

scrubber (in atmospheric chemistry)

An apparatus used in sampling and in flue gas cleaning. The gas is passed through a space containing wetted 'packing' or spray. In general, particles are collected in scrubbers by one or a combination of the following: impingement of particles on a liquid medium; diffusion of the particles onto a liquid medium; condensation of liquid medium vapours on the particles; partitioning of the gas into extremely small elements to allow collection of the particles by Brownian diffusion and gravitation settling on the gas-liquid interface. The devices include spray towers, jet scrubbers, Venturi scrubbers, cyclonic scrubbers, inertial scrubbers, mechanical scrubbers and packed scrubbers. Normally the gas flow in the scrubber is counter to the liquid flow. Efficient scrubbers will collect particles as small as 1 to 2 μm in diameter.

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