Application Note

No. 820003S-E

Supercritical Fluid Extraction of Bisphenol A in Epoxy Resin

Bisphenol A considered as endocrine disruptors were extracted using Supercritical Fluid Extraction (SFE) with carbon dioxide and analyzed by reversed-phase HPLC.

Fig.1 shows the chromatograms of the extracts from epoxy resins used for coating of artificial leather, electrical cables, etc..

Pretreatment

Sample

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Extraction by Supercritical fluid

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Recovery of extracted solution

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Concntration

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Sample volume in measuring flask by CH_3OH/H_2O(50/50)

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Injection into HPLC

Conditions

[SFE]	
System:	SCF-201
Extraction vessel:	1 mL
CO_2 flow rate:	3.0 mL/min
CH_3OH flow rate:	0.3 mL/min
Extraction pressure:	25 MPa
Extraction temp.:	80°C
Sample:	Synthetic leather Covering for AC cable
[HPLC]	
Column:	CrestPak C18S (4.6 mm I.D. x 150 mm L.)
Eluent:	CH_3OH / H_2O (50/50)
Wavelengths:	Ex 282 nm, Em 306 nm, Gain x 100
Flow rate:	1.0 mL/min
Column temp.:	40°C
Sample:	Standard (100 ppb) Extracts of coating material of artificial leather and electrical cable
Injection volume:	10 µL

Keywords: Bisphenol A; STD, epoxy resins; SFE; Fluorescence detection; endocrine disruptor

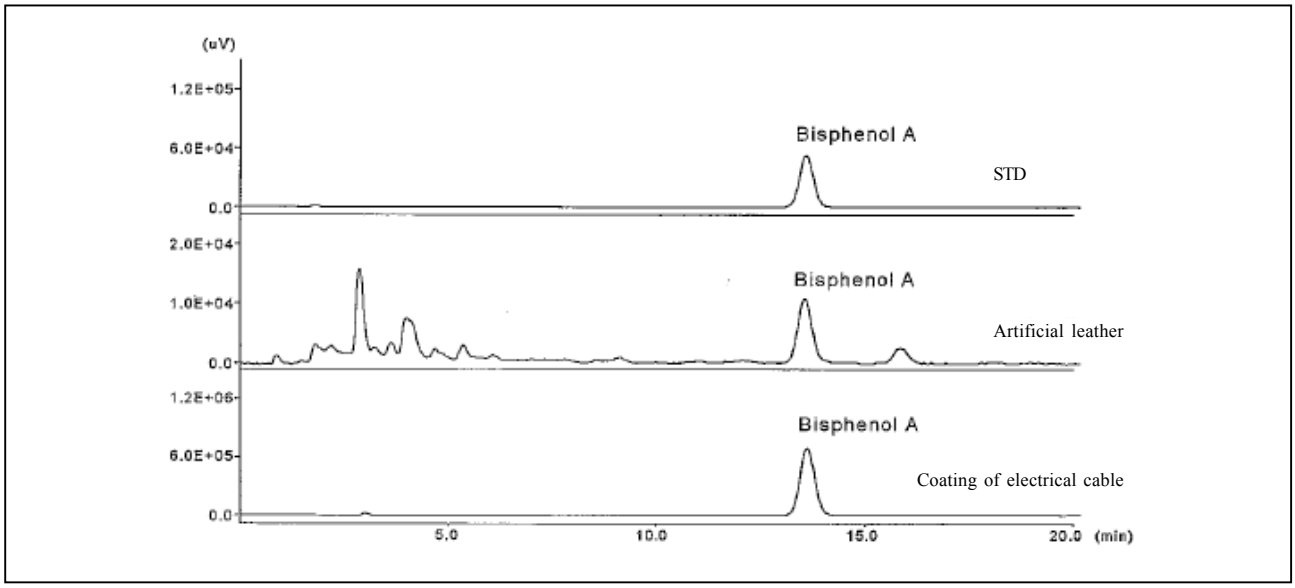

Fig. 1 Chromatograms of bisphenol A-STD sample and epoxyresin extraction sample

JASCO INTERNATIONAL CO., LTD.
4-21, Sennin-cho 2-chome, Hachioji, Tokyo 193-0835, Japan
Tel: +81-42-666-1322, Fax: +81-42-665-6512