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鱼松块压缩成型工艺参数优化

Optimization of technical parameters of compression molding of dried fish floss block

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中文摘要:

为研究鱼松块压缩成型工艺对鱼松成型块品质的影响, 分析了糕粉添加量、成型压力、保压时间和成型速度对鱼松成型块质构和感官评定的影响。选取糕粉添加量、成型压力、保压时间进行正交试验。试验结果表明: 鱼松成型块感官评分与硬度和咀嚼性呈极显著正相关, 与弹性和黏附性呈极显著的负相关; 成型压力对鱼松成型块的感官评定有显著影响; 对感官评分的影响顺序为: 成型压力>糕粉添加量>保压时间; 正交试验的最佳成型工艺为糕粉添加量20%, 成型压力3MPa, 保压时间20s, 成型速度为40mm/min。该工艺将为鱼松块成型设备的研制提供设计依据。

英文摘要:

In order to study the influence of compression molding technology on the quality of fish floss block, the effect of adding amount of pre-gelatinized sticky, the molding press, the pressure keeping time and the molding velocity on fish floss block hardness, sensory evaluation and textural properties were analyzed. The orthogonal experiment was designed with the influences of adding amount of pre-gelatinized sticky, the molding press, the pressure keeping time. Results showed that the sensory score had significantly positive correlation to hardness and chewiness, significantly negative correlation to springiness and adhesiveness. The effect of the molding press on the sensory score was significant. The order of the parameters for increasing the sensory score was the molding press> adding amount of pre-gelatinized sticky> the pressure keeping time. The optimum processing parameters were obtained as follows: adding amount of pre-gelatinized sticky was 20%, molding press was 3 MPa, pressure keeping time was 20 s, and molding velocity was 40 mm/min. The research can provide design basis for the compression molding equipment of dried fish floss block.

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