HYDROGEL COMPOSITION WITH ENHANCED WATER ABSORPTION, AND PREPARATION METHOD THEREFOR AND USE THEREOF

ABSTRACT

A hydrogel composition with enhanced water absorption, and a preparation method therefor and the use thereof. The raw materials comprise a carboxymethyl cellulose raw material, an alginic acid raw material, a soluble raw material, a calcium source and silicon dioxide. The composition is prepared by means of using the chelation between calcium ions and the alginic acid raw material. On the one hand, the carboxymethyl cellulose raw material is used to reduce the sensitivity of the chelation, thereby preventing a decline in water absorption of the composition; on the other hand, by means of adding the soluble raw material, which is dispersed in a solid hydrogel composition, after the solid hydrogel composition comes into contact with water, the soluble raw material in the composition exhibits a good water absorption capacity, which can improve the ability of water to penetrate the interior of the composition, thereby improving the water absorption performance of the composition. In addition, silicon dioxide can enhance the elastic modulus of the hydrogel.