

filter

A porous material on which solid particles present in air or other fluid which flows through it are largely caught and retained. Filters are made with a variety of materials: cellulose and derivatives, glass fibre, ceramic, synthetic plastics and fibres. Filters may be naturally porous or be made so by mechanical or other means. Membrane/ceramic filters are prepared with highly controlled pore size in a sheet of suitable material such as polyfluoroethylene, polycarbonate or cellulose esters. Nylon mesh is sometimes used for reinforcement. The pores constitute 80–85% of the filter volume commonly and several pore sizes are available for air sampling (0.45–0.8 μm are commonly employed).

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