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INITIATION OF THE *IN VITRO* CULTURE OF THE *MACROCARPON VACCINIUM* AITON VARIETY 'EARLY BLACK'

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The research was carried out in the Laboratory of Embryology and Biotechnology of the National Botanical Garden (Institute) "Alexandru Ciubotaru". Cranberry (*Vaccinium macrocarpon* Aiton), is a shrub about 20-30 cm tall, with red fruits (1-2 cm in diameter), evergreen leaves and white or pale pink flowers. Fruits have multiple health benefits, an increased content of protein, vitamins A, B1, B2, C, minerals, tannins, fiber, flavonoids, saponins, phenols and essential fatty acids Omega 3, 6 and 9, oils and sugars, are energizing, helps eliminate stress, anxiety and depression. Based on the nutritional and therapeutic importance of cranberries, research has been initiated on obtaining seedlings by in vitro multiplication. During the research, several sterilization procedures were developed. According to the literature for the inoculation of *Vaccinium* species is used plant material consisting of shoots fragments containing apical buds or nodal fragments, harvested from mature plants.

The explants were taken from the donor plants in June, during the active vegetation period of the plants. Fragments of shoots with apical buds were taken for inoculation. The biological material was brought to the laboratory, where it was fragmented and washed under cold water. After washing with detergent solution, the fragments were placed in KMnO4 solution (about 3%) to which 2.3 drops of Tween were added for 10 min. The biological material was then transferred to the box, rinsed 4 times with sterile distilled water (autoclaved) and sterilized. For this species we used 3 sterilization regimens: 1) the plant material was sterilized with a solution of mercuric chloride (ethanol mercury chloride) 0.1% for 5 minutes; 2) the plant material was asepticized with 0.05% chlorhexidine solution for 5 minutes; 3) the plant material was sterilized with 0.25% lysoformin solution for 10 minutes. This was followed by rinsing with sterile distilled water, then placing the biological material in 3% H2O2 solution (for 1 min.) And repeated rinsing with sterile distilled water. After this process, the biological material was fragmented under the laminar and inoculated into test tubes (one inoculum in the test tube) on agarized nutrient medium: WPM - 100%, zeatin - 0.5 mg / l, sucrose - 30 g / l, agar - 5 g / l, pH- 5.0.

Following the research, we established that exposure to these sterilization reagents did not cause necrotization of the explants, however the most beneficial method of asepsis for the given culture is with mercury chloride of 0.1% (5 minutes), the process of infestation of explants being less than 50%. After sterilization with a chlorhexidine solution of 0.05%, about 30% of viable inoculums were obtained, with a solution of lysoformin of 0.25% - about 10%.

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Keywords: *Vaccinium macrocarpon*, variety, in vitro multiplication.