METHOD FOR ANALYSIS OF BIPHENYL FOR DIBENZOFURAN AND DIBENZO-P-DIOXIN

PRINCIPLE

Biphenyl is dissolved in a suitable solvent and analyzed for dibenzofuran and dibenzo-p-dioxin by gas chromatography/mass spectrometry.

EXPERIMENTAL

1. Biphenyl dissolved in Nanograde® methylene chloride.
2. Solution analyzed using gas chromatograph/mass spectometer/computer system.
3. Concentrations of dibenzofuran and dibenzo-p-dioxin analyzed using identical conditions.
4. Concentrations of components, if found, are calculated as follows:

$$\text{Concentration (ppm)} = \frac{\text{area sample}}{\text{area standard}} \times \frac{\text{concentration standard (mg/ml)}}{\text{biphenyl concentration (g/ml)}}$$

Monsanto

FROM (NAME & LOCATION) W. C. Hammann - B3SA

DATE November 18, 1975

SUBJECT ANALYSIS OF AROCLORS FOR DIOXINS

REFERENCE

TO

T. H. Bottini - B2CA
J. F. Herber - T3G
J. P. Mieure - T2F
W. B. Papageorge - B2SK
J. C. Weber - B1ND
W. W. Withers - B2SA

NOV 19 1975

You are invited to attend a meeting on the above subject to be held on Wednesday, November 26th, at 1:30 p.m. in B-367.

This discussion should be completed by 3 p.m.

WCH/piw

W. C. Hammann

0256777

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PCB-ARCH0745402

1254.

	ppm "as is"	ppm CBBF's added	ppm Found	% Recov.
Cl_4	0.7	0.17	0.9	103
Cl_5	1.7	3.30	6.7	152
Cl_6	1.9	4.57	6.1	92
Cl_7	0.3	0.67	0.9	90
Totals -	4.5	8.70	14.6	

1260 (AK-3)

	1248
Cl_3	0.06
Cl_4 - 0.4	0.65
Cl_5 - 1.2	1.0
Cl_6 - 3.1	0.15
Cl_7 - 0.8	
Total - 5.5	1.86

1254.

	ppm "as is"	ppm CDDF's added	ppm Found	% Recov.
Cl_4	0.7	0.17	0.9	103
Cl_5	1.7	3.30	6.7	152
Cl_6	1.9	4.57	6.1	92
Cl_7	0.3	0.67	0.9	90
Totals -	4.5	8.70	14.6	

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Cl_3		0.06
Cl_4 -	0.4	0.65
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Total -	5.5	1.86

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Totals -	4.5	8.70	14.6	

1260 (AK-3)		1248
Cl_3		0.06
Cl_4 -	0.4	0.65
Cl_5 -	1.2	1.0
Cl_6 -	3.1	0.15
Cl_7 -	0.8	1.86
Total -	5.5	

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PCB-ARCH0745405

1254.

	ppm "as is"	ppm Cl-BF's added	ppm Found	% Recov.
Cl_4	0.7	0.17	0.9	103
Cl_5	1.7	3.30	6.7	152
Cl_6	1.9	4.57	6.1	92
Cl_7	0.3	0.67	0.9	90
Totals -	4.5	8.70	14.6	

1260 (AK-3)

		1248
Cl_3		0.06
Cl_4 -	0.4	0.65
Cl_5 -	1.2	1.0
Cl_6 -	3.1	0.15
Cl_7 -	0.8	
Total -	5.5	

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PCB-ARCH0745406

1254.

	ppm "as is"	ppm CLDBF's added	ppm Found	% Recov.
Cl_4	0.7	0.17	0.9	103
Cl_5	1.7	3.30	6.7	152
Cl_6	1.9	4.57	6.1	92
Cl_7	0.3	0.67	0.9	90
Totals -	4.5	8.70	14.6	

1260 (AK-3)		1248
Cl_3		0.06
Cl_4 -	0.4	0.65
Cl_5 -	1.2	1.0
Cl_6 -	3.1	0.15
Cl_7 -	0.8	
Total -	5.5	1.86

one analyses

1254.

	ppm "as is"	ppm CDBF's added	ppm Found	% Recov.
Cl_4	0.7	0.17	0.9	103
Cl_5	1.7	3.30	6.7	152
Cl_6	1.9	4.57	6.1	92
Cl_7	0.3	0.67	0.9	90
Totals -	(4.5)	8.70	14.6	

1260 (AK-3)

	1248
Cl_3	0.06
Cl_4 - 0.4	0.65
Cl_5 - 1.2	1.0
Cl_6 - 3.1	0.15
Cl_7 - 0.8	
Total - (5.5)	

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PCB-ARCH0745408

1254.

	ppm "as is"	ppm CDEF's added	ppm Found	% Recov.
Cl_4	0.7	0.17	0.9	103
Cl_5	1.7	3.30	6.7	152
Cl_6	1.9	4.57	6.1	92
Cl_7	0.3	0.67	0.9	90
Totals -	4.5	8.70	14.6	

1260 (AK-3)	1248
Cl_3	0.06
Cl_4 - 0.4	0.65
Cl_5 - 1.2	1.00
Cl_6 - 3.1	0.15
Cl_7 - 0.8	
Total - 5.5	1.86

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