

Inside Mukogawa Women's University (Japan), the Department of Pharmaceutical Sciences researches conducts specifically search for physiologically active substances, synthesis, analysis and drug design of pharmaceutical products, drug delivery system, proper use of pharmaceutical products.

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"In our laboratory, sensor work has been performed for evaluating medicines or related substances. We are working on assessment of taste characteristics, taste making efficiency of formulations for medicine or nutraceutical products. For example, we evaluated the palatability of 15 bottled nutritive drinks, all commercially available on the Japanese market, using data from artificial taste and odor sensors (Electronic Tongue and Nose).

In gustatory sensation tests, well-trained healthy volunteers scored the drinks in terms of palatability and of the basic tastes. Overall palatability is positively correlated with sourness intensity and fruitiness and negatively correlated with bitterness intensity and the tasting of medicinal plants. The taste sensor (The ASTREE Electronic Tongue) could predict the sourness and bitterness intensity and fruitiness could be predicted by odor sensor (The FOX Electronic Nose). Thanks to the taste sensor data, the 15 drinks could be classified into four groups. Finally, the combined usage of the taste and odor sensors gave rise to a three-group classification. Thus, not only the taste sensor but also the odor sensor may be useful in evaluating the palatability of bottled nutritive drinks. Currently, we are also focusing on taste of amino acid with taste sensor. We tried to make taste sensor map for 26 kinds of amino acids using data of principal component."



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