

Development of Modification Method of Polyamide Microfiltration Membranes to Give them Bactericidal Properties

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Abstract: Bulk and surface-modified polyamide membranes were studied. Argentic specimen and those containing multimaster ammonium groups were used as biocidal agents. Consideration of evaluation results of bactericidal properties of membrane filters started 24 hours after planting and continued during all the tests. It was established that the bulk modification method does not allow achieving the bactericidal effect. The surface modification by argentic specimen and polyhexamethylen guanide enables to obtaine bacteriostatic membranes. The two membranes possessed the best antimicrobial characteristics:

– surface membrane modified with chitosan mixture solution and «Bioform» specimen;

– surface membrane modified with 5 % PHMG solution.

Modified membranes, preserving bacteriostatic properties within 14 days, can be recommended for production of individual filters, which are used in the apparel of the Defense Ministry, the Ministry of Internal Affairs and the Ministry of Emergency Situations.