form the porous scaffold. However, this method of preparation of a porous hydrogel involves the use of an organic solvent with a synthetic polymer which renders the method according to this invention weakly compatible with biological and therapeutic purposes.

Therefore there is still an existing need in the art to develop a method for preparing porous scaffold matrices that can be used for biological and therapeutic purposes.

SUMMARY ~~OF THE INVENTION~~

Therefore, it is an object of the present ~~invention~~disclosure to provide a method for preparing a porous scaffold which comprises the steps consisting of:

a) preparing an alkaline aqueous solution comprising an amount of at least one polysaccharide, an amount of a cross-linking agent and an amount of a porogen agent.

b) transforming the solution into a hydrogel by placing said solution at a temperature from about 4°C to about 80°C for a sufficient time to allow the cross-linking of said amount of polysaccharide and

c) submerging said hydrogel into an aqueous solution

d) washing the porous scaffold obtained at step c).

It is another object of the present ~~invention~~disclosure to provide a porous scaffold obtainable by the method as above described.

It is still further an object of the present ~~invention~~disclosure to provide the use of the disclosed porous scaffold ~~of the invention~~ for tissue engineering, cell culture and cell delivery.

In one aspect of the present invention, there is provided a method for preparing a porous scaffold which comprises the steps consisting of :

a) preparing an alkaline aqueous solution comprising an amount of at least one polysaccharide, an amount of a covalent cross- linking agent and an amount of a porogen agent

b) transforming the solution into a hydrogel by placing said solution at a temperature from 4°C to 80°C for a sufficient time to allow the cross-linking of said amount of polysaccharide

c) submerging said hydrogel into an aqueous solution

d) washing the porous scaffold obtained at step c).

In another aspect, there is provided a porous scaffold obtainable by the method wherein said covalent cross-linking agent is trisodium trimetaphosphate.

In another aspect, there is provided a vascular substitute made with a scaffold as defined above.

In another aspect, there is provided cartilage or bone implants made with a scaffold as defined above.

In another aspect, there is provided the use of a scaffold as defined above for the evaluation of the toxicity and/or pharmacology of a product.

In another aspect, there is provided a controlled release system of an active agent made with a scaffold as defined above.