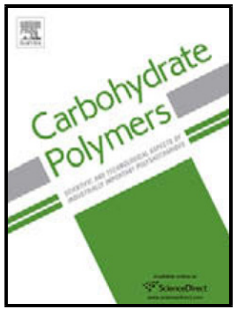

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Highlights:

- There is a possibility to program the solubility of the composite.
- Obtained materials exhibit a high antimicrobial activity
- Chitosan composites absorb 30-times its own weight of liquid

Abstract:

Porous chitosan composites using CO_2 dissolution procedure and including water soluble N-propylphosphonic chitosan derivative (p-CHI) were obtained and characterized. In contrast to the control material, composites containing modified chitosan distinguished by a rapid moisture absorption and good adhesion to the skin. The FTIR analysis confirmed the presence of propylphosphonic group in the structure of the polymer. The porosity of the materials was