

This study focuses on the polystyrene matrix composites and micro loads of vegetable origin: spruce sawdust and cellulose microcrystal. The latter are obtained by extracting the cellulose from flour spruce. The composite samples were prepared by injection. The particle size analysis made it possible to determine the size of the charges and to highlight the effectiveness of treatment extraction. Analysis of microstructural changes was followed by Fourier transform infrared spectroscopy and morphology by scanning electron microscopy. The mechanical behaviour and tensile strength were studied before and after hydrothermal aging