



What makes nanocellulose so wonderful?

Whether you're aware of it or not, you see the results of cellulose's structural integrity every day in the form of plants. Every blade of grass, garden hedge, and towering redwood is supported through the cellulose-containing walls of their cells. It's what keeps trees standing tall after decades or even centuries of life, and it's what gives wood its utility as a sturdy building material.

Nanocellulose is the smallest, most refined, and highly structured version of cellulose with some amazing properties. Each cellulose nanofiber is 1000 times smaller than the width of a human hair, meaning it has an ENORMOUS amount of surface area available for use and modification. It is high strength and provides mechanical stiffness while remaining lightweight, which opens myriad possibilities for its use as a building material. Perhaps more exceptional is the abundance and sustainability of nanocellulose. This material has been derived from wood pulp, numerous plants including algae, and even bacteria. In a world where the sustainability of petroleum products like plastic is constantly called into question, nanocellulose may provide the answer.

How is nanocellulose refined?

By removing impurities from finely ground wood pulp in a process known as acid hydrolysis, the nanocellulose fibers are freed up for applications that far surpass what can be done with the raw material.

How is it being used?

At our lab, we have generated a method for converting cellulose nanofibers raw material into a sheet form and concentrated material for art restoration purposes. These nanocellulose sheets are produced in thicknesses varying from 0.012 to 0.15 millimeters. They contain no lignin or hemicelluloses, which contribute to a buildup in paper acidity over time, and the nanocellulose can even be processed to be transparent. For more information on our conservation sheets and their application

Aside from these restorative sheets, we have been researching other uses for nanocellulose. Cellulose nanofibrils show great potential in the field of medicine as a wound dressing due to the

high surface area and biocompatibility of nanocellulose. High tensile strength makes it a prime contender as a building material. Nanocellulose has even been processed into cosmetic sheet masks due to the high amount of water a properly prepared sheet can hold.

- Our sheets are uniform in texture and consistency.
- Nanocellulose is the purest form of cellulose. They contain no lignin.
- We offer two types of sheets: Standard and Pro.
 - Our *Standard sheets* are translucent and made of cellulose nanofibers.
 - Our *Pro sheets* are transparent and made of TEMPO oxidized cellulose nanofibers.

Standard Sheet



Pro Sheet



Reach out to us for more information or to place order at info@innovatech.us