

## 猕猴桃切片真空冷冻干燥工艺参数优化

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摘要: 通过三因素二次通用旋转组合试验设计, 考察了预冻速率、干燥室压力和加热板温度对真空冷冻干燥猕猴桃切片品质的影响, 得出了猕猴桃冻干切片品质与各因素间的回归模型。3个因素对猕猴桃冻干切片质量的影响均极为显著 ( $p < 0.01$ ); 影响主次顺序为预冻速率、干燥室压力、加热板温度。猕猴桃冻干切片的最优生产工艺参数为预冻速率 $0.6^{\circ}\text{C}/\text{min}$ , 干燥室压力 $73.6\text{ Pa}$ , 加热板温度 $40^{\circ}\text{C}$ 。The effects of the factors of pre-freeze rate, dry chamber pressure and board temperature on quality of vacuum freeze-dry kiwifruit slice were investigated with three-factor second order general revolving combination design, and the regression model with high reliability was obtained between the quality of kiwifruit slice and the factors. The results showed that the three factors all had very significant influence on quality of kiwifruit slice ( $p < 0.01$ ). The influencing sequence from significant to common is pre-freeze rate, dry chamber pressure and board temperature. The optimally technical parameters are  $0.6^{\circ}\text{C}/\text{min}$  of pre-freeze rate,  $73.6\text{ Pa}$  of dry chamber pressure and  $40^{\circ}\text{C}$  of board temperature.

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