INDICATOR PARAMETERS FOR PCDD/F AS A POSSIBLE MEANS TO MONITOR EMISSIONS OF TOXICITY EQUIVALENTS FROM WASTE INCIDERATORS

A. Kaune¹, D. Lenoir², U. Nikolai³, A. Kettrup²

¹ GSF-Research Centre for Environment and Health, Neuherberg

² Institue for Ecological Chemistry, Neuherberg ³ Society for Secure Handling of Waste in Bayaria, Munich, FRG

SUMMARY
In the stack emissions from a hazardous waste incinerator we found highly significant correlations between 2,3,7,8-tetrachlorodibenzo-p-dioxin toxicity equivalents (I-TE) and pentachlorobenzene (Cl₅Bz) and between I-TE and heptachlorobiphenyl (Cl₇B). We therefore propose to utilize these substances as indicator parameters from which I-TE values can be estimated. Since they are easier to analyze than PCDD/F the use of indicator parameters such as Cl₅Bz and Cl₇B offers the chance to monitor I-TE emissions which are limited to 0.1 ng/m³ in many European countries.

Key words: polychlorinated dibenzo-p-dioxins, polychlorinated dibenzofurans, chlorophenols, polychlorinated biphenyls, hazardous waste incinerator

Address for correspondence: A. Kaune, GSF-Forschungszentrum für Umwelt und Gesundheit GmbH, Ingolstädter Landstr. 1, D-8042 Neuherberg, BRD