



Astra[®]
ChromLine

BISPHENOLS BY LC-MS/MS

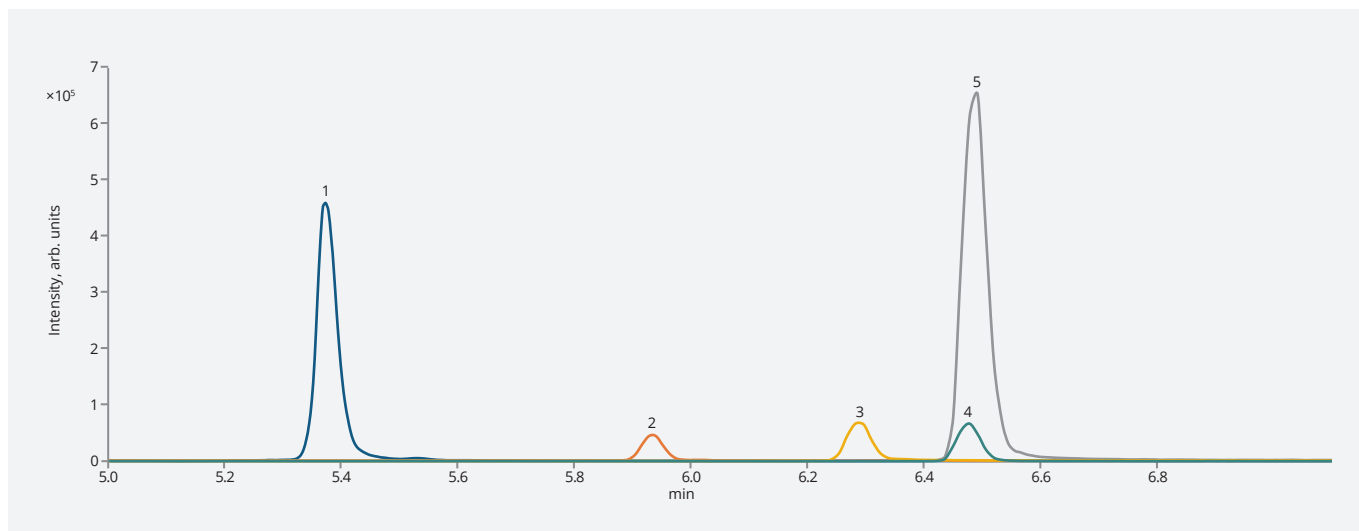
ABSTRACT

This application shows the simultaneous determination of BPA and other bisphenol analogues at the traces concentrations levels by LC-MS/MS method.

INTRODUCTION

Bisphenols are a class of chemical additives used to impart the desired properties of plastic materials. They are added to food packaging internal coatings to protect food and beverage from direct contact with metal. Residues of bisphenols can migrate into foods and has been found in various body tissues and fluids. BPAs have a proven toxic effects and can cause heart disease, obesity, diabetes, endocrine disruption and cancer. BPAs should be strictly monitored at low doses due the harmful effects on living organisms.

Bisphenols by LC-MS/MS

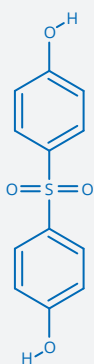


Bisphenols on ASTRA® Phenyl-Hexyl-HE column

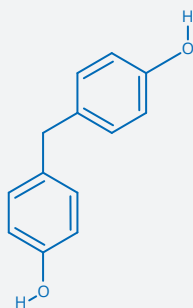
	Precursor (m/z)	Product (m/z)	Collision energy (V)
Bisphenol S	249	108	20
Bisphenol F	199	93	15
Bisphenol AF	335	265	14
Bisphenol A	227	212	11
Bisphenol B	241	212	11

Bisphenols by LC-MS/MS

Column	ASTRA® Phenyl-Hexyl-HE, 3 µm		
Dimensions	100 mm × 2.1 mm		
Part number	AST-5891-II21		
Mobile phase	A: DDW B: MeOH		
Gradient elution	Time (min)	A (%)	B (%)
	0	75	25
	1	75	25
	4	0	100
	9	0	100
	9.1	75	25
	14	75	25
Flow rate	350 µL/min		
Temperature	23 °C		
Injection volume	10 µL		
Detection	LC-MS/MS-negative MRM mode		
MS instrument	Bruker EVOQ® DART-TQ+ 		
Sample	1 ng/mL in MeOH		
Analytes	1. Bisphenol S, CAS number 80-09-1 2. Bisphenol F, CAS number 620-92-8 3. Bisphenol A, CAS number 80-05-7 4. Bisphenol B, CAS number 77-40-7 5. Bisphenol AF, CAS number 1478-61-1		



Bisphenol S



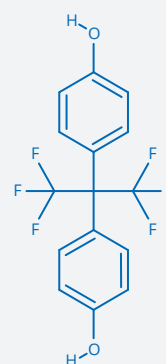
Bisphenol F



Bisphenol A



Bisphenol B



Bisphenol AF



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