

ABSTRACT

A method for producing a water-absorbent resin includes a polymerization step of polymerizing a polymerizable component containing a water-soluble ethylenically unsaturated monomer dissolved in water using a water-soluble azo-type radical polymerization initiator to obtain a reaction system including a water-absorbent resin precursor, and a dehydration step of removing water from the reaction system by heating. In the dehydration step, a water-soluble radical polymerization initiator is added to the reaction system at any first dehydration stage when the residual water rate calculated by the formula (1) is 50% or more, and a reducing substance is added to the reaction system at any second dehydration stage when the residual water rate decreases from that at the first dehydration stage by 10% or more. According to this production method, a water-absorbent resin having satisfactory water-absorption capacity can be produced while suppressing the content of residual monomers.

Residual Water Rate (%)

$$= \frac{\text{Mass of Water Remaining in Reaction System}}{\text{Mass of Water-Soluble Ethylenically Unsaturated Monomer Used in Polymerization Step}} \times 100$$

(1)