

CurCol

The CURCOL Interreg North-West Europe (NWE) funded project was designed to meet the requirements for (bio)packaging. The CURCOL project set out to create bio-based sustainable colorants. To meet the demand for environmentally friendly materials in the packaging industry, the supply chain was built, starting with the cultivation of the Curcuma plant and ending with the production of curcumin-based colored packaging prototypes. This was brought together by the consortium partners from Ireland, Netherlands, Germany, and Belgium. The research at TUS assessed the UV stability and processability of curcumin-based red and yellow colorants in biopolymers PLA, PHB, PLA/PHB blends, and starch-based polymers. The colorants were effectively incorporated into the biopolymers using film/filament extrusion, injection molding, and blow film extrusion. They were then successfully tested for their UV stability, recyclability (up to 4 cycles), and distinctive features. Shopping bags were made from the blown films as product prototypes in addition to producing intermediate prototypes of tensile bars, granules, and filaments.

