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Lactic acid fermentation may be considered as a simple and valuable biotechnology for maintaining and/or improving the safety, nutritional, sensory and shelf-life properties of vegetables. Lactic acid bacteria (LAB) are mainly responsible for the fermentation of vegetable, spontaneous fermentation thus leads to variations of the sensory properties of the products. It was shown that the use of a starter cultures helps to standardize the fermentation by controlling the microbial flora. The aim of this work was the elaboration of fermented carrot with the addition of selected *Lactobacillus plantarum* isolated from pepper as starter cultures. *L. plantarum* were cultivated in MRS media, pH 5.5 during 24 h at 30°C, cultures were centrifuged, washed in saline and resuspended in sterile saline solution. The inoculums were adjusted to obtain an initial inoculation of 10^6 CFU/g in fermentation assay. The assay was conducted with whole peeled carrot, washed and cut in pieces of equal size. The samples were separated into two groups. The first was not subjected to any treatment, and the second under a scalding process, (80°C-10 min). 30 grams of untreated and scalded carrot were placed them in sterile containers containing 70 ml of sterile saline in a concentration used commercially. One series served as control and was not scalded or inoculated with LAB, allowing a spontaneous fermentation (SF). The second series served as scalded control, it was scalded but not inoculated with LAB, allowing a spontaneous fermentation in scalded carrot (SSF). The third series, scalded carrot were inoculated with initial inocula of 10^6 CFU/g of selected cultures of *Lact. plantarum* JP11 (FJP11). Samples were taken at 0,7,14 and 21 d for determine viable count in MRS and Mc Conkey media, pH and lactic acid. The fermentation was at 20°C for 21 days. In SF the number of microorganisms that growth in MRS medium increases 6 log cycles during 7 days, then a reduction of 3 log cycles was observed at 21 d. In this condition, the growth in Mc Conkey medium, an initial population of 4.36 log cycle was observed, which decreased 2 log cycle at 21 d. The blanching process reduce 1.83 and 2.0 log cycle the bacterial population determined by enumeration in MRS and Mc Conkey media during SSF, respectively. In the FSP11 the population of enterobacteria, was not detected at 7, 14 and 21d. In this condition the lactic acid production was higher than in SF and SSF. The big finding of this work was the possible use of *Lact. plantarum* JP11 isolatedfrom pepper as starter culture of carrot fermentation The addition of *Lact. plantarum* JP11 increase stability and microbiological safety of fermented carrot, preventing infectious diseases, with optimal sensorial attributed.

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REVALORIZATION OF INEXPENSIVE CARBON SOURCES AND AGROINDUSTRIAL BY-PRODUCTS FOR SCLEROGLUCAN PRODUCTION BY *Sclerotium rolfsii* ATCC 201126 AT FERMENTER SCALE

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Scleroglucan, a neutral hydrosoluble exopolysaccharide (EPS) is produced by submerged fermentation with filamentous fungi of the genus *Sclerotium*. Because of its wide variety of actual or potential applications, several industries focused their attention on this biopolymer. Large-scale production at fermenter scale has not yet been faced in our country, being an interesting field for competition particularly considering its high added-value and its monopolized production and commercialization by foreign industries. In this context, the examination of possibilities for biopolymer local production, especially at low cost, has become imperative. In a previous study we evaluated scleroglucan production by *Sclerotium rolfsii* ATCC 201126 at shake flask scale using 9 different C-sources, being sucrose, maltose, corn starch and sugarcane molasses the preferred substrates. In this work, sucrose, corn starch and sugarcane molasses were evaluated as C-sources for scleroglucan production at fermenter scale, due to their low cost and high availability. Two-day-old mycelia grown at 30ºC on PM_{20} agar were used for seed cultures after homogenization in liquid medium. Seed cultures were placed in Erlenmeyer flasks containing PM_{20} and incubated at 220 rpm and 30ºC for 48 h. They were used to inoculate (10%, v/v) the different tested culture media. Batch fermentation was carried out under optimized conditions for 72 h in a 5-L stirred-tank bioreactor with a working volume of 3 L. Samples were withdrawn every 12 h and biomass, EPS, starch, glucose and reducing sugars were determined. Once fermentation was stopped, scleroglucan obtained with the different substrates was recovered, purified and quantified following the protocol described by Fariña *et al.* (*Carbohydrate Polymers*, 2001, 44: 41-50). Yield ($Y_{p/c}$) volumetric productivity (P_r), specific productivity ($P_{r/x}$), and recovery efficiency (r.e.) were calculated. The highest scleroglucan production parameters were achieved when using corn starch as C-source (EPS=7.95 g/L; $Y_{p/c}$=0.40; P_r=0.110 g/L.h; $P_{r/x}$=0.018; r.e.=51.53%). Sugarcane molasses led to 5.11 g/L of EPS with an $Y_{p/c}$=0.28, P_r=0.071 g/L.h, $P_{r/x}$=0.013 and r.e. of 33.16%. Meanwhile, sucrose allowed to produce 6.87 g/l of EPS with an