

# **CHEMICAL ANALYSIS OF BIOPOLYMERS IN ATMOSPHERIC AEROSOLS**

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Several studies have shown that carbonaceous components contribute significantly to the composition of tropospheric aerosols and thus influence their chemical, optical and microphysical properties. Climatic effects as well as health effects are related to the chemical composition of the aerosol particles, but only very limited experimental data on the atmospheric abundance and behavior of biopolymers are currently available.

To characterize the biopolymer content of aerosol particles, the atmospheric processing of biopolymers and their degradation products is a central aim of the research projects SCAVEX (Schneefernerhaus Aerosol and Reactive Nitrogen Experiment) and CARBAERO (Carbonaceous Aerosol Components). The identification and quantification of different substance classes and individual compounds requires different ways of extraction, clean-up steps and high-performance analytical methods. Appropriate analytical procedures for aerosol filter samples have been established, including an extraction scheme and various chromatographic and immunological methods. The experimental techniques and field measurement results from urban, rural and remote locations will be presented.