

# PCB and Environmental Neat Standards

Your essential resource for Agilent ULTRA chemical standards





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## About Agilent standards

Agilent is a global leader in chromatography and spectroscopy, as well as an expert in chemical standards manufacturing. Agilent offers certified reference materials, QC standards, reagents, and buffers to complement our extensive line of instruments, columns, sample preparation products, consumables, and services. Our portfolio provides laboratories with full workflow solutions for efficient, accurate results.

Agilent has an extensive list of chemical standards, matched by expertise in designing and formulating custom standards to exacting specifications. Agilent products are available through our global distribution channels, and with our logistics capabilities we offer rapid turnaround time on all orders.

With over 40 years of technical expertise in measurement science, we provide innovative, quality products to address the entire analytical chemistry workflow for laboratories around the world.

## Products

- Certified reference materials (CRM)
- Reference materials (RM)
- Calibration standards
- IQ/OQ/PQ standards
- Linearity standards
- Quality check samples
- Buffers and reagents
- Wash solution and diluents

## Markets

### Environmental

- Petrochemicals
- PCB/PBB
- Halocarbons
- VOC/Semi-VOC
- Pesticides
- Dioxins and furans

### Food and Beverages

- Allergens
- Amino and nitroaromatics
- Pharma and vet drugs
- PAHs
- Lipids
- Food authenticity
- Phenols
- Dyes

### Life Science

- Pharmaceutical
- Biopharma
- Academic and research
- University
- Governmental

### Industrial and Mining

#### Petrochemical

- Matrix oils
- Metals in biodiesel
- Organometallic

#### Elemental Analysis

- Single element
- Multi-element

## Custom products

Do you need a custom defined reference material or other chemical solution unique to your laboratory or testing procedure? If the product you require is not available as an Agilent product, we can prepare it for you on a custom basis. Custom reference materials are a fast, economical way to meet your specific laboratory needs.

Agilent maintains an expansive compatibility database, integrating 40 years of manufacturing and quality control data to create stable and reliable custom product formulations. Choose from any of our three quality control validation levels (see [Page 4](#)).

Visit [www.agilent.com/chem/standards](http://www.agilent.com/chem/standards) to request a quote.

## Quality control laboratory

Agilent operates an ISO 17025 accredited quality control laboratory and is accredited to ISO Guide 34 as a reference material producer for the manufacture of certified reference materials (CRM).

Rely on the expertise of our applications development group for:

- Method development
- Pre- and postfill analysis
- Stability testing and protocols
- Homogeneity testing



## Quality control validation levels

Chemical standards manufactured by Agilent are supplied with a lot-specific certificate of analysis (C of A) that reflects the associated quality control validation level. Certificates of analysis can ship with the product and are available online. All Agilent products, unless otherwise stated, are Level II - ISO Guide 34 reference materials.

		Reported Value	Reported Uncertainty	Former Name	Solutions	Neats	Lead Time (Customs)
Level I	ISO Guide 34 RM	True (calculated)	$U_{char}$	Gravimetric	Y	Y	5 business days
Level II	ISO Guide 34 RM	True (analytical)	$U_{char}$	Full validation	Y	Y	7 to 10 business days
Level III	ISO Guide 34	Certified	$U_{exp}$	ISO Guide 34	Y		15 to 20 business days

**Level I solution:** A reference material (RM) prepared gravimetrically in accordance with ISO Guide 34 and under the Agilent ISO 9001 registered quality system. The neat materials used for the product are verified by an Agilent ISO 17025 laboratory and under the Agilent ISO Guide 34 accreditation. For each analyte, the true value, with its uncertainty value calculated at 95% confidence level, is reported.

**Level I neat:** RM prepared in accordance with ISO Guide 34 and under the Agilent ISO 9001 registered quality system. The true value (% purity) is reported.

**Level II solution:** RM prepared gravimetrically in accordance with ISO Guide 34 and under the Agilent ISO 9001 registered quality system. The neat materials used for the product are verified by an Agilent ISO 17025 laboratory and under the Agilent ISO Guide 34 accreditation. The analyte concentrations are verified by an Agilent ISO 17025 accredited laboratory. For each analyte, the true value, with its uncertainty value calculated at 95% confidence level, is reported.

**Level II neat:** RM prepared in accordance with ISO Guide 34 and under the Agilent ISO 9001 registered quality system. The materials used for this product are verified by the Agilent ISO 17025 laboratory and under the Agilent ISO Guide 34 accreditation. The true value (% purity), with its uncertainty value calculated at 95% confidence level, is reported.

**Level III solution:** RM prepared gravimetrically in accordance with ISO Guide 34 and under the Agilent ISO 9001 registered quality system. The neat materials used for this product are verified by the Agilent ISO 17025 laboratory and under the Agilent ISO Guide 34 accreditation. The analyte concentrations are verified by an Agilent ISO 17025 accredited laboratory. For each analyte, the certified value is reported with its uncertainty value calculated as the expanded uncertainty, in accordance with ISO Guide 35.

## Triple certification

### **Agilent is committed to product integrity by offering customers the assurance of triple certification to ISO standards.**

Agilent operates under an ISO 9001 registered quality management system, where an accrediting body (TUV) attests to the quality of our methods, procedures, testing, production, and record keeping.

Our quality control laboratory is accredited to ISO 17025 (ANAB) for technical competence to perform testing of organic and inorganic materials and certified reference materials, as defined in our scope, accessible online at

**[www.agilent.com/chem/17025](http://www.agilent.com/chem/17025)**

Agilent is further accredited to ISO Guide 34 (ANAB) for technical competence as a reference material producer of certified reference materials. This requires Agilent to identify and document the major components of uncertainty including homogeneity, short- and long-term stability, and uncertainty due to analytical characterization and manufacturing.

The most current Agilent certifications are accessible at **[www.agilent.com/quality](http://www.agilent.com/quality)**

## Tips and tools

To view our entire portfolio of over 7,000 standards, all manufactured under ISO 17025 Guide 34, visit **[www.agilent.com/chem/standards](http://www.agilent.com/chem/standards)**

## Level 2 reference material Certificate of Analysis

Analyte	CAS#	Analyte Lot	True Value
methyl butanoate	000623-42-7	RM04575	1005 ± 5 µg/mL
methyl hexanoate	000106-70-7	NT01630	1005 ± 5 µg/mL
methyl octanoate	000111-11-5	NT01094	1003 ± 5 µg/mL
methyl decanoate	000110-42-9	NT00187	1004 ± 5 µg/mL
methyl laurate	000111-82-0	NT01095	1003 ± 5 µg/mL
methyl tetradecanoate	000124-10-7	NT00188	1003 ± 5 µg/mL
methyl palmitate	000112-39-0	RM07128	1001 ± 5 µg/mL
methyl octadecanoate	000112-61-8	RM12285	1002 ± 5 µg/mL
methyl arachidate	001120-28-1	RM11588	1003 ± 5 µg/mL
methyl docosanoate	000929-77-1	NT01096	1004 ± 5 µg/mL
tetracosanoic acid methyl ester	002442-49-1	NT01097	1004 ± 5 µg/mL


**Matrix:** hexane

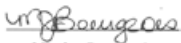
**Storage:** Store Refrigerated (2° - 8°C).

Agilent uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCCL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

*Monica Bourgeois*  
Monica Bourgeois  
QMS Representative

Produced in accordance with TUV USA Inc 56 100 18560026  
registered ISO 9001 Quality Management System

  
 ISO Guide 34 Cert No.  
AR-1936

  
 ISO17025 Cert No.  
AT-1937

250 Smith Street North Kingstown, Rhode Island 02852 [www.agilent.com/quality](http://www.agilent.com/quality)

An example of a Certificate of Analysis for an Agilent reference material.

## GHS compliance

Agilent is a certified GHS author for SDS and GHS compliant labeling. Chemical products manufactured and distributed by Agilent are compliant with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS). Safety Data Sheets (SDS) and labels are prepared in accordance with regulations and in the following languages:

### European CLP Regulation

*Regulation 1272/2008*

- Chinese (standard Mandarin)
- Czech
- Danish
- Dutch
- English
- Estonian
- Finnish
- French
- German
- Italian
- Japanese
- Korean
- Polish
- Portuguese
- Romanian
- Russian
- Spanish
- Swedish

### USA GHS-OSHA Regulation

*Hazcom 2012*

- English
- Spanish
- French

### Chinese GHS Regulation

*GB/T 17519-2013 and  
GB/T 16483-2008*

- Chinese (standard Mandarin)
- English

Additional languages are available upon request.

As regulations are updated and expanded, Agilent will maintain up-to-date records online at [www.agilent.com](http://www.agilent.com)

## Tips and tools

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# Polychlorinated Biphenyls and Environmental Neat Standards

### Reference materials – both neat and in solution – for PCBs, PBBs, dioxins, furans, ethers, and PCB metabolites

Polychlorinated biphenyls (PCBs) are industrial compounds that are now known to be among the most persistent and widely distributed pollutants in the global ecosystem. Their physical and chemical stability, along with their excellent dielectric properties led to the widespread commercial use of these compounds. The stability of PCBs accounts for the environmental persistence of these materials. Since they are lipophilic, they tend to bio accumulate in the fatty tissues of animals, including humans.<sup>1</sup>

Each component in a reference standard is pre-analyzed, with most analytes being >99% pure, and the solvents are of the highest quality available. All solutions are gravimetrically prepared to a precision of  $\pm 2.0\%$ . A certificate showing the actual weight of each analyte is supplied with each mixture.

### Working with small quantities

When neat chemical standards are packaged in small quantities (100 milligrams or less), the volume of chemical contained in the vial is much smaller than the size of the vial. For example, 5 milligrams of a liquid PCB occupies about 4.2 microliters of volume, so it is difficult to remove the material from the vial without wasting some of it.

To avoid this problem, Agilent uses analytical balances and strict weigh tolerances to dispense these materials. The actual amount of material contained in the vial is never less than the stated value, nor more than 1% higher than the stated value. Thus, the analyst can simply rinse the material out of the vial using an appropriate solvent, and still be assured of the amount dispensed.

### PCB purities

The response factors for individual PCB congeners vary significantly when measured using an electron capture detector (ECD). For this reason, Agilent determines purity for these compounds using a flame ionization detector (FID), GC-FID, or GC/MS.

### BZ numbers

'BZ No.' represents the Ballschmitter number used to identify each specific congener. These numbers are equivalent to the IUPAC numbers for PCBs, with three exceptions. Congeners with the BZ numbers 199, 200, and 201 have the IUPAC numbers 200, 201, and 199, respectively. Both uses are found in the literature.

<sup>1</sup>Euro Chlor. Euro Chlor Risk Assessment for the Marine Environment OSPARCOM Region - North Sea. **2002**. [Online] [http://www.eurochlor.org/media/49366/8-11-4-16\\_marine\\_ra\\_pcbbs\\_ddt\\_dioxin.pdf](http://www.eurochlor.org/media/49366/8-11-4-16_marine_ra_pcbbs_ddt_dioxin.pdf) (accessed Feb 21, 2019)



# PCB Congeners

PCB congeners – neat and in solution

## Chlorinated Biphenyls, 97+% Pure by FID

BZ No.	Compound	CAS No.	Neat PCB Congeners		PCB Solution, 100 µg/mL	
			Part No.	Vol.	Part No. in Hexane	Part No. in Isooctane
–	Biphenyl	92-52-4	RPC-001	500 mg	RPC-001S	RPC-001AS
1	2-Chlorobiphenyl	2051-60-7	RPC-006	50 mg	RPC-006S	RPC-006AS
2	3-Chlorobiphenyl	2051-61-8	RPC-007	10 mg	RPC-007S	RPC-007AS
3	4-Chlorobiphenyl	2051-62-9	RPC-008	50 mg	RPC-008S	RPC-008AS
4	2,2'-Dichlorobiphenyl	13029-08-8	RPC-009	25 mg	RPC-009S	RPC-009AS
5	2,3-Dichlorobiphenyl	16605-91-7	RPC-012	25 mg	RPC-012S	RPC-012AS
6	2,3'-Dichlorobiphenyl	25569-80-6	RPC-101	5 mg	RPC-101S	RPC-101AS
7	2,4-Dichlorobiphenyl	33284-50-3	RPC-013	25 mg	RPC-013S	RPC-013AS
8	2,4'-Dichlorobiphenyl	34883-43-7	RPC-089	25 mg	RPC-089S	RPC-089AS
9	2,5-Dichlorobiphenyl	34883-39-1	RPC-014	50 mg	RPC-014S	RPC-014AS
10	2,6-Dichlorobiphenyl	33146-45-1	RPC-015	25 mg	RPC-015S	RPC-015AS
11	3,3'-Dichlorobiphenyl	2050-67-1	RPC-010	50 mg	RPC-010S	RPC-010AS
12	3,4-Dichlorobiphenyl	2974-92-7	RPC-016	50 mg	RPC-016S	RPC-016AS
13	3,4'-Dichlorobiphenyl	2974-90-5	RPC-112	5 mg	RPC-112S	RPC-112AS
14	3,5-Dichlorobiphenyl	34883-41-5	RPC-017	50 mg	RPC-017S	RPC-017AS
15	4,4'-Dichlorobiphenyl	2050-68-2	RPC-011	10 mg	RPC-011S	RPC-011AS
16	2,2',3-Trichlorobiphenyl	38444-78-9	RPC-092	5 mg	RPC-092S	RPC-092AS
17	2,2',4-Trichlorobiphenyl	37680-66-3	RPC-173	5 mg	RPC-173S	RPC-173AS
18	2,2',5-Trichlorobiphenyl	37680-65-2	RPC-021	25 mg	RPC-021S	RPC-021AS
19	2,2',6-Trichlorobiphenyl	38444-73-4	RPC-139	5 mg	RPC-139S	RPC-139AS
20	2,3,3'-Trichlorobiphenyl	38444-84-7	RPC-104	5 mg	RPC-104S	RPC-104AS
21	2,3,4-Trichlorobiphenyl	55702-46-0	RPC-018	25 mg	RPC-018S	RPC-018AS
22	2,3,4'-Trichlorobiphenyl	38444-85-8	RPC-118	5 mg	RPC-118S	RPC-118AS
23	2,3,5-Trichlorobiphenyl	55720-44-0	–		RPC-175S	RPC-175AS
24	2,3,6-Trichlorobiphenyl	55702-45-9	RPC-083A	5 mg	RPC-083S	RPC-083AS
25	2,3',4-Trichlorobiphenyl	55712-37-3	RPC-121	5 mg	RPC-121S	RPC-121AS
26	2,3',5-Trichlorobiphenyl	38444-81-4	RPC-022	25 mg	RPC-022S	RPC-022AS
27	2,3',6-Trichlorobiphenyl	38444-76-7	RPC-120	5 mg	RPC-120S	RPC-120AS
28	2,4,4'-Trichlorobiphenyl	7012-37-5	RPC-084	10 mg	RPC-084S	RPC-084AS

(continued)

# PCB Congeners

## Chlorinated Biphenyls, 97+% Pure by FID

BZ No.	Compound	CAS No.	Neat PCB Congeners		PCB Solution, 100 µg/mL	
			Part No.	Vol.	Part No. in Hexane	Part No. in Isooctane
29	2,4,5-Trichlorobiphenyl	15862-07-4	RPC-019	50 mg	RPC-019S	RPC-019AS
30	2,4,6-Trichlorobiphenyl	35693-92-6	RPC-020	50 mg	RPC-020S	RPC-020AS
31	2,4',5-Trichlorobiphenyl	16606-02-3	RPC-023	25 mg	RPC-023S	RPC-023AS
32	2,4',6-Trichlorobiphenyl	38444-77-8	–		RPC-176S	RPC-176AS
33	2',3,4-Trichlorobiphenyl	38444-86-9	RPC-062	10 mg	RPC-062S	RPC-062AS
34	2',3,5-Trichlorobiphenyl	37680-68-5	RPC-123	5 mg	RPC-123S	RPC-123AS
35	3,3',4-Trichlorobiphenyl	37680-69-6	RPC-107	5 mg	RPC-107S	RPC-107AS
36	3,3',5-Trichlorobiphenyl	38444-87-0	RPC-122	5 mg	RPC-122S	RPC-122AS
37	3,4,4'-Trichlorobiphenyl	38444-90-5	RPC-119	5 mg	RPC-119S	RPC-119AS
38	3,4,5-Trichlorobiphenyl	53555-66-1	RPC-124	5 mg	RPC-124S	RPC-124AS
39	3,4',5-Trichlorobiphenyl	38444-88-1	RPC-125	5 mg	RPC-125S	RPC-125AS
40	2,2',3,3'-Tetrachlorobiphenyl	38444-93-8	RPC-065	50 mg	RPC-065S	RPC-065AS
41	2,2',3,4-Tetrachlorobiphenyl	52663-59-9	–		RPC-177S	RPC-177AS
42	2,2',3,4'-Tetrachlorobiphenyl	36559-22-5	RPC-105	5 mg	RPC-105S	RPC-105AS
43	2,2',3,5-Tetrachlorobiphenyl	70362-46-8	–		RPC-178S	RPC-178AS
44	2,2',3,5'-Tetrachlorobiphenyl	41464-39-5	RPC-029	25 mg	RPC-029S	RPC-029AS
45	2,2',3,6-Tetrachlorobiphenyl	70362-45-7	–		RPC-179S	RPC-179AS
46	2,2',3,6'-Tetrachlorobiphenyl	41464-47-5	–		RPC-180S	RPC-180AS
47	2,2',4,4'-Tetrachlorobiphenyl	2437-79-8	RPC-035	50 mg	RPC-035S	RPC-035AS
48	2,2',4,5-Tetrachlorobiphenyl	70362-47-9	RPC-136	5 mg	RPC-136S	RPC-136AS
49	2,2',4,5'-Tetrachlorobiphenyl	41464-40-8	RPC-030	50 mg	RPC-030S	RPC-030AS
50	2,2',4,6-Tetrachlorobiphenyl	62796-65-8	RPC-024	10 mg	RPC-024S	RPC-024AS
51	2,2',4,6'-Tetrachlorobiphenyl	65194-04-7	–		RPC-181S	RPC-181AS
52	2,2',5,5'-Tetrachlorobiphenyl	35693-99-3	RPC-031	10 mg	RPC-031S	RPC-031AS
53	2,2',5,6'-Tetrachlorobiphenyl	41464-41-9	RPC-032	25 mg	RPC-032S	RPC-032AS
54	2,2',6,6'-Tetrachlorobiphenyl	15968-05-5	RPC-066	50 mg	RPC-066S	RPC-066AS
55	2,3,3',4-Tetrachlorobiphenyl	74338-24-2	RPC-126	5 mg	RPC-126S	RPC-126AS
56	2,3,3',4'-Tetrachlorobiphenyl	41464-43-1	–		RPC-182S	RPC-182AS
57	2,3,3',5-Tetrachlorobiphenyl	70424-67-8	–		RPC-183S	RPC-183AS
58	2,3,3',5'-Tetrachlorobiphenyl	41464-49-7	RPC-128	5 mg	RPC-128S	RPC-128AS
59	2,3,3',6-Tetrachlorobiphenyl	74472-33-6	–		RPC-184S	RPC-184AS
60	2,3,4,4'-Tetrachlorobiphenyl	33025-41-1	RPC-093	5 mg	RPC-093S	RPC-093AS
61	2,3,4,5-Tetrachlorobiphenyl	33284-53-6	RPC-027	50 mg	RPC-027S	RPC-027AS

(continued)

## Chlorinated Biphenyls, 97+% Pure by FID

BZ No.	Compound	CAS No.	Neat PCB Congeners		PCB Solution, 100 µg/mL	
			Part No.	Vol.	Part No. in Hexane	Part No. in Isooctane
62	2,3,4,6-Tetrachlorobiphenyl	54230-23-7	RPC-148	5 mg	RPC-148S	RPC-148AS
63	2,3,4',5-Tetrachlorobiphenyl	74472-34-7	–		RPC-185S	RPC-185AS
64	2,3,4',6-Tetrachlorobiphenyl	52663-58-8	–		RPC-186S	RPC-186AS
65	2,3,5,6-Tetrachlorobiphenyl	33284-54-7	RPC-028	25 mg	RPC-028S	RPC-028AS
66	2,3',4,4'-Tetrachlorobiphenyl	32598-10-0	RPC-086	20 mg	RPC-086S	RPC-086AS
67	2,3',4,5-Tetrachlorobiphenyl	73575-53-8	–		RPC-187S	RPC-187AS
68	2,3',4,5'-Tetrachlorobiphenyl	73575-52-7	–		RPC-188S	RPC-188AS
69	2,3',4,6-Tetrachlorobiphenyl	60233-24-1	RPC-025	10 mg	RPC-025S	RPC-025AS
70	2,3',4',5-Tetrachlorobiphenyl	32598-11-1	RPC-033	10 mg	RPC-033S	RPC-033AS
71	2,3',4',6-Tetrachlorobiphenyl	41464-46-4	–		RPC-189S	RPC-189AS
72	2,3',5,5'-Tetrachlorobiphenyl	41464-42-0	RPC-034	25 mg	RPC-034S	RPC-034AS
73	2,3',5',6-Tetrachlorobiphenyl	74338-23-1	–		RPC-190S	RPC-190AS
74	2,4,4',5-Tetrachlorobiphenyl	32690-93-0	RPC-138	5 mg	RPC-138S	RPC-138AS
75	2,4,4',6-Tetrachlorobiphenyl	32598-12-2	RPC-026	10 mg	RPC-026S	RPC-026AS
76	2',3,4,5-Tetrachlorobiphenyl	70362-48-0	–		RPC-191S	RPC-191AS
77	3,3',4,4'-Tetrachlorobiphenyl	32598-13-3	RPC-036	25 mg	RPC-036S	RPC-036AS
78	3,3',4,5-Tetrachlorobiphenyl	70362-49-1	RPC-127	5 mg	RPC-127S	RPC-127AS
79	3,3',4,5'-Tetrachlorobiphenyl	41464-48-6	RPC-129	5 mg	RPC-129S	RPC-129AS
80	3,3',5,5'-Tetrachlorobiphenyl	33284-52-5	RPC-091	5 mg	RPC-091S	RPC-091AS
81	3,4,4',5-Tetrachlorobiphenyl	70362-50-4	RPC-096	5 mg	RPC-096S	RPC-096AS
82	2,2',3,3',4-Pentachlorobiphenyl	52663-62-4	RPC-097	5 mg	RPC-097S	RPC-097AS
83	2,2',3,3',5-Pentachlorobiphenyl	60145-20-2	–		RPC-192S	RPC-192AS
84	2,2',3,3',6-Pentachlorobiphenyl	52663-60-2	–		RPC-193S	RPC-193AS
85	2,2',3,4,4'-Pentachlorobiphenyl	65510-45-4	–		RPC-194S	RPC-194AS
86	2,2',3,4,5-Pentachlorobiphenyl	55312-69-1	RPC-038	10 mg	RPC-038S	RPC-038AS
87	2,2',3,4,5'-Pentachlorobiphenyl	38380-02-8	RPC-099	10 mg	RPC-099S	RPC-099AS
88	2,2',3,4,6-Pentachlorobiphenyl	55215-17-3	RPC-041	5 mg	RPC-041S	RPC-041AS
89	2,2',3,4,6'-Pentachlorobiphenyl	73575-57-2	–		RPC-195S	RPC-195AS
90	2,2',3,4',5-Pentachlorobiphenyl	68194-07-0	–		RPC-196S	RPC-196AS
91	2,2',3,4',6-Pentachlorobiphenyl	58194-05-8	–		RPC-197S	RPC-197AS
92	2,2',3,5,5'-Pentachlorobiphenyl	52663-61-3	–		RPC-198S	RPC-198AS
93	2,2',3,5,6-Pentachlorobiphenyl	73575-56-1	RPC-069	5 mg	RPC-069S	RPC-069AS
94	2,2',3,5,6'-Pentachlorobiphenyl	73575-55-0	–		RPC-199S	RPC-199AS

(continued)

# PCB Congeners

## Chlorinated Biphenyls, 97+% Pure by FID

BZ No.	Compound	CAS No.	Neat PCB Congeners		PCB Solution, 100 µg/mL	
			Part No.	Vol.	Part No. in Hexane	Part No. in Isooctane
95	2,2',3,5',6-Pentachlorobiphenyl	38379-99-6	RPC-130	5 mg	RPC-130S	RPC-130AS
96	2,2',3,6,6'-Pentachlorobiphenyl	73575-54-9	–		RPC-200S	RPC-200AS
97	2,2',3',4,5-Pentachlorobiphenyl	41464-51-1	RPC-087	10 mg	RPC-087S	RPC-087AS
98	2,2',3',4,6-Pentachlorobiphenyl	60233-25-2	RPC-141	5 mg	RPC-141S	RPC-141AS
99	2,2',4,4',5-Pentachlorobiphenyl	38380-01-7	RPC-171	5 mg	RPC-171S	RPC-171AS
100	2,2',4,4',6-Pentachlorobiphenyl	39485-83-1	RPC-042	5 mg	RPC-042S	RPC-042AS
101	2,2',4,5,5'-Pentachlorobiphenyl	37680-73-2	RPC-039	10 mg	RPC-039S	RPC-039AS
102	2,2',4,5,6'-Pentachlorobiphenyl	68194-06-9	RPC-172	5 mg	RPC-172S	RPC-172AS
103	2,2',4,5',6-Pentachlorobiphenyl	60145-21-3	RPC-040	10 mg	RPC-040S	RPC-040AS
104	2,2',4,6,6'-Pentachlorobiphenyl	56558-16-8	RPC-043	5 mg	RPC-043S	RPC-043AS
105	2,3,3',4,4'-Pentachlorobiphenyl	32598-14-4	RPC-098	5 mg	RPC-098S	RPC-098AS
106	2,3,3',4,5-Pentachlorobiphenyl	70424-69-0	RPC-142	5 mg	RPC-142S	RPC-142AS
107	2,3,3',4',5-Pentachlorobiphenyl	70424-68-9	–		RPC-201S	RPC-201AS
108	2,3,3',4,5'-Pentachlorobiphenyl	70362-41-3	RPC-131	5 mg	RPC-131S	RPC-131AS
109	2,3,3',4,6-Pentachlorobiphenyl	74472-35-8	RPC-150	5 mg	RPC-150S	RPC-150AS
110	2,3,3',4',6-Pentachlorobiphenyl	38380-03-9	RPC-133	5 mg	RPC-133S	RPC-133AS
111	2,3,3',5,5'-Pentachlorobiphenyl	39635-32-0	–		RPC-202S	RPC-202AS
112	2,3,3',5,6-Pentachlorobiphenyl	74472-36-9	RPC-070	5 mg	RPC-070S	RPC-070AS
113	2,3,3',5',6-Pentachlorobiphenyl	68194-10-5	–		RPC-203S	RPC-203AS
114	2,3,4,4',5-Pentachlorobiphenyl	74472-37-0	RPC-108	5 mg	RPC-108S	RPC-108AS
115	2,3,4,4',6-Pentachlorobiphenyl	74472-38-1	RPC-071	5 mg	RPC-071S	RPC-071AS
116	2,3,4,5,6-Pentachlorobiphenyl	18259-05-7	RPC-037	10 mg	RPC-037S	RPC-037AS
117	2,3,4',5,6-Pentachlorobiphenyl	68194-11-6	RPC-147	5 mg	RPC-147S	RPC-147AS
118	2,3',4,4',5-Pentachlorobiphenyl	31508-00-6	RPC-106	5 mg	RPC-106S	RPC-106AS
119	2,3',4,4',6-Pentachlorobiphenyl	56558-17-9	RPC-044	5 mg	RPC-044S	RPC-044AS
120	2,3',4,5,5'-Pentachlorobiphenyl	68194-12-7	–		RPC-204S	RPC-204AS
121	2,3',4,5',6-Pentachlorobiphenyl	56558-18-0	RPC-045	5 mg	RPC-045S	RPC-045AS
122	2',3,3',4,5-Pentachlorobiphenyl	76842-07-4	RPC-117	5 mg	RPC-117S	RPC-117AS
123	2',3,4,4',5-Pentachlorobiphenyl	65510-44-3	RPC-156	5 mg	RPC-156S	RPC-156AS
124	2',3,4,5,5'-Pentachlorobiphenyl	70424-70-3	RPC-134	5 mg	RPC-134S	RPC-134AS
125	2',3,4,5,6'-Pentachlorobiphenyl	74472-39-2	–		RPC-205S	RPC-205AS
126	3,3',4,4',5-Pentachlorobiphenyl	57465-28-8	RPC-102	5 mg	RPC-102S	RPC-102AS
127	3,3',4,5,5'-Pentachlorobiphenyl	39635-33-1	RPC-132	5 mg	RPC-132S	RPC-132AS

(continued)

## Chlorinated Biphenyls, 97+% Pure by FID

BZ No.	Compound	CAS No.	Neat PCB Congeners		PCB Solution, 100 µg/mL	
			Part No.	Vol.	Part No. in Hexane	Part No. in Isooctane
128	2,2',3,3',4,4'-Hexachlorobiphenyl	38380-07-3	RPC-049	20 mg	RPC-049S	RPC-049AS
129	2,2',3,3',4,5-Hexachlorobiphenyl	55215-18-4	RPC-052	5 mg	RPC-052S	RPC-052AS
130	2,2',3,3',4,5'-Hexachlorobiphenyl	52663-66-8	–		RPC-206S	RPC-206AS
131	2,2',3,3',4,6-Hexachlorobiphenyl	61798-70-7	RPC-152	5 mg	RPC-152S	RPC-152AS
132	2,2',3,3',4,6'-Hexachlorobiphenyl	38380-05-1	RPC-143	5 mg	RPC-143S	RPC-143AS
133	2,2',3,3',5,5'-Hexachlorobiphenyl	35694-04-3	RPC-114	5 mg	RPC-114S	RPC-114AS
134	2,2',3,3',5,6-Hexachlorobiphenyl	52704-70-8	RPC-153	5 mg	RPC-153S	RPC-153AS
135	2,2',3,3',5,6'-Hexachlorobiphenyl	52744-13-5	–		RPC-207S	RPC-207AS
136	2,2',3,3',6,6'-Hexachlorobiphenyl	38411-22-2	RPC-067	20 mg	RPC-067S	RPC-067AS
137	2,2',3,4,4',5-Hexachlorobiphenyl	35694-06-5	RPC-053	5 mg	RPC-053S	RPC-053AS
138	2,2',3,4,4',5'-Hexachlorobiphenyl	35065-28-2	RPC-088	5 mg	RPC-088S	RPC-088AS
139	2,2',3,4,4',6-Hexachlorobiphenyl	56030-56-9	RPC-056	5 mg	RPC-056S	RPC-056AS
140	2,2',3,4,4',6'-Hexachlorobiphenyl	59291-64-4	RPC-151	5 mg	RPC-151S	RPC-151AS
141	2,2',3,4,5,5'-Hexachlorobiphenyl	52712-04-6	RPC-050	5 mg	RPC-050S	RPC-050AS
142	2,2',3,4,5,6-Hexachlorobiphenyl	41411-61-4	RPC-158	5 mg	RPC-158S	RPC-158AS
143	2,2',3,4,5,6'-Hexachlorobiphenyl	68194-15-0	RPC-054	5 mg	RPC-054S	RPC-054AS
144	2,2',3,4,5',6-Hexachlorobiphenyl	68194-14-9	RPC-155	5 mg	RPC-155S	RPC-155AS
145	2,2',3,4,6,6'-Hexachlorobiphenyl	74472-40-5	RPC-160	5 mg	RPC-160S	RPC-160AS
146	2,2',3,4',5,5'-Hexachlorobiphenyl	51908-16-8	–		RPC-146S	RPC-146AS
147	2,2',3,4',5,6-Hexachlorobiphenyl	68194-13-8	RPC-154	5 mg	RPC-154S	RPC-154AS
148	2,2',3,4',5,6'-Hexachlorobiphenyl	74472-41-6	–		RPC-208S	RPC-208AS
149	2,2',3,4',5',6-Hexachlorobiphenyl	38380-04-0	RPC-149	5 mg	RPC-149S	RPC-149AS
150	2,2',3,4',6,6'-Hexachlorobiphenyl	68194-08-1	–		RPC-209S	RPC-209AS
151	2,2',3,5,5',6-Hexachlorobiphenyl	52663-63-5	RPC-051	5 mg	RPC-051S	RPC-051AS
152	2,2',3,5,6,6'-Hexachlorobiphenyl	68194-09-2	RPC-161	5 mg	RPC-161S	RPC-161AS
153	2,2',4,4',5,5'-Hexachlorobiphenyl	35065-27-1	RPC-047	10 mg	RPC-047S	RPC-047AS
154	2,2',4,4',5,6'-Hexachlorobiphenyl	60145-22-4	RPC-048	5 mg	RPC-048S	RPC-048AS
155	2,2',4,4',6,6'-Hexachlorobiphenyl	33979-03-2	RPC-046	50 mg	RPC-046S	RPC-046AS
156	2,3,3',4,4',5-Hexachlorobiphenyl	38380-08-4	RPC-055	5 mg	RPC-055S	RPC-055AS
157	2,3,3',4,4',5'-Hexachlorobiphenyl	69782-90-7	RPC-164	5 mg	RPC-164S	RPC-164AS
158	2,3,3',4,4',6-Hexachlorobiphenyl	74472-42-7	RPC-109	5 mg	RPC-109S	RPC-109AS
159	2,3,3',4,5,5'-Hexachlorobiphenyl	39635-35-3	RPC-113	5 mg	RPC-113S	RPC-113AS
160	2,3,3',4,5,6-Hexachlorobiphenyl	41411-62-5	RPC-157	5 mg	RPC-157S	RPC-157AS

(continued)

# PCB Congeners

## Chlorinated Biphenyls, 97+% Pure by FID

BZ No.	Compound	CAS No.	Neat PCB Congeners		PCB Solution, 100 µg/mL	
			Part No.	Vol.	Part No. in Hexane	Part No. in Isooctane
161	2,3,3',4,5',6-Hexachlorobiphenyl	74474-43-8	RPC-144	5 mg	RPC-144S	RPC-144AS
162	2,3,3',4,5,5'-Hexachlorobiphenyl	39635-34-2	–		RPC-210S	RPC-210AS
163	2,3,3',4',5,6-Hexachlorobiphenyl	74472-44-9	RPC-163	5 mg	RPC-163S	RPC-163AS
164	2,3,3',4',5,6-Hexachlorobiphenyl	74472-45-0	–		RPC-211S	RPC-211AS
165	2,3,3',5,5',6-Hexachlorobiphenyl	74472-46-1	RPC-159	5 mg	RPC-159S	RPC-159AS
166	2,3,4,4',5,6-Hexachlorobiphenyl	41411-63-6	RPC-115	5 mg	RPC-115S	RPC-115AS
167	2,3',4,4',5,5'-Hexachlorobiphenyl	52663-72-6	RPC-100	10 mg	RPC-100S	RPC-100AS
168	2,3',4,4',5,6-Hexachlorobiphenyl	59291-65-5	RPC-145	5 mg	RPC-145S	RPC-145AS
169	3,3',4,4',5,5'-Hexachlorobiphenyl	32774-16-6	RPC-090	5 mg	RPC-090S	RPC-090AS
170	2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6	RPC-110	5 mg	RPC-110S	RPC-110AS
171	2,2',3,3',4,4',6-Heptachlorobiphenyl	52663-71-5	RPC-072	5 mg	RPC-072S	RPC-072AS
172	2,2',3,3',4,5,5'-Heptachlorobiphenyl	52663-74-8	–		RPC-212S	RPC-212AS
173	2,2',3,3',4,5,6-Heptachlorobiphenyl	68194-16-1	RPC-166	5 mg	RPC-166S	RPC-166AS
174	2,2',3,3',4,5,6'-Heptachlorobiphenyl	38411-25-5	–		RPC-213S	RPC-213AS
175	2,2',3,3',4,5',6-Heptachlorobiphenyl	40186-70-7	–		RPC-214S	RPC-214AS
176	2,2',3,3',4,6,6'-Heptachlorobiphenyl	52663-65-7	–		RPC-215S	RPC-215AS
177	2,2',3,3',4',5,6-Heptachlorobiphenyl	52663-70-4	–		RPC-216S	RPC-216AS
178	2,2',3,3',5,5',6-Heptachlorobiphenyl	52663-67-9	–		RPC-217S	RPC-217AS
179	2,2',3,3',5,6,6'-Heptachlorobiphenyl	52663-64-6	–		RPC-218S	RPC-218AS
180	2,2',3,4,4',5,5'-Heptachlorobiphenyl	35065-29-3	RPC-094	5 mg	RPC-094S	RPC-094AS
181	2,2',3,4,4',5,6-Heptachlorobiphenyl	74472-47-2	RPC-077	5 mg	RPC-077S	RPC-077AS
182	2,2',3,4,4',5,6'-Heptachlorobiphenyl	60145-23-5	RPC-162	5 mg	RPC-162S	RPC-162AS
183	2,2',3,4,4',5',6-Heptachlorobiphenyl	52663-69-1	RPC-073	5 mg	RPC-073S	RPC-073AS
184	2,2',3,4,4',6,6'-Heptachlorobiphenyl	74472-48-3	RPC-168	5 mg	RPC-168S	RPC-168AS
185	2,2',3,4,5,5',6-Heptachlorobiphenyl	52712-05-7	RPC-057	5 mg	RPC-057S	RPC-057AS
186	2,2',3,4,5,6,6'-Heptachlorobiphenyl	74472-49-4	RPC-116	5 mg	RPC-116S	RPC-116AS
187	2,2',3,4',5,5',6-Heptachlorobiphenyl	52663-68-0	RPC-111	5 mg	RPC-111S	RPC-111AS
188	2,2',3,4',5,6,6'-Heptachlorobiphenyl	74487-85-7	RPC-103	5 mg	RPC-103S	RPC-103AS
189	2,3,3',4,4',5,5'-Heptachlorobiphenyl	39635-31-9	RPC-137	5 mg	RPC-137S	RPC-137AS
190	2,3,3',4,4',5,6-Heptachlorobiphenyl	41411-64-7	RPC-135	5 mg	RPC-135S	RPC-135AS
191	2,3,3',4,4',5',6-Heptachlorobiphenyl	74472-50-7	RPC-167	5 mg	RPC-167S	RPC-167AS
192	2,3,3',4,5,5',6-Heptachlorobiphenyl	74472-51-8	RPC-165	5 mg	RPC-165S	RPC-165AS
193	2,3,3',4',5,5',6-Heptachlorobiphenyl	69782-91-8	RPC-169	5 mg	RPC-169S	RPC-169AS

(continued)

## Chlorinated Biphenyls, 97+% Pure by FID

BZ No.	Compound	CAS No.	Neat PCB Congeners		PCB Solution, 100 µg/mL	
			Part No.	Vol.	Part No. in Hexane	Part No. in Isooctane
194	2,2',3,3',4,4',5,5'-Octachlorobiphenyl	35694-08-7	RPC-058	5 mg	RPC-058S	RPC-058AS
195	2,2',3,3',4,4',5,6-Octachlorobiphenyl	52663-78-2	RPC-074	5 mg	RPC-074S	RPC-074AS
196	2,2',3,3',4,4',5,6'-Octachlorobiphenyl	42740-50-1	RPC-170	5 mg	RPC-170S	RPC-170AS
197	2,2',3,3',4,4',6,6'-Octachlorobiphenyl	33091-17-7	–		RPC-219S	RPC-219AS
198	2,2',3,3',4,5,5',6-Octachlorobiphenyl	68194-17-2	RPC-075	5 mg	RPC-075S	RPC-075AS
199	2,2',3,3',4,5,6,6'-Octachlorobiphenyl	52663-73-7	RPC-095	5 mg	RPC-095S	RPC-095AS
200	2,2',3,3',4,5',6'-Octachlorobiphenyl	40186-71-8	RPC-082	5 mg	RPC-082S	RPC-082AS
201	2,2',3,3',4,5,5',6'-Octachlorobiphenyl	52663-75-9	–		RPC-220S	RPC-220AS
202	2,2',3,3',5,5',6,6'-Octachlorobiphenyl	2136-99-4	RPC-068	5 mg	RPC-068S	RPC-068AS
203	2,2',3,4,4',5,5',6-Octachlorobiphenyl	52663-76-0	RPC-174	5 mg	RPC-174S	RPC-174AS
204	2,2',3,4,4',5,6,6'-Octachlorobiphenyl	74472-52-9	RPC-078	5 mg	RPC-078S	RPC-078AS
205	2,3,3',4,4',5,5',6-Octachlorobiphenyl	74472-53-0	RPC-140	5 mg	RPC-140S	RPC-140AS
206	2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	40186-72-9	RPC-059	5 mg	RPC-059S	RPC-059AS
207	2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl	52663-79-3	RPC-080	5 mg	RPC-080S	RPC-080AS
208	2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	52663-77-1	RPC-081	5 mg	RPC-081S	RPC-081AS
209	Decachlorobiphenyl	2051-24-3	RPC-060	10 mg	RPC-060S	RPC-060AS

## PCB congener mixtures

## SIM Calibration Standard Mixture

Description	Analytes and Concentration	BZ No.	Part No.
12 analytes, in hexane, 1 x 1 mL	2-Chlorobiphenyl	10 µg/mL	1
	2,3-Dichlorobiphenyl	10 µg/mL	5
	2,4,5-Trichlorobiphenyl	10 µg/mL	29
	2,2',4,6-Tetrachlorobiphenyl	20 µg/mL	50
	3,3',4,4'-Tetrachlorobiphenyl	20 µg/mL	77
	2,2',3,4,5'-Pentachlorobiphenyl	20 µg/mL	87
	2,2',4,6,6'-Pentachlorobiphenyl	20 µg/mL	104
	2,2',4,4',5,6'-Hexachlorobiphenyl	20 µg/mL	154
	2,2',3,4',5,6,6'-Heptachlorobiphenyl	30 µg/mL	188
	2,2',3,3',4,5',6,6'-Octachlorobiphenyl	30 µg/mL	200
	2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	40 µg/mL	208
	Decachlorobiphenyl	50 µg/mL	209

## Dry Color Manufacturer's Association (DCMA) Mixture

Description	Analytes and Concentration	BZ No.	Part No.
10 analytes, in hexane, 1 x 1 mL	2-Chlorobiphenyl	100 µg/mL	1
	3,3'-Dichlorobiphenyl	100 µg/mL	11
	2,4,5-Trichlorobiphenyl	10 µg/mL	29
	2,2',4,4'-Tetrachlorobiphenyl	10 µg/mL	47
	2,3',4,5',6-Pentachlorobiphenyl	10 µg/mL	121
	2,2',3,3',6,6'-Hexachlorobiphenyl	10 µg/mL	136
	2,2',3,4,5,5',6-Heptachlorobiphenyl	5 µg/mL	185
	2,2',3,3',4,4',5,5'-Octachlorobiphenyl	5 µg/mL	194
	2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	5 µg/mL	206
	Decachlorobiphenyl	5 µg/mL	209

## EPA PCB Congener Calibration Check Solution

Description	Congener	BZ No.	Part No. 0.2 µg/mL in Isooctane	Part No. 100 µg/mL in Acetone
20 analytes, 1 x 1 mL	2,4'-Dichlorobiphenyl	8	RPC-EPA-1	RPC-EPA2-1
	2,2',5-Trichlorobiphenyl	18		
	2,4,4'-Trichlorobiphenyl	28		
	2,2',3,5'-Tetrachlorobiphenyl	44		
	2,2',5,5'-Tetrachlorobiphenyl	52		
	2,3',4,4'-Tetrachlorobiphenyl	66		
	3,3',4,4'-Tetrachlorobiphenyl	77		
	2,2',4,5,5'-Pentachlorobiphenyl	101		
	2,3,3',4,4'-Pentachlorobiphenyl	105		
	2,3',4,4',5-Pentachlorobiphenyl	118		
	3,3',4,4',5-Pentachlorobiphenyl	126		
	2,2',3,3',4,4'-Hexachlorobiphenyl	128		
	2,2',3,4,4',5'-Hexachlorobiphenyl	138		
	2,2',4,4',5,5'-Hexachlorobiphenyl	153		
	2,2',3,3',4,4',5-Heptachlorobiphenyl	170		
	2,2',3,4,4',5,5'-Heptachlorobiphenyl	180		
	2,2',3,4',5,5',6-Heptachlorobiphenyl	187		
	2,2',3,3',4,4',5,6-Octachlorobiphenyl	195		
	2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	206		
	Decachlorobiphenyl	209		



# PCB Methods

## EPA Method 680

### Internal Standard Mixture

Description	Analytes	Part No. 40 µg/mL in Hexane	Part No. 75 µg/mL in Hexane/ Toluene (1:1)	Part No. 750 µg/mL in Hexane/ Methylene Chloride
2 analytes, 1 x 1 mL	Chrysene-d <sub>12</sub> Phenanthrene-d <sub>10</sub>	ISM-565-1	ISM-566-1	ISM-567-1

### Concentration Calibration Standard Mixture

Description	Analytes and Concentration	BZ No.	Part No.
9 analytes, in hexane/ toluene (1:1), 1 x 1 mL	2-Chlorobiphenyl	100 µg/mL	1
	2,3-Dichlorobiphenyl	100 µg/mL	5
	2,4,5-Trichlorobiphenyl	100 µg/mL	29
	2,2,4,6-Tetrachlorobiphenyl	200 µg/mL	50
	2,2,3,4,5-Pentachlorobiphenyl	200 µg/mL	87
	2,2,4,4,5,6-Hexachlorobiphenyl	200 µg/mL	154
	2,2,3,4,5,6,6-Heptachlorobiphenyl	300 µg/mL	188
	2,2,3,3,4,5,6,6-Octachlorobiphenyl	300 µg/mL	200
	Decachlorobiphenyl	500 µg/mL	209

### Internal and Surrogate Standards

Description	Part No. 250 µg/mL in Toluene	Part No. 2000 µg/mL in Methylene Chloride	Part No. 200 µg/mL in Methylene Chloride	Part No. 1000 µg/mL in Methylene Chloride
Chrysene-d <sub>12</sub> , 1 mL	ATS-122-1	ATS-120-1	–	–
Phenanthrene-d <sub>10</sub> , 1 mL	–	–	IST-231-1	IST-230-1

### EPA Method 680 Kit

Description	Ampules	Vol.	Part No.
Kit, contains four ampules	Concentration mixture (CB-681MN-1) Retention time mixture (CB-682MN-1) Chrysene-d <sub>12</sub> solution (ATS-120-1) Phenanthrene-d <sub>10</sub> solution (IST-230-1)	1 x 1 mL of each	CBK-680A

## EPA Method 8082

## Polychlorinated Biphenyl (PCBS)

## Method 8082 PCB Congeners Mixture

Description	Analytes and Concentration	BZ No.	Part No.
19 analytes, in isooctane, 1 x 1 mL	2-Chlorobiphenyl	100 µg/mL	1
	2,3-Dichlorobiphenyl	100 µg/mL	5
	2,2',5-Trichlorobiphenyl	100 µg/mL	18
	2,4',5-Trichlorobiphenyl	100 µg/mL	31
	2,2',3,5'-Tetrachlorobiphenyl	100 µg/mL	44
	2,2',5,5'-Tetrachlorobiphenyl	100 µg/mL	52
	2,3',4,4'-Tetrachlorobiphenyl	100 µg/mL	66
	2,2',3,4,5'-Pentachlorobiphenyl	100 µg/mL	87
	2,2',4,5,5'-Pentachlorobiphenyl	100 µg/mL	101
	2,3,3',4',6-Pentachlorobiphenyl	100 µg/mL	110
	2,2',3,4,4',5'-Hexachlorobiphenyl	100 µg/mL	138
	2,2',3,4,5,5'-Hexachlorobiphenyl	100 µg/mL	141
	2,2',3,5,5',6-Hexachlorobiphenyl	100 µg/mL	151
	2,2',4,4',5,5'-Hexachlorobiphenyl	100 µg/mL	153
	2,2',3,3',4,4',5-Heptachlorobiphenyl	100 µg/mL	170
	2,2',3,4,4',5,5'-Heptachlorobiphenyl	100 µg/mL	180
	2,2',3,4,4',5,6-Heptachlorobiphenyl	100 µg/mL	183
2,2',3,4',5,5',6-Heptachlorobiphenyl	100 µg/mL	187	
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	100 µg/mL	206	

## Tips and tools

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## European PCB congener mixtures

## NEN 5734/VPR C85-16 PCB Mixture

Description	Analytes and Concentration	BZ No.	Part No.
7 analytes, in isooctane, 1 x 1 mL	2,4,4'-Trichlorobiphenyl	10 µg/mL	28
	2,2',5,5'-Tetrachlorobiphenyl	10 µg/mL	52
	2,2',4,5,5'-Pentachlorobiphenyl	10 µg/mL	101
	2,3',4,4',5-Pentachlorobiphenyl	10 µg/mL	118
	2,2',3,4,4',5'-Hexachlorobiphenyl	10 µg/mL	138
	2,2',4,4',5,5'-Hexachlorobiphenyl	10 µg/mL	153
	2,2',3,4,4',5,5'-Heptachlorobiphenyl	10 µg/mL	180

## EN 12766/CEN EN 61619 PCB Calibration Mixture

Description	Analytes and Concentration	BZ No.	Part No.
14 analytes, in isooctane, 1 x 1 mL	2,2',5-Trichlorobiphenyl	10 µg/mL	18
	2,4,4'-Trichlorobiphenyl	10 µg/mL	28
	2,4',5-Trichlorobiphenyl	10 µg/mL	31
	2,2',3,5'-Tetrachlorobiphenyl	10 µg/mL	44
	2,2',5,5'-Tetrachlorobiphenyl	10 µg/mL	52
	2,2',4,5,5'-Pentachlorobiphenyl	10 µg/mL	101
	2,3',4,4',5-Pentachlorobiphenyl	10 µg/mL	118
	2,2',3,4,4',5'-Hexachlorobiphenyl	10 µg/mL	138
	2,2',3,4',5',6-Hexachlorobiphenyl	10 µg/mL	149
	2,2',4,4',5,5'-Hexachlorobiphenyl	10 µg/mL	153
	2,2',3,3',4,4',5-Heptachlorobiphenyl	10 µg/mL	170
	2,2',3,4,4',5,5'-Heptachlorobiphenyl	10 µg/mL	180
	2,2',3,3',4,4',5,5'-octachlorobiphenyl	10 µg/mL	194
	Decachlorobiphenyl	10 µg/mL	209

## PCB windowing mixtures

## PCB Elution Window with Mixtures

First Eluting Congener	BZ No.	RRT*	Last Eluting Congener	BZ No.	RRT*	Part No.
Biphenyl	–	0.0997	–	–	–	RPCW-100-1
2-Chlorobiphenyl	1	0.1544	4-Chlorobiphenyl	3	0,1975	RPCW-101-1
2,6-Dichlorobiphenyl	10	0.2243	4,4'-Dichlorobiphenyl	15	0,3387	RPCW-102-1
2,2',6-Trichlorobiphenyl	19	0.3045	3,4,4'-Trichlorobiphenyl	37	0,4858	RPCW-103-1
2,2',6,6'-Tetrachlorobiphenyl	54	0.38	3,3',4,4'-Tetrachlorobiphenyl	77	0,6295	RPCW-104-1
2,2',4,6,6'-Pentachlorobiphenyl	104	0.4757	3,3',4,4',5-Pentachlorobiphenyl	126	0,7512	RPCW-105-1
2,2',4,4',6,6'-Hexachlorobiphenyl	155	0.5666	3,3',4,4',5,5'-Hexachlorobiphenyl	169	0,8625	RPCW-106-1
2,2',3,4',5,6,6'-Heptachlorobiphenyl	188	0.692	2,3,3',4,4',5,5'-Heptachlorobiphenyl	189	0,9142	RPCW-107-1
2,2',3,3',5,5',6,6'-Octachlorobiphenyl	202	0.8089	2,3,3',4,4',5,5',6-Octachlorobiphenyl	205	0,9678	RPCW-108-1
2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	208	0.932	2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	206	1,0103	RPCW-109-1
Decachlorobiphenyl	209	1.0496	–	–	–	RPCW-110-1
Octachloronaphthalene	–	1.0000	–	–	–	RPCW-111-1

\*RRT = relative retention time versus octachloronaphthalene; see M. D. Mullin, et al., Environ. Sci. Technol., 18, 468(1984).

## PCB Elution Window Kit

Description	Part No.
Kit, contains eleven ampules: 1 x 1 mL of each of the PCB Windowing mixtures, RPCW-100 through to RPCW-110.	RPCWK

## PCB Locator Mixture

Description	Analytes and Concentration	Part No.
5 analytes, in hexane, 1 x 1 mL	2-Chlorobiphenyl 0.1 ng/μL 3-Chlorobiphenyl 0.1 ng/μL Aroclor 1242 0.5 ng/μL Aroclor 1260 0.5 ng/μL Aroclor 1268 0.2 ng/μL	LMPK-1

# Aroclors

## Commercial PCBs

Industrial PCBs were generally prepared by treating molten biphenyl with anhydrous chlorine in the presence of a catalyst (iron filings or ferric chloride). The crude material was then treated with alkali to remove traces of hydrogen chloride, then distilled to remove color. Varying the reaction conditions gave rise to a family of products of various compositions.

The Aroclors are examples of technical mixtures composed of many compounds. Due to variations in the manufacturing process, the exact composition of these mixtures varies from lot to lot.

### High Concentration Aroclor Solution

Compound	Neat Material		1000 µg/mL in Isooctane	
	Mass	Part No.	Vol.	Part No.
Aroclor 1016	50 mg	RPC-1016	1 x 1 mL	EPA-1282-1
Aroclor 1221	50 mg	RPC-1221	1 x 1 mL	EPA-1292-1
Aroclor 1232	10 mg	RPC-1232	1 x 1 mL	EPA-1302-1
Aroclor 1242	50 mg	RPC-1242	1 x 1 mL	EPA-1312-1
Aroclor 1248	50 mg	RPC-1248	1 x 1 mL	EPA-1342-1
Aroclor 1254	50 mg	RPC-1254	1 x 1 mL	EPA-1352-1
Aroclor 1260	50 mg	RPC-1260	1 x 1 mL	EPA-1362-1
Aroclor 1262	50 mg	RPC-1262	1 x 1 mL	EPA-1372-1
Aroclor 1268	50 mg	RPC-1268	1 x 1 mL	EPA-1382-1

### Aroclor Standards

Description	Compound	Part No. 100 µg/mL in Methanol	Part No. 100 µg/mL in Hexane	Part No. 100 µg/mL in Isooctane
Ampules, 1 x 1 mL	Aroclor 1016	PP-280-1	PP-281-1	PP-282-1
	Aroclor 1221	PP-290-1	PP-291-1	PP-292-1
	Aroclor 1232	PP-300-1	PP-301-1	PP-302-1
	Aroclor 1242	PP-310-1	PP-311-1	PP-312-1
	Aroclor 1248	PP-340-1	PP-341-1	PP-342-1
	Aroclor 1254	PP-350-1	PP-351-1	PP-352-1
	Aroclor 1260	PP-360-1	PP-361-1	PP-362-1
	Aroclor 1262	PP-370-1	PP-371-1	PP-372-1
	Aroclor 1268	PP-380-1	PP-381-1	PP-382-1

### Aroclor Solution Kit

Description	Part No. 100 µg/mL in Hexane	Part No. 100 µg/mL in Methanol	Part No. 100 µg/mL in Isooctane
Kit, contains 9 ampules, 1 x 1 mL of each each Aroclor	Aroclor 1016	Aroclor 1254	RPCK-1A
	Aroclor 1221	Aroclor 1260	RPCK-3A
	Aroclor 1232	Aroclor 1262	RPCK-4A
	Aroclor 1242	Aroclor 1268	
	Aroclor 1248		

## Aroclors in Transformer Oil Kits (wt/vol)

Description	Part No.	
Kit, contains 4 ampules: 3 x 2 mL of Aroclor at 100 µg/mL in PCB free transformer oil, plus 1 x 2 mL of PCB free transformer oil	Aroclor 1016 kit	1016TK
	Aroclor 1221 kit	1221TK
	Aroclor 1232 kit	1232TK
	Aroclor 1242 kit	1242TK
	Aroclor 1248 kit	1248TK
	Aroclor 1254 kit	1254TK
	Aroclor 1260 kit	1260TK
	Aroclor 1262 kit	1262TK
	Aroclor 1268 kit	1268TK

## PCB Contaminant Kits (wt/wt)

Description	Part No.	
Kit, contains 4 ampules: 2 x 1 mL of Aroclor at 50 µg/gm in PCB free transformer oil, plus 2 x 1 mL of Aroclor at 500 µg/gm in PCB free transformer oil	Aroclor 1242 kit	1242TK-B
	Aroclor 1248 kit	1248TK-B
	Aroclor 1254 kit	1254TK-B
	Aroclor 1260 kit	1260TK-B

## PCB Contaminant Kits (wt/vol)

Description	Part No.	
Kit, contains 4 ampules: 2 x 1 mL of Aroclor at 50 µg/mL in PCB free transformer oil, plus 2 x 1 mL of Aroclor at 500 µg/mL in PCB free transformer oil	Aroclor 1242 kit	1242TK-A
	Aroclor 1254 kit	1254TK-A
	Aroclor 1260 kit	1260TK-A

## Aroclors in Transformer Oil (wt/wt)

Description	Mass	Part No.
Aroclor 1242, in PCB free transformer oil, 1 mL	50 µg/gm	1242TK-B1
	500 µg/gm	1242TK-B2
Aroclor 1248, in PCB free transformer oil, 1 mL	50 µg/gm	1248TK-B1
	500 µg/gm	1248TK-B2
Aroclor 1254, in PCB free transformer oil, 1 mL	50 µg/gm	1254TK-B1
	500 µg/gm	1254TK-B2
Aroclor 1260, in PCB free transformer oil, 1 mL	50 µg/gm	1260TK-B1
	500 µg/gm	1260TK-B2

## PCB Free Transformer Oil

Description	Vol.	Part No.
PCB free transformer oil	4 x 2 mL	TK-OIL
	1 x 2 mL	TK-OIL-2
	25 mL	TK-OIL-25
	100 mL	TK-OIL-100

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# PCM, Metabolites, and Terphenyls

## Hydroxylated biphenyls

### Hydroxylated Chlorobiphenyls and Biphenyls, 95–99% Pure

Compound	Mass	Part No.
2-Chloro-4-biphenylol	5 mg	RPM-001
3-Chloro-4-biphenylol	10 mg	RPM-003
4'-Chloro-4-biphenylol	10 mg	RPM-004
2',5'-Dichloro-4-biphenylol	10 mg	RPM-009
2',5'-Dichloro-3-biphenylol	10 mg	RPM-010
3,5-Dichloro-2-biphenylol	10 mg	RPM-011
4,4'-Dichloro-3-biphenylol	10 mg	RPM-013
2,2',5'-Trichloro-4-biphenylol	10 mg	RPM-017
2',3,5'-Trichloro-2-biphenylol	10 mg	RPM-018
2',5,5'-Trichloro-2-biphenylol	10 mg	RPM-020
3,4',5-Trichloro-4-biphenylol	5 mg	RPM-021
2',3',4',5'-Tetrachloro-4-biphenylol	10 mg	RPM-022
2',3',4',5'-Tetrachloro-3-biphenylol	10 mg	RPM-023
3,3',5,5'-Tetrachloro-4,4'-biphenyldiol	10 mg	RPM-024
2',3',4',5,5'-Pentachloro-2-biphenylol	5 mg	RPM-025
2-Biphenylol	100 mg	RPM-027
3-Biphenylol	100 mg	RPM-028
4-Biphenylol	100 mg	RPM-029
2,2'-Biphenyldiol	100 mg	RPM-030
4,4'-Biphenyldiol	100 mg	RPM-032
2,5-Biphenyldiol	100 mg	RPM-033
3,4-Biphenyldiol	100 mg	RPM-034

### Chlorinated Terphenyls, 95–99% Pure

Compound	Mass	Part No.
4-Chloro- <i>o</i> -terphenyl	10 mg	RTP-019
4-Chloro- <i>p</i> -terphenyl	20 mg	RTP-002
2,4-Dichloro- <i>p</i> -terphenyl	20 mg	RTP-014
2,5-Dichloro- <i>o</i> -terphenyl	10 mg	RTP-005
2,5-Dichloro- <i>m</i> -terphenyl	10 mg	RTP-004
2,5-Dichloro- <i>p</i> -terphenyl	20 mg	RTP-003
2,4,6-Trichloro- <i>p</i> -terphenyl	20 mg	RTP-008
2,3,5,6-Tetrachloro- <i>p</i> -terphenyl	10 mg	RTP-015
2,4,4',6-Tetrachloro- <i>p</i> -terphenyl	10 mg	RTP-010
2,3,4,5,6-Pentachloro- <i>p</i> -terphenyl	10 mg	RTP-016
Tetradecachloro- <i>m</i> -terphenyl	25 mg	RTP-011
2,2'',5,5'''-Tetrachloro- <i>p,p</i> -quaterphenyl	5 mg	RTP-018

### Industrial Terphenyl Solution Kit

Description	Part No.
Kit, contains 3 ampules: 1 x 1 mL of each Aroclor at 100 µg/mL in hexane	Aroclor 5442 Aroclor 5460 Aroclor 5060 RTP-1A

## Polybrominated Biphenyls

## Bromo biphenyls

## Bromobiphenyls, 97–99% Pure

Compound	Neat Material		Solution at 100 µg /mL in Hexane	
	Mass	Part No.	Vol.	Part No.
2-Bromobiphenyl	50 mg	RBF-076	1 x 2 mL	RBF-076S
3-Bromobiphenyl	50 mg	RBF-077	1 x 2 mL	RBF-077S
4-Bromobiphenyl	50 mg	RBF-078	1 x 2 mL	RBF-078S
2,6-Dibromobiphenyl	–	–	1 x 2 mL	RBF-079S
4,4'-Dibromobiphenyl	50 mg	RBF-080	1 x 2 mL	RBF-080S
2,2'-Dibromobiphenyl	50 mg	RBF-081	1 x 2 mL	RBF-081S
2,4-Dibromobiphenyl	15 mg	RBF-082	1 x 2 mL	RBF-082S
2,5-Dibromobiphenyl	15 mg	RBF-083	1 x 2 mL	RBF-083S
2,4,6-Tribromobiphenyl	15 mg	RBF-084	1 x 2 mL	RBF-084S
2,2',5-Tribromobiphenyl	10 mg	RBF-085	1 x 2 mL	RBF-085S
2,3',5-Tribromobiphenyl	10 mg	RBF-086	1 x 2 mL	RBF-086S
2,4',5-Tribromobiphenyl	10 mg	RBF-087	1 x 2 mL	RBF-087S
2,4,5-Tribromobiphenyl	10 mg	RBF-097	1 x 2 mL	RBF-097S
3,4,5-Tribromobiphenyl	10 mg	RBF-098	1 x 2 mL	RBF-098S
2,2',4,5'-Tetrabromobiphenyl	–	–	1 x 2 mL	RBF-088S
2,2',5,5'-Tetrabromobiphenyl	20 mg	RBF-089	1 x 2 mL	RBF-089S
3,3',5,5'-Tetrabromobiphenyl	20 mg	RBF-090	1 x 2 mL	RBF-090S
2,2',5,6'-Tetrabromobiphenyl	20 mg	RBF-091	1 x 2 mL	RBF-091S
2,2',4,5',6-Pentabromobiphenyl	10 mg	RBF-092	1 x 2 mL	RBF-092S
2,2',4,4',6,6'-Hexabromobiphenyl	5 mg	RBF-093	1 x 2 mL	RBF-093S
2,2',4,4',5,5'-Hexabromobiphenyl (95%)	–	–	1 x 2 mL	RBF-094S
Decabromobiphenyl (95%)	50 mg	RBF-102	1 x 2 mL	RBF-102S
Octabromobiphenyl (tech) (FR250 BA, Dow Chemical)	50 mg	RBF-074	–	–
Hexabromobiphenyl (tech) (Firemaster BP-6, Michigan Chemical)	10 mg	RBF-075	–	–



# Diphenyl Ethers

## Polychlorinated diphenyl ethers

## Polybrominated diphenyl ethers

### Dioxin and Furan Precursors

#### Chlorinated Diphenyl ethers, 97–99% Pure

Compound	Mass	Part No.
Diphenyl ether	100 mg	RPE-020
2-Chlorodiphenyl ether	10 mg	RPE-002
4-Chlorodiphenyl ether	10 mg	RPE-001
2,4-Dichlorodiphenyl ether	10 mg	RPE-005
2,4'-Dichlorodiphenyl ether	10 mg	RPE-004
4,4'-Dichlorodiphenyl ether	10 mg	RPE-003
2,2',4-Trichlorodiphenyl ether	10 mg	RPE-006
2',3,4-Trichlorodiphenyl ether	10 mg	RPE-008
2,4,4'-Trichlorodiphenyl ether	10 mg	RPE-007
2,3',4,4'-Tetrachlorodiphenyl ether	10 mg	RPE-009
2,4,4',5-Tetrachlorodiphenyl ether	10 mg	RPE-011
3,3',4,4'-Tetrachlorodiphenyl ether	10 mg	RPE-010
2,3',4,4',5-Pentachlorodiphenyl ether	10 mg	RPE-012
Decachlorodiphenyl ether	10 mg	RPE-014
4-Phenoxybiphenyl	25 mg	RPE-021
2,4,4'-Trichloro-2'-hydroxydiphenyl ether	50 mg	RPE-024

#### Brominated Diphenyl Ethers in Solution, 97–99% Pure

Compound, at 100 µg/mL in Isooctane	Vol.	Part No.
2,2',4,4'-Tetrabromodiphenyl ether	1 x 1 mL	RPE-080S-1
2,2',4,4',5-Pentabromodiphenyl ether	1 x 1 mL	RPE-082S-1
2,2',4,4',6-Pentabromodiphenyl ether	1 x 1 mL	RPE-081S-1
2,2',4,4',5,5'-Hexabromodiphenyl ether	1 x 1 mL	RPE-083S-1

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## Dioxins

Polychlorinated dibenzo-*p*-dioxinsChlorinated Dibenzo-*p*-dioxins, 97–99% Pure

Compound	Neat Material		Solutions at 50 µg/mL in Toluene	
	Mass	Part No.	Vol.	Part No.
Dibenzo- <i>p</i> -dioxin	25 mg	RPE-023	1 x 1 mL	RPE-023S-1
1-Chlorodibenzo- <i>p</i> -dioxin	25 mg	RPE-015	1 x 1 mL	RPE-015S-1
2-Chlorodibenzo- <i>p</i> -dioxin	25 mg	RPE-016	1 x 1 mL	RPE-016S-1
2,3-Dichlorodibenzo- <i>p</i> -dioxin	5 mg	RPE-051	1 x 1 mL	RPE-051S-1
2,7-Dichlorodibenzo- <i>p</i> -dioxin	5 mg	RPE-025	1 x 1 mL	RPE-025S-1
2,8-Dichlorodibenzo- <i>p</i> -dioxin	5 mg	RPE-052	1 x 1 mL	RPE-052S-1
1,2,3-Trichlorodibenzo- <i>p</i> -dioxin	5 mg	RPE-059	1 x 1 mL	RPE-059S-1
1,2,4-Trichlorodibenzo- <i>p</i> -dioxin	5 mg	RPE-026	1 x 1 mL	RPE-026S-1
2,3,7-Trichlorodibenzo- <i>p</i> -dioxin	5 mg	RPE-053A	1 x 1 mL	RPE-053S-1
1,2,3,4-Tetrachlorodibenzo- <i>p</i> -dioxin	25 mg	RPE-027	1 x 1 mL	RPE-027S-1
1,3,6,8-Tetrachlorodibenzo- <i>p</i> -dioxin	5 mg	RPE-054A	1 x 1 mL	RPE-054S-1
1,3,7,8-Tetrachlorodibenzo- <i>p</i> -dioxin	5 mg	RPE-060A	1 x 1 mL	RPE-060S-1
2,3,7,8-Tetrachlorodibenzo- <i>p</i> -dioxin*	–	–	1 x 1 mL	RPE-029S-1*
1,2,3,4,7-Pentachlorodibenzo- <i>p</i> -dioxin	5 mg	RPE-055A	1 x 1 mL	RPE-055S-1
1,2,3,7,8-Pentachlorodibenzo- <i>p</i> -dioxin	5 mg	RPE-056A	1 x 1 mL	RPE-056S-1
1,2,4,7,8-Pentachlorodibenzo- <i>p</i> -dioxin	5 mg	RPE-057A	1 x 1 mL	RPE-057S-1
1,2,3,4,7,8-Hexachlorodibenzo- <i>p</i> -dioxin	5 mg	RPE-058A	1 x 1 mL	RPE-058S-1
1,2,3,4,6,7,8-Heptachlorodibenzo- <i>p</i> -dioxin	–	–	1 x 1 mL	RPE-063S-1
Octachlorodibenzo- <i>p</i> -dioxin	50 mg	RPE-017A	1 x 1 mL	RPE-017S-1

\*the 2,3,7,8-tetrachlorodibenzo-*p*-dioxin solution (RPE-029S) is at a concentration of 10 µg/mL in toluene.

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### Chlorinated Dibenzo-*p*-dioxin Mixture

Description	Analytes	Part No.
4 analytes, at 50 µg/mL in toluene, 1 x 1 mL	1,2,3,4-Tetrachlorodibenzo- <i>p</i> -dioxin 1,2,3,4,7-Pentachlorodibenzo- <i>p</i> -dioxin 1,2,3,4,7,8-Hexachlorodibenzo- <i>p</i> -dioxin 1,2,3,4,6,7,8-Heptachlorodibenzo- <i>p</i> -dioxin	RPE-064M-1

### Chlorinated Dibenzo-*p*-dioxin Solution

Description	Analytes	Part No.
5 analytes, at 10 µg/mL in toluene, 1 x 1 mL	2,3,7,8-Tetrachlorodibenzo- <i>p</i> -dioxin 1,2,3,7,8-Pentachlorodibenzo- <i>p</i> -dioxin 1,2,3,4,7,8-Hexachlorodibenzo- <i>p</i> -dioxin 1,2,3,4,6,7,8-Heptachlorodibenzo- <i>p</i> -dioxin Octachlorodibenzo- <i>p</i> -dioxin	RPE-065M-1

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## Dibenzofurans

## Polychlorinated dibenzofurans

## Chlorinated Dibenzofurans, 97–99% Pure

Compound	Neat Material		Solutions at 50 µg/mL in Toluene	
	Mass	Part No.	Vol.	Part No.
Dibenzofuran	50 mg	RPE-022	1 x 1 mL	RPE-022S-1
2-Chlorodibenzofuran	5 mg	RPE-030	1 x 1 mL	RPE-030S-1
2,4-Dichlorodibenzofuran	5 mg	RPE-032	1 x 1 mL	RPE-032S-1
2,6-Dichlorodibenzofuran	5 mg	RPE-033	1 x 1 mL	RPE-033S-1
2,8-Dichlorodibenzofuran	10 mg	RPE-018	1 x 1 mL	RPE-018S-1
2,3,8-Trichlorodibenzofuran	5 mg	RPE-036	1 x 1 mL	RPE-036S-1
2,4,6-Trichlorodibenzofuran	5 mg	RPE-034	1 x 1 mL	RPE-034S-1
2,4,8-Trichlorodibenzofuran	5 mg	RPE-035	1 x 1 mL	RPE-035S-1
1,2,3,4-Tetrachlorodibenzofuran	5 mg	RPE-039A	1 x 1 mL	RPE-039S-1
1,3,7,8-Tetrachlorodibenzofuran	5 mg	RPE-040A	1 x 1 mL	RPE-040S-1
2,3,7,8-Tetrachlorodibenzofuran	1 mg	RPE-037	1 x 1 mL	RPE-037S-1
1,2,3,4,8-Pentachlorodibenzofuran	5 mg	RPE-041A	1 x 1 mL	RPE-041S-1
1,2,3,7,8-Pentachlorodibenzofuran	–	–	1 x 1 mL	RPE-042S-1
1,2,3,4,7,8-Hexachlorodibenzofuran	–	–	1 x 1 mL	RPE-043S-1
1,2,3,4,6,7,8-Heptachlorodibenzofuran	–	–	1 x 1 mL	RPE-044S-1
Octachlorodibenzofuran	50 mg	RPE-019A	1 x 1 mL	RPE-019S-1

## Chlorinated Dibenzofuran Mixture

Description	Analytes	Part No.
5 analytes, at 10 µg/mL in toluene, 1 x 1 mL	2,3,7,8-Tetrachlorodibenzofuran 1,2,3,7,8-Pentachlorodibenzofuran 1,2,3,4,7,8-Hexachlorodibenzofuran 1,2,3,4,6,7,8-Heptachlorodibenzofuran Octachlorodibenzofuran	RPE-045M-1

# Additional Neat Compounds

## Neat compounds of environmental interest

All of these materials include a certificate showing the purity of the standard.

### Neat Standards, 95–99% Pure

Compound	Mass	CAS No.	Part No.
Acenaphthene	100 mg	83-32-9	RAH-001
Acenaphthylene	100 mg	208-96-8	RAH-064
2-Acetamidofluorene	100 mg	53-96-3	RCC-002
2-Acetamidonaphthalene	100 mg	581-97-5	RCC-025
Acetone	1 gm	67-64-1	RCC-200
Acetonitrile	100 mg	75-05-8	RCC-201
Acetophenone	100 mg	98-86-2	RCC-202
Acridine	100 mg	260-94-6	HAH-003
Acrolein	100 mg	107-02-8	RCC-150
Acrylamide	100 mg	79-06-1	RCC-203
Acrylonitrile	100 mg	107-13-1	RCC-204
Allyl alcohol	100 mg	107-18-6	RCC-136
Allyl bromide	See 3-bromopropene		
Allyl chloride	See 3-chloropropene		
1-Aminoanthracene (90%)	100 mg	610-49-1	RCC-026
2-Aminoanthracene (90%)	100 mg	613-13-8	RCC-027
2-Aminobiphenyl	100 mg	90-41-5	RCC-003
4-Aminobiphenyl	100 mg	92-67-1	RCC-004
6-Aminochrysene	100 mg	2642-98-0	RCC-028
1-Aminonaphthalene	See $\alpha$ -naphthylamine		
2-Aminonaphthalene	See $\beta$ -naphthylamine		
1-Amino-4-nitronaphthalene	100 mg	776-34-1	RNH-111
Aniline	1 gm	62-53-3	RCC-137
Anthanthrene	10 mg	191-26-4	RAH-082
Anthracene	100 mg	120-12-7	RAH-002
Aroclor 1016 (PCB 1016)	50 mg	12674-11-2	RPC-1016
Aroclor 1221 (PCB 1221)	50 mg	11104-28-2	RPC-1221

### Neat Standards, 95–99% Pure

Compound	Mass	CAS No.	Part No.
Aroclor 1232 (PCB 1232)	10 mg	11141-16-5	RPC-1232
Aroclor 1242 (PCB 1242)	50 mg	53469-21-9	RPC-1242
Aroclor 1248 (PCB 1248)	50 mg	12672-29-6	RPC-1248
Aroclor 1254 (PCB 1254)	50 mg	11097-69-1	RPC-1254
Aroclor 1260 (PCB 1260)	50 mg	11096-82-5	RPC-1260
Aroclor 1262 (PCB 1262)	50 mg	37324-23-5	RPC-1262
Aroclor 1268 (PCB 1268)	50 mg	11100-14-4	RPC-1268
7-Azaindole	100 mg	271-63-6	HAH-010
Azobenzene	100 mg	103-33-3	RCC-043
Azoxybenzene	100 mg	495-48-7	RCC-044
Azulene	10 mg	275-51-4	RAH-003
Benzal chloride	100 mg	98-87-3	RCB-042
Benzo[a]anthracene	20 mg	56-55-3	RAH-004
Benzene	100 mg	71-43-2	RAB-041
Benzidine	20 mg	92-87-5	RCC-005
Benzo[c]cinnoline	100 mg	230-17-1	HAH-009
Benzo[b]fluoranthene	10 mg	205-99-2	RAH-072
Benzo[k]fluoranthene	10 mg	207-08-9	RAH-073
Benzo[a]fluorene	10 mg	238-84-6	RAH-005
Benzo[b]fluorene	10 mg	243-17-4	RAH-006
Benzoic acid	100 mg	65-85-0	RCC-143
Benzo[ghi]perylene	10 mg	191-24-2	RAH-009
Benzo[a]pyrene	10 mg	50-32-8	RAH-010
Benzo[e]pyrene	10 mg	192-97-2	RAH-081
Benzo[c]quinoline	See phenanthridine		
Benzo[f]quinoline	100 mg	85-02-9	HAH-004
Benzo[h]quinoline	100 mg	230-27-3	HAH-005

(Continued)

## Additional Neat Compounds

### Neat Standards, 95–99% Pure

Compound	Mass	CAS No.	Part No.
Benzothiazole	100 mg	95-16-9	HAH-008
Benzyl alcohol	100 mg	100-51-6	RCC-144
Benzyl chloride	See <i>a</i> -chlorotoluene		
1,1'-Binaphthyl	50 mg	604-53-5	RAH-012
2,2'-Binaphthyl	50 mg	612-78-2	RAH-013
Biphenyl	500 mg	92-52-4	RPC-001
2,2'-Biquinoline	100 mg	119-91-5	RCC-129
Bis(2-chloroethoxy)methane	100 mg	111-91-1	RCC-145
Bis(chloromethyl) ether	100 mg	542-88-1	RCC-006
Bis(2-ethylhexyl) phthalate	100 mg	117-81-7	DMP-019
Bromobenzene	100 mg	108-86-1	RBF-001
1-Bromo-1-chloroethane	1 gm	593-96-4	RHH-029
1-Bromo-2-chloroethane	1 gm	107-04-0	RHH-030
Bromochloromethane	1 gm	74-97-5	RHH-007
Bromodichloromethane	1 gm	75-27-4	RHH-008
Bromoethane	1 gm	74-96-4	RHH-024
Bromoethene (vinyl bromide)	1 gm	593-60-2	RHH-025
Bromoform	1 gm	75-25-2	RHH-005
1-Bromonaphthalene	100 mg	90-11-9	RBF-011
2-Bromonaphthalene	100 mg	580-13-2	RBF-012
1-Bromo-2-naphthol	100 mg	573-97-7	RBF-015
6-Bromo-2-naphthol	100 mg	15231-91-1	RBF-016
2-Bromophenol	100 mg	95-56-7	RBF-006A
3-Bromophenol	100 mg	591-20-8	RBF-006B
4-Bromophenol	100 mg	106-41-2	RBF-006C
4-Bromophenyl phenyl ether	100 mg	101-55-3	RCC-148
1-Bromopropane	1 gm	106-94-5	RHH-048
2-Bromopropane	1 gm	75-26-3	RHH-049
2-Bromopropene	1 gm	557-93-7	RHH-052
3-Bromopropene (allyl bromide)	1 gm	106-95-6	RHH-053
Bromotrichloromethane	1 gm	75-62-7	RHH-009
1,2,3,4-diepoxybutane	100 mg	1464-53-5	RCC-153
2-Butanone (MEK)	1 gm	78-93-3	RCC-205

### Neat Standards, 95–99% Pure

Compound	Mass	CAS No.	Part No.
<i>n</i> -Butylbenzene	100 mg	104-51-8	RAB-016
<i>sec</i> -Butylbenzene	100 mg	135-98-8	RAB-017
<i>tert</i> -Butylbenzene	100 mg	98-06-6	RAB-018
Butyl benzyl phthalate	100 mg	85-68-7	DMP-037
<i>tert</i> -Butyl methyl ether (MTBE)	1 gm	1634-04-4	RCC-149
Carbazole	100 mg	86-74-8	HAH-022
Carbon disulfid	1 gm	75-15-0	RCC-175
Carbon tetrabromide	1 gm	558-13-4	RHH-006
Carbon tetrachloride	1 gm	56-23-5	RHH-003
2-Chloroaniline	100 mg	95-51-2	RCA-001
3-Chloroaniline	100 mg	108-42-9	RCA-002
4-Chloroaniline	100 mg	106-47-8	RCA-003
2-Chloroanisole	100 mg	766-51-8	RCP-032
3-Chloroanisole	100 mg	2845-89-8	RCP-033
4-Chloroanisole	100 mg	623-12-1	RCP-034
Chlorobenzene	100 mg	108-90-7	RCP-020
2-Chlorobenzoic acid	100 mg	118-91-2	RBA-001
3-Chlorobenzoic acid	100 mg	535-80-8	RBA-002
4-Chlorobenzoic acid	100 mg	74-11-3	RBA-003
1-Chlorobutane	100 mg	109-69-3	RHH-063
4-Chloro- <i>m</i> -cresol	See 4-chloro-3-methylphenol		
2-Chloroethanol	100 mg	107-07-3	RCC-176
2-Chloroethyl ether	1 gm	111-44-4	RCC-088
2-Chloroethyl vinyl ether	100 mg	110-75-8	RCC-177
Chloroform	1 gm	67-66-3	RHH-002
1-Chlorohexane	100 mg	544-10-5	RHH-055
4-Chloro-3-methylphenol	100 mg	59-50-7	RCC-154
1-Chloronaphthalene	100 mg	90-13-1	RCN-002
2-Chloronaphthalene	100 mg	91-58-7	RCN-003
4-Chloro-1-naphthol	100 mg	604-44-4	RCN-013
2-Chlorophenol	20 mg	95-57-8	RCP-001
3-Chlorophenol	20 mg	108-43-0	RCP-002
4-Chlorophenol	20 mg	106-48-9	RCP-003

(Continued)

## Neat Standards, 95–99% Pure

Compound	Mass	CAS No.	Part No.
4-Chlorophenyl phenyl ether	10 mg	7005-72-3	RPE-001
1-Chloropropane	1 gm	540-54-5	RHH-035
2-Chloropropane	1 gm	75-29-6	RHH-036
3-Chloropropene (allyl chloride)	1 gm	107-05-1	RHH-044
2-Chlorotoluene	100 mg	95-49-8	RCB-001
3-Chlorotoluene	100 mg	108-41-8	RCB-002
4-Chlorotoluene	100 mg	106-43-4	RCB-003
<i>o</i> -Chlorotoluene (benzyl chloride)	100 mg	100-44-7	RCB-004
6-Chrysenamine	See 6-aminochrysene		
Chrysene	100 mg	218-01-9	RAH-007
Coronene	10 mg	191-07-1	RAH-015
<i>o</i> -Cresol (2-methylphenol)	100 mg	95-48-7	RCC-155
<i>m</i> -Cresol (3-methylphenol)	100 mg	108-39-4	RCC-156
<i>p</i> -Cresol (4-methylphenol)	100 mg	106-44-5	RCC-157
Cumene	See isopropylbenzene		
4h-Cyclopenta[ <i>def</i> ]phenanthrene	10 mg	203-64-5	RAH-088
Decacyclene	100 mg	191-48-0	RAH-016
Decahydronaphthalene (mix)	100 mg	91-17-8	RAH-017
<i>cis</i> -Decahydronaphthalene	100 mg	493-01-6	RAH-074
<i>trans</i> -Decahydronaphthalene	100 mg	493-02-7	RAH-075
<i>n</i> -Decane	1 gm	124-18-5	RNA-001
<i>n</i> -Decylbenzene (phenyldecane)	100 mg	104-72-3	RAB-027
2,7-Diacetamidofluorene	100 mg	304-28-9	RCC-029
3,3'-Diaminobenzidine	20 mg	91-95-2	RCC-030
4,4'-Diaminodiphenylmethane	20 mg	101-77-9	RCC-031
2,7-Diaminofluorene	100 mg	525-64-4	RCC-032
1,2-Diaminonaphthalene	100 mg	938-25-0	RCC-033
2,4-Diaminotoluene	100 mg	95-80-7	RCC-034
Diamyl phthalate	100 mg	131-18-0	DMP-016
Dibenz[ <i>a,c</i> ]anthracene	10 mg	215-58-7	RAH-018
Dibenz[ <i>a,h</i> ]anthracene	10 mg	53-70-3	RAH-019
Dibenzofuran	50 mg	132-64-9	RPE-022
Dibenzo[ <i>a,l</i> ]pentacene	10 mg	227-09-8	RAH-083

\*at 200 µg/mL in methylene chloride

## Neat Standards, 95–99% Pure

Compound	Mass	CAS No.	Part No.
Dibenzo[ <i>a,e</i> ]pyrene	1 x 1 mL	192-65-4	P-801-1*
Dibenzo[ <i>a,h</i> ]pyrene	10 mg	189-64-0	RAH-076
Dibenzo[ <i>a,h</i> ]pyrene	1 x 1 mL	189-64-0	P-821-1*
Dibenzo[ <i>a,i</i> ]pyrene	1 x 1 mL	189-55-9	P-811-1*
Dibenzo[ <i>a,l</i> ]pyrene	1 x 1 mL	191-30-0	P-791-1*
Dibenzothiophene	100 mg	132-65-0	HAH-020
1,3-Dibromobenzene	100 mg	108-36-1	RBF-002B
1,2-Dibromobenzene	100 mg	583-53-9	RBF-002A
1,4-Dibromobenzene	100 mg	106-37-6	RBF-002C
Dibromochloromethane	1 gm	124-48-1	RHH-010
1,2-Dibromo-3-chloropropane	1 gm	96-12-8	RHH-034
1,2-Dibromo-1,1-dichloroethane	1 gm	75-81-0	RHH-032
1,2-Dibromo-1,2-dichloroethane	1 gm	683-68-1	RHH-033
Dibromodichloromethane	1 gm	594-18-3	RHH-011
1,2-Dibromoethane	1 gm	106-93-4	RHH-026
1,2-Dibromoethene	1 gm	540-49-8	RHH-027
Dibromomethane	1 gm	74-95-3	RHH-004
1,4-Dibromonaphthalene	100 mg	83-53-4	RBF-014
2,3-Dibromonaphthalene	50 mg	13214-70-5	RBF-013
1,6-Dibromo-2-naphthol	100 mg	16239-18-2	RBF-017
2,4-Dibromophenol	100 mg	615-58-7	RBF-007
2,6-Dibromophenol	100 mg	608-33-3	RBF-008
1,2-Dibromopropane	1 gm	78-75-1	RHH-050
1,3-Dibromopropane	1 gm	109-64-8	RHH-051
Dibutyl phthalate	100 mg	84-74-2	DMP-015
1,3-Dichloro-2-propanol	100 mg	96-23-1	RCC-178
2,3-Dichloroaniline	100 mg	608-27-5	RCA-004
2,4-Dichloroaniline	100 mg	554-00-7	RCA-005
2,5-Dichloroaniline	100 mg	95-82-9	RCA-006
2,6-Dichloroaniline	100 mg	608-31-1	RCA-007
3,4-Dichloroaniline	100 mg	95-76-1	RCA-008
3,5-Dichloroaniline	100 mg	626-43-7	RCA-009
2,3-Dichloroanisole	100 mg	1984-59-4	RCP-035

(Continued)

## Additional Neat Compounds

### Neat Standards, 95–99% Pure

Compound	Mass	CAS No.	Part No.
2,4-Dichloroanisole	100 mg	553-82-2	RCP-036
2,5-Dichloroanisole	50 mg	1984-58-3	RCP-046
2,6-Dichloroanisole	100 mg	1984-65-2	RCP-037
3,4-Dichloroanisole	50 mg	36404-30-5	RCP-047
3,5-Dichloroanisole	100 mg	33719-74-3	RCP-038
$\alpha$ ,4-Dichloroanisole	100 mg	21151-56-4	RCP-042
1,2-Dichlorobenzene	100 mg	95-50-1	RCP-021
1,3-Dichlorobenzene	100 mg	541-73-1	RCP-022
1,4-Dichlorobenzene	100 mg	106-46-7	RCP-023
3,3'-Dichlorobenzidine	100 mg	91-94-1	RCC-007
2,3-Dichlorobenzoic acid	100 mg	50-45-3	RBA-008
2,4-Dichlorobenzoic acid	100 mg	50-84-0	RBA-009
2,5-Dichlorobenzoic acid	100 mg	50-79-3	RBA-007
2,6-Dichlorobenzoic acid	100 mg	50-30-6	RBA-006
3,4-Dichlorobenzoic acid	100 mg	51-44-5	RBA-004
3,5-Dichlorobenzoic acid	100 mg	51-36-5	RBA-005
<i>cis</i> -1,4-Dichloro-2-butene	100 mg	1476-11-5	RHH-064
<i>trans</i> -1,4-Dichloro-2-butene	100 mg	110-57-6	RHH-056
1,1-Dichloroethane	1 gm	75-34-3	RHH-012
1,2-Dichloroethane	1 gm	107-06-2	RHH-013
1,1-Dichloroethene	1 gm	75-35-4	RHH-020
<i>cis</i> -1,2-Dichloroethene	100 mg	156-59-2	RHH-057
<i>trans</i> -1,2-Dichloroethene	1 gm	156-60-5	RHH-021
Dichloromethane	1 gm	75-09-2	RHH-001
1,4-Dichloronaphthalene	25 mg	1825-31-6	RCN-005
1,5-Dichloronaphthalene	25 mg	1825-30-5	RCN-006
2,3-Dichloronaphthalene	5 mg	2050-75-1	RCN-008
2,4-Dichloro-1-naphthol	100 mg	2050-76-2	RCN-014
2,3-Dichlorophenol	20 mg	576-24-9	RCP-004
2,4-Dichlorophenol	20 mg	120-83-2	RCP-005
2,5-Dichlorophenol	20 mg	583-78-8	RCP-006
2,6-Dichlorophenol	20 mg	87-65-0	RCP-007
3,4-Dichlorophenol	20 mg	95-77-2	RCP-008

### Neat Standards, 95–99% Pure

Compound	Mass	CAS No.	Part No.
3,5-Dichlorophenol	20 mg	591-35-5	RCP-009
1,2-Dichloropropane	1 gm	78-87-5	RHH-037
1,3-Dichloropropane	1 gm	142-28-9	RHH-038
2,2-Dichloropropane	100 mg	594-20-7	RHH-058
1,1-Dichloropropene	100 mg	563-58-6	RHH-059
1,3-Dichloro-1-propene (mix)	1 gm	542-75-6	RHH-054
2,3-Dichloro-1-propene	1 gm	78-88-6	RHH-045
2,4-Dichlorotoluene	100 mg	95-73-8	RCB-005
2,5-Dichlorotoluene	100 mg	19398-61-9	RCB-006
2,6-Dichlorotoluene	100 mg	118-69-4	RCB-007
3,4-Dichlorotoluene	100 mg	95-75-0	RCB-008
$\alpha$ ,2-Dichlorotoluene	100 mg	611-19-8	RCB-009
$\alpha$ ,3-Dichlorotoluene	100 mg	620-20-2	RCB-010
$\alpha$ ,4-Dichlorotoluene	100 mg	104-83-6	RCB-011
Dicyclohexyl phthalate	100 mg	84-61-7	DMP-017
1,2-Diethylbenzene	100 mg	135-01-3	RAB-038
1,3-Diethylbenzene	100 mg	141-93-5	RAB-039
1,4-Diethylbenzene	100 mg	105-05-5	RAB-040
Diethylhexyl adipate	See dioctyl adipate		
Diethylhexyl maleate	See dioctyl maleate		
Diethylhexyl phthalate	See bis (2-ethylhexyl) phthalate		
Diethyl phthalate	100 mg	84-66-2	DMP-012
9,10-Dihydroanthracene	100 mg	613-31-0	RAH-021
6,13-Dihydrodibenzo[ <i>b,i</i> ]phenazine	100 mg	10350-06-8	RCC-138
1,2-Dihydronaphthalene	100 mg	447-53-0	RAH-022
1,4-Dihydronaphthalene	100 mg	612-17-9	RAH-023
Diindeno[1,2,3- <i>cd</i> :1',2',3'- <i>lm</i> ]perylene	5 mg	188-94-3	RAH-084
Diisooctyl adipate	100 mg	1330-86-5	DMP-027
Diisopropyl phthalate	100 mg	605-45-8	DMP-014
3,3'-Dimethoxybenzidine	100 mg	119-90-4	RCC-117
9,10-Dimethylanthracene	10 mg	781-43-1	RAH-024
7,12-Dimethylbenz[ <i>a</i> ]anthracene	10 mg	57-97-6	RAH-025
1,2-Dimethylbenzene	See <i>o</i> -xylene		

(Continued)



## Neat Standards, 95–99% Pure

Compound	Mass	CAS No.	Part No.
1,3-Dimethylbenzene	See <i>m</i> -xylene		
1,4-Dimethylbenzene	See <i>p</i> -xylene		
3,3'-Dimethylbenzidine	See <i>o</i> -tolidine		
2,2'-Dimethylbiphenyl	10 mg	605-39-0	RAH-071
3,3'-Dimethylbiphenyl	20 mg	612-75-9	RAH-062
4,4'-Dimethylbiphenyl	100 mg	613-33-2	RAH-026
Dimethylcarbamoyl chloride	1 gm	79-44-7	RCC-103
1,2-Dimethyl-3-ethylbenzene (tech)	10 mg	933-98-2	RAB-029
1,2-Dimethyl-4-ethylbenzene (tech)	10 mg	934-80-5	RAB-030
1,3-Dimethyl-4-ethylbenzene (tech)	10 mg	874-41-9	RAB-032
1,3-Dimethyl-5-ethylbenzene (tech)	10 mg	934-74-7	RAB-033
1,4-Dimethyl-2-ethylbenzene (tech)	100 mg	1758-88-9	RAB-034
1,2-Dimethylindole	100 mg	875-79-6	HAH-029
2,3-Dimethylindole	100 mg	91-55-4	HAH-030
1,2-Dimethylnaphthalene	100 mg	573-98-8	RAH-068
1,3-Dimethylnaphthalene	50 mg	575-41-7	RAH-066
1,4-Dimethylnaphthalene	100 mg	571-58-4	RAH-027
1,5-Dimethylnaphthalene	100 mg	571-61-9	RAH-029
1,6-Dimethylnaphthalene	100 mg	575-43-9	RAH-028
2,3-Dimethylnaphthalene	100 mg	581-40-8	RAH-067
2,6-Dimethylnaphthalene	100 mg	581-42-0	RAH-030
2,7-Dimethylnaphthalene	10 mg	582-16-1	RAH-097
3,6-Dimethylphenanthrene	10 mg	1576-67-6	RAH-085
2,4-Dimethylphenol	100 mg	105-67-9	RCC-158
Dimethyl phthalate	100 mg	131-11-3	PST-430
2,4-Dimethylquinoline	10 mg	1198-37-4	HAH-017
2,6-Dimethylquinoline	100 mg	877-43-0	HAH-018
9,10-Dinitroanthracene	1 x 1 mL	33685-60-8	RNH-134-1**
<i>m</i> -Dinitrobenzene	100 mg	99-65-0	RNH-001
2,2'-Dinitrobiphenyl	100 mg	2436-96-6	RNH-135
4,6-Dinitro- <i>o</i> -cresol	See 2-methyl-4,6-dinitrophenol		
2,7-Dinitrofluorene	100 mg	5405-53-8	RNH-137
2,7-Dinitro-9-fluorenone	100 mg	31551-45-8	RNH-138

\*\*at 100 µg/mL in nitromethane

## Neat Standards, 95–99% Pure

Compound	Mass	CAS No.	Part No.
1,3-Dinitronaphthalene	100 mg	606-37-1	RNH-139
1,5-Dinitronaphthalene	100 mg	605-71-0	RNH-140
1,8-Dinitronaphthalene	100 mg	602-38-0	RNH-141
2,4-Dinitrophenol	100 mg	51-28-5	RCC-159
2,4-Dinitrotoluene	100 mg	121-14-2	RNH-002
2,6-Dinitrotoluene	100 mg	606-20-2	RNH-003
Diocetyl adipate (diethylhexyl adipate)	100 mg	103-23-1	DMP-028
Diocetyl maleate (diethylhexyl maleate)	100 mg	142-16-5	DMP-036
Diocetyl phthalate	See bis (2-ethylhexyl) phthalate		
Di- <i>n</i> -octyl phthalate	100 mg	117-84-0	DMP-020
1,4-Dioxane	1 gm	123-91-1	RCC-180
9,10-Diphenylanthracene	100 mg	1499-10-1	RAH-086
1,2-Diphenylethane	100 mg	103-29-7	RAH-020
1,2-Diphenylhydrazine	1 gm	122-66-7	RCC-174
4,7-Diphenyl-1,10-phenanthroline	50 mg	1662-01-7	RCC-142
Diphenyl phthalate	100 mg	84-62-8	DMP-018
Di- <i>n</i> -propyl phthalate	100 mg	131-16-8	DMP-013
<i>n</i> -Docosane	1 gm	629-97-0	RNA-012
Dodecahydrotriphenylene	100 mg	1610-39-5	RAH-087
<i>n</i> -Dodecane	1 gm	112-40-3	RNA-003
<i>n</i> -Dotriacontane	1 gm	544-85-4	RNA-015
Durene	See 1,2,4,5-tetramethylbenzene		
<i>n</i> -Eicosane	1 gm	112-95-8	RNA-011
Epichlorohydrin	100 mg	106-89-8	RCC-161
1,2-epoxybutane	100 mg	106-88-7	RCC-162
Ethyl alcohol (tech)	1 gm	64-17-5	RCC-181
Ethylbenzene	100 mg	100-41-4	RAB-013
Ethylene dibromide	See 1,2-dibromoethane		
Ethylene dichloride	See 1,2-dichloroethane		
Ethylenethiourea (imidazolidinethione)	1 gm	96-45-7	RCC-106
Ethyl methacrylate	100 mg	97-63-2	RCC-206

(Continued)

## Additional Neat Compounds

### Neat Standards, 95–99% Pure

Compound	Mass	CAS No.	Part No.
Ethyl methanesulfonate	100 mg	62-50-0	RCC-182
2-Ethyltoluene	100 mg	611-14-3	RAB-035
3-Ethyltoluene	100 mg	620-14-4	RAB-036
4-Ethyltoluene	100 mg	622-96-8	RAB-037
Fluoranthene	100 mg	206-44-0	RAH-031
Fluorene	100 mg	86-73-7	RAH-032
9-fluorenone	100 mg	486-25-9	RAH-033
Halowax 1000 (26% Cl)	1 x 2 mL	58718-66-4	HPCK-2F***
Halowax 1001 (50% Cl)	1 x 2 mL	58718-67-5	HPCK-2G***
Halowax 1013 (56% Cl)	1 x 2 mL	12616-35-2	HPCK-2E***
Halowax 1051 (70% Cl)	1 x 2 mL	2234-13-1	HPCK-2C***
Halowax 1099 (52% Cl)	1 x 2 mL	37450-05-0	HPCK-2D***
Hemimellitene	See 1,2,3-trimethylbenzene		
<i>n</i> -Heneicosane	1 gm	629-94-7	RNA-024
<i>n</i> -Hentriacontane	10 mg	630-04-6	RNA-031
<i>n</i> -Heptacosane	10 mg	593-49-7	RNA-028
<i>n</i> -Heptadecane	1 gm	629-78-7	RNA-008
2,2,4,4,6,8,8-Heptamethylnonane	1 gm	909554	RNA-023
<i>n</i> -Heptane	1 gm	142-82-5	RNA-019
<i>n</i> -Heptylbenzene (phenylheptane)	100 mg	1078-71-3	RAB-024
Hexabromobenzene	100 mg	87-82-1	RBF-005
Hexachlorobutadiene	100 mg	87-68-3	RHH-060
Hexachloroethane	1 gm	67-72-1	RHH-019
Hexachlorophene	100 mg	70-30-4	RCC-166
Hexachloropropene	1 gm	1888-71-7	RHH-047
<i>n</i> -Hexacosane	1 gm	630-01-3	RNA-027
<i>n</i> -Hexadecane ( <i>n</i> -cetane)	1 gm	544-76-3	RNA-007
Hexamethylbenzene	100 mg	87-85-4	RAB-012
<i>n</i> -Hexane	1 gm	110-54-3	RNA-018
2-Hexanone	100 mg	591-78-6	RCC-207
<i>n</i> -Hexatriacontane	1 gm	630-06-8	RNA-017
<i>n</i> -Hexylbenzene (phenylhexane)	100 mg	1077-16-3	RAB-023
Hydroquinone	100 mg	123-31-9	RCC-167

\*\*\*at 100 µg/mL in hexane

### Neat Standards, 95–99% Pure

Compound	Mass	CAS No.	Part No.
2-Hydroxypropionitrile	100 mg	78-97-7	RCC-208
Imidazolidinethione	See ethylenethiourea		
Indane	100 mg	496-11-7	RAH-065
1,3-Indanedione	100 mg	606-23-5	RAH-034
Indene	100 mg	95-13-6	RAH-035
Indeno[1,2,3- <i>cd</i> ]pyrene	5 mg	193-39-5	RAH-077
Indole	100 mg	120-72-9	HAH-024
Iodomethane	See methyl iodide		
Isobutyl alcohol	1 gm	78-83-1	RCC-183
Isobutylbenzene	100 mg	538-93-2	RAB-019
Isodurene	See 1,2,3,5-tetramethylbenzene		
Isophorone	100 mg	78-59-1	RCC-209
Isopropylbenzene (cumene)	100 mg	98-82-8	RAB-015
4-Isopropyltoluene	100 mg	99-87-6	RAB-042
Isoquinoline	100 mg	119-65-3	HAH-002
Isosafrole	100 mg	120-58-1	RCC-184
Lepidine	See 4-methylquinoline		
Malononitrile	100 mg	109-77-3	RCC-210
Mesitylene	See 1,3,5-trimethylbenzene		
Methyl acrylate	100 mg	96-33-3	RCC-212
1-Methylanthracene	10 mg	610-48-0	RAH-098
2-Methylanthracene	100 mg	613-12-7	RAH-036
9-Methylanthracene	100 mg	779-02-2	RAH-037
2-Methylbiphenyl	100 mg	643-58-3	RAH-038
3-Methylbiphenyl	100 mg	643-93-6	RAH-039
4-Methylbiphenyl	100 mg	644-08-6	RAH-040
3-Methylcholanthrene	10 mg	56-49-5	RAH-041
2-Methyl-4,6-dinitrophenol	100 mg	534-52-1	RCC-169
Methylene chloride	See dichloromethane		
4,4'-Methylenebis (2-chloroaniline)	100 mg	101-14-4	RCC-011
1-Methylfluorene	100 mg	1730-37-6	RAH-043
3-Methylhendecane	50 mg	1002-43-3	FLHC-009
3-Methylheneicosane	50 mg	6418-47-9	FLHC-014

(Continued)

## Neat Standards, 95–99% Pure

Compound	Mass	CAS No.	Part No.
3-Methylheptadecane	50 mg	6418-44-6	FLHC-012
1-Methylindole	100 mg	603-76-9	HAH-025
2-Methylindole	100 mg	95-20-5	HAH-026
3-Methylindole	100 mg	83-34-1	HAH-027
7-Methylindole	100 mg	933-67-5	HAH-028
Methyl iodide (iodomethane)	100 mg	74-88-4	RHH-062
1-Methylisoquinoline	10 mg	1721-93-3	HAH-011
Methyl methacrylate	100 mg	80-62-6	RCC-213
Methyl methanesulfonate	100 mg	66-27-3	RCC-185
1-Methylnaphthalene	500 mg	90-12-0	RAH-044
2-Methylnaphthalene	500 mg	91-57-6	RAH-045
2-Methyl-1-nitronaphthalene	100 mg	881-03-8	RNH-112
4-Methyl-2-pentanone (mibk)	1 gm	108-10-1	RCC-214
1-Methylphenanthrene	10 mg	832-69-9	RAH-046
2-Methylphenol	See <i>o</i> -cresol		
3-Methylphenol	See <i>m</i> -cresol		
4-Methylphenol	See <i>p</i> -cresol		
2-Methylquinoline (quinaldine)	100 mg	91-63-4	HAH-012
3-Methylquinoline	100 mg	612-58-8	HAH-013
4-Methylquinoline (lepidine)	100 mg	491-35-0	HAH-014
6-Methylquinoline	100 mg	91-62-3	HAH-031
7-Methylquinoline	10 mg	612-60-2	HAH-015
8-Methylquinoline	100 mg	611-32-5	HAH-016
3-Methyltricosane	50 mg	–	FLHC-015
3-Methyltridecane	50 mg	6418-41-3	FLHC-010
Naphthacene	10 mg	92-24-0	RAH-078
Naphthalene	100 mg	91-20-3	RAH-080
$\beta$ -Naphthoquinoline	See benzo[ <i>f</i> ]quinoline		
1,4-Naphthoquinone	100 mg	130-15-4	RCC-215
$\alpha$ -Naphthylamine	100 mg	134-32-7	RCC-012
$\beta$ -Naphthylamine	10 mg	91-59-8	RCC-013
2-Nitroaniline	100 mg	88-74-4	RCC-186
3-Nitroaniline	100 mg	99-09-2	RCC-187

\*\*at 100  $\mu$ g/mL in nitromethane

## Neat Standards, 95–99% Pure

Compound	Mass	CAS No.	Part No.
4-Nitroaniline	100 mg	100-01-6	RCC-188
9-Nitroanthracene	1 x 1 mL	602-60-8	RNH-115-1**
Nitrobenzene	100 mg	98-95-3	RNH-004
2-Nitrobiphenyl	100 mg	86-00-0	RNH-117
3-Nitrobiphenyl	100 mg	2113-58-8	RNH-118
4-Nitrobiphenyl	200 mg	92-93-3	RNH-177
3-Nitrodibenzofuran	1 x 1 mL	5410-97-9	RNH-120-1**
2-Nitrodibenzothiophene	1 x 1 mL	6639-36-7	RNH-121-1**
2-Nitrodiphenylamine	100 mg	119-75-5	RNH-123
2-Nitrofluorene	200 mg	607-57-8	RNH-097**
3-Nitro-9-fluorenone	1 x 1 mL	42135-22-8	RNH-125-1**
1-Nitronaphthalene	100 mg	86-57-7	RNH-127
9-Nitrophenanthrene	1 x 1 mL	954-46-1	RNH-130-1**
5-Nitro-1,10-phenanthroline	100 mg	4199-88-6	RNH-131
2-Nitrophenol	100 mg	88-75-5	RCC-170
4-Nitrophenol	100 mg	100-02-7	RCC-171
2-Nitrophenyl disulfid	100 mg	1155-00-6	RNH-144
3-Nitrophenyl disulfid	100 mg	537-91-7	RNH-145
4-Nitrophenyl disulfide (tech)	100 mg	100-32-3	RNH-146
4-Nitrophenyl phenyl ether	100 mg	620-88-2	RNH-147
4-Nitrophenyl phenyl sulfid	100 mg	952-97-6	RNH-148
2-Nitro- <i>p</i> -phenylenediamine	100 mg	5307-14-2	RNH-099
3-Nitro- <i>o</i> -phenylenediamine	100 mg	3694-52-8	RNH-166
4-Nitro- <i>o</i> -phenylenediamine	100 mg	99-56-9	RNH-100
2-Nitropropane	100 mg	79-46-9	RCC-189
1-Nitropyrene	1 x 1 mL	5522-43-0	RNH-132-1**
5-Nitroquinoline	100 mg	607-34-1	RNH-149
6-Nitroquinoline	100 mg	613-50-3	RNH-150
8-Nitroquinoline	100 mg	607-35-2	RNH-151
4-Nitroquinoline-1-oxide	100 mg	56-57-5	RCC-190
N-Nitrosodicyclohexylamine	100 mg	947-92-2	RCC-071
N-Nitrosodiethylamine	100 mg	55-18-5	RCC-016
N-Nitrosodimethylamine	100 mg	62-75-9	RCC-015

(Continued)

## Additional Neat Compounds

### Neat Standards, 95–99% Pure

Compound	Mass	CAS No.	Part No.
N-Nitrosodiphenylamine	100 mg	86-30-6	RCC-017
N-Nitrosodi- <i>n</i> -propylamine	20 mg	621-64-7	RCC-072
4-Nitrosomorpholine	20 mg	59-89-2	RCC-077
1-Nitrosopiperidine	20 mg	100-75-4	RCC-078
1-Nitrosopyrrolidine	100 mg	930-55-2	RCC-080
4-Nitro- <i>p</i> -terphenyl	100 mg	10355-53-0	RNH-133
2-Nitrotoluene	100 mg	88-72-2	RNH-005
3-Nitrotoluene	100 mg	99-08-1	RNH-006
4-Nitrotoluene	100 mg	99-99-0	RNH-007
5-Nitro- <i>o</i> -toluidine	100 mg	99-55-8	RCC-192
<i>n</i> -Nonacosane	10 mg	630-03-5	RNA-029
<i>n</i> -Nonadecane	1 gm	629-92-5	RNA-010
<i>n</i> -Nonane	1 gm	111-84-2	RNA-021
<i>n</i> -Nonylbenzene (phenylnonane)	100 mg	1081-77-2	RAB-026
Norphytane	See 2,6,10,14-tetramethylpentadecane		
Octachloronaphthalene	20 mg	2234-13-1	RCN-012
Octachlorostyrene	10 mg	29082-74-4	RCB-045
<i>n</i> -Octacosane	1 gm	630-02-4	RNA-014
<i>n</i> -Octadecane	1 gm	593-45-3	RNA-009
<i>n</i> -Octane	1 gm	111-65-9	RNA-020
<i>n</i> -Octatriacontane	100 mg	7194-85-6	RNA-033
<i>n</i> -Octylbenzene (phenyloctane)	100 mg	2189-60-8	RAB-025
Pentabromophenol	100 mg	608-71-9	RBF-010
Pentacene	10 mg	135-48-8	RAH-049
Pentachloroaniline	100 mg	527-20-8	RCA-015
Pentachloroanisole	50 mg	1825-21-4	RCP-041
Pentachlorobenzene	100 mg	608-93-5	RCP-030
Pentachloroethane	1 gm	76-01-7	RHH-018
Pentachlorophenol	20 mg	87-86-5	RCP-019
2,3,4,5,6-Pentachlorotoluene	100 mg	877-11-2	RCB-020
<i>n</i> -Pentacosane	100 mg	629-99-2	RNA-026
<i>n</i> -Pentadecane	1 gm	629-62-9	RNA-006
Pentamethylbenzene	100 mg	700-12-9	RAB-011

### Neat Standards, 95–99% Pure

Compound	Mass	CAS No.	Part No.
2,2,4,6,6-Pentamethylheptane	1 gm	13475-82-6	RNA-022
<i>n</i> -Pentatriacontane	100 mg	630-07-9	RNA-032
<i>n</i> -Pentylbenzene ( <i>n</i> -amylbenzene)	100 mg	538-68-1	RAB-020
<i>sec</i> -Pentylbenzene ( <i>sec</i> -amylbenzene)	100 mg	2719-52-0	RAB-021
<i>tert</i> -Pentylbenzene ( <i>tert</i> -amylbenzene)	100 mg	2049-95-8	RAB-022
Perylene	10 mg	198-55-0	RAH-050
Phenaceti	100 mg	62-44-2	RCC-216
Phenanthrene	100 mg	85-01-8	RAH-051
Phenanthridine (benzo[ <i>c</i> ]quinoline)	100 mg	229-87-8	HAH-006
1,10-Phenanthroline monohydrate	100 mg	5144-89-8	RCC-141
Phenol	100 mg	108-95-2	RCC-172
9-Phenylanthracene	100 mg	602-55-1	RAH-089
1-Phenyl-2-butene	100 mg	1560-06-1	RAB-028
<i>n</i> -Phenylcarbazole	100 mg	1150-62-5	RCC-126
<i>p</i> -Phenylenediamine	100 mg	106-50-3	RCC-194
1-Phenylnaphthalene	100 mg	605-02-7	RAH-099
<i>N</i> -Phenyl- $\beta$ -naphthylamine	100 mg	135-88-6	RCC-040
Phytane	See 2,6,10,14-tetramethylhexadecane		
2-Picoline	100 mg	109-06-8	RCC-195
Prehnitene	See 1,2,3,4-tetramethylbenzene		
Pristane	See 2,6,10,14-tetramethylpentadecane		
Propargyl alcohol	100 mg	107-19-7	RCC-196
$\beta$ -Propiolactone	100 mg	57-57-8	RCC-018
Propionitrile	100 mg	107-12-0	RCC-217
<i>n</i> -Propylamine	100 mg	107-10-8	RCC-197
<i>n</i> -Propylbenzene	100 mg	103-65-1	RAB-014
Propylene oxide	100 mg	75-56-9	RCC-092
Pseudocumene	See 1,2,4-trimethylbenzene		
Pyrene	100 mg	129-00-0	RAH-008
Pyridine	1 gm	110-86-1	RCC-198
<i>p</i> -Quaterphenyl	100 mg	135-70-6	RAH-054
Quinaldine	See 2-methylquinoline		

(Continued)

## Neat Standards, 95–99% Pure

Compound	Mass	CAS No.	Part No.
Quinoline	100 mg	91-22-5	HAH-001
<i>m</i> -Quinquephenyl	10 mg	16716-13-5	RAH-063
<i>p</i> -Quinquephenyl	10 mg	3073-05-0	RAH-100
Rubrene	10 mg	517-51-1	RAH-055
Safrole	100 mg	94-59-7	RCC-063
Styrene	100 mg	100-42-5	RAB-043
Styrene oxide	1 gm	96-09-3	RCC-093
<i>o</i> -Terphenyl	100 mg	84-15-1	RAH-056
<i>m</i> -Terphenyl	100 mg	92-06-8	RAH-057
<i>p</i> -Terphenyl	100 mg	92-94-4	RAH-058
1,2,4,5-Tetrabromobenzene	100 mg	636-28-2	RBF-004
1,1,2,2-Tetrabromoethane	1 gm	79-27-6	RHH-028
2,3,4,5-Tetrachloroaniline	100 mg	634-83-3	RCA-013
2,3,5,6-Tetrachloroaniline	100 mg	3481-20-7	RCA-014
2,3,4,5-Tetrachloroanisole	50 mg	938-86-3	RCP-050
2,3,5,6-Tetrachloroanisole	50 mg	6936-40-9	RCP-052
1,2,3,4-Tetrachlorobenzene	100 mg	634-66-2	RCP-027
1,2,3,5-Tetrachlorobenzene	100 mg	634-90-2	RCP-028
1,2,4,5-Tetrachlorobenzene	100 mg	95-94-3	RCP-029
1,1,1,2-Tetrachloroethane	1 gm	630-20-6	RHH-016
1,1,2,2-Tetrachloroethane	1 gm	79-34-5	RHH-017
Tetrachloroethene	1 gm	127-18-4	RHH-023
2,3,4,5-Tetrachlorophenol	20 mg	4901-51-3	RCP-016
2,3,4,6-Tetrachlorophenol	20 mg	58-90-2	RCP-017
2,3,5,6-Tetrachlorophenol	20 mg	935-95-5	RCP-018
1,1,1,2-Tetrachloropropane	1 gm	812-03-3	RHH-040
1,1,1,3-Tetrachloropropane	1 gm	1070-78-6	RHH-041
1,1,2,3-Tetrachloropropane	1 gm	18495-30-2	RHH-042
$\alpha,\alpha,2,6$ -Tetrachlorotoluene	100 mg	81-19-6	RCB-019
$\alpha,\alpha,\alpha,4$ -Tetrachlorotoluene	100 mg	5216-25-1	RCB-018
2,4,5,6-Tetrachloro- <i>m</i> -xylene	100 mg	877-09-8	RCB-031
<i>n</i> -Tetracontane	100 mg	4181-95-7	RNA-034
<i>n</i> -Tetracosane	1 gm	646-31-1	RNA-013

## Neat Standards, 95–99% Pure

Compound	Mass	CAS No.	Part No.
<i>n</i> -Tetradecane	1 gm	629-59-4	RNA-005
1,2,3,4-Tetrahydrocarbazole	100 mg	942-01-8	RCC-125
1,2,3,4-Tetrahydrofluoranthene	10 mg	42429-92-5	RAH-091
Tetrahydrofuran	1 gm	109-99-9	RCC-199
1,2,3,4-Tetrahydronaphthalene	100 mg	119-64-2	RAH-079
1,2,3,4-Tetramethylbenzene	25 mg	488-23-3	RAB-009
1,2,3,5-Tetramethylbenzene	100 mg	527-53-7	RAB-008
1,2,4,5-Tetramethylbenzene (durene)	100 mg	95-93-2	RAB-010
2,6,10,14-Tetramethylhexadecane (phytane)	100 mg	638-36-8	FLHC-017
2,6,10,14-Tetramethylpentadecane	100 mg	1921-70-6	FLHC-016
1,2,3,4-Tetraphenylnaphthalene	10 mg	751-38-2	RAH-092
<i>n</i> -Tetratetracontane	100 mg	7098-22-8	RNA-035
<i>n</i> -Tetratriacontane	100 mg	14167-59-0	RNA-016
Thiophene	1 gm	110-02-1	RCC-121
<i>o</i> -Tolidine (3,3'-Dimethylbenzidine)	100 mg	119-93-7	RCC-041
Toluene (methylbenzene)	100 mg	108-88-3	RAB-001
<i>o</i> -Toluidine	100 mg	95-53-4	RCC-193
<i>n</i> -Triacontane	100 mg	638-68-6	RNA-030
Triallyl phosphate	1 gm	1623-19-4	RCC-115
1,3,5-Tribromobenzene	100 mg	626-39-1	RBF-003
2,4,6-Tribromophenol	100 mg	118-79-6	RBF-009
2,3,4-Trichloroaniline	100 mg	634-67-3	RCA-010
2,4,5-Trichloroaniline	100 mg	636-30-6	RCA-011
2,4,6-Trichloroaniline	100 mg	634-93-5	RCA-012
2,3,4-Trichloroanisole	100 mg	54135-80-7	RCP-039
2,3,5-Trichloroanisole	50 mg	54135-81-8	RCP-048
2,3,6-Trichloroanisole	100 mg	50375-10-5	RCP-040
2,4,5-Trichloroanisole	50 mg	6130-75-2	RCP-043
2,4,6-Trichloroanisole	50 mg	87-40-1	RCP-044
3,4,5-Trichloroanisole	50 mg	54135-82-9	RCP-049
1,2,3-Trichlorobenzene	100 mg	87-61-6	RCP-024
1,2,4-Trichlorobenzene	100 mg	120-82-1	RCP-025

(Continued)

## Additional Neat Compounds

### Neat Standards, 95–99% Pure

Compound	Mass	CAS No.	Part No.
1,3,5-Trichlorobenzene	100 mg	108-70-3	RCP-026
2,3,6-Trichlorobenzoic acid (tech)	100 mg	50-31-7	RBA-010
1,1,1-Trichloroethane	100 mg	71-55-6	RHH-014
1,1,2-Trichloroethane	1 gm	79-00-5	RHH-015
Trichloroethene	1 gm	79-01-6	RHH-022
2,3,4-Trichlorophenol	20 mg	15950-66-0	RCP-010
2,3,5-Trichlorophenol	20 mg	933-78-8	RCP-011
2,3,6-Trichlorophenol	20 mg	933-75-5	RCP-012
2,4,5-Trichlorophenol	20 mg	95-95-4	RCP-013
3,4,5-Trichlorophenol	20 mg	609-19-8	RCP-015
1,2,3-Trichloropropane	1 gm	96-18-4	RHH-039
2,3,6-Trichlorotoluene	100 mg	2077-46-5	RCB-013
2,4,5-Trichlorotoluene	100 mg	6639-30-1	RCB-012
$\alpha$ ,2,4-Trichlorotoluene	100 mg	94-99-5	RCB-015
$\alpha$ ,2,6-Trichlorotoluene	100 mg	2014-83-7	RCB-014
$\alpha$ ,3,4-Trichlorotoluene	100 mg	102-47-6	RCB-016
$\alpha,\alpha,\alpha$ -Trichlorotoluene	100 mg	98-07-7	RCB-017
<i>n</i> -Tricosane	1 gm	638-67-5	RNA-025

### Neat Standards, 95–99% Pure

Compound	Mass	CAS No.	Part No.
<i>n</i> -Tridecane	1 gm	629-50-5	RNA-004
1,2,3-Trimethylbenzene	100 mg	526-73-8	RAB-006
1,2,4-Trimethylbenzene	100 mg	95-63-6	RAB-005
1,3,5-Trimethylbenzene (mesitylene)	100 mg	108-67-8	RAB-007
2,3,5-Trimethylnaphthalene	10 mg	2245-38-7	RAH-069
2,4,7-Trinitro-9-fluorenone	25 mg	129-79-3	RNH-106
Triphenylene	10 mg	217-59-4	RAH-059
Triptycene	10 mg	477-75-8	RAH-060
Truxene	100 mg	548-35-6	RAH-061
<i>n</i> -Undecane	1 gm	1120-21-4	RNA-002
Vinyl acetate	100 mg	108-05-4	RCC-218
Vinyl bromide	See bromoethene		
4-Vinylcyclohexene dioxide	1 gm	848735	RCC-094
Vinylidene chloride	See 1,1-dichloroethene		
<i>o</i> -Xylene (1,2-dimethylbenzene)	100 mg	95-47-6	RAB-002
<i>m</i> -Xylene (1,3-dimethylbenzene)	100 mg	108-38-3	RAB-003
<i>p</i> -Xylene (1,4-dimethylbenzene)	100 mg	106-42-3	RAB-004

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