茶叶蛋糕加工工艺研究及其感官评分合格率的编程设计

摘要

随着人们生活水平的提高，对如蛋糕这样的烘焙产品的需求量和营养健康要求也逐渐提高。而绿茶具有多种保健功能，含有咖啡碱、茶多酚、矿物质、维生素、茶色素、茶多糖、茶氨酸和皂苷等功效成分，不仅能抗癌抗辐射，还能消炎杀菌、抗氧化抗衰老，降血脂等等，其特殊效果是其他茶类无法媲美的。将绿茶和蛋糕结合起来，即提升了烘焙产品的营养意义，也顺应了市场的发展需求。

本文通过研究茶粉添加量、白砂糖添加量、牛奶添加量、蛋糕油添加量、搅打时间、烘烤时间和烘烤上下火温度这几项主要的配方和操作影响因素对蛋糕质量的影响，通过系统的感官评分包括外观、组织状态、香气、滋味与口感这四项来定量考核蛋糕品质。综合分析出影响最大的为三项为茶粉添加量、白砂糖添加量和搅打时间，故单独将该三项做三因素三水平的正交试验。除此三项外，其他四项通过单因素试验得出的结果为牛奶最佳添加量为 12%，蛋糕油最佳添加量为 12%，最佳烘烤时间为 14 分钟，烘烤最佳温度为面火 230℃/底火 190℃。

正交试验通过直观分析法，对 9 个试验组进行综合评定后，分析得出理论最优方案，再与 9 个试验组中的最佳方案做对比验证，最后证实理论分析结果具有参考意义，最佳的方案为茶粉添加量 15%、白砂糖添加量 70%、搅打时间 45s。

本文根据实验感官评分数据进行了合格率的编程设计，设置分值超过 76 分时为合格，结合正交的三因素的感官评分结果，设计出能根据其水平变化给出感官评分是否合格的判断的编程。

关键词：绿茶粉，蛋糕，加工工艺，感官评价，编程

Abstract

With the improvement of people's living standards, the demand for baked goods such as cake and nutritional health requirements have gradually increased. Green tea has a variety of health functions, including caffeine, tea polyphenols, minerals, vitamins, tea pigments, tea polysaccharides, theanine and saponins and other efficacy components, not only can fight anti-radiation, but also anti-inflammatory sterilization, antioxidant anti-aging, lowering blood lipids and so on, its special effect is unmatched by other teas.

The combination of green tea and cake enhances the nutritional significance of baking products and responds to the development needs of the market. This paper studies the influence of tea powder addition, sugar addition, milk addition, cake oil addition, stirring time, baking time and baking temperature up and down on the quality of cake, through the system's sensory score including appearance, tissue status, aroma, Taste and taste of these four items to quantitatively assess the quality of the cake. The most influential three items were the amount of tea powder added, the amount of sugar added and the stirring time, so the three items were made to do the orthogonal test of three factors and three levels alone.

In addition to these three, the results of the other four by single factor test are 12%, the best addition of cake oil is 12%, the best baking time is 14 minutes, and the best baking temperature is 230 ℃/primers 190 ℃ of surface fire.

Orthogonal test through the visual analysis method, after the comprehensive evaluation of 9 test group, the analysis of the theoretical optimal scheme, and then compared with the best scheme in 9 test group to do a comparative verification, and finally confirmed that the theoretical analysis results have reference significance, the best scheme for tea powder addition 15%, white sugar addition 70%, stirring time 45s.

Based on the experimental sensory score data, this paper makes the programming of the pass rate, sets the score of more than 76 points as qualified, combined with the results of the sensory score of three factors orthogonal, and designs the programming which can give the judgment of whether the sensory score is qualified according to its horizontal change.

以上内容仅为本文档的试下载部分，为可阅读页数的一半内容。如要下载或阅读全文，请访问：

https://d.book118.com/858013117063007007