

Analysis of the Taste Difference between Baked Salt and Non-Baked Salt

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Summary

Baked salt is made by baking the sea salt. Some of the food manufacturing companies specify the baked salt than sea salt on the grounds that the taste is different. But, scientific evidence of those taste difference is not clear. So, we analyzed the chemical difference between sea salt, industrial baked salts, and salts baked in muffle furnace by powder X - ray diffraction, and we analyzed the taste difference of those aqueous solution by taste sensor.

In the analysis of powder X - ray diffraction, one diffraction peak exposed between baked salt and sea salt as a raw material of baked salt. In the principal component analysis of the taste, sea salt and baked salt were plotted in different positions. We therefore concluded that sea salt was changed its chemical composition and its taste in the salt baking process.

We baked the sea salt under the industrial-baking process temperature in muffle furnace, and we analyzed those baked salts by powder X - ray diffraction and taste sensor. Baked salts in muffle furnace were different diffraction peaks to sea salt and industrial baked salt. In the principal component analysis of the taste, the baked salts in muffle furnace were plotted in different positions of sea salt and industrial baked salt. Therefore, we concluded that chemical composition and taste of the industrial baking salt were made in industrial salt baking process specifically, not only temperature condition.

In the analysis of powder X - ray diffraction, 4 industrial baked salts exposed different diffraction images each other. In the principal component analysis of the taste, 2 industrial baked salts were plotted in different positions, but, other 2 industrial baked salts were plotted in nearly positions. So, we concluded that difference of diffraction images and difference of the taste of aqueous solution is not a relationship of direct connection.