**MO275**

**Emissions and photo-transformation of biocides on building facades using the**

**example of terbutryn**

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Biocides as triazines or isothiazolinones are added to render and paint in order to

protect building facades from microbial deterioration. Previous studies have

shown that biocides leach out of the material during rain events and can be

detected in the urban environment. In the present study the leaching of terbutryn

from artificial walls equipped with two types of render (acrylate and silicone resin

render) was observed for 19 months. On the one hand, the emissions of terbutryn

(concentration and mass load) were determined; on the other hand,

photodegradation products were identified and studied in the leachate as well as

the render. It could be shown that biocides leach predominantly within the first

months of the facade lifetime. While the leaching was determined by driving rain

within this period the leaching was reduced afterwards and determined by other

factors. Several photo-transformation products could be detected in the façade

runoff. However the major fraction of the transformation products was still

remaining in the façade material. Based on the amount of terbutryn and its

transformation products in the leachate as well as remaining in the material, the

overall mass balance can be closed. This study showed, that the focus on

transformation products during the assessment of biocides in building material is

of high importance: not only concering the emissions during life-time, but also

when it comes to disposure of the coating material as waste.