KNOW-HOW FOR DIOXIN AND FURAN EXTRACTION, CLEANUP AND ANALYSIS

DATOS DE CONTACTO:

Research Results Transfer Office-OTRI
University of Alicante
Tel.: +34 96 590 99 59
Email: areaempresas@ua.es
http://innoua.ua.es

RESUMEN

The know-how involves the ability to measure a very low concentration of dioxins (values close to picograms or femtograms). The technique also permits the quantitative analysis of almost all the congeners of dioxins and furans (more than 130 different compounds), not only the main 17 toxic compounds.

VENTAJAS Y ASPECTOS INNOVADORES

The know-how involves the ability to measure a very low concentration of dioxins (values close to picograms or femtograms). It does not depend on the precise equipment but the expertise in preparing properly the samples by means of a very sensitive and specific analytical method.

The technique also permits the quantitative analysis of almost all the congeners of dioxins and furans (more than 130 different compounds), not only the main 17 toxic compounds.

Nowadays, this methodology (standard one) is the only one available method to carry out reliable dioxin analyses.

APLICACIONES DE LA OFERTA

The technique could be applied to different fields:

- Control of gaseous emissions from the combustion of urban or industrial wastes. Following European directive 94/67/CE of the Council, related to the incineration of hazardous wastes, the emission limit is 0.1ng/Nm3.

- Characterization of hazardous and toxic wastes. The directive of the European Council establish a content of dioxins lower than 0.01 % for the waste to be considered hazardous and toxic.

- Determination in food and feed (milk and derivates, meat, fish,...). It is estimated that more than 90 % of the environmental exposure to dioxins and furans is trough the food, specially those of animal origin. In theindustrialized countries the averages daily ingest of PCDD/Fs is 50-200 pg/person/day.

- Determination in sewage sludges and other organic fertilizers (therefore in composting plants). It exists a draft for a normative referring to the limit of dioxins and furans of 100 ng/kg dry solid.

- Determination in other matrices such as tissues and blood, air, emission due to the trafic, paper, ink, higienic materials, tobacco smoke, chimney soot, dust...

COLABORACIÓN BUSCADA

Two types of cooperation are sought by the Department of Chemical Engineering of the University of Alicante:

• Accomplishment of the extraction, cleanup and analysis of dioxins and related compounds to samples that companies are interested in.

• Instruct people interested in perform the tasks involved in the dioxin analysis, with training courses designed specifically for each situation.