

Composite Semipermeable Membrane and Method for Producing Same

ABSTRACT

A composite semipermeable membrane comprising a porous support membrane on which a separating functional polyamide layer resulting from the polycondensation reaction of polyfunctional aromatic amines with polyfunctional acid halides is formed, wherein the separating functional polyamide layer has carboxy groups, amino groups, phenolic hydroxyl groups, and azo groups, wherein X_A , the ratio of the amino groups (molar equivalent of the amino groups / (molar equivalent of the azo groups + molar equivalent of the phenolic hydroxyl groups + molar equivalent of the amino groups)) on a feed water contact surface of the separating functional polyamide layer (an A surface), is in the range 0.5 or less, and X_B , the ratio of the amino groups (molar equivalent of the amino groups / (molar equivalent of the azo groups + molar equivalent of the phenolic hydroxyl groups + molar equivalent of the amino groups)) on a permeate-side surface of the separating functional polyamide layer (a B surface), i.e., the opposite side to the A surface, is in the range of 0.5 to 1. The present invention provides a composite semipermeable membrane that achieves a balance between high solute removal properties and a high permeate flow rate and has high organic-solvent resistance, and a method for producing same.

[FIGURE 1]

