

First Evidence in Japan Linking Nutritional Assessment Scores with Biomarkers **Ajinomoto Co. Develops a Nutrient Profiling System for Assessing an Entire Day's Diet**

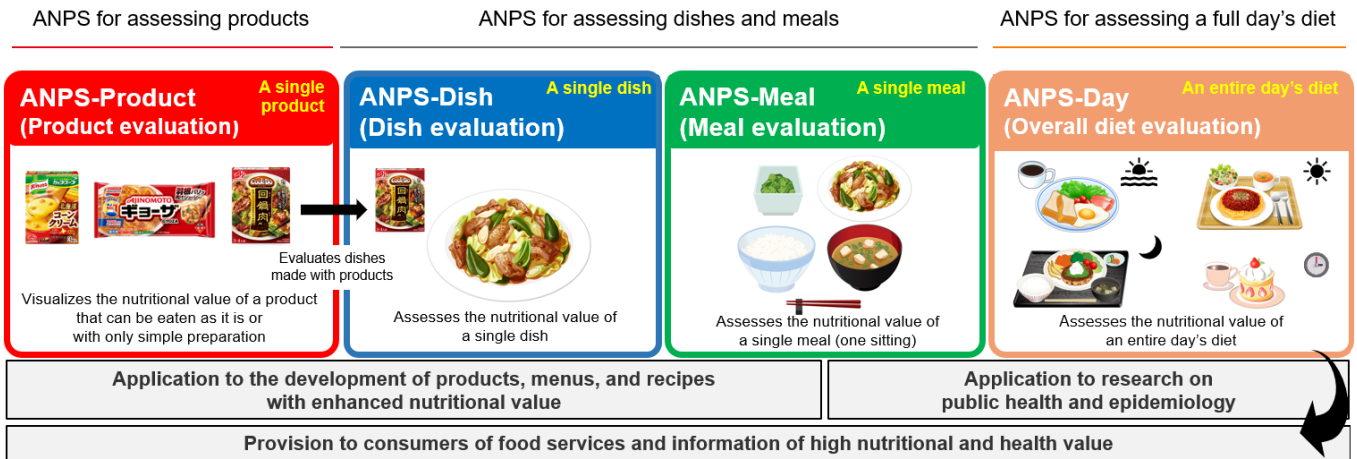
Research Findings Published in the International Academic Journal *Nutrients*

TOKYO, June 30, 2026 – Ajinomoto Co., Inc. (“Ajinomoto Co.”), in a joint study with the Department of Nutritional Epidemiology and Behavioural Nutrition, Graduate School of Medicine, The University of Tokyo (a social cooperation program with Ajinomoto Co.), has expanded its proprietary nutrient profiling system for scientifically assessing nutritional value, the Ajinomoto Group Nutrient Profiling System (ANPS), to create a new method called ANPS-Day that assesses the nutritional quality of an entire day’s diet, and examined the method’s validity using biomarkers measured in healthy Japanese adults. As a result, it confirmed that groups with higher ANPS-Day scores had a lower urinary sodium-to-potassium ratio (Na/K ratio), which has been reported to be associated with cardiovascular disease risk. The findings of this research have been published in the international academic journal *Nutrients*.

In recent years, as interest has grown in the efforts of governments and companies in various countries to improve nutrition, the development and introduction of nutrient profiling systems (NPSs) has been advancing. An NPS is a method of scientifically evaluating the nutritional components contained in foods and expressing the nutritional quality of those foods in an easy-to-understand way. The Ajinomoto Group has developed its own NPS, ANPS, and has progressively expanded its scope of application, from ANPS-Product for a single product to ANPS-Dish for a single dish and ANPS-Meal for a single meal. However, although various studies have examined the scientific validity of these assessment methods, the evidence accumulated to date had come mainly from analyses drawing on existing recipe information, and validation using biomarkers from actual members of the public had not yet been achieved.

In this joint study with The University of Tokyo, the Ajinomoto Co. expanded ANPS to create ANPS-Day, which assesses the nutritional quality of a full day’s diet. The score used in this method (the ANPS-Day score) builds on the knowledge gained from the previously developed ANPS-Dish and ANPS-Meal and was designed with Japanese food culture and nutritional issues in mind. Specifically, it evaluates four components: protein, vegetables, saturated fatty acids, and sodium. To validate this score-based assessment method, the group analyzed data from 324 healthy Japanese adults who took part in a survey conducted across 20 areas nationwide, drawing on four-day dietary records and on biomarkers from two 24-hour urine collections (the amounts of sodium, potassium, and urea nitrogen excreted) to examine how these related to the ANPS-Day scores.

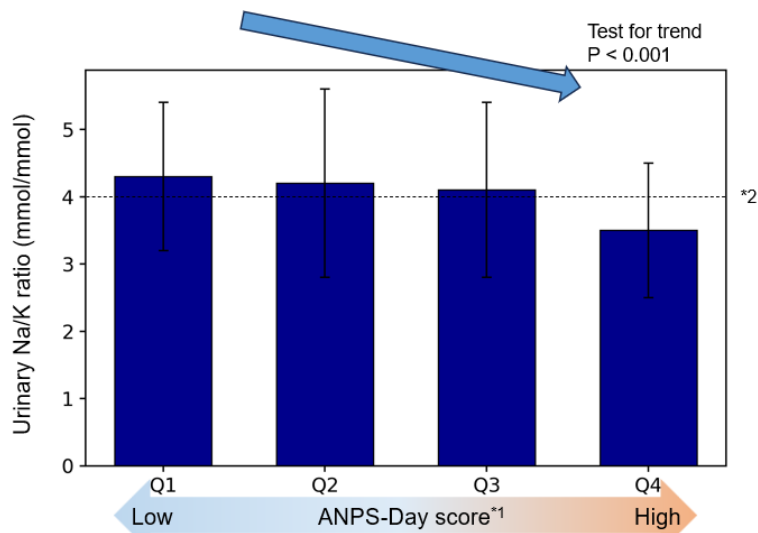
The Ajinomoto Group Nutrient Profiling System



The analysis confirmed that the ANPS-Day score can reflect, to a certain extent, the nutritional quality of a full day's diet, and that groups with higher ANPS-Day scores had a lower urinary Na/K ratio, which has been reported to be associated with cardiovascular disease risk. Extending a dish- and meal-level nutrient profiling system to the assessment of an entire day's diet and validating it against urinary biomarker from members of the public is a rare achievement worldwide, and this is also the first such result in Japan demonstrating an association with data from 24-hour urine collection.

This research has been published in the international peer-reviewed journal *Nutrients*. The study was recognized for demonstrating the validity of a method for assessing the nutritional quality of an entire day's diet using real-world dietary data and objective biomarkers.

These findings demonstrate that ANPS-Day is a nutritional assessment technology that correlates with urinary biomarkers.



24-hour urinary Na/K ratio by ANPS-Day quartile in Japanese men and women (mean ± standard deviation)

*1. Energy-adjusted score.

2. In its consensus statement published in 2024, the Japanese Society of Hypertension advocates aiming for a low urinary Na/K ratio in healthy Japanese individuals; and the dotted line in this figure indicates the proposed feasible target (below 4), which however does not apply to patients with specific conditions.

* Hisamatsu T, et al., "Practical use and target value of urine sodium-to-potassium ratio in assessment of hypertension risk for Japanese: Consensus Statement by the Japanese Society of Hypertension Working Group on Urine Sodium-to-Potassium Ratio," *Hypertens Res.* 2024. <https://doi.org/10.1038/s41440-024-01861-x>

Going forward, the Ajinomoto Group will draw on the evidence obtained in this research to further advance its Nutrition Without Compromise approach. The Group will share ANPS, a nutritional assessment technology originating in Japan, both at home and abroad, and, through applications such as visualizing nutritional balance and suggesting meals, help create an environment in which consumers can improve their diets based on scientific evidence.

Guided by its purpose of “contributing to the well-being of all human beings, our society, and our planet with ‘AminoScience®,’” the Ajinomoto Group aims to help extend the healthy life expectancy of one billion people by 2030. By continuing to advance science-based efforts to improve nutrition through its Nutrition Without Compromise approach, it will help people lead healthy, comfortable lives.

Reference

Paper published in the international academic journal *Nutrients*

Title: Validity of the Ajinomoto Group Nutrient Profiling System Against Two 24 h Urinary Excretions of Sodium, Potassium and Protein in Japanese Adults

Authors: Hiroko Jinzu, Sachi Nii, Keishiro Arima, Yuki Nakayama, Chie Furuta, Naoki Hayashi, Ryoko Tajima, Keiko Asakura, Shizuko Masayasu, Satoshi Sasaki, Kentaro Murakami, and Hitomi Okubo

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Link: <https://www.mdpi.com/2072-6643/18/10/1623>

Press release dated May 14, 2020

The Ajinomoto Group Introduces a Nutrient Profiling System:

https://www.ajinomoto.com/cms_wp_ajmnt_global/wp-content/uploads/pdf/2020_05_14E.pdf

Press release dated December 24, 2021

The Ajinomoto Group Develops the Ajinomoto Group Nutrient Profiling System for Menu:

https://www.ajinomoto.com/cms_wp_ajmnt_global/wp-content/uploads/pdf/2021_12_24E.pdf

Press release dated May 27, 2025

Ajinomoto Group Develops Japan's First Nutrient Profiling System for Meals:

https://www.ajinomoto.com/cms_wp_ajmnt_global/wp-content/uploads/pdf/2025_05_27E.pdf

For details on Ajinomoto Co. and the Ajinomoto Group, visit <https://www.ajinomoto.com/>

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