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Investigation of Heavy Metal Release at a Municiapal Solid Waste Incineration Facolity –an Excellent Example for the Unique Potential of Intrinsic Radiotracer Aapplication to the Investigation of Industrial Processes in Chemical Engineering

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Radiotracers are widespread in use for investigation of material transport processes in industry and environment. Often they are used for the measurement of the residence time distribution in continuously operating chemical engineering facilities and reactors. Mostly intrinsic or physical tracers are used for these purposes.

In case of phase transformation processes are in the focus of interest physical or extrinsic tracers are not the labelling material of choice. Intrinsic or chemical tracers are required in that case.

At example of the heavy metal release investigation at a municipal solid waste incineration facility the unique potential of intrinsic radiotracers will be demonstrated in the given paper.

Goal of the investigation at the municipal solid waste incineration facility reported in this paper was the behaviour study of different heavy metal species at various incineration conditions. With the help of short lived radioisotopes of copper (Cu-64) and zinc (Zn-69m) could be shown at which position of the incinerator and in which amount the heavy metal under investigation was released.

The experimental results of this investigation were an essential contribution for better understanding the processes inside the incinerator and to optimize the processing conditions.

Country/Organization invited to participate

Germany

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