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Research group: Sciences de l'exposition

Leader: HOPF Nancy B.

The Exposure Sciences group is interested in professional and domestic exposure to chemical, biological and physical pollutants. Inhalation exposure is one of the group's research focuses.

Our equipment allows us to perform human studies. We do research with gases and vapors (solvents, anesthetic gases), aerosols (dusts and particles such as microplastics, and plastic additives phthalates). We have the chance to have a controlled human exposure chamber where participants can stay still or do exercises while exposed to gases. We also have an aerosol delivery system to generate aerosols of phthalates. Lastly, a customized system allow us to generate dust exposure.

Main research topics via inhalation exposure:

1. Chemical risks: gas, vapour and aerosol measurements (e.g. glycol ethers, other solvents, neurotoxic and endocrine disruptor compounds)
2. Human toxicokinetics: absorption, distribution, metabolism and elimination in the human body
3. Biological monitoring: metabolites in biological fluids such as blood and urine (e.g., phthalate, solvents, microplastics)
4. Analysis of exposure determinants: type of pollutant, frequency and concentration of emission, environmental context