

Analysis of bisphenol A in phenol resins

Bisphenol-A, known as extrinsic endocrine disrupting chemical (environmental hormone), can enter the food chain from tableware manufactured from certain plastics. In this report, Some examples of the analysis of bisphenol-A in phenolic resins were shown using reversed phase chromatography.

Conditions:

Column: CrestPak C18S
(4.6mm I.D. x 150mmL)
Eluent: A=CH₃CN / H₂O (70/30)
B=CH₃CN

Time(min)	A(%)	B(%)
0.0	100	0
15.0	100	0
15.1	0	100
30.0	0	100
30.1	100	0

1 cycle 55min
Wavelength: Ex 230nm, Em 310nm
Gain x100
Flow rate: 2.0mL/min
Column temperature: 40 degree celsius
Sample: phenol resin
Injection volume: 20μL

Pretreatment

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1mL Epoxy resin 0.1% (w/w) solution (THF)
    ↓
dropping in H2O (1mL)
    ↓
Homogenize
    ↓
Centrifubation (5000 rpm. 10 min)
    ↓
BOND ELUT C18
    ↓
Filter with 0.45μm membrane filter
    ↓
INJECT
    
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Keywords: 1. Bisphenol A, 2. Phenol resins, 3. ODS, 4. FL, 5. Endocrine disrupting chemicals

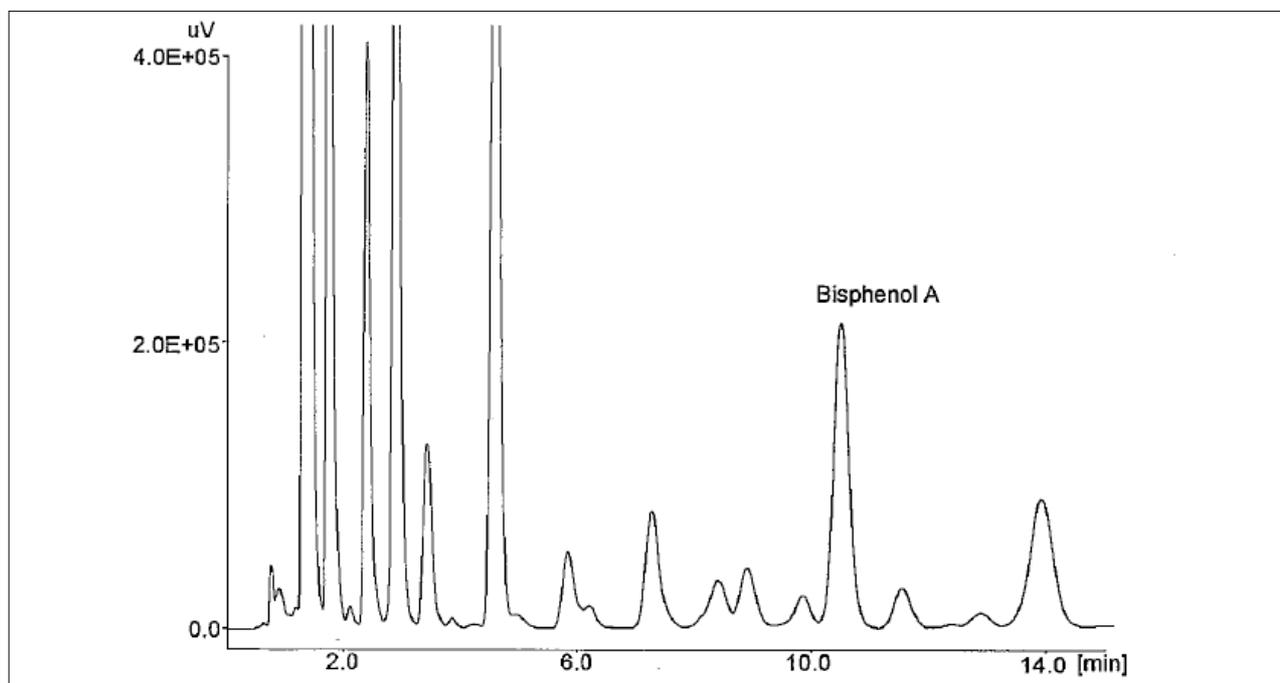


Fig. 1. Chromatograms of samples extracted from resins