

Water

Many gases are soluble in water to some extent.

Most ionic compounds are also soluble.

Covalent compounds are almost impossible to dissolve in water.

Solute - substance which dissolves

Solvent - liquid the substance dissolves into.

solubility - amount of solute which dissolve into a certain amount of solvent (usually measured in: grams of solute per 100 grams of solvent)

A saturated solution - is one in which as much solute as possible has been dissolved

water = universal ~~solvent~~ solvent

Solubility of gases ~~decreases~~ increases at higher pressures and lower temperatures.

Fertilisers are very soluble - nitrate ions bad for bacteria with greenhouses have to check oxygen dissolved in water essential for aquatic life. Normal pollution threatens this. Contaminated water in big cities - dissolved CO_2 in water at high pressures before bottling

Water naturally contains microorganisms and dissolved salts.

Boyle water - pass through filter bed removes any solid particles.

- chlorine gas added to kill harmful microorganisms.

improve taste and quality - passed over ion exchange resin to remove dissolved sub more

distilled to produce pure water.

Soft water doesn't contain many dissolved substances so it readily forms soap lather

Hard water contains calcium or magnesium ions.

HARD WATER

- reduces heart disease

+ good for health. Calcium - development of strong bones. • improves beer flavour

- more soap needed for lather - increased cost. (forms scum)

• leads to scale. reduces efficiency of appliances.