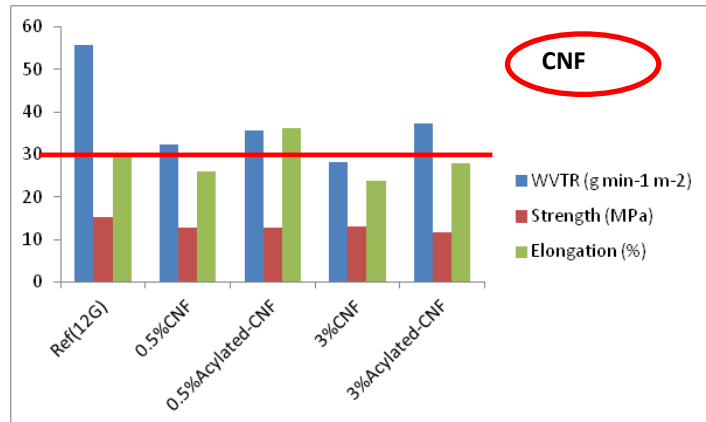
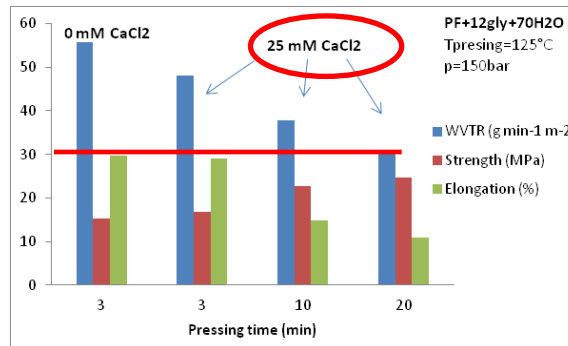
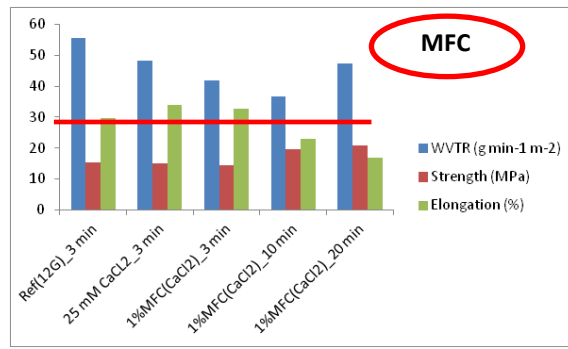
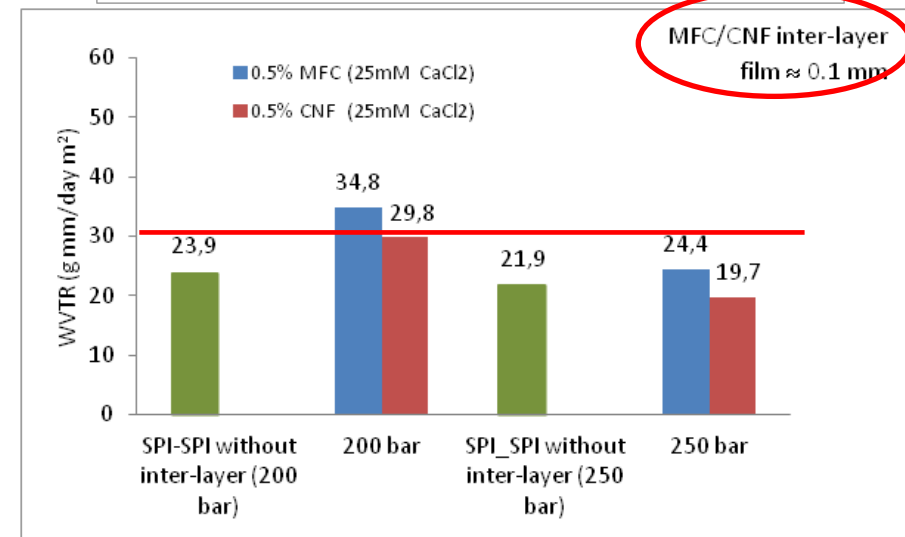
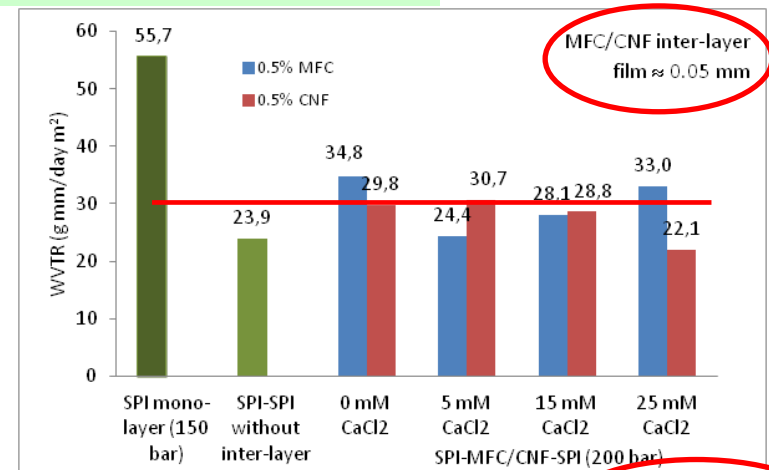
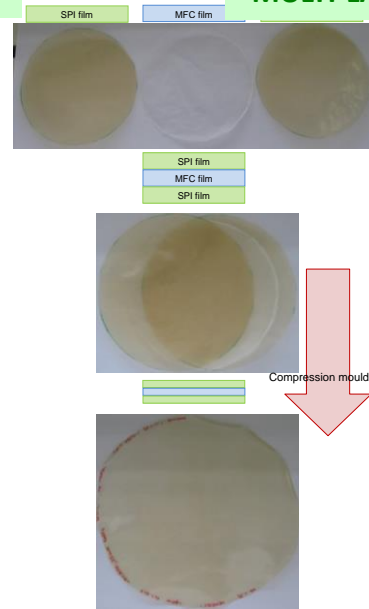


The effect of nanocellulose (NC) on mechanical and WVV properties of soy-protein plasticized multi-layer film

MONO-LAYER FILMS (with embedded NC)



MULTI-LAYER FILMS (with inter-layered NC)



- Inclusion of MFC into SPI formulation improved strength and barrier properties of the film, depending on the used Ca-ions and pressing time, but reduce the elongation.
- The CNF has the same effect on WVTR without changing of mechanical properties.
- SPI-SPI laminated film has ~57% reduced WVTR compared to mono-layer. The WVTR is again increased for about 5-10% with incorporation of MFC or CNF as inter-layer film being prepared without or with lower amount of CaCl₂.