LABORATORY NOTEBOOK

PCB Standard Preparation Notebook (2)

ARCADIS GERAGHTY & MILLER

Project No. 044
Book No. 2048 TITLE Recovery Check Std Le 8/9 9/13

From Page No. ____

RCS 08092010-172STD00
09132010

10 ul of RCS-08092010-172 STD00
10 ul of IS-07132010-145 STD00

added to 1 ml volume flow
and brought to volume with hexane

(lot #095289)

final conduct = 50 ng/ml

To Page No. .

Witnessed & Understood by me,	Date	Invented by: Andy [illegible]	Date 9/13
		Recorded by:	

Project No. 044
Book No. 2278

LE Recovery Check STD for 9/16

Page No.

RCS 08092010-172STD00
09162010

10 ul of RCS 08092010-172 STD 00
10 ul of IS 07132010-145 STD 00

added to 1ml volume flask
and brought to volume with hexane
(lot #095289)

To Page No.

essed & Understood by me,	Date	Invented by:	Date
		Recorded by:	9/16

Project No. 649
Book No. 2278 TITLE Standard for Commercial lab

From Page No. ____

Q10092103

AccuStandard® 125 Market St. • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com

C-254S-H-0.002X 1 mL
Aroclor 1254
0.2 µg/mL in Hexane
Lot: 210081060
Exp. Aug 4, 2020

FLAMMABLE

FOR LABORATORY USE ONLY
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
STORAGE Ambient

202 ng/ml

To Page No

Witnessed & Understood by me,	Date	Invented by: Cindy	Date 9/26
		Recorded by:	

Project No. 049
Book No. 2278

.E Standard for Conservation Ld

Page No. ____

Q10092105

AccuStandard® 125 Market St. • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com

C-254S-H-0.008X 1 mL
Aroclor 1254
0.8 µg/mL in Hexane
Lot: 210091117
Exp. Sep 14, 2020

FLAMMABLE

FOR LABORATORY USE ONLY
WARNING This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm

STORAGE Ambient

807. mg/ml

To Page No. ____

essed & Understood by me, | Date | Invented by: [signature] | Date 9/20

Recorded by:

Project No. 049
Book No. 2278 TITLE Recovery Check STD for 9/22

From Page No. ____

RCS 08092010-172STD00
09222010

20 ul of RCS 08092010-172STD00
10 ul of 07132010-145 STD00

add to 1 ml volumetric flask
bought to volume with hexane
Lot# 095289

final concentration = 50 ng/ml

To Page No.

Witnessed & Understood by me,	Date	Invented by: Andy S	Date 9/22
		Recorded by:	

Project No. 049

E 0.36% Aroclor in oil based paint

Book No. 2279

Page No.

S10300

0.36% of 1254 Aroclor in Oil based paint.

Ptrack # **S10300**

Notebook ID # 2278	description		weight (g)	difference (g)	Concentration
09232010-007STD00	Empty amber 60 ml jar	jar	72.8167		% Aroclor
S10000	0.72% Aroclor 1254 in Oil bas	jar + Aroclor 1254 pa	84.9901	12.1734	**0.72%**
S03100	Sherwin Williams all surface Enamel Oil based Primer	jar +Aroclor 1254 + paint	97.4312	12.4411	**total % pcb (w/w)**
			total amt(g)	24.6145	**0.36%**

AS

0.36% Aroclor in oil based primer
09232010-007STD00

Discarded 11/15/2011
AM

To Page No.

essed & Understood by me,

Date

Invented by: andy

Date 9/23

Recorded by:

Project No. 049
Book No. 2278
TITLE PCB Standard C#4, 13C

From Page No. ____

09272010-08STD00

13C-2,2'-Dichlorobiphenyl (C#4)
50ug/mL (nonane)

Lot # : MB0040900

1.2 mL

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Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	09/27/2010

LE PCB Standard C#52, 13C

Project No. 049

Book No. 2278

n Page No. ____

09272010-09STD00

13C-2,2',5,5'-Tetrachlorobiphenyl (C#52)
50ug/mL (nonane)

Lot #: MB0520510

1.2mL

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essed & Understood by me, | Date | Invented by: | Date

Recorded by: J. Nardin | 09/27/2010

Project No. 049
Book No. 2278 TITLE PCB Standard C#194, 13C

From Page No. ____

09272010-108TD00

13C-2,2',3,3',4,4',5,5'-Octachlorobiphenyl
(C#194) 50ug/mL (nonane)

Lot #: MB1940206

1.2 mL

To Page No.

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	09/27/2010

Project No. 049
Book No. 2278

LE Internal Standard

n Page No. ____

09272010-11STD00

1000 µL 09272010-08STD00
1000 µL 09272010-09STD00
1000 µL 09272010-10STD00
2000 µL Hexane, Lot #103947
PCB Internal standard; 10 µg/mL

To Page No. ____

essed & Understood by me,

Date

Invented by:

Recorded by: T. Nardin

Date 09/27/2010

Project No. 049
Book No. 2278 TITLE Recovery Check Standard Stock

rom Page No. ____

09272010-12STD00

Recovery Check Standard 5ug/mL

500 ul 2,2',3,3',4,4',5,5',6 Nonachlorobiphenyl (07122010-139STD00)
500 ul 3,3',4,4'-tetrachlorobiphenyl (07122010-140STD00)
12.5 ul 2,4,5,6-tetrachloro-M-xylene (STD11182009-54STD00)
To 5 mL in hexane (lot # 103947)

To Page No. ____

itnessed & Understood by me, | Date | Invented by: [signature] | Date 9/27
Recorded by:

.E Recovery Check Standard for 9/27 Project No. 049 Book No. 2278

Page No. ____

RCS-08092010-172STD00
09272010

Composed of: 10ul 07132010-1455STD00 (Internal Standard)
10ul 08192010-172STD00

Brought to 1 mL with hexane (lot #103947)

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essed & Understood by me, | Date | Invented by: | Date 9/27/2010

Recorded by: J. Nardin

Project No. 049

Book No. 2278 TITLE 1254 Aroclor Stock STD

From Page No. ____

09282010-14STD00

Aroclor 1254 stock, 1000 µg/mL

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AS-E0135-3 1 mL

Aroclor 1254

1000 µg/mL Isooctane

Lot: 209071294

Exp. Jul 30, 2019

FLAMMABLE

FOR LABORATORY USE ONLY

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm

STORAGE Ambient

- COA = 1002 µg/mL

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Witnessed & Understood by me,	Date	Invented by: [signature]	Date 9/28
		Recorded by:	

Project No. 049
Book No. 2278

LE RCS-08092010-172STD00 -09292010

Page No.

Composed of 10 ml - RCS08092010-172 5810 Oe
10 ml - IS-07132010-145 STD00

brought to 1 ml with hexane (lot - 103947)

→ final concentration = 50 ng/ml

To Page No.

essed & Understood by me, | Date | Invented by: [signature] | Date 9/29

Recorded by:

Project No. 049
Book No. 2278 TITLE Stock standard 2

From Page No. ____

Aroclor 1254 Stock (2)
5ug/mL

10042010-16STD00

· 25 µL of 09282010-14STD00
· Brought to FV 5mL with hexane, lot# 107790

10/8/2010:

Dilutions: 10042010-16STD01: Aroclor 1254 stock (3), 2.5 ug/mL.
· dilute 1:2 (~~250µL~~ 500µL in 1 mL hexane, lot# 103947,
· internal standard added (10µL): 09272010-11STD00.

10042010-16STD02: Aroclor 1254 Stock (4); 1 ug/mL
· dilute 1:5 (200µL in hexane)
· internal standard added: 10µL 09272010-11STD00.

10042010-016STD03 S
1 ug/ml Aroclor 1254

└ dilute 1:5 (100µL in 400µL hexane)
final conc 1ug/mL

To Page N

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	10/4/2010

LE Aroclor 1254 Calibration curve GC/MS#2 Project No. 049
Book No. 2278

Page No.

#	Concentration (ng/mL)	FV	µL 10042010-16STD00	µL RCS	µL IS
1	5	5	5	5	50
2	10	5	10	10	50
3	50	5	50	50	50
4	100	10	200	200	100
5	200	5	200	200	50
6	500	5	500	500	50

Recovery check standard: 09272010-12 STD00
Internal standard: 09272010-11 STD00

Nitebook ID's:

#	ID
1	10042010-17CAL01
2	10042010-17CAL02
3	10042010-17CAL03
4	10042010-17CAL04
5	10042010-17CAL05
6	10042010-17CAL06

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ssed & Understood by me,	Date	Invented by:	Date
		Recorded by: J. Nardin	10/4/2010

Project No. 049
Book No. 2278 TITLE Recovery Check Standard 10/5/2010

From Page No. ____

RCS08092010 - 1725TD00 - 10052010

comprised of: 10 ml 08092010-1725TD00 RCS
10 µL 07132010-1455TD00 Internal Standard
Brought to 1 mL with hexane lot# 103947

To Page No

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	10/5/2010

Project No. 049
.E PCB - Congeners Calibration Curve Book No. 2278
Page No. 10/12/10

10122010-019CAL

0122010-019CAL01

5 ul of 08062010-167STD00 - PCB - congeners STD
5 ul of 09272010-012STD00 - Recovery Check STD
50 ul of 09272010-011STD00 - IS "

into a 5 ml volume flask brought to volume
with hexane (Lot #103947)
final concentration = 5 ng/ml

0122010-019CAL02

10 ul of 08062010-167STD00 - PCB congeners STD
10 ul of 09272010-012STD00 - Recovery Check STD
50 ul of 09272010-011STD00 - IS

into a 5 ml volume flask brought to volume
with hexane (Lot #103947)
final concentration = 10 ng/ml

0122010-019CAL03

25 ul of 08062010-167STD00 - PCB congeners STD
25 ul of 09272010-012STD00 - Recovery Check STD
50 ul of 09272010-011STD00 - IS

into a 5 ml volume flask brought to volume
with hexane (Lot #103947)
final concentration = 25 ng/ml

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ssed & Understood by me,	Date	Invented by:	Date
		Recorded by:	10/12

Project No. 0419

Book No. 2278 TITLE PCB Conger Calibration Curve fe

From Page No. 19

10122010-019CAL04

100 ul of 08062010-167STD00 - PCB conger
100 ul of 09272010-012STD00 - Recovery Chr S
100 ul of 09272010-011STD00 - IS

~~brought~~ pg
into a 10 ml volume flask and brought to v
with hexane (Lot # 103947)
final concentration = 50 mg/ml

10122010-019CAL05

100 ul of 08062010-167STD00 PCB con
100 ul of 09272010-012STD00 Recovery Chr STD
50 ul of 09272010-011STD00 IS
into a 5 ml volume flask and brought to
volume with hexane (Lot # 103947)
final concentration = 100 mg/ml

10122010-019CAL06

200 ul of 08062010-167STD00 PCB conger
200 ul of 09272010-012STD00 Recovery Chr STD
50 ul of 09272010-011STD00 - IS

into a 5 ml volume flask and brought to volume
with hexane (Lot # 103947)

final concentration = 200 mg/ml

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Witnessed & Understood by me,	Date	Invented by: Andy S	Date
		Recorded by:	10/12/10

TITLE Standard for Commercial Lab

Project No. 049

Book No. 2278

From Page No. ____

Q10101103 JN

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C-254S-H-0.008X 1 mL

Aroclor 1254

0.8 µg/mL in Hexane

Lot: 210091117

Exp. Sep 14, 2020

FLAMMABLE

FOR LABORATORY USE ONLY

WARNING This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm

STORAGE Ambient

JN

~~800~~ ppb JN

807.2 ppb (ng/mL)

To Page No. ____

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by: T. Nardin	10/12/2010

Project No. 049
Book No. 2278 TITLE Standard for Commercial Lab

From Page No. ____

Q10101104

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C-254S-H-0.006X 1 mL
Aroclor 1254
0.6 µg/mL in Hexane
Lot: 210081061
Exp. Aug 4, 2020

FLAMMABLE

FOR LABORATORY USE ONLY
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm
STORAGE Ambient

1/4

605 ppb (0.605 µg/mL)

To Page No

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	10/17/2019

LE Recovery Check std. 10/12/2010

Project No. 049

Book No. 2278

n Page No. ____

RCS 08092010-172 STD00 - 10122010

composed of: 10 ul 08092010-172 STD00 Recovery Check standard
10 ul 09272010-11 STD00 Internal Standard.

Brought to 1 mL with hexane (lot # 103947)

To Page No. ____

essed & Understood by me,

Date

Invented by:

Date 10/12/2010

Recorded by: J. Nardin

Project No. 049
Book No. 2278 TITLE IAP-1013 2010

From Page No. ____

4m 10132010-24IAP01 , 5 ug/mL PCBs

composed of: 100 ul 2,2',5,5'-Tetrachlorobiphenyl (STD12142009-67STI
100 uL 3,3',4,4'-Tetrachlorobiphenyl (08092010-173 STD00)
100 ul 2,2',4,5,5'-Pentachlorobiphenyl (08092010-174 STD
Brought up to final volume of 2 mL with hexane (lot #10394
to final concentration of 5 ug/mL PCBs.

4m 10132010-24IAP02 150 ug/mL
composed of: 30 uL 10132010-24IAP01
10 ul Internal Standard 09272010-11 STD00
Brought to 1 mL with hexane (lot # 103947)

To Page No

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	10/13/2010

TITLE 0.50% 1254 Aroclor in oil based primer

Project No. 049
Book No. 2278

From Page No. ____

0.50% 1254 Aroclor in an oil based primer (w/w)
10142010-025STD00 Lab book # 2278

S10400

Ptrack # **S10400** **10142010-025STD00** Notebook # **2278**

Notebook ID	description		weight (g)	difference (g)	% PCBs (w/w)
	Empty amber 60 ml jar	jar	73.0046		
009082010-189STD00	Aroclor 1254	jar + Aroclor 1254	73.2606	0.2560	**0.50%**
S03100	Sherwin Williams all surface Enamel Oil based Primer	jar +Aroclor 1254 + paint	124.6173	51.3567	**total % pcb (w/w)**
			total amt(g)	51.6127	**0.50%**

AS

Discarded – 11/15/2011

To Page No. ____

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	10/14

Project No. 049
Book No. 2278 TITLE Recovery Check STD

From Page No. ____

for 10/18/2010

08092010-172STD00-10182010
Recovery check std

- 10ul of 08092010-172STD00 - Recovery STD
- 10ul of 09272010-011STD00 - IS
- brought to volume with hexane (lot # 103947

final concentration =

50 ng/ml

To Page No

Witnessed & Understood by me,	Date	Invented by: Cindy Sos	Date 10/18
		Recorded by:	

LE Recovery Check STD

Project No. 049
Book No. 2278

n Page No. ____

08092010-172STD00-10192010
Recovery Check Standard

Composed of: 10 uL 08092010-172STD00
10 uL 09272010-11 STD00

Brought to a final volume of 1 mL with hexane (lot # 103947)

final concentration = 50 ng/mL

To Page No. ____

essed & Understood by me,

Date

Invented by:

Recorded by: J. Nardin

Date 10/19/2010

Project No. 049
Book No. 2278 TITLE Recovery check standard – 10/25

From Page No. ____

09082010-172STD00-10252010
Recovery Check Standard

Composed of: 10 uL 08092010 -172STD00
10 uL 09272010-11STD00

Brought to final volume of 1 mL with hexane (lot # 103947)

final concentration = 50 ng/mL

To Page No

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	10/25/2010

'LE Recovery Check Standard - 10/26

Project No. 049

Book No. 2278

n Page No. ____

09272010-12STD00-10262010
Recovery Check Standard

Composed of: 10 uL 09272010-12STD00
10 uL 09272010-11STD00

Brought to final volume of 1 mL with hexane (lot #103947)

final concentration = 50 mg/mL

To Page No. ____

essed & Understood by me,

Date

Invented by:

Recorded by: J. Nardin

Date 10/26/2010

Project No. 049

Book No. 2278 TITLE Recovery check standard - 10/27

From Page No. ____

09272010-012STD00 -10272010
Recovery check std

Composed of: 10 µL 09272010-12STD00
10 µL 09272010-11STD00

Brought to a final volume of 1mL with hexane (lot # 104946

final concentration= 50ng/mL

To Page No

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	10/27/2010

Project No. 049
Book No. 2278

E 1242 Aroclor Standard

Page No.

10292010-031STD00
1242 Aroclor Std 1000 ug/ml

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C-242S-H-10X
Aroclor 1242
1000 µg/mL in Hexane
Lot: 210051236
Exp. May 24, 2020

1 mL

FLAMMABLE

FOR LABORATORY USE ONLY

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

STORAGE Ambient

AS

S11900

10292010-031STD01
50 ug/ml Aroclor 1242

50 ul of 10292010-031STD00 - brought to volume with Hexane (lot # 104946) in a 1ml volume volume flask

final concentration = 50 ug/ml

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ssed & Understood by me, | Date | Invented by: Andy St | Date 10/29

Recorded by:

Project No. 049
Book No. 2278
TITLE Recovery Check Standard - 11/1

From Page No. ____

09272010-12STD00-11/1/2010
Recovery Check Standard

Composed of : 10 uL 09272010-12STD00
10 uL 09272010-11STD00

Brought to a final volume of 1 mL with hexane (lot #101

final Concentration = 50 ng/mL

To Pag

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	11/1/2010

Project No. 049

.E 1248 Aroclor STD

Book No. 2278

Page No.

11022010-033STD00
1248 Aroclor Std 1000ug/ml

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Tel. 203-786-5290 • www.accustandard.com

C-248S-H-10X 1 mL
Aroclor 1248
1000 µg/mL in Hexane
Lot: 209111008
Exp. Nov 2, 2019

FLAMMABLE

FOR LABORATORY USE ONLY

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

STORAGE Ambient

A5

S12000

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essed & Understood by me,

Date

Invented by:

Recorded by:

Date

11/2

Project No. 049
Book No. 2278 TITLE Recovery Check Standard - 11/2

From Page No. ____

09272010-12STD00-11/2/2010
Recovery Check Standard

Composed of: 10 ul 09272010-12STD00
10 uL 09272010-11STD00

Brought to a final volume of 1 mL with hexane (lot # 101790

final concentration = 50 ng/mL

To Page N

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	11/2/2010

Project No. 049
Book No. 2278

.E Recovery Check standard - 11/3

Page No.

09272010-12STD00-11/3/2010
Recovery Check Standard

Composed of: 10 uL 09272010-12STD00
10 uL 09272010-11STD00

Brought to a final volume of 1mL with hexane (lot# 101790)

final concentration = 50 ng/mL

To Page No.

essed & Understood by me,

Date

Invented by:

Recorded by: J. Nardin

Date 11/3/2010

Project No. 049
Book No. 2278
TITLE 1248 Aroclor Standard

From Page No. ____

11032010-36STD00~~0~~4
1248 Aroclor Standard 50 ug/mL

Composed of: 50 uL 11022010-33 STD00

Brought to final volume of 1 mL with hexane (lot #101790)

Final Concentration = 50 ppm

To Page

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	11/4/2010

Project No. 049

Book No. 2278

E 1254 Aroclor Standard

Page No.

4 4h

11032010-37STD00

1254 Aroclor Standard 50ug/mL

11042010-37STD00 4h

Composed of: 50 uL 07152010-154STD00

Brought to a final volume of 1 mL with hexane (lot # 101790)

Final concentration = 50 ppm

To Page No.

essed & Understood by me,

Date

Invented by:

Recorded by: J. Nardin

Date 11/4/2010

Project No. 049
Book No. 2278 TITLE Recovery Check Standard - 11/8

From Page No. ____

09272010-12STD00-11/8/2010
Recovery Check Standard

Composed of: 10 uL 09272010-12STD00
10 uL 09272010-11STD00

Brought to final volume of 1 mL with hexane (lot # 103947)

Final concentration = 50 ng/mL

To Page

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	11/8/2010

LE Recovery Check standard - 11/9

Project No. 049

Book No. 2278

n Page No. ____

09272010-12STD00-11/9/2010
Recovery Check Standard

Composed of: 10 uL 09272010-12STD00
10 uL 09272010-11STD00

Brought to final volume of 1 mL with hexane (lot#103947)

Final Concentration = 50 ng/mL

To Page No. ____

essed & Understood by me,	Date	Invented by:	Date
		Recorded by: J. Nardin	11/9/2010

Project No. 049
Book No. 2278 TITLE (C13)- C#77

From Page No. ____

11102010-40STD00
(13C) 3,3',4,4'-Tetrachlorobiphenyl

Lot # MB0771209

50 µg/mL, in nonane.

To Page

Witnessed & Understood by me,	Date	Invented by:	Date
			11/10/2010

LE (C13) - C# 206

Project No. 049

Book No. 2278

n Page No.

11102010-41STD00
(13C) 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl

Lot# MB 20601995

50 µg/mL in nonane

To Page No.

essed & Understood by me,

Date

Invented by:

Recorded by: J. Nardin

Date 11/10/2010

Project No. 049
Book No. 2278 TITLE Recovery Check standard

From Page No. ____

11102010-42STD00
Recovery Check Standard - 5ug/mL

1 mL (13c)-2,2',3,3',4,4',5,5',6 Nonachlorobiphenyl (11102010-41STD00)
1 mL (13c)-3,3',4,4'-tetrachlorobiphenyl (11102010-40STD00)
25 uL 2,4,5,6-Tetrachloro-M-Xylene (STD11182009-54STD00)

Bring to 10 mL with hexane, lot# 104946

To Page N

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	11/10/2010

LE Recovery Check Standard - 11/15

Project No. 049

Book No. 2278

n Page No. ____

11102010-42STD00 - 11/15/2010
Recovery Check Standard

Composed of: 10 µL 11102010-42STD00
10 µL 09272010-11STD00

Brought to a final volume of 1 mL with hexane (lot# 104946)

Final concentration = 50 ng/mL

To Page No. ____

essed & Understood by me,

Date

Invented by:

Recorded by:

Date 11/15/2010

Project No. 049
Book No. 2278 TITLE Recovery Check Standard - 11/16

From Page No. ____

11102010-42STD00 - 11/16/2010
Recovery Check Standard

Composed of: 10ml 11102010-42STD00
10ml 09272010-11STD00

Brought to final volume of 1 mL with hexane (lot #10

final concentration= 50ng/mL

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Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	11/16/2010

LE C#44 Standard

Project No. 049
Book No. 2278

n Page No. ____

11172010-45STD00

AccuStandard® 125 Market St. • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com

FOR LABORATORY USE ONLY

C-044S-TP 1 mL
2,2',3,5'-Tetrachlorobiphenyl
100 µg/mL in Isooctane
Lot: B6100232
Exp. Oct 20, 2016

FLAMMABLE

WARNING This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm

STORAGE Ambient/Sonicate

11172010-45STD01

Dilution 1:20
50 uL 11172010-45STD00 to 1 mL in hexane (lot#104946)
Final concentration = 5 ug/mL

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essed & Understood by me, | Date | Invented by: | Date

Recorded by: T. Nardin | 11/17/2010

Project No. 049
Book No. 2278 TITLE C#33 Standard

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11172010-46STD00

AccuStandard® 125 Market St. • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com

FOR LABORATORY USE ONLY

C-033S-TP 1 mL
2',3,4-Trichlorobiphenyl
100 µg/mL in Isooctane
Lot: B5100214
Exp. Oct 25, 2015

FLAMMABLE

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm

STORAGE Ambient/Sonicate

11172010-46STD01

Dilution: 1:20
50 µL 11172010-46 STD00 to 1 mL in hexane (lot#104946)
Final concentration = 5 µg/mL

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Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	11/17/2010

LE C#49 Standard

Project No. 049
Book No. 2278

1 Page No. ____

11172010-47STD00

AccuStandard® 125 Market St. • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com

FOR LABORATORY USE ONLY

C-049S-TP 1 mL
2,2',4,5'-Tetrachlorobiphenyl
100 µg/mL in Isooctane
Lot: B5050245
Exp. May 23, 2015

FLAMMABLE

WARNING This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm

STORAGE Ambient/Sonicate

11172010-47STD01

Dilution 1:20
50 µL 11172010-47STD00 to 1 mL in hexane (lot #104946)
Final concentration = 5 µg/mL

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ssed & Understood by me,	Date	Invented by:	Date
		Recorded by: J. Nardin	11/17/2010

Project No. 049
Book No. 2278 TITLE C# 37 Standard

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11172010-48STD00

AccuStandard® 125 Market St. • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com

FOR LABORATORY USE ONLY

C-037S-TP 1 mL
3,4,4'-Trichlorobiphenyl
100 µg/mL in Isooctane
Lot: B4110071
Exp. Nov 5, 2014

WARNING This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm

STORAGE Ambient/Sonicate

FLAMMABLE

11172010-48STD01

Dilution 1:20
50uL 11172010-48STD00 to 1mL in hexane (lot# 1049
Final concentration= 5ug/mL

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Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	11/18/2010

LE C#53 Standard

Project No. 049

Book No. 2278

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11172010-49STD00

AccuStandard® 125 Market St. · New Haven, CT 06513 · USA Tel. 203-786-5290 · www.accustandard.com

FOR LABORATORY USE ONLY

C-053S-TP 1 mL

2,2',5,6'-Tetrachlorobiphenyl

100 µg/mL in Isooctane

Lot: B2040070

Exp. Apr 5, 2012

FLAMMABLE

WARNING This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm

STORAGE Ambient/Sonicate

11172010-49STD01

Dilution 1:20

50 µL 11172010-49STD00 to 1 mL in hexane (lot # 104946)

Final concentration = 5 µg/mL

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essed & Understood by me,

Date

Invented by:

Date 11/18/2010

Recorded by: J. Nardin

Project No. 049
Book No. 2278 TITLE C#31 standard

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11172010-50STD00

AccuStandard® 125 Market St. • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com

C-031S-TP 1 mL
2,4',5-Trichlorobiphenyl
100 µg/mL in Isooctane
Lot: B7010043
Exp. Jan 8, 2017

FLAMMABLE

FOR LABORATORY USE ONLY
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
STORAGE Ambient/Sonicate

11172010-50STD01

Dilution: 1:20 in hexane
50µL 11172010-50STD00 to 1 mL in hexane (lot #104946)
Final concentration = 5 µg/mL

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Witnessed & Understood by me,	Date	Invented by:	Date
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Project No. 049
Book No. 2278

E C# 32 standard

Page No.

11172010-51STD00

AccuStandard® 125 Market St. • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com

C-032S-TP 1 mL
2,4',6-Trichlorobiphenyl
100 µg/mL in Isooctane
Lot: A7030335
Exp. Feb 18, 2019

FLAMMABLE

FOR LABORATORY USE ONLY
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm
STORAGE Ambient/Sonicate

11172010-51STD01

Dilution 1:20
50 µL 11172010-51STD00 to 1 mL in hexane (lot #104946)
final concentration = 5 µg/mL

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essed & Understood by me,

Date

Invented by:

Recorded by: J. Nardin

Date 11/18/2010

Project No. 849
Book No. 2278 TITLE C# 20 standard

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11172010-52STD00

AccuStandard® 125 Market St. • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com

C-020S-TP 1 mL
2,3,3'-Trichlorobiphenyl
100 µg/mL in Isooctane
Lot: B7070185
Exp. Jul 17, 2017

FLAMMABLE

FOR LABORATORY USE ONLY
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
STORAGE Ambient/Sonicate

11172010-52STD01

Dilution 1:20
50 mL 11172010-52STD00 to 1 mL in hexane (lot #104946)
Final concentration = 5 ug/mL

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Witnessed & Understood by me,	Date	Invented by:	Date
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.E C# 22 Standard

Project No. 049
Book No. 2278

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11172010-53STD00

AccuStandard® 125 Market St. • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com

C-022S-TP 1 mL
2,3,4'-Trichlorobiphenyl
100 µg/mL in Isooctane
Lot: 209061162
Exp. Jun 11, 2019

FLAMMABLE

FOR LABORATORY USE ONLY
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
STORAGE Ambient/Sonicate

11172010-53STD01

Dilution 1:20
50 µL 11172010-53STD00 to 1 mL in hexane (lot #104946)
Final concentration = 5 µg/mL

To Page No.

essed & Understood by me,

Date

Invented by:

Recorded by: J. Nardin

Date 11/18/2010

Project No. 049
Book No. 2278 TITLE C#15 Standard

From Page No. ____

11172010-54STD00

AccuStandard® 125 Market St. • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com

C-015S-TP 1 mL
4,4'-Dichlorobiphenyl
100 µg/mL in Isooctane
Lot: B9040220
Exp. Apr 23, 2019

FLAMMABLE

FOR LABORATORY USE ONLY
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
STORAGE Ambient/Sonicate

11172010-54STD01

Dilution 1:20
50 µL of 11172010-54STD00 to 1 mL in hexane (lot #1049
Final concentration = 5 µg/mL

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Witnessed & Understood by me,	Date	Invented by:	Date
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Project No. 049

LE C#18 Standard

Book No. 2278

n Page No. ____

11172010-55STD00

AccuStandard® 125 Market St. • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com

C-018S-TP 1 mL

2,2',5-Trichlorobiphenyl
100 µg/mL in Isooctane
Lot: 210111201
Exp. Nov 12, 2020

FLAMMABLE

FOR LABORATORY USE ONLY

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm

STORAGE Ambient/Sonicate

11172010-55STD01

Dilution 1:20
50uL 11172010-55STD00 to 1mL in hexane (lot#104946)
Final Concentration = 5ug/mL

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essed & Understood by me,

Date

Invented by:

Date

Recorded by: T. Nardin

11/18/2010

Project No. 049
Book No. 2278 TITLE C#10 Standard

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11172010-56STD00

AccuStandard® 125 Market St. • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com

C-010S-TP 1 mL
2,6-Dichlorobiphenyl
100 µg/mL in Isooctane
Lot: B2090163
Exp. Sep 12, 2012

FLAMMABLE

FOR LABORATORY USE ONLY
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm
STORAGE Ambient/Sonicate

11172010-56STD01

Dilution 1:20

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Project No. 049

LE C#13 standard

Book No. 2278

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11172010-57STD00

AccuStandard® 125 Market St. • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com

C-013S-TP 1 mL

3,4'-Dichlorobiphenyl

100 µg/mL in Isooctane

Lot: 210101017

Exp. Oct 1, 2020

FLAMMABLE

FOR LABORATORY USE ONLY

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

STORAGE Ambient/Sonicate

11172010-57STD01

Dilution 1:20

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Date

Invented by:

Date

Recorded by: J. Nardin

11/18/2010

Project No. 049

Book No. 2278 TITLE C#8 Standard

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11172010-58STD00

AccuStandard® 125 Market St. • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com

C-008S-TP 1 mL

2,4'-Dichlorobiphenyl

100 µg/mL in Isooctane

Lot: B2100269

Exp. Oct 23, 2012

FLAMMABLE

FOR LABORATORY USE ONLY

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

STORAGE Amblight/Sonicate

11172010-58STD01

Diluted 1:20

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Project No. 049
Book No. 2278

LE C#16 Standard

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11172010-59STD00

AccuStandard® 125 Market St. • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com

C-016S-TP 1 mL
2,2',3-Trichlorobiphenyl
100 µg/mL in Isooctane
Lot: B6060081
Exp. Jun 8, 2016

FLAMMABLE

FOR LABORATORY USE ONLY
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
STORAGE Ambient/Sonicate

11172010-59STD01

Diluted 1:20

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11172010-60STD00

11/18/2010

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Project No. 049

LE Recovery Check Standard - 11/17

Book No. 2278

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11102010-42STD00 - 11/17/2010
Recovery Check Standard

Composed of: 20 uL 11102010-42STD00
20 uL 09272010-11STD00

Brought to a final volume of 2 mL with hexane (lot# 104946)

Final Concentration = 50 ng/mL

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essed & Understood by me,

Date

Invented by:

Date

Recorded by: J. Nardin

11/17/2010

Project No. 049
Book No. 2278 TITLE Recovery Check Standard - 11/18

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11102010-42STD00 - 11/18/2010
Recovery Check Standard

Composed of: 10uL 11102010-42STD00
10uL 09272010-11STD00

Brought to final volume of 1 mL with hexane (lot #104946)

Final concentration = 50ng/mL

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Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	11/18/2010

LE Recovery Check Standard - 11/22

Project No. 044

Book No. 2278

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11102010-42STD00 - 11/22/2010
Recovery Check Standard

Composed of: 10 ul 11102010-42STD00
10 ul 09272010-11STD00

Brought to final volume of 1mL in hexane (lot #104946)

final concentration = 50 ng/mL

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essed & Understood by me,

Date

Invented by:

Recorded by: J. Nardin

Date 11/22/2010

Project No. 049
Book No. 2278
TITLE C#9 Standard

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11232010-64STD00

50 ul 04012010-100STD00
950 ul Hexane lot # 104946

Concentration = 5 ug/mL

4-Chlorobiphenyl

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Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	11/23/2010

Project No. 049

TITLE C#4 Standard

Book No. 2278

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11232010-65STD00

50 uL 04012010-101STD00
950 uL Hexane lot #104946.

Concentration = 5 ug/mL

2,2'-Dichlorobiphenyl

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Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by: J. Nardin	11/23/2010

Project No. 049
Book No. 2278 TITLE C#5 Standard

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11232010-66STD00

50 uL 04012010-98STD00
950 uL Hexane lot #104946.

Concentration= 5ug/mL

2,3-Dichlorobiphenyl

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Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	11/23/2010

Project No. 049

.E C#17 Standard

Book No. 2278

Page No.

11232010-67STD00

50 uL 04012010-102 STD00
950 uL Hexane, lot # 104946

Concentration = 5ug/mL

2,2',4-Trichlorobiphenyl

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essed & Understood by me,

Date

Invented by:

Date

Recorded by: J. Nardin

11/23/2010

Project No. 049
Book No. 2278 TITLE C# 28 Standard

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11232010-68STD00

50 uL 04012010-103STD00
950 uL Hexane, lot # 104946

Concentration = 5 ug/mL

2,4,4'-Trichlorobiphenyl

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Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	11/23/2010

Project No. 049

.E C#52 standard

Book No. 2278

Page No.

11232010-69STD00

50 uL 04012010-104STD00
950 uL Hexane, lot #104946

Concentration = 5ug/mL

2,2',5,5'- Tetrachlorobiphenyl

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essed & Understood by me,

Date

Invented by:

Date

Recorded by: J. Nardin

11/23/2010

Project No. 649
Book No. 2278 TITLE Recovery Check Standard - 11/23

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11102010-42STD00 - 11/23/2010
Recovery Check Standard

Composed of: 10 uL 11102010-42STD00
10 uL 09272010-11STD00

Brought to final volume of 1 mL with hexane (lot #104946).

Final Concentration = 50 ng/mL

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Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	11/23/2010

Project No. 049

TITLE C #55 Standard

Book No. 2278

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11292010-71STD00

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C-055S-TP

2,3,3',4-Tetrachlorobiphenyl

100 µg/mL in Isooctane

Lot: B3030229

Exp. Mar 21, 2013

1 mL

FLAMMABLE

FOR LABORATORY USE ONLY

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm

STORAGE Ambient/Sonicate

11292010-71STD01

Dilution 1:20

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Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	

Project No. 049
Book No. 2278 TITLE C#60 Standard

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11292010-72STD00

AccuStandard® 125 Market St. · New Haven, CT 06513 · USA
Tel. 203-786-5290 · www.accustandard.com

C-060S-TP 1 mL
2,3,4,4'-Tetrachlorobiphenyl
100 µg/mL in Isooctane
Lot: 210071218
Exp. Jul 22, 2020

FLAMMABLE

FOR LABORATORY USE ONLY
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm
STORAGE Ambient/Sonicate

11292010-72STD01

Dilution 1:20

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Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	11/29/2010

.E C#64 Standard

Project No. 049

Book No. 2278

Page No.

11292010-73STD00

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C-064S-TP 1 mL

2,3,4',6-Tetrachlorobiphenyl

100 µg/mL in Isooctane

Lot: A9030133

Exp. Apr 12, 2017

FLAMMABLE

FOR LABORATORY USE ONLY

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

STORAGE Ambient/Sonicate

11292010-73STD01

Dilution 1:20

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essed & Understood by me,

Date

Invented by:

Recorded by: J. Nardin

Date 11/29/2010

Project No. 049
Book No. 2278 TITLE C#70 Standard

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11292010-74STD00

AccuStandard® 125 Market St. • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com

C-070S-TP 1 mL
2,3',4',5-Tetrachlorobiphenyl
100 µg/mL in Isooctane
Lot: B5060150
Exp. Jun 16, 2015

FLAMMABLE

FOR LABORATORY USE ONLY
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
STORAGE Ambient/Sonicate

11292010-74STD01

Dilution 1:20

To Page No

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	11/29/2010

TITLE C#74 standard

Project No. 049

Book No. 2278

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11292010-75STD00

AccuStandard® 125 Market St. • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com

C-074S-TP 1 mL

2,4,4',5-Tetrachlorobiphenyl

100 µg/mL in Isooctane

Lot: 209111036

Exp. Nov 4, 2019

FLAMMABLE

FOR LABORATORY USE ONLY

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

STORAGE Ambient/Sonicate

11292010-75STD01

Dilution 1:20

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Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by: J. Nardin	11/29/2010

Project No. 049
Book No. 2278 TITLE PCB Congeners Stock Std

From Page No. ____

12012010 -076 STD00

12012010-076STD00 (Aroclor 1242/1248)
PCB Congener stock std 5 ug/ml

This PCB congener stock std mix contains 250ul of the following compounds added to a 5 ml volumetric flask and brought to volume with hexane (lot #104946)

11292010 - 73STD00 - C#64 2,3,4',6-Tetrachlorobiphenyl
11172010 - 45STD00 - C#44 2,2',3,5'-Tetrachlorobiphenyl
11172010 - 53STD00 C#22 2,3,4'-Trichlorobiphenyl
04012010 - 102STD00 C#17 2,2',4-Trichlorobiphenyl
~~011~~ TS
11172010 - 47STD00 C#49 2,2',4,5' Tetrachlorobiphenyl
04012010 - 104STD00 - C#52 2,2'5,5'-Tetrachlorobiphenyl
11172010 - 55STD00 - C#18 2,2'5 - Trichlorobiphenyl
11172010 -54STD00 C#15 4,4'-Dichlorobiphenyl
11172010 -57STD00 C#13 3,4 - Dichlorobiphenyl

Final concentration = 5ug/ml

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Witnessed & Understood by me,	Date	Invented by: Andy SR	Date 12/1
		Recorded by:	

Project No. 049

TITLE 13C Standard C#4

Book No. 2278

From Page No. ____

12012010-77STD00

13C-2,2'-Dichlorobiphenyl (C#4)
50ug/mL (nonane)

Lot # MB0040900
1.2 mL

EMPTY - 11/2/2011 JM

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Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by: J. Nardin	12/1/2010

Project No. 049
Book No. 2278 TITLE 13 C Standard C#52

From Page No. ——

12012010-78STD00

13C-2,2',5,5'-Tetrachlorobiphenyl (C#52)
50ug/mL (nonane)

Lot# MB0520510
1.2 mL

To Page N

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	12/1/2010

LE 13C Standard C#194

Project No. 049

Book No. 2278

n Page No.

12012010-79STD00

13C-2,2',3,3',4,4',5,5'-Octachlorobiphenyl (C#194)
50ug/mL (nonane)

Lot# MB1940206
1.2mL

EMPTY- 11/2/2011 JM

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essed & Understood by me,

Date

Invented by:

Recorded by: J. Nardin

Date 12/1/2010

Project No. 649

Book No. 2278 TITLE

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Andy S

To Page

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	

Project No. 014

.E Internal Standard Solution Book No. 2278

Page No.

12012010-081STD00 10 ug/ml
PCB congener Internal Standard

The internal Standard Solution contain the following compounds add at 1.0 ml to a 5 ml Volumen flask and brought to volume with hexane (Lot #104946)

12012010-77STD00 (CH#4) 2,2'-Dichlorow ($^{13}C_{12}$) biphenyl
12012010-78STD00 (CH#52) -2',2',5,6'-Tetrachlorow ($^{13}C_{12}$) biphenyl
12012010-79STD00 -(CH#194)- 2,2',3,3',4,4',5,6'-Octachlorow ($^{13}C_{12}$) - biphenyl

Final Concentration = 10 ug/ml

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ssed & Understood by me,	Date	Invented by:	Date
		Recorded by:	

Project No. 049
Book No. 2278 TITLE 1242/1248 - PCB Congener Calibration Curve

From Page No. ____

12012010-082CAL00

12012010-082CAL01 (5ng/ml)

12012010-082CAL01 5 ng/ml
PCB congener Calibration curve

5ul of 12012010-076STD00 - "PCB Congener STD
5ul of 11102010-042STD00 - "PCB RCS"
50ul of 12012010-081STD00 - "Internal Std"

into a 5ml volume volume flask; brought to volume with hexane (Lot #104446)
final concentration = 5 ng/ml

12012010-082CAL02 (10ng/ml)

12012010-082CAL02 10 ng/ml
PCB congener Calibration curve

10ul of 12012010-076STD00 - PCB Congener
10ul of 11102010-042STD00 - RCS
50ul of 12012010-081STD00 - "IS"
into a 5ml volume flask; brought to volume with hexane (Lot #104446)
final concentration = 10 ng/ml

12012010-082CAL03 (25ng/ml)

12012010-082CAL03 25 ng/ml
PCB congener calibration curve

25ul of 12012010-076STD00 - PCB Congener
25ul of ~~120~~ AS 11102010-042STD00 RCS
50ul of 12012010-082STD - "IS"
into a 5ml volume flask; brought to volume with hexane (Lot 104446)
final concentration: 25 ng/ml

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Witnessed & Understood by me,	Date	Invented by: Andy St	Date
		Recorded by:	12/1/10

Project No. 049
Book No. 2278

LE Recovery Check Standard - 11/30

Page No.

09272010-12STD00 - 11/30/2010
Recovery Check Standard

Composed of: 10 ul 09272010-12STD00
10 ul 09272010-11STD00

To final volume of 1mL with hexane (lot# 104947)

11102010-42STD00 - 11/30/2010
Recovery Check Standard

Composed of: 10 ul 11102010-42STD00
10 ul 09272010-11STD00

To final volume of 1mL with hexane (lot# 104947)

To Page No.

essed & Understood by me,	Date	Invented by:	Date
		Recorded by: J. Nardin	12/1/2010

Project No. 049

Book No. 2278 TITLE Recovery Check Standard - 12/1

From Page No. ____

11102010-42STD00 - 12/1/2010
Recovery Check Standard

Composed of: 10 uL 11102010-42STD00
10 uL 09272010-11STD00

To final volume of 1mL with hexane (lot #104946)

To Page No.

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	12/1/2010

Project No. 049

LE 1242/1248 - PCB Congen Calcur Book No. 2278

n Page No. 82 (Cont.)

12012010-085CAL04 50 ng/ml
PCB congener calibration curve

010-085CAL04

100ul of 12012010-076STD00 - PCB congen
100ul of 11102010-042STD00 - RCS
100ul of 12012010-081STD00 - IS

into a 10ml volume meter flask: brought to volume with hexane (Lot #104946)

final concentration = 50 ng/ml

12012010-085CAL05 100 ng/ml
PCB congener calibration curve

012010-085CAL05

40ul of 12012010-076STD00 - PCB congen
40ul of 11102010-042STD00 - RCS
20ul of 12012010-081STD00 - IS

into a 2ml volume meter flask: brought to volume with hexane (Lot # 104946)

final concentration = 100 ng/ml

12012010-085CAL06 200 ng/ml
PCB congener calibration curve

012010-085CAL06

80ul of 12012010-076STD00 - PCB congen
80ul of 11102010-042STD00 - RCS
20ul of 12012010-081STD00 - IS
into a 2ml volume meter flask; brought to α^{as} volume with hexane (Lot #104946)

final concentration = 200 ng/ml

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essed & Understood by me, | Date | Invented by: [signature] | Date

Recorded by:

P2/1

Project No. 049

Book No. 2278 TITLE Recovery Check Standard - 12/2

From Page No. ____

11102010-42STD00-12/2/2010
Recovery Check Standard

Composed of: 10 ml 11102010-42STD00
10 ml 09272010-11STD00

To 1 mL with hexane (lot #104946)

Final concentration = 50 ng/mL

To Page No.

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	12/2/2010

Project No. 049

TITLE Recovery Check Standard - 12/6

Book No. 2278

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11102010-42STD00 - 12/6/2010
Recovery Check Standard

Composed of: 10 µL 11102010-42STD00
10 µL 09272010-11STD00

To 1 mL with hexane (lot #104946)

Final concentration = 50 ng/mL

To Page No. ____

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by: J. Nardin	12/6/2010

Project No. 049
Book No. 2278 TITLE Recovery Check Standard - 12/7

From Page No. ____

11102010-42STD00 - 12/7/2010
Recovery Check Standard

Composed of 10 uL 11102010-42STD00.
10 uL 09272010-11STD00

To 1 mL final volume with hexane (lot# 104946)

To Page No.

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	12/7/2010

Project No. 049
Book No. 2278

LE Recovery Check Standard - 12/8

n Page No.

11102010-42STD00 - 12/8/2010
Recovery Check Standard

Composed of 10 uL 11102010-42 STD00
10 uL 09272010-11 STD00

To 1 mL final volume with hexane (lot #104946)

To Page No.

essed & Understood by me,

Date

Invented by:

Date

Recorded by: J. Nardin

12/8/2010

Project No. 049
Book No. 2278 TITLE Recovery check standard - 12/9

From Page No. ____

11102010-42STD00 - 12/9/2010
Recovery Check Standard

10uL 11102010-42STD00
10uL 12012010-81STD00

To 1mL with hexane lot #104946

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Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	12/9/2010

Project No. 049
Book No. 2278

LE 100 ug PCB congener STD

Page No.

12092010-091STD00
100 ng.mL PCB congener std

~~$~~ 1S

- 20 ul of 08062010-167STD00 - PCB congener
- 10 ul of 09272010-011STD00 - IS

- added to a 1 ml volume flask & brought to volume with Hexane (Lot # 104946)

finish ~~conge~~ concentration 100 ng/ml

12092010-091STD00

To Page No.

essed & Understood by me, | Date | Invented by: [signature] | Date 12/9/10

Recorded by:

Project No. 644

Book No. 2278 TITLE 0.2% Aroclor 1254 in polysulfide

From Page No. ____

S13100

Ptrack # **S13100** **12102010-092STD00** Notebook # **2278**

THIOKOL 2235M Polysulfide Caulk

1 pound =	453.6	g

pTrack # (P011)

Caulk Composition

Base	19	pounds
Base	8618	g
Activator	680	g
Base-to-activator ratio	12.7	

Amount of caulk needed for testing

Caulk per sample *	10	g
# of samples**	3	samples
Amount of caulk needed	30	g

*A sample of 3-inch diameter and 0.5 cm thick requires about 7 g caulk

** Two samples for off-gassing test and the remianing for extraction

To make this amount of caulk: **90** g

Amount	Need			Actual	
Base	83.4	g		83.451	g
Activator	6.6	g		6.625	g
Total	90.00	g		90.08	g
Aroclor 1254 (009082010-189STD00)	0.180	g		0.1883	g
% Aroclor 1254	0.20%			0.21%	

AS

Tar - Acetate 8.0732 g
+ Alfoil

- Acetate + Alfoil 1254 - 8.2615

- Aroclor 1254 = 0.1883

To Page No.

Witnessed & Understood by me,	Date	Invented by: [signature]	Date
		Recorded by:	12/10

Project No. 049

Book No. 2278

E Standard for Commercial Lab

Page No.

Q10121301

AccuStandard® 125 Market St. • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com

C-254S-H-0.002X 1 mL

Aroclor 1254

0.2 µg/mL in Hexane

Lot: 210081060

Exp. Aug 4, 2020

FLAMMABLE

FOR LABORATORY USE ONLY

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm

STORAGE Ambient

200 ppb. Replacement for Q10092103.

To Page No.

essed & Understood by me,

Date

Invented by:

Recorded by: J. Nardin

Date 12/13/2010

Project No. 049

Book No. 2278 TITLE Standard for commercial lab

From Page No. ____

Q10121302

AccuStandard® 125 Market St. • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com

C-254S-H-0.008X 1 mL

Aroclor 1254

0.8 µg/mL in Hexane

Lot: 210091117

Exp. Sep 14, 2020

FLAMMABLE

FOR LABORATORY USE ONLY

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm

STORAGE Ambient

800 ppb. Replacement for Q10092105.

To Page No.

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	12/23/2020

LE Aroclor 1254 Standard

Project No. 049

Book No. 2278

n Page No. ____

12132010-95STD00
Aroclor 1254 (neat)

AccuStandard®
125 Market St. • New Haven, CT 06513 • USA
Tel. 203-786-5290 • www.accustandard.com

1 gram

C-254N-1G
Aroclor 1254

Lot: 124-191-B
Exp. Jul 28, 2015

HARMFUL

FOR LABORATORY USE ONLY
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm

STORAGE Ambient

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essed & Understood by me,

Date

Invented by:

Recorded by: J. Nardin

Date 12/13/2010

Project No. 049
Book No. 2278 TITLE PCB paint (16% w/w)

From Page No. ____

1212010-96STD00

S13200

Add 0.0770 g 12132010-95 STD00 Aroclor 1254 (neat) and 46.9668 g Sherwin Williams all surface enamel oil based Pr to an empty amber 60mL

Final concentration of PCBs in Paint = 0.16% (w/w)

Ptrack # S13200 12132010-096STD00 Notebook # 2278

Notebook ID	description		weight (g)	difference (g)	% PCBs (w/w
	Empty amber 60 ml jar	jar	72.6921		
12132010-095STD00	Aroclor 1254	jar + Aroclor 1254	72.7691	0.0770	0.16%
S03100	Sherwin Williams all surface Enamel Oil based Primer	jar +Aroclor 1254 + paint	119.7359	46.9668	total % pcb (w/w)
			total amt(g)	47.0438	0.16%

JN

Discarded 11/15/2011
JN

To Pag

Witnessed & Understood by me, | Date | Invented by: | Date 12/2/2010

.E RCS - for 12/14/2010

Project No. 049
Book No. 2278

Page No. ____

11102010-42STD00-12142010
Recovery Check std

10ul of 11102010-42STD00 RCS-
10ul of 09272010-11STD00 -IS

brought to 1ml with Methanol (lot#104946)

final concentration = 50 ng/ml

To Page No. ____

ssed & Understood by me,

Date

Invented by: [signature]

Recorded by:

Date 12/14/10

Project No. 049
Book No. 2278 TITLE RCS - 12/15

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11102010-42STD00 - 12/15/2010
Recovery Check Standard

10uL 11102010-42STD00
10uL 12012010-81STD00

To 1 mL with hexane, lot #104946

To Page No

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	12/15/2010

TITLE Res-12/16

Project No. 049

Book No. 2278

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11102010-42STD00 - 12/16/2010
Recovery Check Standard

Composed of: 10 ul 11102010-42STD00
10 ul 12012010-81STD00

Brought to 1 mL with hexane lot # 104946

Final concentration = 50 ng/mL

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Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by: J. Nardin	12/16/2010

Project No. 049

Book No. 2278 TITLE

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12172010-100STD00

7821GS EXP:11/11 2ml

CHEM SERVICE

PO BOX 599, WEST CHESTER, PA 19381 800-452-999

2.2'.3.5'-Tetrachlorobiphenyl Solution
100ug/ml In Hexane
Lot: 433-35B

FLAMMABLE-REPRODUCTIVE HAZARD

WARNING!: READ your MSDS before HANDLING chemical.

To Page No

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	12/17/2010

Project No. 049
Book No. 2278

LE

n Page No.

12172010-101STD00

F2174S EXP:04/12 5ml

CHEM SERVICE
PO BOX 599, WEST CHESTER, PA 19381 800-452-9994

4,4'-Dichlorobiphenyl Solution
2000ug/ml In t-Butylmethyl ether
Lot: 451-95B

CAUTION CONTAINS PCBs
(Polychlorinated Biphenyls)

FOR PROPER DISPOSAL INFORMATION CONTACT U.S. ENVIRONMENTAL PROTECTION AGENCY

FLAMMABLE-POISON-IRRITANT

WARNING!: READ your MSDS before HANDLING chemical.

1 mL solution of 12172010-101STD00 diluted by 20 made with hexane, lot # 104946. Concentration = 100 ug/mL

To Page No.

essed & Understood by me,

Date

Invented by:

Date

Recorded by: J Nardin

12/17/2010

Project No. 049

Book No. 2278 TITLE 3,4'- Dichlorobiphenyl

From Page No. ____

12172010-102STD00

9001GS EXP:11/13 2ml

CHEM SERVICE
PO BOX 599, WEST CHESTER, PA 19381 800-452-9994

3,4'-Dichlorobiphenyl Solution
100ug/ml in Hexane
Lot:436-28D

FLAMMABLE-REPRODUCTIVE HAZARD
WARNING!: READ your MSDS before HANDLING chemical.

JM

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Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	12/17/2010

Project No. 049

TLE IAP 12172010 - for 1242/1248 Book No. 2278

om Page No. ____

IAP 12/17/2010 composition:

5 ul 12172010-100STD00
5 ul 12172010-101STD00 (DL=20)
5 ul 12172010-102STD00

Brought to 2mL with hexane (lot# 104946)

Final Concentration of PCB standards = 250 ng/mL

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nessed & Understood by me,	Date	Invented by:	Date 12/17/2010
		Recorded by: J. Nardin	

Project No. 049

Book No. 2278 TITLE 1254 Standard

From Page No. ____

Q10122002

AccuStandard® 125 Market St. • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com

C-254S-H-0.006X 1 mL

Aroclor 1254

0.6 µg/mL in Hexane

Lot: 210081061

Exp. Aug 4, 2020

FLAMMABLE

FOR LABORATORY USE ONLY

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

STORAGE Ambient

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Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	12/15

LE 1254 Standard

Project No. 049

Book No. 2278

n Page No. ____

Q10122003

AccuStandard® 125 Market St. • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com

C-254S-H-0.002X 1 mL

Aroclor 1254

0.2 µg/mL in Hexane

Lot: 210081060

Exp. Aug 4, 2020

FLAMMABLE

FOR LABORATORY USE ONLY

WARNING This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

STORAGE Ambient

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essed & Understood by me, | Date | Invented by: | Date

Recorded by: J. Nerdin | 12/18

Project No. 944
Book No. 2278 TITLE IAP 1220-10C-IAP-4 for 1242/1248 column

From Page No. ____

- 10.0 ml of 12172010-103IAP into 2 ml volumetric flask brought to volume with hexane (lot # 104946)

final concentration is

To Page No.

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	

Project No. 049

LE Recovery Check Std - 12/20

Book No. 2278

n Page No.

11102010-42STD00 - 12/20/2010
Recovery Check Standard

Composed of: 10 ul 11102010-42STD00
10 ul 12012010-81STD00

To 1 mL final volume with hexane (lot #104946)

final concentration = 50 ppb

To Page No.

essed & Understood by me,

Date

Invented by:

Date

Recorded by: J. Nardin

12/22/2010

Project No. 049
Book No. 2278 TITLE Recovery Check std - 12/21

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11102010-42STD00 - 12/21/2010
Recovery Check Standard

Composed of: 10ul 11102010-42STD00
10ul 12012010-81STD00

To 1 mL final volume with hexane (lot #104946)

Final concentration = 50 ng/mL

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Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	12/22/2010

Project No. 049

.E IAP - 1223 2010 - 109IAP

Book No.

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essed & Understood by me,

Date

Invented by:

Date

Recorded by:

Project No. 049

Book No. 2278 TITLE Recovery Check - 12/22

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11102010-42STD00 - 12/22/2010
Recovery Check Standard

Composed of 10 uL 11102010-42STD00
10 uL 12012010-81STD00

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Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	12/22

Project No. 049

Book No. 2278

'LE 13C - C#206

m Page No. ____

12272010-111STD00
13C-2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl

Lot# MB 2060 1995

50 ug/mL in nonane.

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essed & Understood by me,

Date

Invented by:

Recorded by: J. Nardin

Date 12/27/2010

Project No. 149
Book No. 2278 TITLE Recovery Check Standard

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12272010-112STD00
Recovery Check Standard

200 uL 11102010-40STD00 ; (13C) 3,3',4,4'-Tetrachlorobiphenyl
200 uL 12272010-111STD00 .(13C) 2,2',3,3',4,4',5,5',6 Nonachlorobiphenyl
5 uL STD 11182009-54STD00 , 2,4,5,6-Tetrachloro-M-xylene.

Brought to 2mL with hexane, lot #104946.

To Page

Witnessed & Understood by me,	Date	Invented by:	Date
			12/27/2010

Project No. 049

Book No. 2278

.E Recovery Check Std - 12/27

Page No.

12272010 - 112 STD00 - 12/27/2010

Recovery Check Standard

Composed of: 10 uL 12272010-112STD00

10 uL 12012010-81STD00

Brought to 1 mL final volume with hexane, lot #104946.

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ssed & Understood by me,	Date	Invented by:	Date
		Recorded by: J. Nardin	12/27/2010

Project No. 049
Book No. 2278.
TITLE Recovery Check Std – 12/29

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12272010-112STD00 - 12/29/2010
Recovery Check Standard

10 ml 12272010-112STD00
10 mL 12012010-81STD00

Hexane lot # 104946

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Witnessed & Understood by me,	Date	Invented by:	Date
			12/29/2010

TLE Recovery Check Std – 1/4

Project No. 049

Book No. 2278

m Page No. ____

12272010-112STD00 - 1/4/2011
Recovery Check Standard

10 uL 12272010-112STD00
10 uL 12012010-81STD00

Hexane lot #104946

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nessed & Understood by me,	Date	Invented by:	Date
		Recorded by: J. Nardin	1/4/2011

Project No. 049
Book No. 2278 TITLE 13C - C#206

From Page No. ____

01052010-116STD00

2,2',3,3',4,4',5,5'6 Nonachloro [$^{13}C_{12}$] biphenyl

Wellington Laboratories, 1.2 mL, Lot# MB20601995

50 µg/mL in nonane

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Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	1/5/2011

Project No. 049

LE 13C – C#77 Book No. 2278

n Page No.

01052010-117STD00

3,3',4,4'-Tetrachloro[$^{13}C_{12}$]biphenyl

Wellington Laboratories, Lot # MB0771209

50 ng/mL in hexane

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essed & Understood by me, | Date | Invented by: | Date 1/5/2011

Recorded by: T. Nardish

Project No. 049

Book No. 2278 TITLE Recovery Check Standard

From Page No. ____

01052010-118STD00
Recovery Check Standard

1000 uL 01052010-117STD00 3,3',4,4'-Tetrachlorobiphenyl (13C-
1000 uL 01052010-116STD00 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (13
25 uL STD 11182009-54STD00, 2,4,5,6 Tetrachloro-M-Xylene

Brought to 10mL with hexane, lot #104946

To Page No

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	1/5/2011

Project No. 049
Book No. 2278

LE RCS-1/5

n Page No. ____

01052011-118STD00 - 1/5/2011
Recovery Check Standard

Composed of: 10mL 01052011-118STD00
10mL 12012010-81STD00

To 1mL with hexane, lot #104946

To Page No. ____

ıessed & Understood by me,	Date	Invented by:	Date
		Recorded by: J. Nardin	1/5/2011

Project No. 049
Book No. 2278 TITLE RCS-1/6

From Page No. ____

04052011-118STD00 - 1/6/2011
Recovery Check Standard

10ul 01052011-118STD00
10ul 12012010-81STD00

Hexane lot# 106411.

To Page N

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	1/6/2011

LE RCS - 1/11

Project No. 049

Book No. 2278

n Page No.

01052011-118STD00 - 1/11/2011
Recovery Check Standard

10 mL 01052011 - 118STD00
10 mL 12012010-81STD00

Hexane lot # 104946

To Page No.

ssed & Understood by me,

Date

Invented by:

Recorded by: J. Nardin

Date 1/11/2011

Project No. 049
Book No. 2278 TITLE RCS-4h 1/12

From Page No. ____

01052011-118STD00 - 1/12/2011
Recovery Check Standard

10 uL 01052011-118STD00
10 uL 12012010-81STD00

Hexane lot# 106411.

To Page N

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	

LE RCS - 1/13/2011

Project No. 049

Book No. 2278

n Page No. ____

01052011-118STD00 - 1/13/2011
Recovery Check Standard

10 uL 01052011-118STD00
10 uL 12012010-81STD00

Hexane lot # 106411

50 ng/mL

To Page No. ____

essed & Understood by me,

Date

Invented by:

Recorded by: J. Nardin

Date 1/13/2011

Project No. 049
Book No. 2278 TITLE Recovery Check Std - 1/17

From Page No. ____

01052011-1118STD00 - 11/17/2011
Recovery Check Standard

Composed of: 10 uL 01052011-118STD00
10 uL 12012010-81STD00

To 1 mL with hexane, lot #106411.

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Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	1/17/2011

TITLE Recovery Check Standard - 1/18

Project No. 049

Book No. 2278

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01052011-118STD00 - ~~1~~4/18/2011
Recovery Check Standard

Composed of: 10 uL 01052011-118STD00
10 uL 12012010-81STD00

To 1 mL with hexane, lot# 106411.

To Page No. ____

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by: J. Nardin	1/18/2011

Project No. 049

Book No. 2278 TITLE RCS- 1/19

From Page No. ____

05052011-118STD00 - 1/19/2011
Recovery Check Standard

Composed of : 10uL 01052011-118STD00
10uL 12012010-81STD00

Brought to 1 mL with hexane lot #106411.

To Page No.

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	1/19/2011

LE RCS-1/20

Project No. 049

Book No. 2278

n Page No. ____

01052011-118STD00- 1/20/2011
Recovery Check Standard

10ml 01052011-118STD00
10ml 12012010-81 STD00

To 1 mL with hexane lot # 106411.

To Page No. ____

essed & Understood by me,

Date

Invented by:

Recorded by: J. Nardin

Date 1/20/2011

Project No. 049
Book No. 2278
TITLE Recovery Check Std - 1/24

From Page No. ____

01052011-118STD00 - 1/24/2011
Recovery Check Standard

10 ml 01052011-118STD00
10 ml 12012010-81STD00

To 1 mL with hexane lot #106441.

To Page

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	1/24/2011

Project No. 049

E: Recovery Check Std - 1/25

Book No. 2278

Page No.

01052011-118STD00 - 1/25/2011
Recovery Check Standard

20 uL 01052011-118STD00
20 uL 12012010-81STD00

To 2 mL with hexane lot #106441.

To Page No.

ssed & Understood by me,

Date

Invented by:

Recorded by: J. Nardin

Date 1/25/2011

Project No. _____

Book No. _____ TITLE _____

From Page No. ____

01052011-118STD00 - 1/26/2011
Recovery Check Standard

To Page

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	

Project No. _____

.E _____ Book No. _____

ı Page No. ____

01052011-118STD00 - 1/27/2011
Recovery Check Standard

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essed & Understood by me, | Date | Invented by: | Date

Recorded by:

Project No. 044
Book No. 2278 TITLE - Neat - Aroclor 1254

From Page No. ____

01312011-132STD00
1254 Aroclor (neat)

AccuStandard®
125 Market St. · New Haven, CT 06513 · USA
Tel. 203-786-5290 · www.accustandard.com

C-254N-1G
Aroclor 1254

1 gram

Lot: 124-191-B
Exp. Jul 28, 2015

HARMFUL

FOR LABORATORY USE ONLY
WARNING This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm

STORAGE Ambient

AS

To Page

Witnessed & Understood by me,	Date	Invented by:	Date
			1/31/11

Project No. 049

TLE 0.71% 1254 Aroclor in Oil based primer

Book No. 2278

m Page No. ____

01312011-133STD00
0.71% 1254 Aroclor in oil based primer

S15000

Ptrack # **S15000** **01312011-133STD00** Notebook # **2278**

Notebook ID	description		weight (g)	difference (g)	% PCBs (w/w)
	Empty amber 60 ml jar	jar	72.7079		
01312011-132STD00	Aroclor 1254	jar + Aroclor 1254	73.0467	0.3388	**0.718%**
S03100	Sherwin Williams all surface Enamel Oil based Primer	jar +Aroclor 1254 + paint	120.2179	47.1712	**total % pcb (w/w)**
			total amt(g)	47.5100	**0.713%**

Discarded 11/15/2011

To Page No. ____

itnessed & Understood by me, | Date | Invented by: | Date

Recorded by:

Project No. 049
Book No. 2278 TITLE Rcs- 1/31

From Page No. ____

01052011-118STD00 - 1/31/2011
Recovery Check Standard

10uL 01052011-118STD00
10uL 12012010-815TD00

To 1mL with hexane lot # 106898

To Page

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	1/31/2011

TITLE RCS - 2/1

Project No. 649

Book No. 2278

From Page No. ____

01052011-118STD00 - 2/1/2011
Recovery Check Standard

10 ul 01052011-118STD00
10 ul 12012010-81STD00

To 1mL with hexane lot# 106898

To Page No. ____

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by: J. Nardin	2/1/2011

Project No. 049

Book No. 2278 TITLE 13C - C#77

From Page No. ____

02012011-136STD00

13C- 3,3',4,4'-Tetrachlorobiphenyl

Wellington Laboratories, 1.2mL, Lot # MB0771209

50 ug/mL in nonane.

To Page

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	2/1/2011

LE 13C – C#206

Project No. 047

Book No. 2278

n Page No.

02012011-137STD00

13C-2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl

Wellington Laboratories, 1.2mL, Lot # MB20601995

50 ug/mL in nonane.

To Page No.

essed & Understood by me,

Date

Invented by:

Recorded by: J. Nardin

Date 2/1/2011

Project No. 049
Book No. 2278 TITLE Recovery Check Standard

From Page No. ____

02012011-138STD00
Recovery Check Standard

1000 uL 02012011-136STD00 13C-3,3',4,4'-Tetrachlorobiphenyl
1000 uL 02012011-137STD00 13C-2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl
25 uL STD11182009-54STD06, 2,4,5,6 Tetrachloro-M-Xylene

Brought to 10mL with hexane lot#106898

To Page No.

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	2/1/2011

LE 13C - CH4

Project No. 649
Book No. 2278

n Page No. ____

02022011-139STD00

13C - 2,2'- Dichlorobiphenyl

Wellington Laboratories, Lot# MB0040900

50ug/mL in nonane.

To Page No. ____

essed & Understood by me,

Date

Invented by:

Recorded by: J. Nardin

Date 2/2/2011

Project No. 049
Book No. 2278 TITLE 13C ~ C#52

From Page No. ____

02022011-140STD00

13C-2,2',5,5'-Tetrachlorobiphenyl

Wellington Laboratories, Lot# MB0520510

50 ug/mL in nonane

To Page No.

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	2/2/2011

TITLE 13C - C# 194

Project No. 049
Book No. 2278

From Page No. ____

02022011-141STD00

13C - 2,2',3,3',4,4',5,5' - Octachlorobiphenyl

Wellington Laboratories, Lot # MB1940206

50 ug/mL in nonane.

EMPTY - 11/2/2011 JN

To Page No. ____

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by: T. Nardin	2/2/2011

Project No. 049
Book No. 2278 TITLE Internal standard

From Page No. ____

02022011-142STD00
Internal Standard

1000 ul 02022011-139STD00 - 2,2'-Dichlorobiphenyl (13C)
1000 ul 02022011-140STD00 - 2,2',5,5'-Tetrachlorobiphenyl (13C)
1000 ul 02022011-141STD00 - 2,2',3,3',4,4',5,5'-Octachlorobiphenyl (13C)

To 5mL with hexane, lot # 106898.

To Page No.

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	2/2/2011

Project No. 049

TITLE RCS - 2/3

Book No. 2278

From Page No.

02012011-138STD00 - 2/3/2011
Recovery Check Standard

Composed of: 10 mL 02032011-138STD00
10 mL 12012010-81STD06

To 1 mL with hexane, lot #106898

To Page No.

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by: J. Nardin	2/3/2011

Project No. 049
Book No. 2278 TITLE RCS- 2/7

From Page No. ____

02012011-138STD00 - 2/7/2011
Recovery Check Standard

10 uL 02012011-138STD00
10 uL 12012010-81 STD00

To 1 mL with hexane, lot #106898

Witnessed & Understood by me, | Date | Invented by: | Date

E RCS - 2/8

Project No. 049

Book No. 2278

Page No.

02012011-138STD00 - 2/8/2011
Recovery Check Standard

10 uL 02012010-138STD00
10 uL 12012010-81STD00

To 1 mL with hexane, lot # 106898

To Page No.

ssed & Understood by me,	Date	Invented by:	Date
		Recorded by: JoNardin	2/8/2011

Project No. 849
Book No. 2278 TITLE RCS- 2/9

From Page No. ____

02012011-138STD00 - 2/9/2011
Recovery Check Standard

10 ul 02012011-138STD00
10 ul 02022011-142STD00

To 1 mL with hexane, lot# 106898

To Page N

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	2/9/2011

Project No. 049
Book No. 2278

LE

n Page No.

02012011-138STD00 - 2/10/2011
Recovery Check Standard

10uL 02012011-138STD00
10uL 02022011-142STD00

To 1mL with hexane, lot# 106898.

To Page No.

ıessed & Understood by me,	Date	Invented by:	Date
		Recorded by: T. Nardin	2/10/2011

Project No. 649
Book No. 2278 TITLE Aroclor 1254 - PCB congeners

From Page No. ____

02112011-148CAL

0211 2011-148CAL01

5 ul of 08062010-167STD00 - PCB congeners Stock std 50
5 ul of 02012011 - 138 STD00 - Recovery Check std 5.
50 ul of 02022011 - 142 STD00 - IS 10 ug/ml

into a 5 ml volumetric with flask brought to volume with hexane (Lot 106898)
- final concentration 5 ng/ml

02112011-148CAL02

10 ul of 08062010-167STD00 - PCB congeners Stock 5 ug/
10 ul of 02012011-138STD00 - Recovery Std 5 ug/
50 ul of 02022011-142STD00 - IS

into a 5 ml volumetric flask brought to volume with hexane (Lot #106898)
final concentration 10 ng/ml

02112011-148CAL03

25 ul of 08062010-167STD00 - PCB cong STD 5 ug/ml
25 ul of 02012011-138STD00 - Recovery Std
50 ul of 02022011-142STD00 - IS
into a 5 ml volumetric flask brought to volume with hexane (Lot # 106898)
final conc 25 ng/ml

To Page No.

Witnessed & Understood by me,	Date	Invented by: Cindy	Date 2/11
		Recorded by:	

Project No. 049
Book No. 2278

LE

n Page No. 148

02/1/2011-148CAL04

100 ul of 08062010-167 STD 00 - PCB std
100 ul of 02012011-138 STD 00 - Recovery
100 ul of 02022011-142 STD00 - IS
into a 10ml volumetric flask brought
to volume with hexane (lot #1068487)
final concentration 50ng/ml

02/1/2011-148CAL05

40 ul of 08062011-167 STD00 - PCB Stock
40ul of 02012011-138 STD00 - Rec
20ul of 02022011-142 STD00 - IS

into a 2ml volume flask brought
to volume with hexane (lot #1068487)
final concentration 100ng/ml

02/1/2011-148CAL06

80ul of 08062011-167 STD00 - PCB Stock
80ul of 02012011-138 STD00 - Rec
20 ul of 02022011-142 STD00 - IS

into a 2ml volumetric flask brought
to volume with hexane (lot #1068487)

final concentration 200ng/ml

To Page No. END

essed & Understood by me, | Date | Invented by: Andy SB | Date 2/11
Recorded by:

Project No. 049
Book No. 2278 TITLE IAP - 2/14

From Page No. ____

IAP for 02112011-148CAL

02142011-150IAP01

Composed of:

µL 08092010-173STD00, 33'44'-Tetrachlorobiphenyl, 100 µg/m
µL 08092010-174STD00, 2,2'455'-Pentachlorobiphenyl, 100 µ
µL STD12142009-67STD00, 22'55'-Tetrachlorobiphenyl, 100 µg

To 2000 µL with hexane, lot#106898.

Final concentration of PCB standards: µg/mL

02142011-150IAP02

- 20 µl of 02142011-150IAP01
10 µl of 02022011-142STD00-IS
into a 1 ml volume flask and bright
to volume with hexane (lot # 106898)

Jen

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Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	2/14/2011

LE RCS - 2/14

Project No. 049
Book No. 2278

n Page No.

02012011-138STD00 - 2/14/2011
Recovery Check Standard

10 uL 02012011-138STD00
10 uL 02022011-142STD00

To 1 mL with hexane, lot # 106898.

To Page No.

essed & Understood by me,

Date

Invented by:

Recorded by: T. Nardin

Date 2/14/2011

Project No. 049

Book No. 2278 TITLE RCS - 2/15

From Page No. ____

02012011-138STD00 - 2/15/2011
Recovery Check Standard

10 uL 02012011-138STD00
10 uL 02022011-142STD00

To 1mL with hexane, lot # 106898

To Page

Witnessed & Understood by me,	Date	Invented by:	Date
			2/15/2011

Project No. 049

Book No. 2278

LE RCS-2/16

n Page No.

02012011-138STD00 - 2/16/2011
Recovery Check Standard

10 µL 02012011-138STD00
10 µL 02022011-142STD00

To 1 mL with hexane lot #106898.

To Page No.

nessed & Understood by me,	Date	Invented by:	Date
		Recorded by: J. Nardin	2/16/2011

Project No. 049
Book No. 2278 TITLE Aroclor 1260 Standard

From Page No. ____

02212011-154STD00

1260 Restek Aroclor standard.

5uL 10082009STD00 1000ug/mL
995uL Hexane lot# 106898.

5ug/mL

To Page No

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	2/21/2011

Project No. 049
Book No. 2278

'LE Recovery Check Std - 2/23

n Page No. ____

02012011-138STD00 - 2/23/2011
Recovery Check Standard

10 mL 02012011-138STD00
10 mL 02022011-142STD00

To 1 mL with hexane, lot # 106898.

To Page No. ____

essed & Understood by me,

Date

Invented by:

Date

Recorded by: T Nardin

2/23/2011

Project No. 049
Book No. 2278 TITLE RCS-2/24

From Page No. ____

02012011-138STD00 - 2/24/2011
Recovery Check Standard

10 uL 02012011-138STD00
10 uL 02022011-142STD00

To 1mL with hexane, lot #106898

To Page No

Witnessed & Understood by me,	Date	Invented by:	Date
			2/24/2011

LE 1242 Aroclor

Project No. 049

Book No. 2278

n Page No. ~~157~~ 31

02252011-157STD00

1242 Aroclor Standard 10 ug/mL /mL

Composed of 10 mL 10292010-31STD00
990 mL hexane, lot # 106898

02252011-157STD01

1242 Aroclor Standard 1 ug/mL

Composed of: 100 mL 02252011-157STD00
10 mL 02022011-142STD00 (Internal Standard)
To 1 mL with hexane, lot # 106898.

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essed & Understood by me,

Date

Invented by:

Recorded by: J. Nardish

Date 2/25/2011

Project No. 049
Book No. 2278 TITLE 1248 Aroclor Standard

From Page No. 33

02252011-158STD00
1248 Aroclor Standard 10 ug/mL

Composed of 10 uL 11022010-33STD00
990 uL hexane lot # 106898

02252011-158STD01
1248 Aroclor Standard 1 ug/mL

Composed of 100 uL 02252011-158STD00
10 uL 02022011-142STD00
To 1mL with hexane lot # 106898.

To Page No.

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	2/25/2011

TITLE RCS-2/28

Project No. 049

Book No. 2278

From Page No. ____

02012011-138STD00 - 2/28/2011
Recovery Check Standard

10 uL 02012011-138STD00
10 uL 02022011-142STD00

To 1 mL with hexane, lot #106898.

To Page No. ____

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by: J. Nardin	2/28/2011

Project No. 049
Book No. 2278 TITLE 1242 Aroclor Standard

From Page No. 157

03012011-1605TD00

200 ul 02252011-1575TD00 (1242 10 ug/mL)
200 ul hexane, lot # 106898

1242 Aroclor - 5 ug/mL

To Page No.

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	3/1/2011

Project No. 047
Book No. 2278

E 1248 Aroclor Standard

Page No. 158

03012011-161STD00

200uL 02252011-158STD00 (1248 10 ug/mL)
200uL hexane, lot # 106898

1248 Aroclor - 5 ug/mL

To Page No.

essed & Understood by me,

Date

Invented by:

Date

Recorded by:

3/1/2011

T. Nardin

Project No. 049
Book No. 2279 TITLE Biphenyl Solution

From Page No. ____

03022011-162 STD00

Biphenyl Soln - 1mL
100ug/mL in Hexane
Lot: 431-147B

CHEM SERVICE

F1062JS EXP:11/11 1ml
CHEM SERVICE
PO BOX 599, WEST CHESTER, PA 19381 800-452-999
Biphenyl Solution
100ug/ml In Hexane
Lot: 431-147B
FLAMMABLE-REPRODUCTIVE HAZARD
WARNING!: READ your MSDS before HANDLING chemical.

03022011-162 STD01
Biphenyl soln - 5ug/mL

Composed of: 50uL 03022011-162 STD00
To 1mL with hexane, lot #106898.

To Page

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	3/2/2011

LE 1242 Aroclor STD

Project No. 049

Book No. 2278

n Page No. ____

D3032011-163STD00

1242 Aroclor Standard - 50 ug/mL

Composed of: 10 ml 10292010-31STD00
190 ml Hexane, lot # 106898.

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nessed & Understood by me,	Date	Invented by:	Date
		Recorded by: J. Nardin	3/3/2011

Project No. _____

Book No. _____ TITLE _____

From Page No. ____

02012011-138STD00 - 3/3/2011
Recovery Check Standard

10 ul 02012011-138STD00
10 ul 02022011-142STD00

To 1 mL with hexane lot#106898

To Page N

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	3/3/2011

Project No. 049
Book No. 2278

TLE – DCC mix with New IS

m Page No. ____

DCC 03082011-165STD00
50 ng/ml

Compressed of

10 ul of 12012010-076STD00 - RCB Compr 5ug/ml
10 ul of 02012011-138STD00 - Recon Chem 5ug/ml
10 ul of 02022011-142STD00 - IS

into a 1ml volume will fresh & brought to Volume with hexane (lot 106898)

final concentration 50 ng/ml

To Page No. ____

essed & Understood by me, | Date | Invented by: [signature] | Date 3/8
Recorded by:

Project No. 049
Book No. 2278 TITLE Recovery Check Standard

From Page No. ____

03102011-166STD00
Recovery Check Standard

200 ul 12272010-111STD00 (2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl,
200 ul 13C-3,3',4,4'-Tetrachlorobiphenyl (combination of the following:
01052011-117STD00
11102010-40STD00
02012011-136STD00
5 ul STD11182009-54STD00 (2,4,5,6-Tetrachloro-M-xylene)

To 2 mL with hexane, lot #106898.

To Page N

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	3/10/2011

.E RCS-3/10

Project No. 049

Book No. 2278

1 Page No. ____

03102011-166STD00 - 3/10/2011
Recovery Check Standard

10 uL 03102011-166STD00
10 uL 03022011-142STD00

To 1 mL with hexane, lot #106898

To Page No. ____

essed & Understood by me,

Date

Invented by:

Recorded by: J. Nardin

Date 3/10/2011

Project No. 049
Book No. 2278 TITLE RCS - 3/14/2011

From Page No. ____

03102011-166STD00 - 3/14/2011
Recovery Check Standard

10 µL 03102011-166STD00
10 µL 02022011-142STD00

To 1 mL with hexane, lot # 106898

To Page

Witnessed & Understood by me,	Date	Invented by:	Date
			3/14/2011

Project No. 049
Book No. 2278

TLE Recovery Check Standard – 3/17

m Page No. ____

03102011-166STD00 - 3/17/2011
Recovery Check Standard

10 ul ~~03102011~~ 1u 03102011-166STD00
10 ul 02022011-142STD00

To 1 mL with hexane, lot #106898.

To Page No. ____

ıessed & Understood by me,	Date	Invented by:	Date
		Recorded by: T. Narden	3/17/2011

Project No. 049
Book No. 2278 TITLE 13C - C#4

From Page No. ____

03222011-170STD00

13C - 2,2'Dichlorobiphenyl

Wellington Laboratories Lot # MB0040900

50ug/mL in nonane.

To Page No

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	03/22/2011

LE 13C - CH#52

Project No. 049

Book No. 2278

n Page No. ____

03222011-171STD00

13C - 2,2',5,5' - tetrachlorobiphenyl.

Wellington Laboratories, Lot# MB0520510

50 ug/mL in nonane.

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essed & Understood by me,

Date

Invented by:

Recorded by: J. Nardin

Date 3/22/2011

Project No. 049
Book No. 2278 TITLE 13C-CB194

From Page No.

03222011-172STD00

13C - 2,2',3,3',4,4',5,5'-Octachlorobiphenyl

Wellington Laboratories - Lot# MB1940206

50 ug/mL in nonane.

To Page No

Witnessed & Understood by me,	Date	Invented by:	Date
			3/22/2011

LE Internal standard

Project No. 649
Book No. 2278

n Page No. ____

03222011-173STD00
Internal Standard

1000 ul 03222011 - 170STD06 - (13C) 2,2'- Dichlorobiphenyl
1000 ul 03222011- 171STD00 - (13C) 2,2',5,5'- tetrachlorobiphenyl
1000 ul 03222011 172STD00 (13C) 2,2',3,3',4,4',5,5'- Octachlorobiphenyl

To 5mL with hexane, lot # 106898

To Page No. ____

essed & Understood by me,

Date

Invented by:

Recorded by: J. Nardin

Date 3/22/2011

Project No. 049

Book No. 2278 TITLE RCS- 3/24

From Page No. ____

03102011-166STD00 - 3/24/2011
Recovery Check Standard

10 ml 03102011-166STD00
10 ml 03222011-173STD00

To 1 ml with hexane lot # 106898

To Page N

Witnessed & Understood by me,	Date	Invented by:	Date
			3/24/2011

TLE 13C - C#77

Project No. 049

Book No. 2278

m Page No.

03282011-175STD01

13C - 3,3',4,4'-Tetrachlorobiphenyl

Wellington Laboratories - 1.2 mL, Lot MB0771209

50 ug/mL in nonane.

To Page No.

nessed & Understood by me,	Date	Invented by:	Date
		Recorded by: T. Nardin	3/28/2011

Project No. 049
Book No. 2278 TITLE 13C - C#206

From Page No.

03282011-176STD01

13C- 2,2',3,3',4,4',5,5',6- Nonachlorobiphenyl

Wellington Laboratories - 1.2mL, Lot MB2060 1995

50ug/mL in nonane.

To Pag

Witnessed & Understood by me,	Date	Invented by:	Date
			3/28/2011

LE Recovery Check Standard

Project No. 049
Book No. 2278

n Page No. ____

03282011-177STD00
Recovery Check Standard

1000 ul 03282011-175STD01 13C-3,3',4,4'-Tetrachlorobiphenyl
1000 ul 03282011-176STD01 13C-2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl
25 uL STD 11182009-54STD00 2,4,5,6-Tetrachloro-M-xylene

Brought to 10 mL with hexane, lot #106898

To Page No. ____

essed & Understood by me,

Date

Invented by:

Date

Recorded by:
J. Nardin

3/28/2011

Project No. 049
Book No. 2278 TITLE RCS - 3/28

From Page No. ____

03282011-177STD00 - 3/28/2011
Recovery Check Standard

10ul 03282011-177STD00
10ul 03222011-173STD00

To 1mL with hexane, lot #106898.

To Page N

Witnessed & Understood by me,	Date	Invented by:	Date
			3/28/2011

Project No. 049

TLE RCS - 3/29

Book No. 2278

m Page No.

03282011-177STD00 - 3/29/2011
Recovery Check Standard

10 uL 03282011-177 STD00
10 uL 03222011-173 STD00
To 1 mL with hexane lot # 110182

To Page No.

nessed & Understood by me,	Date	Invented by:	Date
		Recorded by: T. Nordin	3/29/2011

Project No. 949
Book No. 2278 TITLE New PCC with New IS

From Page No. ____

DCC 03302011-180STD00
50 ng/mL

Contains 10 ul of 08062010-167STD00 "PCB Comm"
10 ul of 03282011-175STD00 "PCB Reg STD
10 ul of 03222011-173STD00 "IS"

added to 1.0 ml volume silica flask
and brought to volume with hexane (lot # 110182)

final concentration = 50 ng/ml

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Witnessed & Understood by me,	Date	Invented by: Andy S	Date
		Recorded by:	3/30

Project No. 049

TLE Recovery Check Standard.

Book No. 2278

m Page No. ____

03302011-181STD00
Recovery Check Standard

500 ul (11102010-40STD00 and 03282011-175STD00) 3,3',4,4'-Tetrachlorobiphenyl (13
500 ul (12272010-111STD00 and 02012011-137STD00) 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (13C)
12.5 uL STD 11182009-54STD00; 2,4,5,6-Tetrachloro-M-xylene

Brought to 5 mL with hexane lot # 110182.

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nessed & Understood by me,	Date	Invented by:	Date
		Recorded by: J. Nardin.	3/30/2011

Project No. 049
Book No. 2278 TITLE RCS-3/30/2011

From Page No. ____

03282011-177STD00 - 3/30/2011
Recovery Check Standard

10 ml 03282011-177STD00
10 ml 03222011-173STD00

To 1 mL with hexane lot# 110182

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Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	3/30/2011

Project No. 049
Book No. 2278

'LE Recovery Check std - 3/31

m Page No.

03302011-181STD00 - 3/31/2011
Recovery Check Standard

10 ul 03302011-181STD00
10 uL 0322-2011-173 STD00

To 1 mL with hexane, lot# 110182.

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nessed & Understood by me,	Date	Invented by:	Date
		Recorded by: J. Nardin	3/31/2011

Project No. 049

Book No. 2278 TITLE RCS - 4/5

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03302011-

03282011-181STD100 - 4/4/2011
Recovery Check Standard

10 uL 03282011-181STD00
10 uL 03222011-173STD00

To 1 mL with hexane lot # 110182.

03302011-181STD00- 4/7/2011
Recovery Check Standard

As above.

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Witnessed & Understood by me,	Date	Invented by:	Date
			4/4/2011

TLE RCS-4/12

Project No. 049
Book No. 2278

m Page No.

03302011-181STD00 - 4/12/2011
Recovery Check Standard

See page # 188

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nessed & Understood by me,	Date	Invented by:	Date
		Recorded by: T. Nardin	4/12/2011

Project No. 649

Book No. 2278 TITLE Arochlor 1242 for ballast

From Page No. ____

04112011-186STTD00

-510601- light ballast "BC-R2-02" fluid taken from the capacitor (almost colorless) -

The substitute is Arochlor 1242

To Page No.

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	

TLE 0.5~~1~~% 0.51% Aroclor in paint

Project No. 049

Book No. 2278

m Page No. ____

S15100

04112011-187STD00
0.51% 1242 Aroclor in paint (w/w)

Ptrack # **S15100** **04112011-187STD00** Notebook # **2278**

Notebook ID	description		weight (g)	difference (g)	% Aroclor (w/w)
	Empty amber 60 ml jar	jar	72.6448		
04112011-186STD00	Aroclor 1242	jar + Aroclor 1242	72.8900	0.2452	
S03100	Sherwin Williams all surface Enamel Oil based Primer	jar +Aroclor 1242 + paint	120.2950	47.4050	**total % Aroclor (w/w)**
			total amt(g)	47.6502	**0.51%**

AS

Discarded
11/15/2011 JM

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essed & Understood by me, | Date | Invented by: [signature] | Date 4/11/10

Recorded by:

Project No. 049

Book No. 2278 TITLE RCS - 4/12

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03302011-181STD00 - 4/12/2011
Recovery Check Standard

10 ul 03302011-181STD00
10 ul 03222011-173STD00

To 1mL with hexane lot#110182

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Witnessed & Understood by me,	Date	Invented by:	Date
			4/12/2011

LE 13C - C#77

Project No. 049
Book No. 2278

n Page No. ____

~~04132011-1385TD00~~ 04132011-1895TD00

13C-3,3',4,4'-Tetrachlorobiphenyl

Wellington Laboratories, 1.2 mL, Lot# MB0771209

~~50 mL~~

50 ug/mL in nonane.

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essed & Understood by me,	Date	Invented by:	Date
		Recorded by: J. Nardin	4/13/2011

Project No. 049
Book No. 2278 TITLE 13C – C#206

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0413 2011-190 STD00

13C – 2,2',3,3',4,4',5,5',6 – Nonachlorobiphenyl

Wellington Laboratories, 1.2mL, Lot MB20601998

50 µg/mL in nonane.

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Witnessed & Understood by me,	Date	Invented by:	Date
			4/13/2011

TLE Recovery Check Standard

Project No. 049

Book No. 2278

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04132011-191STD00
Recovery Check Standard

Composed of: 1000 uL 04132011-189STD00 (13C-3,3',4,4'-Tetrachlorobiphenyl)
1000 uL 04132011-190STD00 (13C-2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl)
25 uL ~~STD1118STD~~ STD11182009-54STD00 (2,3,5,6-Tetrachloro-M-xylene)

To 10 mL with hexane, lot # 110182.

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nessed & Understood by me,	Date	Invented by:	Date
		Recorded by: J. Nardin	4/13/2011

Project No. 649
Book No. 2278 TITLE RCS-4/13

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04132011-191STD00 - 4/13/2011
Recovery Check Standard

10 ul 04132011-191STD00
10 ul 03222011-173STD00

To 1 mL with hexane, lot #110182.

03302011-181STD00 - 4/13/2011
Recovery Check Standard

10 ul 03302011-181STD00
10 ul 03222011-173STD00

To 1 mL with hexane, lot #110182.

To P

Witn

Witnessed & Understood by me, | Date | Invented by: | Date 4/13/2011