

Continuous Decomposition of Sporopollenin from Pollen of *Typha angustifolia* L. by Acidic Methanolysis

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Sporopollenin from the pollen of *Typha angustifolia* L. was exposed to a series of 36 subsequent acidic methanolysis procedures. The remaining decomposition products were investigated using several spectroscopic methods including Fourier transform infrared spectroscopy (FT-IR), solid state ¹³C nuclear magnetic resonance spectroscopy (¹³C-CPMAS-NMR) and X-ray photoelectron spectrometry (XPS). Substantial weight losses of the sporopollenin material occur after each acidic methanolysis step, while FT-IR and ¹³C-CPMAS-NMR spectra display no noticeable differences after 12, 24 and 36 steps. These findings are interpreted as a hint that the sporopollenin polymer has a uniform composition, i.e. relatively small monomer moieties of similar primary structure are present. Moreover, the weight losses account for the presence of substantial amounts of ether linkages in the sporopollenin polymer.