

## Analysis of odors from soles materials

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The Research Institute on Environment and Catalysis (IRCE in French) based in Lyon (France) is the biggest catalysis laboratory in Europe. IRCELYON targets its research activities on sustainable development issues; it is eager to meet societal demands for sustainable energy production and the preservation of our environment.

Through its different activities IRCELYON is developing many partnerships with academic institutions and industrial companies at regional, national and international levels.

As part of a PhD program in partnership with Salomon company (manufacturer of sportswear and sports equipment), IRCELYON works on a project for reducing odors in sports materials like the ones used in shoe soles. One of the aims of this project is to evaluate the efficiency of different materials treatments for sweat odor reduction. For that, researches are using HERACLES electronic nose (Alpha MOS, France), that allows to measure odors emitted by shoe soles over time upon tracking VOCs (Volatile Organic Compounds) concentration and by-compounds formation.

Mrs Chantal Guillard, PhD supervisor at IRCELYON and Miss Caroline Rodriguez, PhD student with Salomon company comment «with HERACLES electronic nose we are able to detect odor differences linked with the presence of malodorous compounds such as isovaleric acid, even at very low concentration. The use of this instrument allows us to rapidly make progress in the analysis and selection of materials intended for shoe soles ».



**IRCE**  
in collaboration with Salomon



**Activity**  
Research activities on sustainable development issues

**Context**  
Project for reducing odors in sports materials in partnership with Salomon company

**Equipment**  
HERACLES Electronic Nose

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