

## Evaluation of the taste masking of medicines for pediatric use

INSERM U1008 team specializes in powders characterization and application and in the development of innovative controlled release galenic forms. The team prepares controlled release medicines and biomaterials using techniques such as compression, granulation, extrusion, spray-drying, hot melt extrusion... The systems are thoroughly characterized *in vitro* using a wide range of physico-chemical and biological techniques.

As part of a university PhD, some members of the team worked on the development and evaluation of pediatric drugs, particularly focusing on the taste masking aimed at improving acceptability. Solid oral forms were considered but the acceptability and palatability issues raised. To increase acceptability among children, orodispersible tablets rapidly disintegrating in the mouth were developed but this required a very efficient masking of the active principle taste.



The masking of the active principle taste was obtained through spray-drying allowing to coat the active principle with a combination of lecithin – sodium caseinate, GRAS excipients for children.

With the ASTREE Electronic Tongue, the taste of active formulations and placebo was compared, which allowed selecting the optimal formulation.

Pr. M.P. Flament and her R&D team comment: "by outsourcing the taste evaluation at Alpha MOS, we could optimize the pediatric form and determine the excipient amount necessary for masking the bitter taste. Alpha MOS delivered an in-depth report in a very short time, which allowed presenting results for the presentation of the thesis and the publication of results".

“We could optimize the pediatric formulation”



**INSERM U 1008:**  
Controlled Release Medicines and Biomaterials : Mechanisms and Optimization

### Activity

University laboratory of industrial pharmacotechnicity

### Context

Masking of the bitter taste of acetaminophen in multi-particular oral forms for pediatric use

### Equipment

ASTREE Electronic Tongue

### Contact

Pr. Marie-Pierre Flament,  
Professor of pharmaceutical technology at Lille 2 University

### Website

<http://u1008.univ-lille2.fr>