

## **Impact of Flavor on Food Product Quality, A Case Study of Vanillin Stability during Biscuit Preparation**

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**Abstract :** The influence of food processing and choice of flavour solvent was investigated using biscuits prepared with vanillin flavour as an example. Powder vanillin either was added directly into the dough or dissolved into flavour solvent then mixed into the dough. The impact of two commonly used flavour solvents on food quality was compared: propylene glycol (PG) or triacetin (TA). The analytical approach for vanillin detection was developed by chromatography (HPLC-PDA), and the standard extraction method for vanillin was also established. The results indicated the impact of solvent choice on vanillin level during biscuit preparation. After baking, TA as a more heat resistant solvent retained more vanillin than PG, so TA is a better solvent for products that undergo a heating process. The results also illustrated the impact of mixing and baking on vanillin stability in the matrices. The average loss of vanillin was 33% during mixing and 13% during baking, which indicated that the binding of vanillin to fat or flour before baking might cause larger loss than evaporation loss during baking.

**Keywords :** biscuit, flavour stability, food quality, vanillin

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