

Abstract**MEMBRANE CARD AND METHOD FOR THE PRODUCTION AND USE THEREOF**

Processes are provided for producing porous track membranes, membrane cards, membrane packages, separation elements, separation units and separation systems, for using the same for the separation of particles from liquid (gaseous) media, and for determining the maximum pore diameter of membranes. Porous track membranes are produced by exposing a polymeric film to a bombardment with heavy ions to form the film with a certain track density, etching pores in the resulting tracked film with an etching solution to provide the film with a density of the pores corresponding to the track density and laminating the resulting porous track membrane to a porous substrate by means of an adhesive to produce membrane cards. Membrane packages and a turbulizer are spirally wound around a liquid (gaseous) medium collection tube to form a separation unit. The separation unit is included in a separation system with a processed liquid (gaseous) medium accumulator, pipes for the source, unprocessed, and processed liquid (gaseous) media, a pressure transducers in liquid (gaseous) medium communication with the pipes for the processed and unprocessed liquid (gaseous) media to control the timing of back flushing of the separation system when the membranes reach a high level of retention of particles separated from the source liquid (gaseous) medium.

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