ENHANCED HYDROGEL COMPOSITION, AND PREPARATION METHOD THEREFOR AND USE THEREOF

ABSTRACT

An enhanced hydrogel composition, and a preparation method therefor and the use thereof. According to the composition, a hydrogel is formed by means of a physical cross-linking mechanism using the chelation between calcium ions and an alginic acid raw material, with the assistance of a carboxymethyl cellulose raw material to reduce the sensitivity of the chelation. The hydrogel retains a high water absorption rate of media; meanwhile, the elastic modulus of the hydrogel is significantly enhanced by means of the introduction of silicon dioxide. The method for preparing the composition comprises: dispersing the carboxymethyl cellulose raw material, the alginic acid raw material, and the silicon dioxide in a solution, mixing same uniformly, drying the mixture to obtain a material A, and then mixing the material A with a calcium source to obtain the composition. Further provided is the use of the composition in the preparation of a space-occupying product in the digestive tract.
Fig 1.