

## Studies of factors of bitter components on salt palatability

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### Summary

We studied taste properties of salts in water solutions and demonstrated effects of bitter components on the taste of salts. Sensory evaluations by different procedures of water solutions of salts at 1.2% solid content showed significant statistical differences in saltiness and bitterness only for salt samples produced by spraying seawater directly at room temperature. Taste sensor analyses revealed different response patterns for salt samples produced by various procedures.

This study used test samples of water solutions of marketed salts prepared at 0.7% NaCl content. We evaluated their saltiness and subjects' preference for them. Results showed that the strength of saltiness contrarily related to preferences; other factors were also involved in preferences.

We previously evaluated only water solutions of salt samples, but salts are usually used with other food materials during cooking. We prepared water solutions and clear soups with four salt samples that were produced by different processes and which had different contents of inorganic components. We evaluated them by a sensory evaluation and taste sensor. We evaluated saltiness, mildness, unpleasantness and palatability for water solutions and clear soup. Results showed that significant differences were statistically confirmed in saltiness for water solutions and clear soups. Significant unpleasantness was recognized in water solutions, but not for the clear soup. These results indicate that taste properties of salts were characteristic for various prepared dishes.

Our previous study demonstrated that taste sensors detect different response patterns for respective salt samples. Herein, we suggest that addition of monosodium glutamate (MSG) gave different effects on taste sensor patterns of clear soups with different salt samples. The taste sensor patterns reflected taste properties of salts. Results revealed that the differences in salt samples affect tastes of dishes on a taste sensor analysis. We concluded that a taste sensor can be used to evaluate effects of MSG on those dishes.