Science of sweat
SKINOS

Wristband sweat sensor
SKWL-1000

Sweat sensor using the principle of a ventilated capsule-type sweat meter.

●It achieves simple and unrestricted measurement of local sweat amount (thermal sweat) in the field, such as during daily life, exercise, and work.

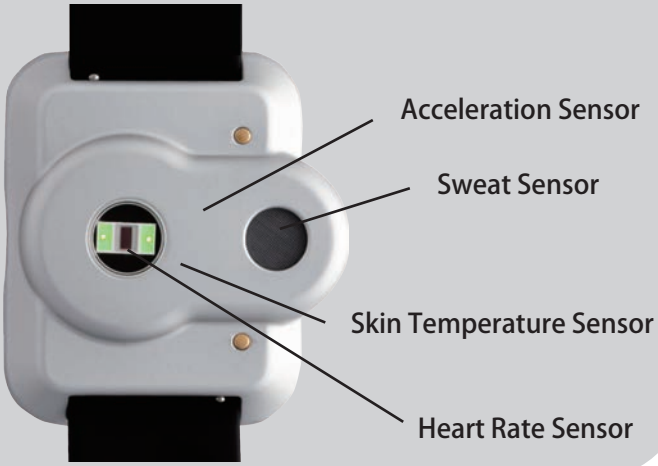
●It has a built-in advanced sweat sensor with unique sweat sensing technology that uses the principle of a ventilated capsule-type sweat meter. It can record the timing of sweating and changes in sweating level.

What is a ventilated capsule-type perspirometer?

This is the standard for sweat measurement, capable of measuring changes in the local sweat rate with high response and high accuracy. Air is supplied to a capsule covering the skin, and the humidity of the air before and after it passes through the skin is measured using two humidity sensors, and the sweat rate is quantified based on the measurement value differential.

All-in-one device measuring physiological phenomena related to thermoregulation
Wristwatch-type wearable device equipped with multi-sensors

It is a wristwatch-type wearable device equipped with not only a sweat sensor but also heart rate sensor, skin temperature sensor, and acceleration sensor.
It measures physiological phenomena related to thermoregulation, such as in hot environments or during exercise with one device.



Large capacity memory and wireless communication function

Measurement data is stored in the internal memory of the device and can be downloaded via wireless communication while charging.
It is equipped with large capacity memory.
It can save 60 pieces of data from the start of measurement to the end of measurement.
Sampling cycle: every 10 seconds (standard)
Data can be easily downloaded using an app and a PC that supports Bluetooth LE.

Applications

Evaluation of thermal comfort in daily living environments (textile product, air-conditioned environment, etc.)
Measurement of sweat amount in exercise physiology research, exercise/sports, and working environment.
Recording of sweating episodes during physical activities and sleep in the field of medical research.

SKINOS Technology & Products

Science of sweat
SKINOS

SKINOS Co., Ltd.
2-16-24 Fumiiri, Ueda City, Nagano Prefecture, 386-0017 Japan
Shinshu University Open Venture Innovation Center, Room 107
TEL : 0268-75-9071 FAX : 0268-75-9072 info@skinos.co.jp https://www.skinos.co.jp

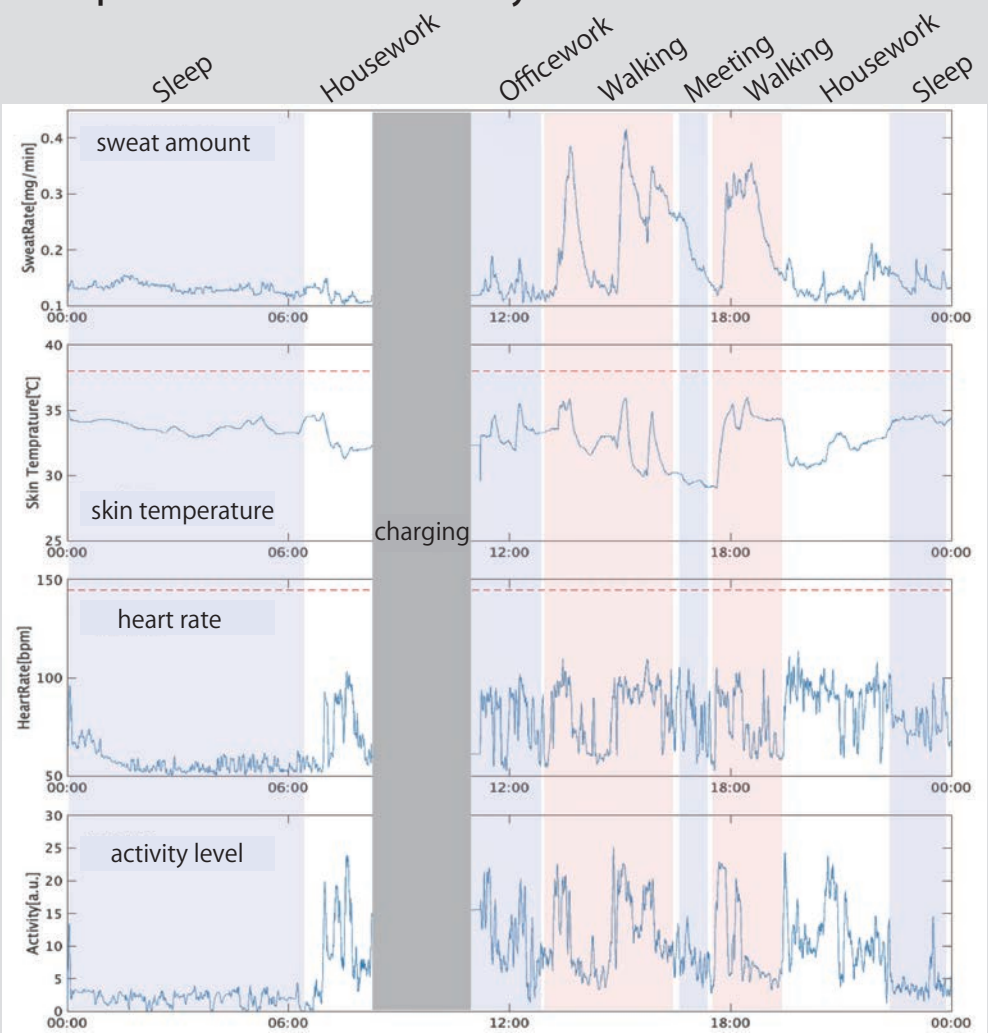
SHINSHU UNIVERSITY
Startup company originating from Shinshu University
JAPAN

Science of sweat
SKINOS

Wristband sweat sensor

SKWL-1000

Example of measurement in daily life



An example of measuring sweat amount, skin temperature, heart rate, and activity level on a summer day using this device is shown.
It shows that the amount of sweat is increasing while moving under the scorching sun.
Also, small changes in his sweat rate while sleeping or working in an air-conditioned office can also be verified

Test subject: Male in his 40s Salesperson

Specifications

Measurement items(On-board sensors)	sweat amount, skin temperature, acceleration, heart rate *Sampling cycle: every 10 seconds (standard)
Display	electronic paper *seating rate, heart rate, skin temperature
Communication standard	Bluetooth LE
Power supply	lithium-ion secondary battery (8+ hours of continuous operation)
Case material	aluminum
Band	nylon or silicone band
Dimensions	51 mm × 48 mm × 15 mm (protrusions not included)
Software	Data Download App(Web App : Latest Google Chrome(web brower) installed)

*This device is designed for resarch applications..

Science of sweat
SKINOS

SKINOS Co., Ltd.
2-16-24 Fumiiri, Ueda City, Nagano Prefecture, 386-0017 Japan
Shinshu University Open Venture Innovation Center, Room 107
TEL : 0268-75-9071 FAX : 0268-75-9072 info@skinos.co.jp https://www.skinos.co.jp

SHINSHU UNIVERSITY
Startup company originating from Shinshu University
JAPAN