

COSMETICS

SOLEIL engages
**in human beauty
and well-being**

Cream, shampoo, gel or lotion, these daily-used high-tech products incorporate the very last scientific advances in order to offer textures, shades, perfumes or new active principles. Quality and effectiveness control must be very rigorous, as well as their safety control.



Discussions in front of the screens of the SWING beamline.

Scientific and technological responses to these expectations require the cosmetic products characteristics (creams, emulsions, powders, gels, solutions...) and biological matrices (skin, hair, eyelash, eyebrow, nail, lips...) to be understood, and their interactions

studied. Among the studies conducted at SOLEIL, one can cite skin moisture and skin dryness, the monitoring of penetration of active principles in the skin, anti-oxidation formulating tests on the skin, encapsulation and release of caffeine, which possesses lipid-reducing activity, in the skin, variation in chemical composition between hair from different geographical origins, hair bleaching, the effect of chemical treatment (coloring or bleaching, straightening or waving...) on the structure and chemical composition of hair, the structure of a dried lip gloss deposit... These examples are proof that cosmetics is at the fore-front of innovation in product.

The 3 keypoints

- 1** SOLEIL established mid-2013 a privileged partnership with the Bio-EC company, the Cergy-Pontoise University and Cosmetic Valley competitiveness Cluster, to study the quality and safety of cosmetic products in a pooled innovation platform called Cosmétomique.
- 2** The SMIS, DISCO, SWING and lastly ANTARES beamlines are involved in cosmetic studies.
- 3** The NANOSCOPIUM and ANATOMIX beamlines will soon make it possible to study nanometric (a millionth of a mm) elements such as nanoparticles.

