



# NANOCAPSULES FROM BIOMASS

## AS DELIVERY SYSTEMS FOR COSMETIC FORMULATIONS

- ✓ **NANOCAPSULES (NCPS) FORMED FROM A CELLULOSE DERIVATIVE ENCAPSULATING VITAMIN E**
- ✓ **FINAL MATERIALS: AQUEOUS DISPERSION**

### APPLICATIONS

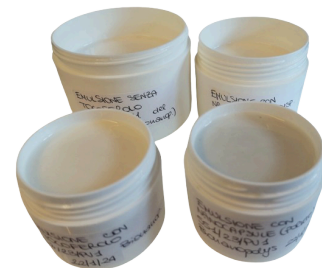
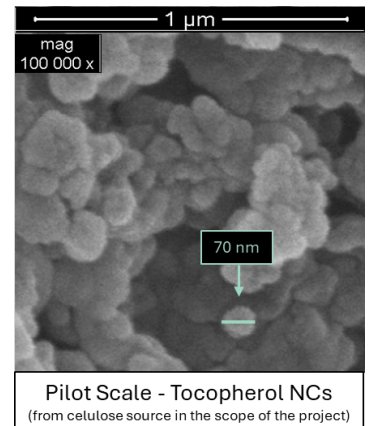
Delivery system for active ingredients (e.g. antioxidants) in cosmetic formulations

### FORMULATIONS DEVELOPMENT

A cosmetic oil in water emulsion containing nanocapsules of cellulose acetate butyrate (CAB) prepared from biomass and loaded with tocopherol was developed.

### IN VITRO ANTIOXIDANT EFFICACY TEST

A Photochemiluminescence (PCL) assay, using Trolox<sup>®</sup> as standard reference, was employed to measure the antioxidant capacity of the formulations with nanocapsules prepared with CAB from biomass and compared to the ones prepared with the commercially available CAB.



SAMPLES	mol Trolox/g (PCL)
Emulsion with nanocapsules (commercial CAB) in powder form loaded with Vitamin E	13.17 ± 0.72
Emulsion with nanocapsules (CAB from biomass) in powder form loaded with Vitamin E	13.73 ± 0.41
Base emulsion	inactive

## CONTACT INFORMATION

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