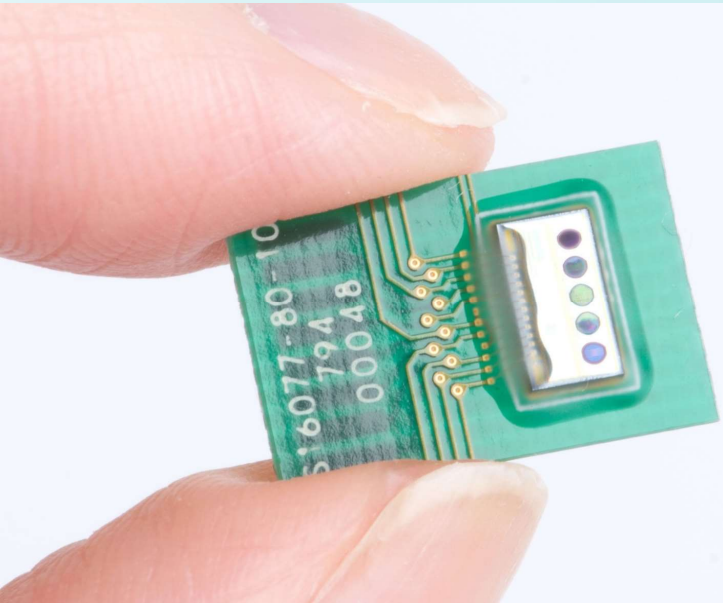


CMOS type sensor 5C-SSM

【Measurement data】 Body odor

Aroma Bit, Inc.
2025.05.01

Introduction of 5C-SSM

5C-SSM applies 5 types of smell adsorption membranes with different characteristics on CMOS, and detects and quantifies the increase or decrease in the amount of electric charge caused by the adsorption/desorption of smell molecules.
This function is based on the CMOS sensor's ability to store electric charge.

The sensor used in the measurement (right figure) is the sensor and drive circuit cased in the “5C-SSM evaluation kit_box,” and all 3 types of membrane sets (total 15 membranes) were measured and analyzed.

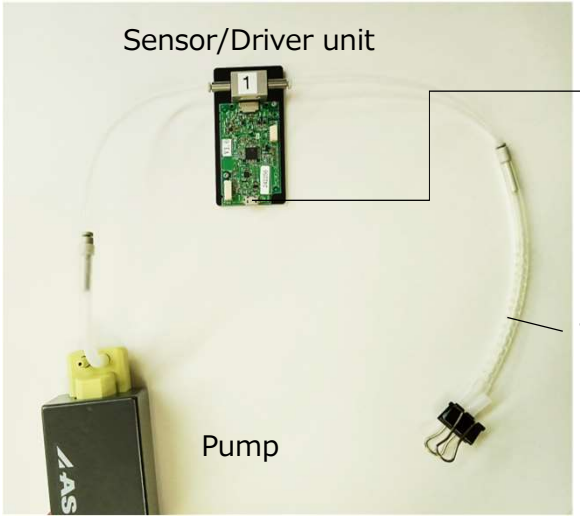
＊The products sold in the kit are supplied in a case.

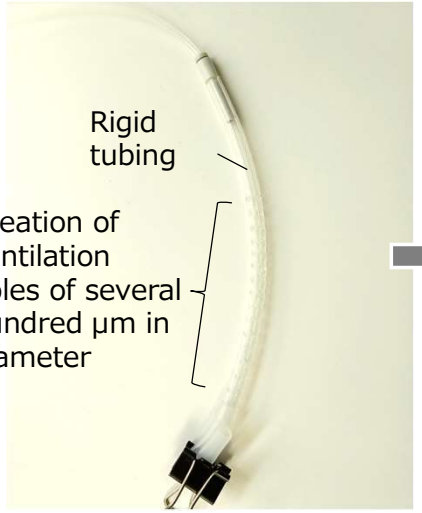
Measurement Overview

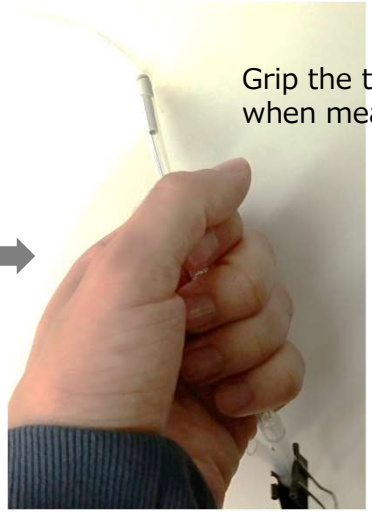
Measurement sample :
Individual identification by palm smell.

Sampler :
Palm（6 men and women）

Measurement condition :
Sensor : 5C-SSM
(FS0101, FS0200, FS0300)
Baseline : Indoor air
Air supply : 10 sec
Ventilation : 2 min
Flow rate : ～0.5 L/min
Temperature&humidity :
Room temperature（～22 ℃）、～40%RH
Features in the analysis :
Maximum differential value of frequency for each element





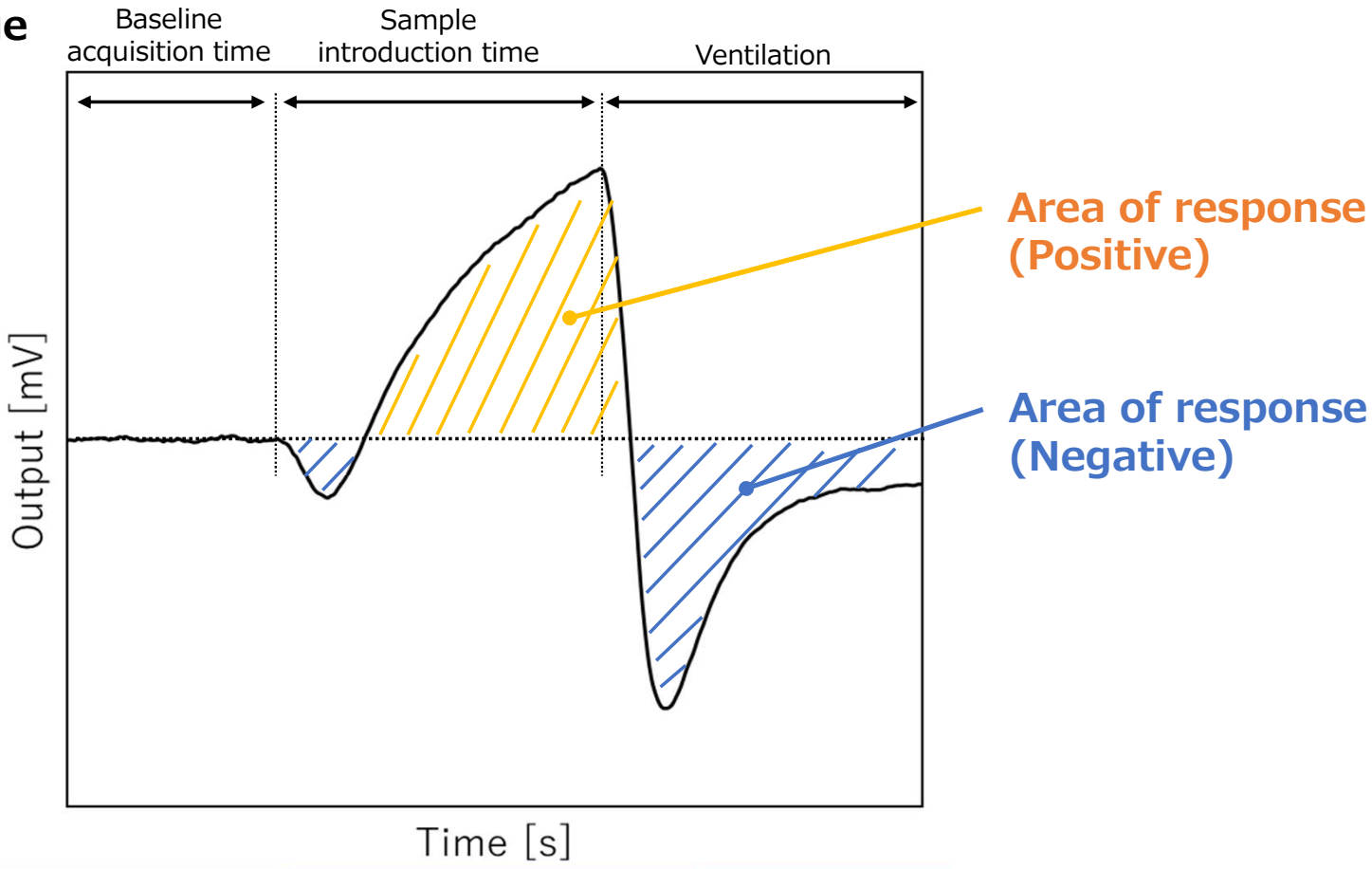


Analysis method

Feature for analysis: Area of response

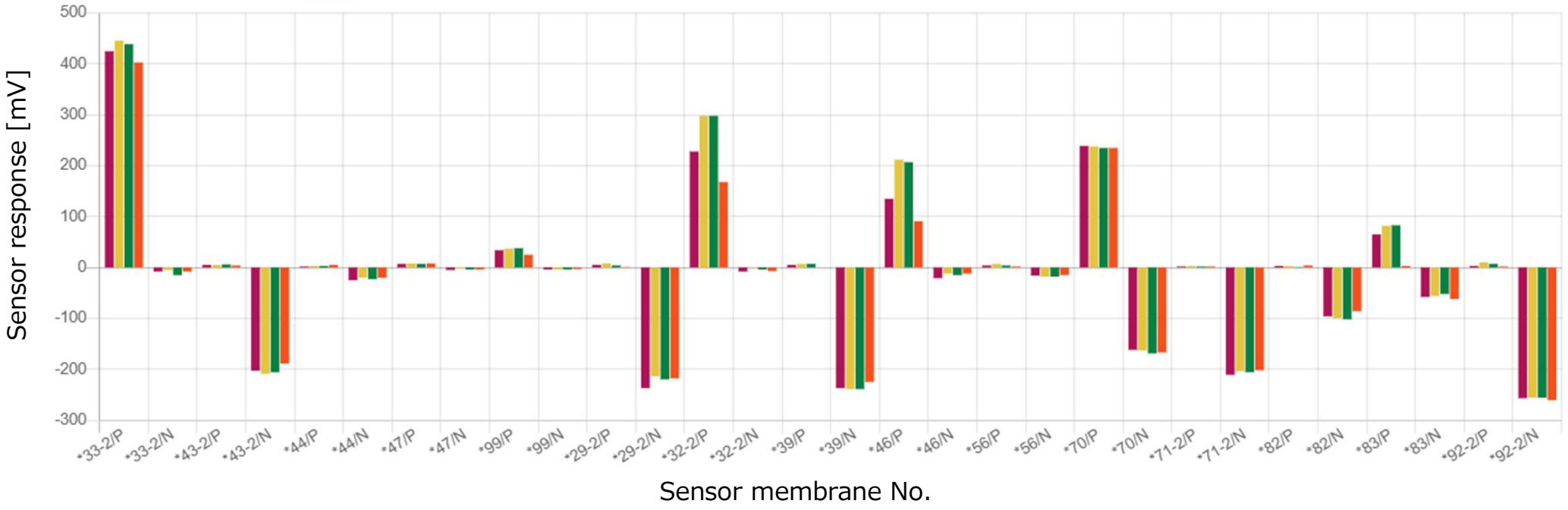
Summation of positive and negative sensor output change from baseline

Analysis image



Example of response for 15 membranes

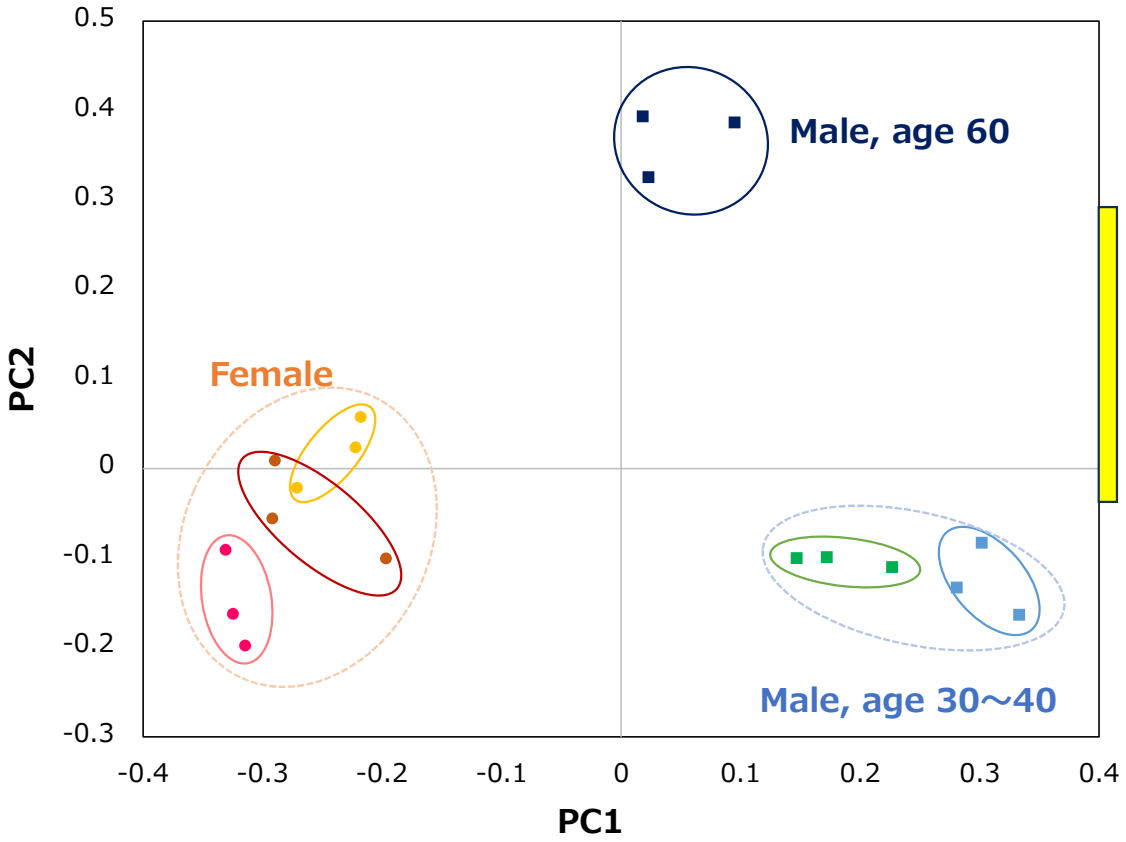
Sample : Male, 30s（N=4）



Principal Component Analysis

Sample : 6 men and women (N=3)

Analysis : Principal Component Analysis (Normalization)



Gender, age, etc. may be identified by body odor.