Flame retardants

Application 2425 GC

Analysis of brominated diphenylethers and brominated biphenyls (flame retardants) via GC/MS following ROHS guideline

Technique	: GC-Capillary
Column	: Fused Silica factorFour15m x 0.25mm, VF-5ms, df = 0.10 µm Part no: CP8938
GC	: CP3800
Temperature	: 100 °C, 2 min → 250 °C, 5 °C/min, 2 min→ 300°C, 5 °C/min, 2 min. → 320°C, 5 °C/min, 6 min
Carrier gas	: He 0.8 mL/min, constant flow
Injection	: PTV 1078; Splitless, Temperature: 150 °C, 0 min →350 °C, 200 °C/min
Sample size	: 2 µl, 20-2000 pg on the column
Detector	: MS-Saturn in ms/ms and MRM, Trap: 240 °C; Transferline: 285 °C;
Solvent	: isooctane

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Peak Identification

1	PBB2	2-bromobiphenyl
2	BDE2	3-bromodiphenylether
3	BDE15	4,4'-dibromodiphenylether
4	PBB15	4,4'-dibromobiphenyl
5	PBB30	2,4,6-tribromobiphenyl
6	BDE30	2,4,6-tribromodiphenylether
7	PBB52	2,2',5,5'-tetrabromobiphenyl
8	BDE62	2,3,4,6-tetrabromodiphenylether
9	PBB103	2,2',4,5',6-pentabromobiphenyl
10	BDE99	2,2',4,4',5-pentabromodiphenylether
11	PCB209	internal Standard
12	PBB153	2,2',4,4',5,5'-hexabromobiphenyl
13	BDE153	2,2',4,4',5,5'-hexabromodiphenylether
14	BDE183	2,2',3,4,4',5,6-heptabromodiphenylether
15	PBB209	decabromobiphenyl
16	BDE203	2,2',3,4,4',5,5',6-octabromodiphenylether
17	PBB250	octabromobiphenyl (isomer)
18	BDE206	2,2',3,3',4,4',5,5' 6-nonabromodiphenylether
19	BDE209	decabromodiphenylether