

Development of new coated paper with high barrier and mechanical performance

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Cellulose Valley

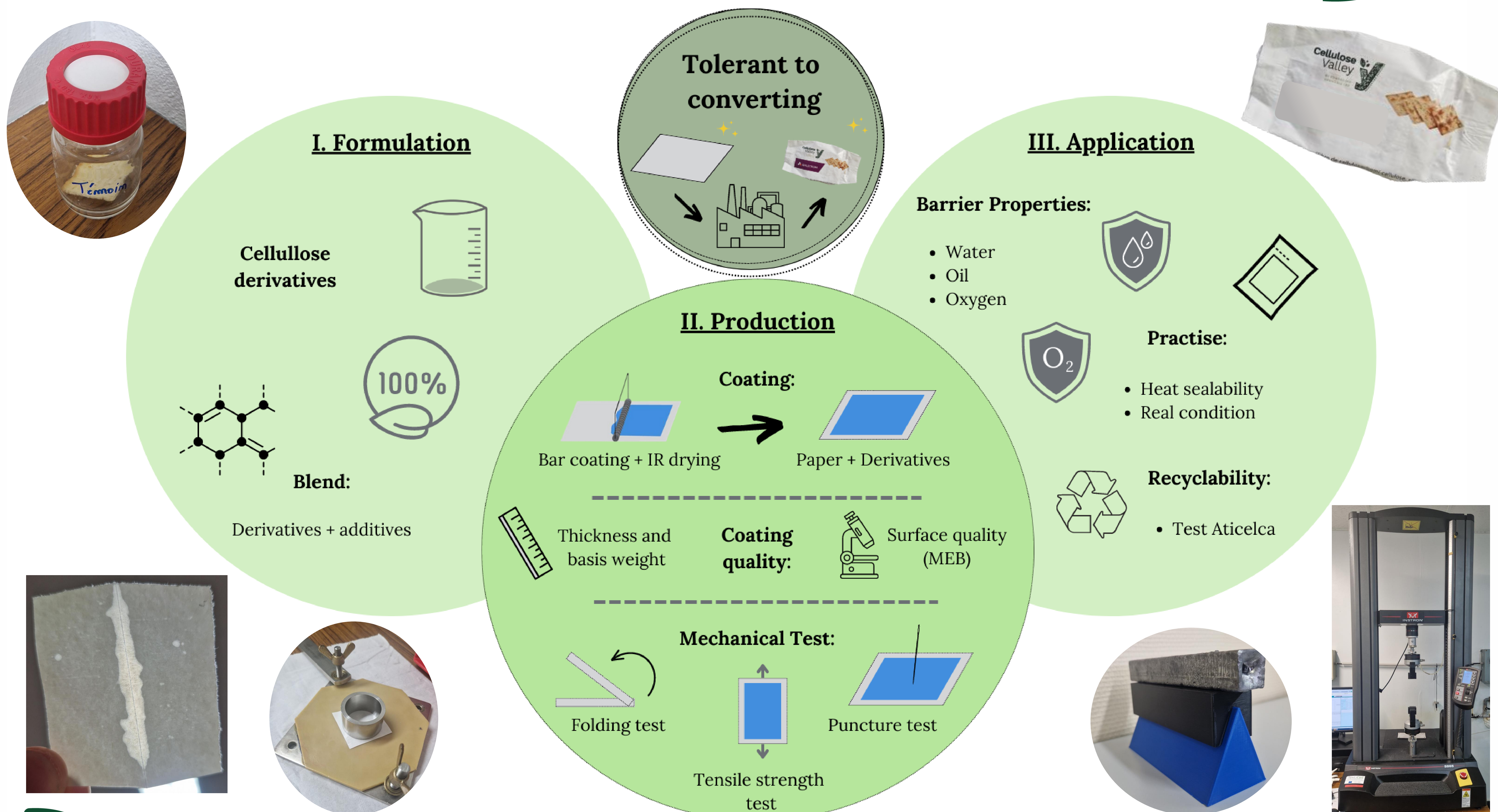
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Context

The European SUP directive and the French AGEC law regulate the use of single-use plastic. As a result, manufacturers need to find alternatives to plastic. The use of paper with a biosourced, recyclable coating to improve these properties could be a possible solution, particularly in food packaging. Will this coated paper be able to withstand all the mechanical stresses present in industry without losing quality? This is the question I'd like to answer by carrying out fold, friction and tensile tests to mimic industrial constraints and find the best coating formulation.

Materials & Methods



Conclusion & perspectives

- ✓ Mechanical properties don't change significantly with 5g/m² of cellulose derivatives coating
- ✓ Increase of stiffness except for one cellulose derivative
- ✓ Increase fold resistance with add of plasticizers in small quantity
- ✓ Correlation between stiffness and fold resistance
- ✓ Good thermo sealability in 1s at 190°C

- ✓ Recyclability test (Aticelca standard)
- ✓ Live cycle assessment
- ✓ modification of barriere propeties with elongation of the paper