

麦胚多层多室流化床在线稳定化试验 Technology and Equipment of Stabilized Storage of Wheat Germ by On-line Multistage Fluidization Drying

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关键词: 麦胚 稳定化 流化床 干燥

摘要: 针对小麦胚芽快速酸败变质的特性, 采用多层多室流化床装备对麦胚进行在线稳定化处理。根据麦胚的性质和实际产量要求, 将改良设计的多层多室流化床装备与面粉生产线连接, 并选取不同温度、风量等参数进行在线试验, 研究流化床对麦胚的稳定化效果。结果表明, 出风温度45℃为稳定化处理麦胚的优化条件。处理后的麦胚VE损失6.28%, 氮溶解指数下降1.11%, 脂肪酸组成和相对含量未产生明显变化。产品经30d加速贮藏, 过氧化值7.2mmol/kg, 酸价18.47mg/g。试验表明, 该技术与装备已达到了麦胚稳定化处理的基本要求。In order to improve the stabilized storage of wheat germ (WG) and better prepare it for further processing, a fluidization drying technology is developed to solve the problem of wheat germ's acidification and deterioration. According to the WG character and the actual production, a multistage fluidized bed is designed and connected to wheat flour product line. With this equipment, temperature and airflow as major parameters are selected to test their respective influence on the wheat germ stabilization. The result shows that the optimized condition of fluidization drying is 45℃ of outlet temperature. VE loss of processed WG is 6.28%, and the decrease of NSI is 1.11%. No distinct change is observed in its fatty acid composition and relative content. After 30 days' accelerate store, peroxide value is 7.2mmol/kg, and acid value is 18.47mg/g. The experiment result shows that the technology and equipment developed have satisfied the demands of stabilized storage of wheat germ.

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