

Our project titled "Cookie Quality Optimization for Piece of Cake" focuses on improving the quality and longevity of cookies produced by a small family-owned factory called "Piece of Cake" in Palestine. The project aims to enhance the freshness of cookies over time, addressing the issue of cookies becoming dry and unappealing after storage. The approach involves modifying the recipe, optimizing the production process, and enhancing quality control measures.

Key Objectives:

1. Improve the productivity and quality of the cookies for an extended period.
2. Use industrial engineering tools to streamline operations and increase efficiency.

Methodology:

- Data collection and analysis were conducted, including customer feedback through questionnaires.
- Various trials were performed to identify the best modifications to the cookie recipe.
- The recipe was altered by adjusting ingredients such as flour, sugar, and baking soda to achieve longer-lasting quality.

Results:

- Two optimized recipes were developed that enhanced cookie quality, particularly in maintaining softness and taste for up to two days.
- The modified recipes were shared with the factory, leading to positive feedback from the head chef and testers.

Recommendations:

- Implement one of the optimized recipes for improved product quality.
- Upgrade packaging methods to maintain freshness for a longer time.
- Educate staff on proper storage techniques and increase production volume, leveraging the longer shelf life of the new recipe.

The project concluded that improving the freshness and quality of the cookies, along with better packaging and staff training, could help "Piece of Cake" enhance its competitive edge in the market.