

低温挤压加酶脱胚玉米粉生产糖浆糖化试验 Saccharifying Experiment of Degermed Corn with Added Enzyme Extruded at Low Temperature for Production of Corn Syrup

申德超 奚可畏 马成业

山东理工大学

关键词: 脱胚玉米 挤压 糖化 酶制剂 试验

摘要: 对低温挤压加酶脱胚玉米粉挤出物直接调浆糖化生产玉米糖浆进行了试验。该技术省去了双酶法生产玉米糖浆的淀粉生产和喷射液化工序和设备, 以及对应的水耗、电耗和环境污染。研究了挤出物的挤压-液化系统参数对糖浆的主要考察指标的影响规律。实验室研究表明, 加酶脱胚玉米粉挤出物糖化12 h糖浆的过滤速度、DE值和淀粉出品率分别为239.8~269.5 L/(m²·h)、89.2%~89.3%和96.2%~97.2%。生产试验结果表明, 添加耐高温 α 淀粉酶的脱胚玉米挤出物, 直接糖化17 h和19 h, 糖浆的DE值分别为95.89%和95.10%, 透光率分别为98.5%和98.0%。Degermed corn grist with added enzyme extruded at low temperature was mashed and saccharified directly for production of corn syrup was carried out. Starch production and spraying liquescence procedure in traditional double enzyme method were omitted. Thereby the corresponding water consumption, electricity consumption and its environment pollution were all omitted. The influence regularity of parameters in extrusion-liquescence system to main indexes of syrup was analyzed. The laboratory experimental results indicated the filtration speed of syrup, the value of DE and the available ratio of starch in syrup for degermed corn extrudate with added enzyme when saccharified for 12 h were 239.8~269.5 L/(m²·h), 89.2%~89.3% and 96.2%~97.2%, respectively. The productive experimental results indicated the values of syrup DE of degermed corn extrudate with high temperature resistant α -amylase for 17 h and 19 h were 95.89% and 95.10%, respectively, the transparence percent of above syrup were 98.5% and 98.0%, respectively.

[查看全文 \(请使用Adobe Acrobat 6.0版本浏览\)](#) [返回首页](#)

[引用本文](#)