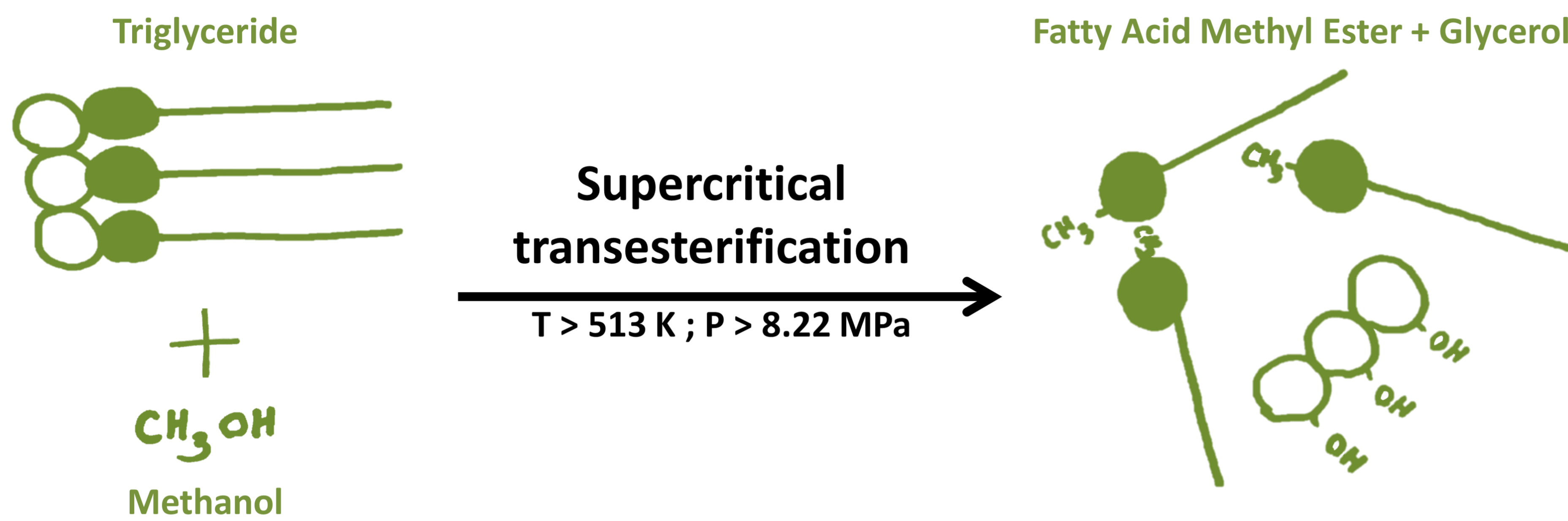


Development of a sustainable method for the extraction of suberin-related compounds from biomass using supercritical transesterification

① Background

SuperCritical TransEsterification (SCTE) with methanol already allows to produce biodiesel (fatty acid methyl ester) from waste vegetable oil



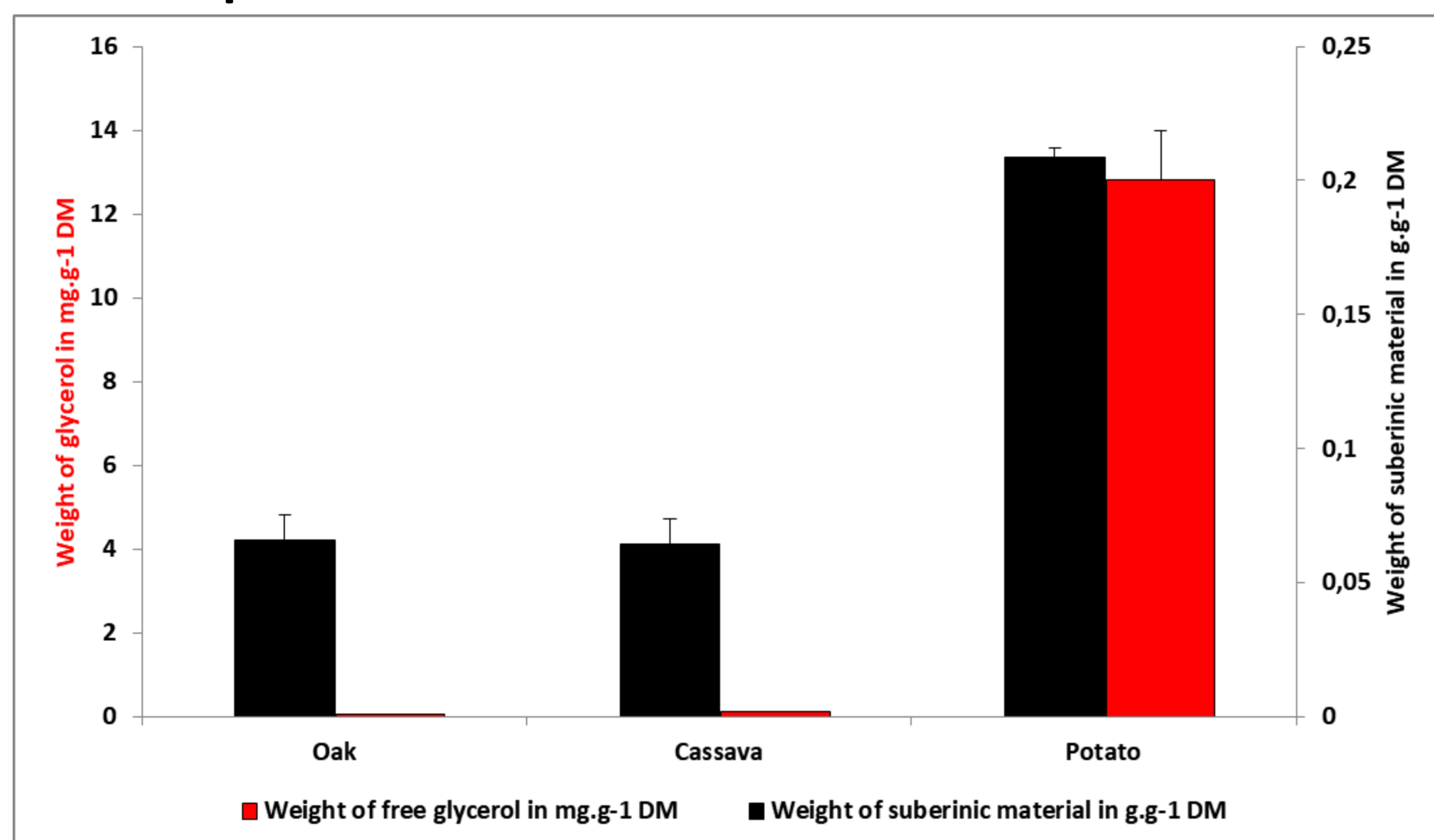
- ❖ Catalyst-free
- ❖ Easy recovery of products and solvent
- ❖ Not affected by free fatty acid presence

② Hypothesis

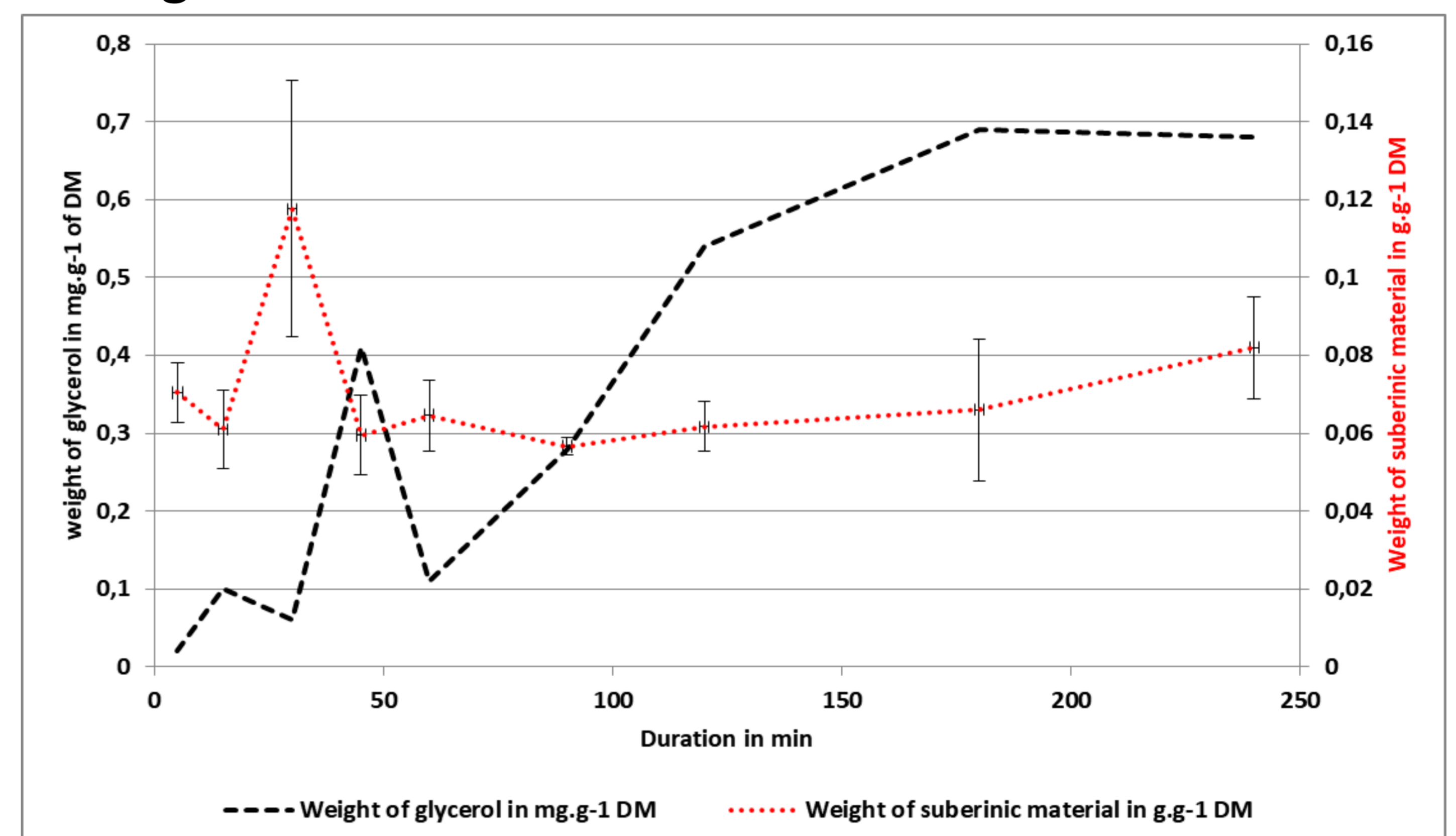
SCTE can be used to depolymerize and extract biopolyester like suberin from lignocellulosic biomass

③ Results

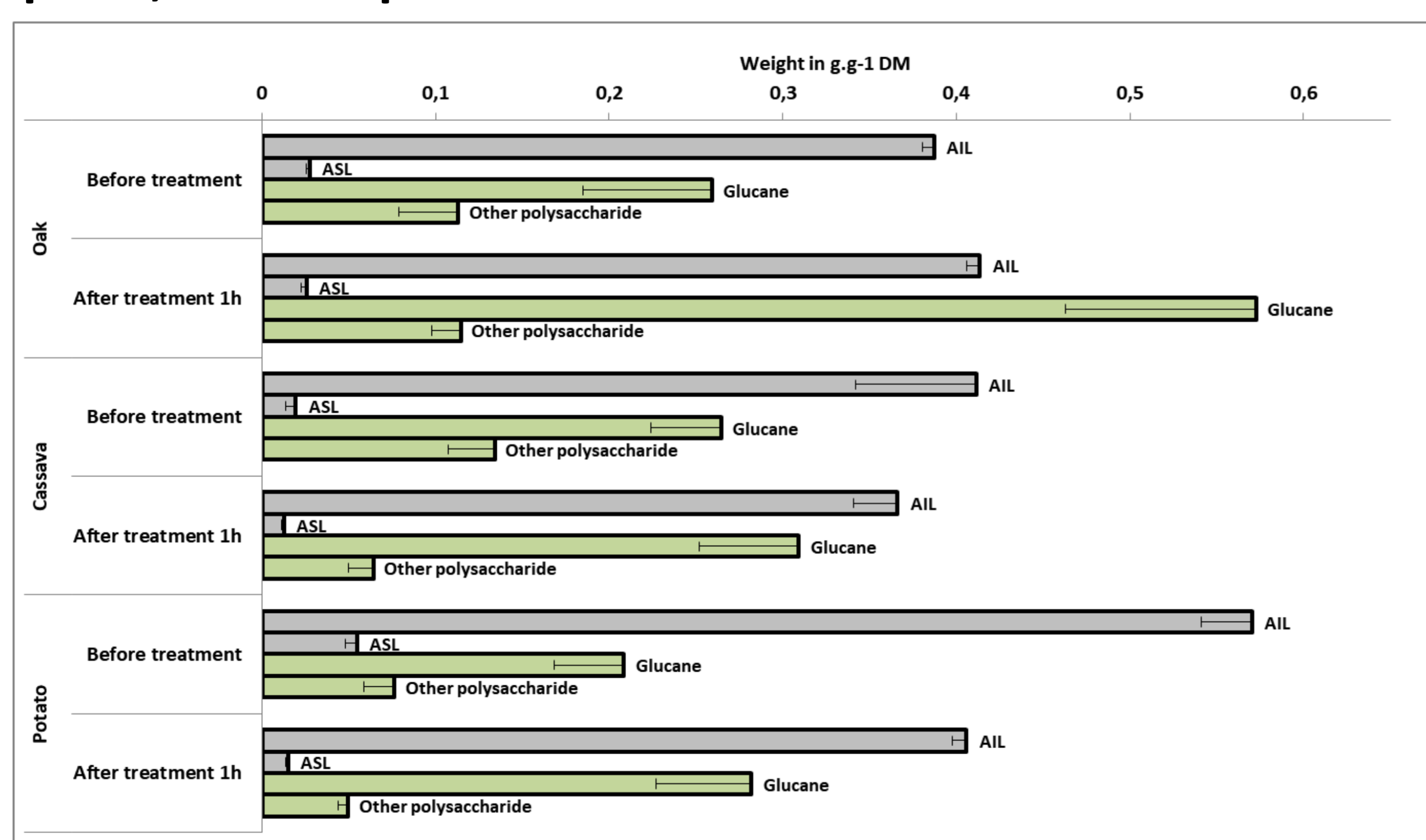
Suberinic material and glycerol released by potato peels, cassava peels and oak bark after 1h SCTE



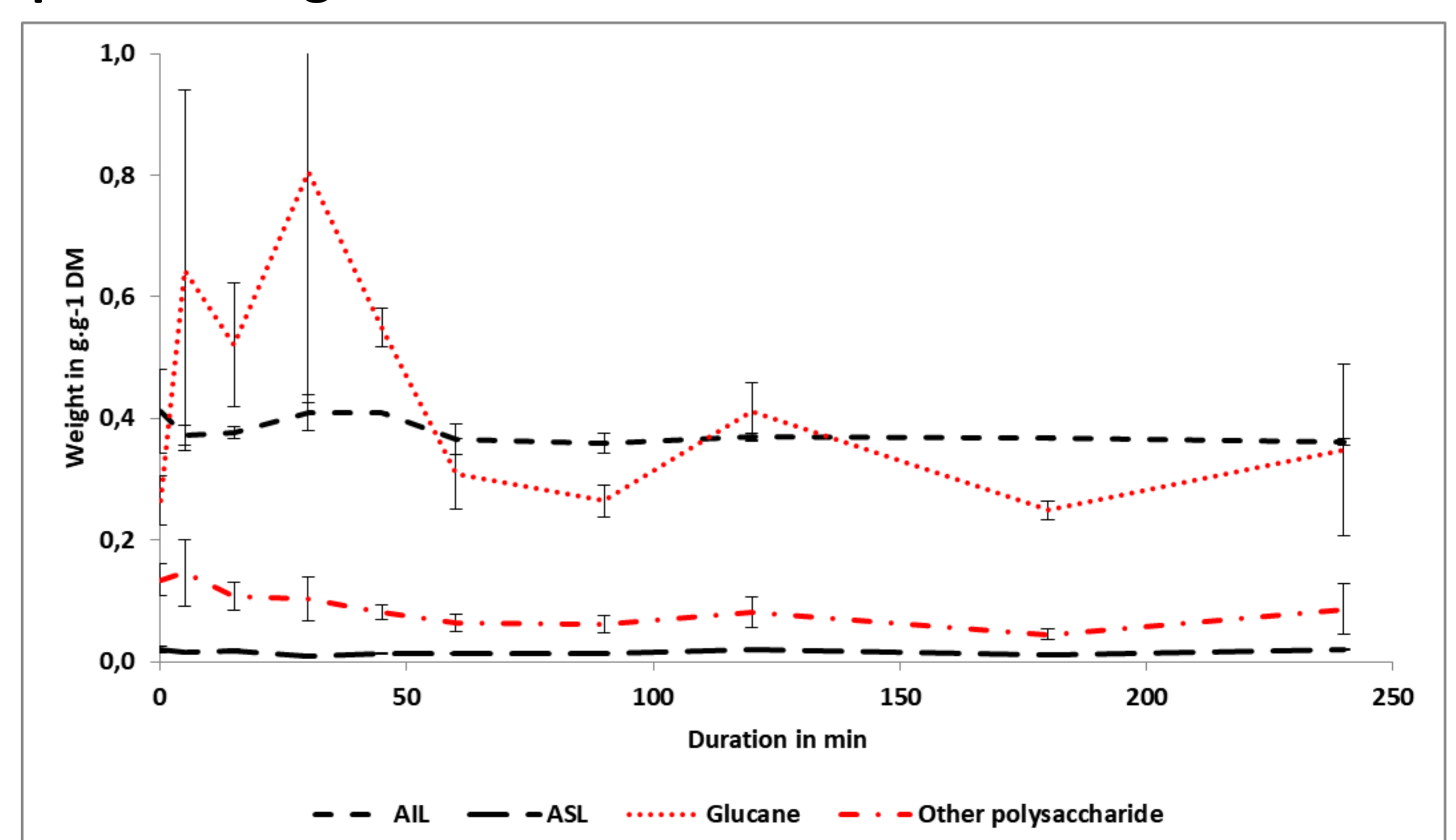
Evolution of suberinic material and glycerol release during SCTE



Polysaccharide and lignin content in potato peels, cassava peels and oak bark before and after 1h SCTE



Evolution of polysaccharide and lignin content in cassava peels during SCTE



④ Perspective

SCTE allows to extract the suberinic material from potato peels, cassava peels and oak bark with an efficiency comparable to basic transesterification.

Degradation of lignocellulosic compounds was very limited