

September 14, 2005

CALUX Assay has been approved as an official method in Japan.

Announced by the Ministry of the Environment, September 14, 2005

Minister of the Environment, Japan, promulgated a ministerial notification (No. 92, November, 2005) designating CALUX Assay as a concrete simplified method in accordance with Item 4 of Paragraph 1 of Article 2 of the Law Concerning Special Measures against Dioxins.

The ministerial notification:

<http://www.env.go.jp/press/press.php3?serial=6349> (Japanese only)

(Reference site: <http://www.env.go.jp/en/press/2004/1227a.html>)

Hiyoshi's CALUX-Assay is being introduced in the Ministerial Notification No. 92(1-1) as mentioned below.

A method utilizing a feature of dioxins which bonds with aryl hydrocarbon receptor

The method uses Acid silica gel column and activated carbon column in pretreatment process and applied reporter gene assay using dioxin responsive recombinant cell line, H1L6.1c2, for assay, to measure dioxin toxic equivalent value. Dioxin responsive cell line, H1L6.1c2 was generated by stably transfecting the plasmid pGudLuc6.1 into mouse hepatoma (Hepa1c1c7) cells. The pGudLuc6.1 plasmid contains the CYP1A1 dioxin-responsive domain (inclusive of four DREs) upstream of the firefly luciferase gene.

Scope of application

Simplified measurement methods by bioassay are now applicable in addition to the conventional measurement method utilizing high resolution gas chromatograph-mass spectrometer system (GC/MS). The scope of application is shown in the table below.

Scale of facilities (Capacity of incineration)	Emission gas	Dust	ash	scaffolding?
Below 2t/h	?	?	?	?
2t/h – 4t/h	x	?	?	?
More than 4t/h	x	?	?	?

? With the ministerial notification, Ministry of Health, Labour and Welfare approved methods for measuring dioxins in scaffolding from waste incinerators (No. 1115001, November 15, 2005).

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