

CORE-SHELL STRUCTURED POLYVINYL ALCOHOL EMBOLIC MICROSPHERE, PREPARATION METHOD, AND USE THEREOF

ABSTRACT

Disclosed are a core-shell structured core-shell structured polyvinyl alcohol embolic microsphere, a preparation method and use thereof. According to the preparation method, polyvinyl alcohol is used as a skeleton material, two modified polyvinyl alcohols with different grafting degrees are obtained by reacting N-(2,2-dimethoxy)-2-methylacrylamide with polyvinyl alcohol in different ratios, a water-soluble monomer with ionic functional groups and an initiator are mixed with an aqueous solution of low-grafting-degree polyvinyl alcohol to obtain a first aqueous phase, an initiator is mixed with an aqueous solution of high-grafting-degree polyvinyl alcohol to obtain a second aqueous phase, the two aqueous phases are added to an oil phase containing an oil-soluble dispersing agent to form a water-in-oil reverse-phase suspension polymerization system, and reverse-phase suspension polymerization is performed to obtain the core-shell structured core-shell structured polyvinyl alcohol embolic microsphere. The core-shell structured polyvinyl alcohol embolic microsphere exhibits an extremely fast drug loading rate and an extremely high drug loading capacity.

Fig 1.