

Kirin Beverage is a comprehensive beverage corporation, which covers the full spectrum of operation, from R&D to production, to distribution, marketing and sales of beverages. With a product line of about 150 items, our company provides almost all types of soft drinks from black tea, coffee, sugarless tea, to carbonated and fruit drinks.



The Electronic Nose PROMETHEUS, from a supporting tool for the sensory evaluation

The importance of quality in the food industry is becoming of primary concern. That is why we have to quickly and accurately comprehend the characteristics of quality sought after by the market, and further strengthen our technical capabilities to respond market requirements. Therefore, we decided to introduce the Electronic Nose technology in our Institute.

The PROMETHEUS was of special interest to us because of its sensibility in the beverage measurement, its capacity of performing consecutive measurements, the extensibility of the device and its unique analysis software.

Since the introduction of the PROMETHEUS three years ago, we have used it to focus on keywords such as "design", "improvement", "management" and "guarantee" of our product, and have successfully generated numerous interesting data.



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An objective, accurate and tireless instrument

The objectivization and visualization of flavor evaluation were the first benefits in the Research & Development process.

As flavor is often described in abstract expressions, it is difficult to preserve accurate information on flavors. The PROMETHEUS "memorizes" and accumulates data on very elusive flavors as expressed in a sentence like "that fragrance I felt at that time...".

The PROMETHEUS is capable of giving consecutive evaluations of multiple test substances and does not fatigue as would a human sensory panel because human senses get tired of repetitions.

Helping us formulate new beverages

Correlation has been found between the PROMETHEUS and sensory evaluation to determine the differences according to brands, and slight differences according to types and compositions of raw materials, manufacturing process and storing conditions. These findings have been utilized in the orientation of new products and in the decision making process on product design stages.

As one of the characteristics of the Japanese market, canned drinks are sold hot. We have used the PROMETHEUS to clarify technical issues related to this style of sales. We have been able to objectively digitize and evaluate the status of the coffee and black tea drinks, after they were heated, and to compare the various processes used to improve our products.

The Electronic Nose PROMETHEUS, to a comprehensive quality assessment tool

Then we used the PROMETHEUS to assess the quality of beverages, regardless any sensory evaluation.

There are many cases where it is extremely important to detect very minute differences in characteristics of the beverages rather than apparent differences.

The Prometheus' ability to detect the subtle changes of fugacious substances that a human panel cannot discern has made it an invaluable tool to assess and predict the quality features of the product. We can rely on the Prometheus for assessing factors of quality changes, determining quality conditions and material composition of our products, and not only for flavor evaluation.

The Japanese cycle of beverages is becoming increasing shorter. Therefore, we need to efficiently accumulate data, which can be analyzed thanks to our research results to quickly feedback information to the development department and production floor in order to improve our products.

Now, the PROMETHEUS has proven to be reliable tool for flavor evaluation. But it is also a technology giving new information that allows to assure the design of safe and high-quality beverages. We will continue to use the Electronic Nose as a comprehensive evaluation tool in our Research & Development Department as well as at our production sites to continually search for the best quality available in our beverages.

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