SUPER **SESI**

(Short application note)

FOSSILIONTECH

Real-time microbial volatilomics

Monitoring and understanding the different stages of cell culture growth by multisensory and semivolatile analysis.

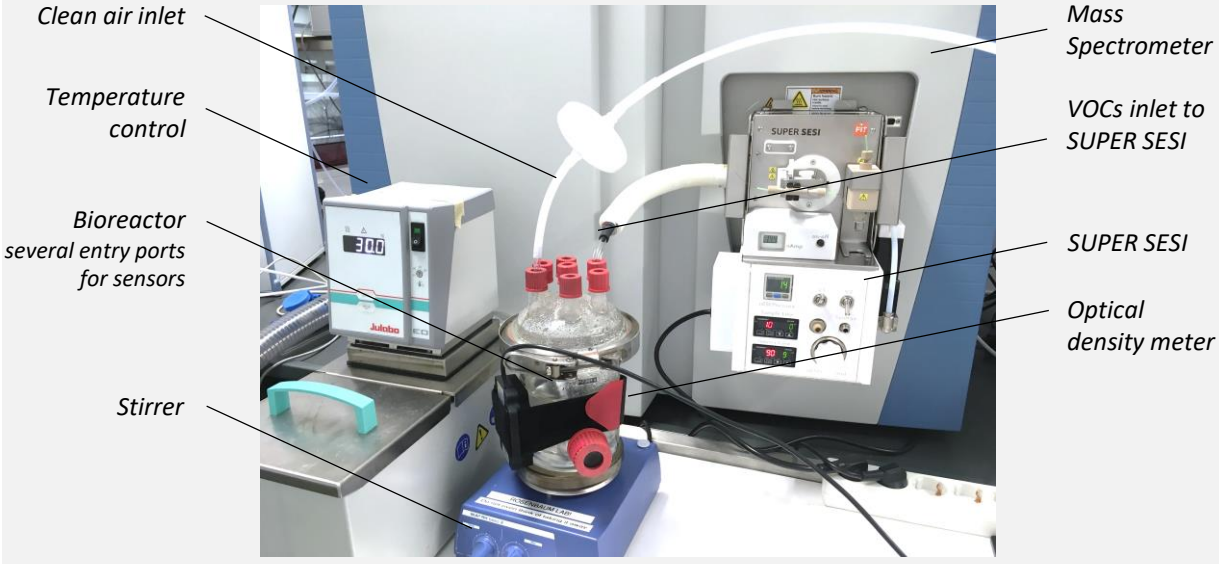
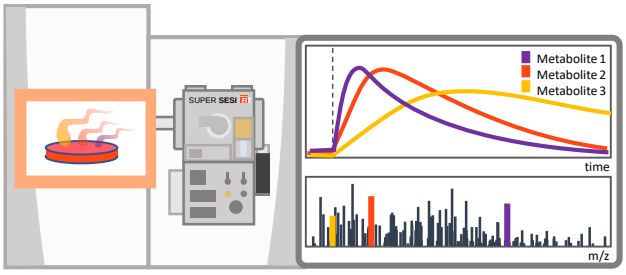


Figure 1: experimental setup assembled at the Prof. Blanks lab at the Institute of Applied Microbiology (iAMB) of the RWTH Aachen University (https://www.iamb.rwth-aachen.de). Clean air is passed through an active charcoal filter before it is introduced in the bioreactor. The reactor temperature is set at 30º C. VOCs released by the medium and the cell metabolism are passed through a ceramic filter to eliminate aerosols and carried by the air flow into the Super SESI. Optical Density, and VOC signals are used to understand the different stages of cell culture growth.

Applications



Metabolism is a very dynamic process. This setup allows to monitor the time dimension of different metabolic studies. Target specific metabolic pathways with isotopic labels. Study **metabolic responses to drugs**, **stressful stimuli, specific conditions, and culture growth**.

References:

Comprehensive Real-Time Analysis of the Yeast Volatilome; Tejero Rioseras A, Garcia Gomez D, Ebert BE, Blank LM, Ibáñez AJ, Sinues PM; Nature, Scientific Reports; 2017;7(1):14236; Oct 2017.

A breath of information: the volatilome; M. Mansurova; Birgitta E. Ebert; Lars M. Blank & Alfredo J. Ibáñez; Current Genetics; 64, 959-964; Dec 2017