Bakery science of bread and the effect of salt reduction on quality: a review

ABSTRACT

Salt or sodium chloride is widely used in most homemade dishes or processed foods. It can be considered\ as a crucial ingredient because, without adding salt most dishes or food products may have less flavor, become tasteless and not appetizing. The addition of salt can provide salty taste or can even mask the bitter taste. It is also widely used as a preserving agent and can increase product's shelf life. Bread is widely consumed and serves as a staple food for certain countries. Not only that, bread is one of the world's oldest foods and is said to be the largest contributor of salt in our diet. While bread is believed to supply the major percentage of daily salt intake, reduction of salt in this product can assist in reducing the consumption of salt in human's diet. Salt is also found to have detrimental impact on human health as it can cause cardiovascular diseases. Nevertheless, the salt reduction in bread is not easy to apply as salt play important roles in bread-making and its reduction can affect the quality of bread. Salt in bread has been observed to improve dough-making process, enhances the flavor of bread and produces nice brown colour of the bread's crust through Maillard reaction. Besides that, salt also helps in improving the texture, decreasing staling and increasing the microbial shelf life of the bread. This article explains the bakery science of bread by discussing the effect of salt reduction on bread quality.

Keyword: Culinary science; Bakery technology; Bread rheology; Healthy diet; Sodium chloride