



August 12, 2011

NEW PRODUCT**BDE-CVS-G: New BDE Calibration and Support Solutions**

Wellington currently offers **BDE-CVS-E** as a series of calibration solutions for the HRGC/HRMS analysis of polybrominated diphenyl ethers (BDEs). This calibration set, and its support solutions, namely:

BDE-MXE (native BDE solution/mixture),
MBDE-MXE (13C-labelled BDE surrogate spiking solution), and
BDE-CVS-EISS (13C-labelled BDE-138 internal standard solution),

have become very popular and are widely used by many environmental/analytical labs. However due to requests from various clients, two additional surrogates (BDE-100L and BDE-126L) and two additional internal standards (BDE-79L and BDE-206L) have been incorporated into a new calibration set: **BDE-CVS-G** (see Table A).

BDE-100L was added to the new calibration set because it is a major component of the pentaBDE commercial mixes and BDE-126L was added because of the toxicity associated with its native analogue. BDE-79L and BDE-206L were added as additional internal standards to facilitate the attainment of a more linear calibration (lower % RSDs) for the relative response factors (RRFs) of the surrogates.

Concurrently, two new support solutions have been prepared and are now offered, namely;
MBDE-MXG (surrogate spiking solution; Table B), and,
MBDE-ISS-G (internal standard solution; Table C).

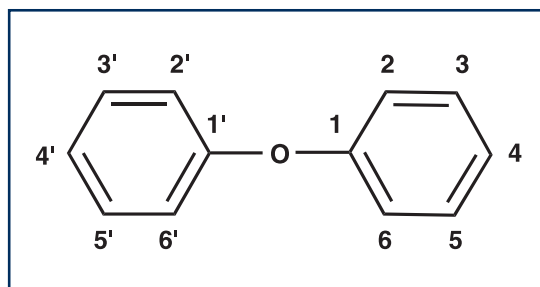


Table A: **BDE-CVS-G**; Components and Concentrations (ng/ml, ± 5% in nonane/toluene)

Isomer #	Native BDEs	CS1	CS2	CS3	CS4	CS5
3	4-Bromodiphenyl ether	1.0	5.0	20	100	400
7	2,4-Dibromodiphenyl ether	1.0	5.0	20	100	400
15	4,4'-Dibromodiphenyl ether	1.0	5.0	20	100	400
17	2,2',4-Tribromodiphenyl ether	1.0	5.0	20	100	400
28	2,4,4'-Tribromodiphenyl ether	1.0	5.0	20	100	400
47	2,2',4,4'-Tetrabromodiphenyl ether	1.0	5.0	20	100	400
49	2,2',4,5'-Tetrabromodiphenyl ether	1.0	5.0	20	100	400
66	2,3',4,4'-Tetrabromodiphenyl ether	1.0	5.0	20	100	400
71	2,3',4',6-Tetrabromodiphenyl ether	1.0	5.0	20	100	400
77	3,3',4,4'-Tetrabromodiphenyl ether	1.0	5.0	20	100	400
85	2,2',3,4,4'-Pentabromodiphenyl ether	1.0	5.0	20	100	400
99	2,2',4,4',5-Pentabromodiphenyl ether	1.0	5.0	20	100	400
100	2,2',4,4',6-Pentabromodiphenyl ether	1.0	5.0	20	100	400
119	2,3',4,4',6-Pentabromodiphenyl ether	1.0	5.0	20	100	400
126	3,3',4,4',5-Pentabromodiphenyl ether	1.0	5.0	20	100	400
138	2,2',3,4,4',5'-Hexabromodiphenyl ether	2.0	10	40	200	800
153	2,2',4,4',5,5'-Hexabromodiphenyl ether	2.0	10	40	200	800
154	2,2',4,4',5,6'-Hexabromodiphenyl ether	2.0	10	40	200	800
156	2,3,3',4,4',5-Hexabromodiphenyl ether	2.0	10	40	200	800
183	2,2',3,4,4',5',6-Heptabromodiphenyl ether	2.0	10	40	200	800
184	2,2',3,4,4',6,6'-Heptabromodiphenyl ether	2.0	10	40	200	800
191	2,3,3',4,4',5',6-Heptabromodiphenyl ether	2.0	10	40	200	800
196	2,2',3,3',4,4',5,6'-Octabromodiphenyl ether	2.0	10	40	200	800
197	2,2',3,3',4,4',6,6'-Octabromodiphenyl ether	2.0	10	40	200	800
206	2,2',3,3',4,4',5,5',6-Nonabromodiphenyl ether	5.0	25	100	500	2000
207	2,2',3,3',4,4',5,6,6'-Nonabromodiphenyl ether	5.0	25	100	500	2000
209	Decabromodiphenyl ether	5.0	25	100	500	2000
	MBDE-MXG					
3L	4-Bromo[¹³ C ₁₂]diphenyl ether	100	100	100	100	100
15L	4,4'-Dibromo[¹³ C ₁₂]diphenyl ether	100	100	100	100	100
28L	2,4,4'-Tribromo[¹³ C ₁₂]diphenyl ether	100	100	100	100	100
47L	2,2',4,4'-Tetrabromo[¹³ C ₁₂]diphenyl ether	100	100	100	100	100
99L	2,2',4,4',5-Pentabromo[¹³ C ₁₂]diphenyl ether	100	100	100	100	100
100L	2,2',4,4',6-Pentabromo[¹³ C ₁₂]diphenyl ether	100	100	100	100	100
126L	3,3',4,4',5-Pentabromo[¹³ C ₁₂]diphenyl ether	100	100	100	100	100
153L	2,2',4,4',5,5'-Hexabromo[¹³ C ₁₂]diphenyl ether	200	200	200	200	200
154L	2,2',4,4',5,6'-Hexabromo[¹³ C ₁₂]diphenyl ether	200	200	200	200	200
183L	2,2',3,4,4',5',6-Heptabromo[¹³ C ₁₂]diphenyl ether	200	200	200	200	200
197L	2,2',3,3',4,4',6,6'-Octabromo[¹³ C ₁₂]diphenyl ether	200	200	200	200	200
207L	2,2',3,3',4,4',5,6,6'-Nonabromo[¹³ C ₁₂]diphenyl ether	500	500	500	500	500
209L	Decabromo[¹³ C ₁₂]diphenyl ether	500	500	500	500	500
	MBDE-ISS-G					
79L	3,3',4,5'-Tetrabromo[¹³ C ₁₂]diphenyl ether	100	100	100	100	100
138L	2,2',3,4,4',5'-Hexabromo[¹³ C ₁₂]diphenyl ether	200	200	200	200	200
206L	2,2',3,3',4,4',5,5',6-Nonabromo[¹³ C ₁₂]diphenyl ether	500	500	500	500	500



Table B: MBDE-MXG; Components and Concentrations (ng/ml, ± 5% in nonane/toluene)

Isomer #	¹³ C ₁₂ -PBDE	Concentration (ng/ml)
3L	4-Bromo[¹³ C ₁₂]diphenyl ether	100
15L	4,4'-Dibromo[¹³ C ₁₂]diphenyl ether	100
28L	2,4,4'-Tribromo[¹³ C ₁₂]diphenyl ether	100
47L	2,2',4,4'-Tetrabromo[¹³ C ₁₂]diphenyl ether	100
99L	2,2',4,4',5-Pentabromo[¹³ C ₁₂]diphenyl ether	100
100L	2,2',4,4',6-Pentabromo[¹³ C ₁₂]diphenyl ether	100
126L	3,3',4,4',5-Pentabromo[¹³ C ₁₂]diphenyl ether	100
153L	2,2',4,4',5,5'-Hexabromo[¹³ C ₁₂]diphenyl ether	200
154L	2,2',4,4',5,6'-Hexabromo[¹³ C ₁₂]diphenyl ether	200
183L	2,2',3,4,4',5',6-Heptabromo[¹³ C ₁₂]diphenyl ether	200
197L	2,2',3,3',4,4',6,6'-Octabromo[¹³ C ₁₂]diphenyl ether	200
207L	2,2',3,3',4,4',5,6,6'-Nonabromo[¹³ C ₁₂]diphenyl ether	500
209L	Decabromo[¹³ C ₁₂]diphenyl ether	500

Table C: MBDE-ISS-G; Components and Concentrations (ng/ml, ± 5% in nonane/toluene)

Isomer #	¹³ C ₁₂ -PBDE	Concentration (ng/ml)
79L	3,3',4,5'-Tetrabromo[¹³ C ₁₂]diphenyl ether	100
138L	2,2',3,4,4',5'-Hexabromo[¹³ C ₁₂]diphenyl ether	200
206L	2,2',3,3',4,4',5,5',6-Nonabromo[¹³ C ₁₂]diphenyl ether	500

The native BDE solution/mix used to prepare BDE-CVS-G (as in BDE-CVS-E) is BDE-MXE.

Please note that we will continue to offer and support BDE-CVS-E, MBDE-MXE and BDE-CVS-EISS.

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