



## HYGIENE & COSMETICS

### SPRUCESUGAR FOR COSMETICS

#### Boreal Bioproducts

Boreal Bioproducts was founded in 2018 to extract green value from the forest side streams of conventional pulp and paper industry. The feedstock, sawdust comes from Finnish sawmills that use PEFC™ and FSC® certified Nordic wood. As the manufacturing process of Boreal Bioproducts bases on pressurized hot water extraction (PHWE), its carbon footprint remains low. The only solvent of the process being water also means that the ingredients can be obtained in their natural form and there is no chemical waste created. Thus, it can be truly stated that SpruceSugar™ has outstanding sustainability profile!

In 2021, Boreal Bioproducts established a strategic partnership with Metsä Spring, the corporate venture capital unit of Metsä Group (revenue EUR 6 billion). This partnership led to an erection of pilot scale biorefinery that is now helping cosmetic industry to take a leap towards eco-responsible beauty by providing SpruceSugar™ samples to test in hair care, skin care, and hair care formulations.

#### SpruceSugar™

SpruceSugar™ is a galactoglucomannan-rich Picea abies extract. It is available in two grades that differs in the lignin content: LW 5 %-w and LL 10-15 %-w. SpruceSugar™ is easily soluble in water and slightly anionic by nature. Due to the low molecular weight of the polysaccharides (< 7 000 g/mol), the viscosity of a solution stays low. As a co-surfactant and co-emulsifier, it creates synergies with other natural surfactants enabling higher bio-content in the formulations. It is cold processable and ideal for minimalistic formulations but can be use beyond that.

SpruceSugar™ is a remarkable illustration of the complexity of the nature. SpruceSugar™ is unique multifunctional biodegradable ingredient that can be utilised both due to its film-forming nature, or foaming tendency but also because of its biological activity or UV-absorbing capabilities. The choice is yours, here are some recipes to start your journey!



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