed and crushed to extract the oil, before the oil impurities are removed.

Steam is another extracting method. Lavender oil can be extracted via distillation, where lavender plants are put into water and boiled. The oil and water evaporate together before the water along with any other impurities, are removed.

As food, vegetable oils hold an important role. All vegetable oils have molecules which contain chain of carbon and hydrogen atoms. In some oils, the hydrogen and carbon chains, known as hydrocarbon chains, contain C=C bonds, double carbon bonds. These make unsaturated oils, and with good use of bromine water, can be detected. Bromine water is an orange liquid, but when mixed with an unsaturated oil, becomes colourless.