a 2016 0149

The invention relates to the field of chemistry and medicine, in particular to processes for creating polymeric materials with antibiotic properties.

Summary of the invention consists in that it provides a process for conjugating alpha-glucans with streptomycin, which comprises the preparation of a colloidal solution of starch or dextran (solution 1) and a solution of streptomycin in dimethylformamide (solution 2). After cooling solution 1 and keeping it at a temperature of 0…2°C is slowly added triethylamine, then ethyl chloroformate, after 15…30 minutes is slowly added solution 2, after 20…40 minutes the resulting mixture is brought to room temperature and maintained for 2…3 hours. The solution is evaporated to a concentration of 15…20%, the resulting conjugate is precipitated with hexane and again with diethyl ether, and then dried under vacuum at a temperature of up to 40°C. At the same time, triethylamine, ethyl chloroformate and streptomycin are taken in equimolar amounts, and with respect to alpha-glucan – in accordance with the desired degree of substitution in the glucose unit of the polymer chain.

The technical result of the invention consists in that the proposed method makes it possible to obtain polymer materials without secondary reactions.

Claims: 1
Fig.: 6