

## **Green Technology for a Nourishing wax from *Vitis vinifera***

L.Fanton, V.Pecher, P.André, LVMH Recherche

Saint Jean de Braye, France

In our days, the cosmetic industry asks more and more for natural plant raw materials using green processes.

The present study describes the green extraction of *Vitis vinifera* followed by the phytochemical characterisation of the extract's lipid part. The challenge was to obtain a natural wax matching the skincare criteria with a nourishing composition using a green process. This challenge has been remarkably achieved by extracting the best of *Vitis vinifera* shoots with Supercritical CO<sub>2</sub> extraction. Indeed, this technique can be used to extract, purify, fractionate or refine many cosmetic ingredients at low temperature without any residual solvent. It is advantageously operated to extract fatty products that are very sensitive to oxidation.

In a first time, a method development has been carried out to determine the optimum parameters of the extraction.

In a second time, the composition of the wax has been studied by gas chromatography. A high concentration of 5% of total sterols was observed as well as 30% of free fatty acid. This specific composition makes the *Vitis vinifera* shoot wax different from other waxes or oils. The identified compounds were known in the literature to participate to the skin barrier function.

These two parts will be detailed in the poster.