The first synthesis of a cellulose derivative goes back to a little more than a century with the development of industrial production of nitrocellulose, which has promoted the development of ethers and esters of cellulose. The carboxymethylcellulose is a derivative occupies an important place in the industry processing and enjoys a wide field of food and pharmaceutical usage; The hydrophilic character of its fibers and their adsorption capacity fact that either at the base of drug composition and design of a wide range of tissue dressings. These dressings are used to treat the wounds of several natures; they are constituted of supports to which has been added to the fibrous layer carboxymethylcellulose whose role is to suck the molecules produced by the bacteria and wound exudate. In this sense we set the target to conceive a wound dressing using the cellulose contained in stems of the esparto, annual vegetal, widely used in Algeria; To do this, two types of extraction were carried out: one, by alkaline delignification in the presence of temperature, followed by a bleaching with hypochlorite and alkaline purification; the other by direct extraction with organic solvent (acetone) using the Kurchner. Method; The cellulose extracted is subsequently quenched in a solution of 30% sodium hydroxide dried to obtain an akalicellulose and treated it in an excess of mono chloro acetic acid (MCA), thereby to prepare for the CMC, main component of our wound dressing hydrofibre. The different characterization results (identification, humidity, purity tests, degree of substitution, etc.) showed that the CMC obtained is comparable to that which are commercially available and could then meet our goal