Semicontinuously operated process for the preparation of copolymers

Abstract

The invention relates to a process for the preparation of a copolymer in semicontinuous operation in a polymerization apparatus, comprising a polymerization reactor connected to a metering device, in each case acid monomer being initially taken in the metering device and polyether macromonomer, acid monomer and water in the polymerization reactor, acid monomer being metered from the metering device into the polymerization reactor, free radical polymerization initiator being passed into the polymerization reactor before and/or during the metering of the acid monomer into the polymerization reactor so that an aqueous medium in which acid monomer and polyether macromonomer are reacted with formation of the copolymer by free radical polymerization forms in the polymerization reactor, the molar ratio of acid monomer used altogether to polyether macromonomer used altogether being 20:1 to 1:1, the molar ratio of acid monomer initially taken in the polymerization reactor to the acid monomer metered into the polymerization reactor being 10:1 to 1:10 and the metering of the acid monomer being effected with the proviso that at least 70 mol% of the acid monomer metered in altogether are metered in in the course of 5 to 19 minutes at a metering rate that is constant or varies to a limited extent.