Glucan Secreted by Phytopathogen *Lasiodiplodia theobromae*

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**Introduction:** Fungi of *Lasiodiplodia* genus, known as phytopathogen, are producers of exopolysaccharides (EPS). These molecules have antioxidant, antimitogenic and immunomodulatory properties and also can be applied in the food industry as stabilisers, emulsifiers and gelling agents. The goal of the study was cultivating the *Lasiodiplodia theobromae* by submerged fermentation, to produce EPS. **Material and methods:** The micro-organism has been cultivated in minimal salts medium (Vogel, 1956) and 5% (w/v) glucose as carbon source, 0.2 % yeast extract as nitrogen source, 72 hours, 180 rpm, 28ºC. The inoculum was standardized as 3.5 mL of cells for each 25 mL of culture medium. The mycelium was separated from fermentation broth by centrifugation (30 minutes, 4800x g, 4 ºC) and dried at 80 °C until constant weight. The supernatant was dialyzed against distilled water (24 h), concentrated and precipitated with ethanol (3 volumes), for recovering the polysaccharide. **Results and discussion:** The material was dissolved in distilled water and aliquots from viscous solution were used to determine total sugars (Dubois et al, 1956), reducing sugars (Miller et al, 1959) and proteins (Bradford, 1976) which demonstrated high content of polysaccharides (95%). The size exclusion chromatography analysis (HPSEC/RID) showed a single peak. Following acid hydrolysis (4M TFA, 3 h, 100 ºC) and analysis on ion exchange chromatography (HPAEC/PAD), the glucose was the main monosaccharide component detected. **Conclusion:** The preliminary results indicate that the polysaccharide secreted by *Lasiodiplodia theobromae* has potential to be used in industry, although more studies are necessary.

Keywords: exopolysaccharides, glucan, *Lasiodiplodia theobromae*

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