## SELECTION OF NUTRIENT MEDIA FOR LYOPHILIC LACTOBACILLI REACTIVATION

**Klimentiev D.A., Kalashnikov A.A., Yamborko G.V.**
*Mechnikov Odessa National University, Odessa, Ukraine*
E-mail: yamborko@sky.od.ua

The purpose of this study was to investigate the effects of using traditional nutrient media to restore lyophilic lactobacilli cultures, which were proposed by different authors.

The object of studying were 40 lactobacilli strains from Odessa National University collection of sea and useful for ecological biotechnology microorganisms, isolated from noncommercial fermented products. Transforming of lyophilic lactobacilli strains, preserved in ampoules, into physiological active form was carried out under aseptic conditions by adding 0,9% NaCl to dried cultures, then they were inoculated into liquid nutrient media. The choice of optimal medium, in which investigated lactobacilli strains can be restored, was fulfilled. For this aim 4 traditional nutrient media with different composition and pH level, offered by several authors, were investigated: MRS (De Man et al., I960); KPL (Toba et al., 1986); SL (Rogosa et al., 1953) and medium by Kvasnikov (I960).

During the initial inoculation of 40 lactobacilli cultures in some selective media the ample growth of bacteria (70-75% of strains) observed in MRS medium (the source of carbon is glucose) and in KPL medium (the main component is dairy whey). Whereas only 25 % of strains isolated from noncommercial dairy products have showed active growth at Kvasnikov medium and 50 % - at SL medium. pH level of this medium was the lowest (5,4) due to adding acidic salts of ammonium and sodium.

Subsequent inoculations in MRS and KPL media have shown the most active growth (100 % of strains). In Kvasnikov medium the active growth of 75 % of strains and in SL medium - 87,5 % of strains was registered. It can be explained that medium SL lacks some nutrients components, which are necessary for the growth of investigated lactobacilli strains. The weak growth in Kvasnikov medium can be caused by adding of ethanol (8 %) and plant's growth factors (cabbage extract). However all strains isolated from fermented vegetables have shown 100 % growth in Kvasnikov medium in contrast to those isolated from noncommercial dairy products.

Thus on the result of our investigation MRS and KPL media have been chosen for the full reactivation of lyophilic strains of bacteria genus *Lactobacillus.*

ПІДБІР ЖИВИЛЬНОГО СЕРЕДОВИЩА ДЛЯ ВІДНОВЛЕННЯ ЛІОФІЛІЗОВАНИХ ШТАМІВ ЛАКТОБАКТЕРІЙ

Клімент'єв Д.О., Калашніков О.О., Ямборко Г.В.

Було вивчено ефективність застосування запропонованих різними авторами живильних середовищ для відновлення ліофілізованих музейних штамів лактобактерій, ізольованих з різних природних джерел. За інтенсивністю росту досліджуваних штамів були обрані середовища MRS та KPL як найбільш ефективні.