METHOD FOR PRODUCING LACTIC ACID AND METHOD FOR PRODUCING POLYLACTIC ACID

Abstract

Disclosed is a method for producing lactic acid, which comprises (A) a continuous fermentation step wherein a fermentation broth of microorganisms which are capable of lactic acid fermentation is filtrated using a porous membrane having an average pore diameter of 0.01 μm or more but less than 1 μm with a transmembrane pressure difference within a range of 0.1-20 kPa; the filtrate is recovered, while holding or flowing back the unfiltrate to the broth; and a fermentation raw material is added to the broth; (B) a step wherein the filtrate obtained in step (A) is filtrated through a nano-filtration membrane; and (C) a step wherein lactic acid is recovered by distilling the filtrate obtained in step (B) at a pressure not less than 1 Pa but not more than the atmospheric pressure at a temperature not less than 25°C but not more than 200°C. Lactic acid obtained by the method has reduced impurities, and thus a polylactic acid obtained using the lactic acid as a starting material has excellent thermal stability, mechanical strength and hue.

(No suitable figure)