hydroxide, calcium hydroxide, magnesium hydroxide, sodium carbonate and calcium carbonate.

(5) The process according to any one of (1) to (4), wherein, before adding the alkaline substance, the aqueous 1,4-butanediol-containing solution originated from a fermentation broth is subjected to a step of filtering the aqueous 1,4-butanediol-containing solution through a nanofiltration membrane and recovering the aqueous 1,4-butanediol-containing solution from the permeate flow of the membrane; and/or a step of subjecting the aqueous 1,4-butanediol-containing solution to an ion exchange treatment.

(6) The process according to any one of (1) to (5), wherein, before adding the alkaline substance, said aqueous 1,4-butanediol-containing solution originated from a fermentation broth is subjected to a step of filtering the aqueous 1,4-butanediol-containing solution through a reverse osmosis membrane to increase the concentration of 1,4-butanediol.

(7) A process of producing a polyester, comprising reacting the 1,4-butanediol obtained by the process according to any one of (1) to (6) with a dicarboxylic acid.

(8) The process of producing a polyester according to (7), wherein the dicarboxylic acid is terephthalic acid.

(9) A process of producing a polyester, comprising performing the process as disclosed herein to produce 1,4-butanediol; and reacting the obtained 1,4-butanediol with a dicarboxylic acid.

[0009] 1,4-butanediol having a high purity and no color which is suited as a material of polyesters can be produced, and by using the 1,4-butanediol, by-production of THF and extension of polymerization time in the production of polyesters can be reduced.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] Fig. 1 is a schematic view showing one example of a membrane separation apparatus used in the Examples.

DETAILED DESCRIPTION

[0011] The aqueous 1,4-butanediol-containing solution originates from a fermentation broth. As long as the solution originates from a fermentation broth, the solution may be one directly obtained by cultivation of a microorganism together with an assimilable biomass

7. A process of producing a polyester, comprising performing the process according to any one of Claims 1 to 6 to produce 1,4 butanediol; and reacting the obtained 1,4-butanediol with a dicarboxylic acid.

8. The process of producing a polyester according to claim 7, wherein said dicarboxylic acid is terephthalic acid.