

Press Information

From Smartphones to Smart Health: Kyocera's worlds' first Gyro-based Carbohydrate Monitoring System

The innovative tracker uses pulse wave patterns to measure carbohydrate metabolism.

Kyoto/London, January 21st, 2020. Kyocera launches the world's first monitoring system for the precise measurement of carbohydrate metabolism. Thanks to gyro sensors, the tracker is also suitable for the lifestyle and wellness area. Commercial availability in Japan is planned for this year.

Smart, innovative and intuitive

To determine the user's carbohydrate balance, the device must be held against the wrist one hour after eating to monitor the pulse. Mr. Ajima, an engineer at Kyocera's medical R&D centre and developer of the device, explains: "As the carbohydrate level rises after eating, the size of the radial artery changes slightly, which produces slight shifts in how the pressure of your blood-flow rises and falls with each heartbeat. Within about ten seconds, the measurements are complete, and the app will then analyse the results, presenting them in detailed graphs and comparing the data with your past history."



The carbohydrate monitoring system connects with a smartphone app

The monitoring system can help determine whether the amount of food consumed was sufficient or not. The regulation of food intake becomes easier for users and can support diets and weight management. The device is particularly suitable for people with prediabetic symptoms and nutrition-conscious users. "Looking toward the future," Mr. Ajima adds, "we hope to expand its

capabilities to monitoring fat and cholesterol. This will be an important addition to Kyocera’s product line-up, and one which has the potential to make a positive impact on all of our lives.” He was proud to be named Grand Prix Runner-Up in the Smart X category at CEATEX 2019 in Japan.



**Hiromi Ajima of Kyocera’s Medical R&D Center
and the world’s first Carbohydrate Monitoring System**

A Chance Discovery

The Carbohydrate monitoring system is the result of an accidental discovery. When smartphones started being equipped with gyro sensors, Mr. Ajima originally was inspired to try to use the smartphone itself as a health monitoring device, noting that they were sensitive enough to detect a pulse when the phone is laid against the wrist. To get a better fit and obtain more reliable data, he soon opted for developing a separate device in which the sensor could be mounted on a spring for greater sensitivity. During research, several apparent measurement errors led to Mr. Ajima discovering that the device had a precise record of changes in metabolism from one meal to the next.

From airplanes to metabolism trackers

The monitoring system works with the same gyro sensor that is used in smartphones for camera stabilization. Originally, gyro sensors were only found in airplanes and other advanced devices. However, due to the integration in smartphones, the costs dropped significantly, so that the innovation team at Kyocera began to develop new applications for this technology.

For more information on Kyocera: www.kyocera.co.uk

About Kyocera

Headquartered in Kyoto, Japan, Kyocera Corporation is one of the world's leading manufacturers of fine ceramic components for the technology industry. The strategically important divisions in the Kyocera Group, which is comprised of 286 subsidiaries (as of March 31, 2019), are information and communications technologies, products which increase quality of life, and environmentally friendly products. The technology group is also one of the most experienced producers of solar energy systems worldwide, with more than 40 years of know-how in the industry.

The company is ranked #655 on Forbes magazine's 2019 "Global 2000" listing of the world's largest publicly traded companies. With a global workforce of over 77,000 employees, Kyocera posted net sales of approximately €12,99 million in fiscal year 2018/2019. The products marketed by the company in Europe include printers, digital copying systems, semiconductor-, fine ceramic-, automotive- and electronic components as well as printing devices and kitchen products. The Kyocera Group has two independent companies in the United Kingdom: Kyocera Fineceramics Ltd. and Kyocera Document Solutions.

The company also takes an active interest in cultural affairs. The Kyoto Prize, a prominent international award, is presented each year by the Inamori Foundation — established by Kyocera founder Dr. Kazuo Inamori — to individuals and groups worldwide who have contributed significantly to the scientific, cultural, and spiritual betterment of humankind (converted at approximately €828,000 per prize category).

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