

TECHNOLOGICAL AND PHYSIC-CHEMICAL ASPECTS OF INTRAVAGINAL GEL WITH LACTIC ACID

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Summary.

Lactic acid is the natural content in the vagina. This acid is the result of vital activity of lacto and bifidobacteria in vagina.

Lactic acid is a natural antibacterial barrier for pathogenic and transient microflora. The purpose is to research the optimal concentration of the lactic acid (pH 4.0-4.5). As well the impact of lactic acid on the physico-chemical, rheological and technological properties of the different gel bases.

Materials and methods.

Were selected for study such a gel base: apple pectin, hydroxyethylcellulose, carbomer, xanthan gum, sodium alginate. Lactic acid is introduced into the gel base as a dilute solution (1:50) in different concentrations (0.1%, 0.2%, 0.3%, 0.5%).

The organoleptic properties were evaluated by visual analysis.

Consumer's properties were evaluated by application to the skin. Rheological properties were determined using a viscometer HB BROOKFIELD DV-II PRO (USA). Determination of pH was researched on ionometry PH-150 MI.

Results.

Gel bases after the addition of lactic acid (0.1%, 0.2%, 0.3%) did not alter their organoleptic properties (color, smell, consistency), except carbomer bases - observed liquefaction system. Gel base did not lose stability - remained thermally and colloidal stability. Structural viscosity decreased with increasing percent acid.

The most acceptable performance structural viscosity at a concentration of lactic acid 0.1%, 0.2%, 0.3%. pH 4.0-4.5 produces lactic acid in a concentration of 0.2%. Changing consumer properties observed when added to lactic acid based solutions of higher concentrations. They became not kept flowing on the surface.

Discussion.

Based on studies conducted (rheological, organoleptic, mechanical and other) were selected for further experiments such gellants: xanthan gum, hydroxyethylcellulose. Lined with the necessary concentration of lactic acid - 0.2%.