

adsorption	the process by which chemicals and other particles are attracted to and held by a solid surface
allotrope	one of several structural forms of the same element in the same state; for example, diamond, graphite and fullerenes are allotropes
anaerobic decomposition	decomposition without oxygen; many bacteria can carry out respiration without using oxygen; decomposition under these conditions produces gases and other wastes that would not be present in aerobic decomposition
aquifer	an underground rock formation through which ground water can easily percolate; sandstone, gravel beds and jointed limestone make good aquifers
chemiluminescence	luminescence caused by a chemical reaction, usually oxidation; the molecules are excited to a high energy level and emit light as they return to the ground state

chlorofluorocarbon

a compound containing carbon, chlorine and fluorine

coagulation

the process of adding coagulants (chemicals or a mixture of chemicals) to cause particles that are slow to settle or are non-settling to settle out more readily; the coagulant reacts with the particles in the water, forming larger particles called flocs that settle out rapidly

coliform

a type of bacteria found in raw water; coliforms are used as a microbiological indicator for the possible presence of other disease-producing organisms arising from faecal contamination; they are measured in colony forming units (CFU); a CFU is the number of bacterial cells, or clumps of cells, that can be developed into a colony when grown under laboratory conditions; coliforms are killed by chlorine

complete combustion

when a hydrocarbon burns in a plentiful oxygen supply and the combustion products are carbon dioxide and water

coordinate covalent bond

a covalent bond that has formed when one atom provides both electrons to form the shared bonding pair

cryptosporidium

a micro-organism occurring in the gut of warm-blooded animals; its cysts are more resistant to disinfection than are bacteria or viruses

equilibrium constant

is K ; when equilibrium is reached the concentration of reactants and products has no tendency to change; the concentrations of the products are written in the numerator and the concentrations of the reactants are written in the denominator; the larger value of K , the more the reactants react together to form product

eutrophication

the process by which lakes and streams become enriched by dissolved nutrients, such as phosphates and nitrates found in fertilisers; this can result in an increased growth of algae in these waterways and a corresponding drop in dissolved oxygen; this condition can be harmful to other life forms living in these waters

flame test

a qualitative test for cations where a clean platinum wire mounted in a glass holder is dipped into the sample to be tested and then held in a non-luminous Bunsen flame; many cations burn with distinctive colour

flocculation

the gentle mixing of chemicals with water containing suspended particles to trap colloidal particles such as mud; the chemicals join tiny particles of dirt, micro-organisms, and fine suspended matter so that they can be more easily filtered out; the larger particles formed can be filtered

flocs	larger particles formed during coagulation; they settle out rapidly and can be effectively removed by passing water through a filter; the process is controlled so that the coagulant chemicals are removed along with the contaminants
haber process	the chemical combination of hydrogen and nitrogen gases in the presence of a catalyst, and under high temperatures and pressures, to form ammonia
haloalkane	a derivative of an alkane where one or more hydrogen atoms have been replaced by a halogen such as fluorine, chlorine, bromine or iodine
halogen	a highly reactive non-metal in group VII of the periodic table; they include the elements fluorine, chlorine, bromine, iodine and astatine