LABORATORY NOTEBOOK

PCB Standard Preparation Notebook

ARCADIS GERAGHTY & MILLER

Project No. 049
Book No. 2246

Preparing a 1260 Aroclor STD

Page No. 5 of

Purpose: To prepare a 1260 Aroclor STD @10 ug/ml from 1,000 ug/ml STD ordered from Restek with Hexane

- added 20ul to 2.0ml volume flask
  - diluted with hexane

  - 1260 Aroclor STD - 1000 ug/ml - from Restek
    Cat # 32012 / Lot A061646
    Exp - 8/2015
    (10082009STD00)

  - The 10 ug/ml STD
    - 10082009STD01

Data file CAL0001

To Page No.

d & Understood by me, | Date | Invented by: [signature] | Date 10/8/09
Recorded by:

Project No. _____

Book No. 2246 TITLE Preparing a 1254 Aldrin STD

From Page No. STU

Purpose: To prepare a ~~1254~~ AS 1254 Aldrin STD @ 10 ~~ug~~/ml from a 1000 ug/ml STD and for Reshot

- added 20ul of 1254 Aldrin (10092009STD007) to a 2ml volume flask and dilute with hexane

- 10092009STD007 = 1254 Aldrin STD - 1000 ug/ml
  Cat# 32011 / A 064054
  Exp 12/2015
  in Parks

- 10 ppm Solution of 1254

  - 10092009STD01

    Data file
    CAL0002

- 10092009-02STD02
  50 ng/ml 1254 Aldrin STD
  - 5ul of 10092009-02STD01
  - 985ul of hexane
  final conc 50 ng/ml
- 10092009-02STD03
  1 ul/ml Low cont (100 ul of 10092009-02STD01
  900 ul of Hexane

To Page No

Witnessed & Understood by me,	Date	Invented by: Andy S	Date
		Recorded by:	10/07

Project No. _____

TLE Preparing a 1016 Aroclor STD Book No. 7246

m Page No. 51

Purpose: To prepare a 1016 Aroclor STD @ 10 ppm
for a 1000 ug/ml STD ~~and~~ AS order for Restock

- ~~add~~
1005 AS
- 1014 2009 STD002 = 1016 Aroclor STD
Cat 32006 / A066907
Exp 5/2016
for Rest Tr

10 ppm STD of 1016
- added 20 ul of 1016 (10142009 STD00)
to 2 ml volume flask and diluted with
hexane
(10142009 STD01)
Data file
CAL0003

SG1604

To Page No. En

...essed & Understood by me,	Date	Invented by: [signature]	Date
		Recorded by:	10/14

Project No. 044

Book No. 2246 TITLE Pre prep Congener mix #4

From Page No. Stat

- Purpose: To prepare Congener mix #4 @ ~~5 ppm~~ AS 5 ppm in Hexane.

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

C-CS-04 1 mL
PCB Congener Mix #4
10.0 µg/mL in Isooctane
Lot: B9010021 22 comps.
Exp: Jan 7, 2019 FLAMMABLE

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

CAL101920090STD00

- Prepared a 5 ppm STD

— 100 ul of CAL101920090-STD00 & added 100 ul of Hexane for final concentration of 5 ppm AS

CAL0004

Data file: CAL0005

To Page No.

Witnessed & Understood by me,	Date	Invented by: [signature]	Date
		Recorded by:	11/19

Project No. 044

TLE Prepay Congen Mix #5 Book No. 2246

m Page No. 5ite

purpose: To prepare Congen mix #5 @ 5 ppm in [illegible]

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

C-CS-05 1 mL
PCB Congener Mix #5
10.0 µg/mL in Isooctane
Lot: 209081305 20 comps.
Exp: Sep 1, 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

CAL 10202009-05-STD 00

- Prepared a 5ppm STD of CAL 10202009 (05) STD-0
  - 100 ul of CAL 10202009 (05) STD 00
  - 100 ul of Hexane
  - final concentration of 5 ppm

Data file: CAL 0006

To Page No.

...essed & Understood by me,	Date	Invented by: [signature]	Date
		Recorded by:	10/20

Project No. 644
Book No. 2246 TITLE Preparation Congener Mix #1

From Page No. 5a

Pump a to prepare PCB congener mix #1 @ 5 ppm in Hex

AccuStandard® 125 Market St. • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com
C-CS-01 1 mL
PCB Congener Mix #1
10.0 µg/mL in Isooctane
Lot: B8090208 39 comps.
Exp: Sep 24, 2018 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

CAL10202009-06 STD 00

Preparing a 5 ppm STD of CAL1020 2009-06 in Hex

100 ul of CAL10202009-06 STD 00
100 ul of Hexane
final concentration of 5 ppm

Date file
CAL0007

To Page No.

Witnessed & Understood by me,	Date	Invented by: [signature]	Date
		Recorded by:	10/20

TITLE Preparing Congener mix #2

Project No. 644

Book No. 2246

From Page No. 5[illegible]

purpose: To prepare PCB congener mix #2 @ 5 ppm in Hex

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

C-CS-02 1 mL

PCB Congener Mix #2

10.0 µg/mL in Isooctane

Lot: B4050059 36 comps.

Exp: May 10, 2014 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

CAL10202009-07STD00

- preparing a 5ppm STD of CAL10202009-07STD00 in Hex

100ul of CAL10202009-07STD00

100ul of Hexane

final concentration of 5ppm

Date file: CAL0008

To Page No. ____

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	10/20

Project No. 044
Book No. 2246 TITLE Preparation of Congener Mix #3

From Page No. STD

Prepare: To prepare PCB Congener mix #3 @ 5ppm in Hexane

AccuStandard® 125 Market St. • New Haven, CT 06513 • USA Tel. 203-786-5290 • www.accustandard.com
C-CS-03 1 mL
PCB Congener Mix #3
10.0 µg/mL in Isooctane
Lot: B8060159 27 comps.
Exp: Jun 16, 2018 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

CAL10202009-08STD00

prepare a 5ppm STD of CAL10202009-08STD00

100ul of CAL10202009-08STD00
100ul of Acetone
fill container of 5ppm

Date file
CAL0009

To Page N

Witnessed & Understood by me, Date Invented by: Date 10/20

Project No. 044

TLE Preparation of Congener Mix #6 Book No. 2246

m Page No. STM

Purpose: To prepare PCB Congener mix #6 @ 5ppm in Hexane

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

C-CS-06 1 mL
PCB Congener Mix #6
10.0 µg/mL in Isooctane
Lot: B9040025 18 comps.
Exp: Apr 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

CAL10202009-09STD00

Prepared a 5ppm STD of CAL10202009-09STD00

-100ul CAL10202009-09 STD00
-100ul Hexane
final concn of 5ppm

Date file
CAL8010

To Page No. ____

essed & Understood by me, | Date | Invented by: [signature] | Date 10/20
Recorded by:

Project No. 644

Book No. 2246 TITLE Preparation of PCB Congener Mix #

From Page No. 5-2

Purpose: To prepare PCB Congener mix #7 @ 5 ppm in Hexane

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

C-CS-07 1 mL
PCB Congener Mix #7
10.0 µg/mL in Isooctane
Lot: 209091013 14 comps.
Exp: Sep 1, 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

CAL10202009-010 STD-00

to prepare 5 ppm STD of CAL10202009-10 STD00

100ul of CAL10202009-10 STD00
100ul of ~~CAL~~ AS Hexane

final conc is 5 ppm
CAL10202009-10 STD01
fetomer - CAL0011

To Page No.

Witnessed & Understood by me,	Date	Invented by: [signature]	Date
		Recorded by:	10/20

E Preparation of PCB Congener Mix #8

Project No. 6119

Book No. 2246

Page No. Still

Purpose: To prepare PCB congener Mix #5 @ 5ppm in Hexane

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

C-CS-08 1 mL

PCB Congener Mix #8

10.0 µg/mL in isooctane

Lot: B2070003 12 comps.

Exp: Jul 1, 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

CAL10202009-11STDC0

To prepare 5ppm STD of CAL10202009-11STD00

100ul of CAL10202009-11STD00

100ul of Hexane

- final concentration is 5ppm

- CAL10202009-11STD07

Sol'n CAL0012

To Page No. ____

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Recorded by:

Project No. 644

Book No. 2246 TITLE Preparation of PCB Congener Mix #9

From Page No. Stet

Purpose - To prepare PCB congener mix #9 @ 5 ppm either

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

C-CS-09 1 mL

PCB Congener Mix #9

10.0 µg/mL in Isooctane

Lot: B8060160 21 comps.

Exp: Jun 16, 2018 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

CAL 1020 2009-12 STD 00

To prepare 5 ppm STD of CAL 1020 2009-12 STD 00

100 ml of CAL 1020 2009-12 STD 00

100 ml of Hexane

fin carrier = 5 ppm

CAL 1020 2009-12 STD 01

Date fed

CAL 0013

To Page No.

Witnessed & Understood by me, | Date | Invented by: [signature] | Date 10/20

Recorded by:

Project No. _____

TLE Preparation of PCB - Compound # 3 Book No. 2246

m Page No. Side "4-Chlorobiphenyl" @ 5 ppm

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

C-003S-TP
4-Chlorobiphenyl
100 µg/mL in Isooctane
Lot: B2060372
Exp. Jun 24, 2012

1 mL

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 Sonicate to Sol'n

4/1/09 FLAMMABLE

STD 11022009-13STD00

- purpose - To prepare 4-chlorobiphenyl @ 5 ppm in Hexane

~ 50 ml of STD11022009-13STD00
~~475~~ 950 ml of Hexane
Final Conc 5 ug/ml

STD 11022009-13STD01

File name

Empty on 4/1/10

To Page No. ____

nessed & Understood by me,	Date	Invented by: [signature]	Date 4/1/10
		Recorded by:	

Project No. _____

Book No. 2246 TITLE Preparation of PCB compr # 5 (2-3-Dichlorobiphenyl

From Page No. 3ce

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

C-005S-TP 1 mL
2,3-Dichlorobiphenyl
100 µg/mL in Isooctane
Lot: B3040274
Exp. Apr 24, 2013

11/2/2009

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 Sonicate to Sol'n

– STD 11022009-14STD00

Purpose: To prepare a 5 ug/ml of 2,3 Dichloro[illegible] solution in hexane

– 50 ul of STD11022009-14STD00
950 ul of Hexane

Final volume 5 ug/ml

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To Page No.

Witnessed & Understood by me,	Date	Invented by: [signature]	Date 4/1/10
		Recorded by:	

Project No. _____

LE Preparation of PCB Analyses #8 Book No. 2246

n Page No. ____

2,4 Dichlorophenyl

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

C-008S-TP
2,4'-Dichlorobiphenyl
100 µg/mL in Isooctane
Lot: B2100269
Exp. Oct 23, 2012

1 mL

11/2/09

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 Sonicate to Sol'

STD11622009-15 STD00

Purpose: To prepare a 5 ug/ml of 2,4 Dichlorobiphenyl in Hexane

-50 ul of STD 11022009-15 STD00
950 ul of Hexane
final concentration = 5 ug/ml

File name

(empty on 4/1/10)

To Page No. ____

essed & Understood by me, | Date | Invented by: [signature] | Date 4/1/10

Recorded by:

Project No. _____

Book No. 2246 TITLE Prep to of PCB conger to 17 "2,2,4-Tr. chlor

From Page No. 5 [illegible]

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

C-017S-TP
2,2',4-Trichlorobiphenyl
100 µg/mL in Isooctane
Lot: B6060082
Exp. Jun 8, 2016

1 mL

11/2/09

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 Sonicate to Sol'n

STD 11022009-16STD00

Prepn:
- To pre pare 5 ug/ml STD of 2,2,4 Tr. chlorbiphenyl in hexane

- 50 ml of STD11022009-16STD00
950 ml of hexane

find concentration 5 ug/ml
STD 11022009-16STD01

file me

To Page

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

TITLE Preparation of PCB compound # 28 Project No. Book No. 2246

From Page No. 54 "2,4,4-Trichlorobiphenyl

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

C-028S-TP 1 mL
2,4,4'-Trichlorobiphenyl
100 µg/mL in Isooctane
Lot: B9030174
Exp. Mar 12, 2019

11/2/09

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 Sonicate to Sol'n

STD 11022009-17STD00

Papers
- 2 papers 5 ug/ml STD of 2,4,4 Trichlorobiphenyl in isohexane

- 50 ml of STD11022009-17STD00
- 950 ml of hexane

final concentration = 5 ug/ml
STD 11022009-17STD01

Filename

Empty - 4-1-10

To Page No.

Witnessed & Understood by me, Date Invented by: [signature] Date 4/1/10

Recorded by:

Project No. 649
Book No. 2246 TITLE Prep site of 245 Trichlorobiphenyl (PCB Congener #

From Page No. Sub

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

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

1 mL

11/2/09

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 Sonicate to Sol'

STD 11022009-18STD00

- prep:
to prepare a 5 ug/ml of 2,4,5 Trichlorobiphenyl in hexane

- 50 ml of STD 11022009-18STD00
950 ml of hexane

final concept
5 ug/ml

STD 11022009-18STD01

Release

To Page No.

Witnessed & Understood by me,	Date	Invented by: [signature]	Date
		Recorded by:	11/02

Project No. 044

TITLE Preparation of 2,2,5,5 Tetrachlorobiphenyl Book No. 2246

From Page No. 5b

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

C-052S-TP 1 mL
2,2',5,5'-Tetrachlorobiphenyl
100 µg/mL in Isooctane
Lot: B8110112
Exp. Nov 11, 2018

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 Sonicate to Sol'n

11/2/09
FLAMMABLE

STD11022009-19STD00

Purpose:
To prepare a 5 ug/ml of 2,2,5,5 Tetrachlorobiphenyl

- 50 ul of STD11022009-19STD00
950 ul of Hexane

final concentration
5 ug/ml
STD11022009-19STD01

Jeb [illegible]

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To Page No.

Witnessed & Understood by me, | Date | Invented by: Cindy S | Date 4/1
Recorded by:

Project No.

Book No. 2246 TITLE Prep Tin of PCB compound #6

From Page No. 5h

"2,3,4,4 Tetrachlo

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

C-066S-TP
2,3',4,4'-Tetrachlorobiphenyl
100 µg/mL in Isooctane
Lot: B2110102
Exp. Nov 12, 2012

1 mL

1/12/09

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 Sonicate to Sol'n

STD11022009-20STD00

Prep
To prepare a 5ug/ml STD for 2,3,4,4 Tetrach
in hexane

- 50ul of STD11022009-20STD00
- 950ul of hexane

final concentration 5ug/ml
STD11022009-20STD01

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To Page No

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

Project No. _____

E Preparation of PCB congener #101 Book No. 2246

Page No. Stat "2,2,4,5,5-Pentachlorobiphenyl"

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

C-101S-TP 1 mL
2,2',4,5,5'-Pentachlorobiphenyl
100 µg/mL in Isooctane
Lot: B8110102
Exp. Nov 11, 2018

11/3/09

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 Sonicate to Sol'n

STD11032009-21STD00

Purpose:
To prepare a 5 ug/ml STD for 2,2,4,5,5-Pentachlorobiphenyl in hexane

- 50ul of STD11032009-21STD00
- 950ul of hexane

final Concentration 5ug/ml
STD11032009-21STD0e

file name

To Page No. ____

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

Recorded by:

Project No.
Book No. 2246 TITLE Preparation of PCB congener 113 "2,3,3,5,6-Pentach

From Page No. Stue

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

C-113S-TP
2,3,3',5',6-Pentachlorobiphenyl
100 µg/mL in Isooctane
Lot: B1050254
Exp. May 1, 2011

1 mL

11/03/09

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 Sonicate to Sol'n

STD11032009-22STD00

Prepare of 5ug/ml STD of 2,3,3,5,6-Pentachlorobi in hexane

- 50 ul of STD11032009-22STD00
- 950 ul of Hexane

final concentration 5ug/ml
STD11032009-22STD01

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To Page No

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

Project No. _____

E Preparation of PCB Congener 77 Book No. 2246

Page No. Stuff "3,3,4,4-tetrachlorobiphenyl

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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

C-077S-TP 1 mL
3,3',4,4'-Tetrachlorobiphenyl
100 µg/mL in Isooctane
Lot: B7090068
Exp. Sep 11, 2017

11/03/09

FLAMMABLE

STORAGE Sonicate to Sol'n

STD11032009-23STD00

Preparation of 5ug/ml STD of 3,3,4,4-tetrachlorobiphenyl in hexane

- 50 ml of STD11032009-23STD00
- 950 ml of hexane

final concentration
5ug/ml
STD11032009-23STD01

Silverine

To Page No. ____

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

Recorded by:

Project No.

Book No. 2246 TITLE Prepare of PCB [illegible] #100

From Page No. STD

"2,3,3,4,5-Pentachlor

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

C-106S-TP
2,3,3',4,5-Pentachlorobiphenyl
100 µg/mL in Isooctane
Lot: B0050263
Exp. Mar 13, 2019

1 mL

11/3/09

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 Sonicate to Sol'n

STD 11032009-24STD00

Prepare a 5 ug/ml STD of 2,3,3,4,5 Pentachlor

- 50 ul of STD11032009-24STD00
- 950 ul of Dichloro

- final conc 5 ug/ml

STD11032009-24STD

To Page N

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

Project No. _____

TLE Preparation of PCB Congen #118 Book No. 2246

m Page No. 210 "2,3,4,4,5-Pentachlorobiphenyl"

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

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

C-118S-TP 1 mL
2,3',4,4',5-Pentachlorobiphenyl
100 µg/mL in Isooctane
Lot: B7050021
Exp. May 2, 2017

11/3/09

FLAMMABLE

STORAGE Sonicate to Sol'n

STD 11032009-25 STD00

Prepare a 5ug/ml STD of 2,3,4,4,5 Pentachlorobiphenyl

- 50ul of STD11032009-25 STD00
- 950 ul of hexane

final concentration
5ug/ml
STD 11032009-25 STD01

file name
Novelen / STD0031.D

Entry on 4/1/10

To Page No. ____

essed & Understood by me, | Date | Invented by: Cindy S | Date 4/1/10

Recorded by:

Project No. _____

Book No. 2246 TITLE Preparing a PCB Congeni #123 S "2,3,4,4,5-Pentachlor

From Page No. Start

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

C-123S-TP
2',3,4,4',5-Pentachlorobiphenyl
100 µg/mL in Isooctane
Lot: B6060025
Exp. Jun 5, 2016

1 mL

11/3/09

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 Sonicate to Sol'n

STD11032009-26STD00

Purpose:
- To prepare a 5ug/ml STD of 2,3,4,4,5 Pentac

= 50ul of STD11032009-26STD00
950ul of Hexane

final concentration = 5ug/ml
STD11032009-26STD0.

filename
Data/2009/November/STD0014.D

Empty on 4/1/10

To Page No

Witnessed & Understood by me,	Date	Invented by: [signature]	Date
		Recorded by:	4/1/10

E Preparing a PCB Conger # 132 Project No. _____ Book No. 2246

Page No. Start "2, 2, 3, 4, 6 - Hexachlorobiphenyl"

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

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

C-132S-TP 1 mL
2,2',3,3',4,6'-Hexachlorobiphenyl
100 µg/mL in Isooctane
Lot: A9090189
Exp. Apr 12, 2017

11/3/09

FLAMMABLE

STORAGE Sonicate to Sol'n

STD 11032009-27STD00

Purpose:
- To prepare a 5 ug/ml Std of 2, 2, 3, 3, 4, 6-Hexachlorobiphenyl in hexane

- 50 ul of STD11032009-27STD00
- 950 ul of hexane

find concentration
5 ug/ml
STD11032009-27STD01

filename
Date | 2009 | Number | STD0015

Empty on 4/1/10

To Page No. _____

ssed & Understood by me, | Date | Invented by: Andy S | Date 4/1/10

Recorded by:

Project No.
Book No. 2246 TITLE Preparation of PCB congener #138 "2,2,3,4,4,5-Hexachlo

From Page No. Start

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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

1 mL

C-138S-TP
2,2',3,4,4',5'-Hexachlorobiphenyl
100 µg/mL in Isooctane
Lot: B7080010
Exp. Aug 1, 2017

11/3/09

STORAGE Sonicate to Sol'n

FLAMMABLE

STD11032009-28STD00

Purpose:
To prepare a 5 ug/ml STD of 2,2,3,4,4,5-Hexachlorobip in hexane

- 50 ul of STD11032009-28STD00
- 950 ul of hexane

final concentration
5 ug/ml
STD11032009-28STD01

file Name

To Page No. -

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

Project No. _____

E Preparing a PCB Congeni #140 Book No. 2246

Page No. Stat " 2,2,3,4,4,6 - Hexachlorobiphenyl

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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

C-140S-TP 1 mL
2,2',3,4,4',6'-Hexachlorobiphenyl
100 µg/mL in Isooctane
Lot: B2040153
Exp. Apr 10, 2012

11/3/09

FLAMMABLE

STORAGE Sonicate to Sol'n

STD11032009-29STD00

Purpose:
Use prepare a 5ug/ml std of 2,2,3,4,4,6 Hexachlorobiphenyl in hexane

- 50 ml of STD11032009-29STD
- 950 ml Hexane

final concentration = 5ug/ml
STD11032009-29STD01

Filename

To Page No. ____

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

Recorded by:

Project No.

Book No. 2246 TITLE Preparing a PCB congeneer #153 s

From Page No. Sheet

"2,2,4,4,5,5-hexachlo

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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

C-153S-TP 1 mL
2,2',4,4',5,5'-Hexachlorobiphenyl
100 µg/mL in Isooctane
Lot: B7110195
Exp. Nov 19, 2017

11/3/09

FLAMMABLE

STORAGE Sonicate to Sol'n

STD11032009-30STD00

Purpose
- To prepare a 5 ug/ml STD - 2,2,4,4,5,5-Hexachlor in hexane

- 50 ul of STD11032009-30STD00
- 950 ul of Hexane

final concentration
5 ug/ml
STD11032009-30STD01

[illegible]

To Page No.

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

Project No. _____

E Prepare a PCB congeneric #154 Std Book No. 2246

Page No. Still "2,2',4,4',5,6' Hexachlorobiphenyl

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C-154S-TP 1 mL
2,2',4,4',5,6'-Hexachlorobiphenyl
100 µg/mL in Isooctane
Lot: B3040341
Exp. Apr 29, 2013

11/3/09

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 Sonicate to Sol'n

STD11032009-31STD00

Purpose:-
To prepare a 5 ul/ml std of 2,2',4,4',5,6'-Hexachlorobiphenyl in Hexane

- 50 ul of STD11032009-31STD00
- 950 ul Hexane

Final Concentration
5 ug/ml
STD11032009-31STD01

Filename

Empty on 4-1-10

To Page No. _____

essed & Understood by me, | Date | Invented by: [signature] | Date 4/1
Recorded by:

Project No.

Book No. 2246 TITLE Preparing a PCB conger # 168 sold "2,3',4,4',5,6-Hexachl

From Page No. Stat

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C-168S-TP 1 mL
2,3',4,4',5',6-Hexachlorobiphenyl
100 µg/mL in Isooctane
Lot: B1060353
Exp. Jun 1, 2011

11/3/09

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 Sonicate to Sol'n

STD 11032009-32STD00

purpose:
- To prepare a 5 ug/ml std of 2,3,4,4,5,6-Hexachlorobiphenyl in Hexane

- 50 ul of STD11032009-32STD00
- 950 ul of hexane

final concentration 5 ug/ml
STD11032009-32STD01

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To Page No.

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

Project No. _____

E Prepare a PCB conger = 158 std Book No. 2246

Page No. 5W " 2,3,3',4,4',6 - Hexachlorobiphenyl "

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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.

C-158S-TP 1 mL
2,3,3',4,4',6-Hexachlorobiphenyl
100 µg/mL in Isooctane
Lot: B1060176
Exp. Jun 1, 2011

11/3/09

FLAMMABLE

STORAGE Sonicate to Sol'n

STD11032009 - 33STD00

upon:

I prepare a 5 ug/ml std of 2,3,3,4,4,6-Hexachlorobiphenyl in hexane

- 50 ul of 5 TD11032009 - 33STD00
- 950 ul fo hexane

final concentration 5ug/ml

STD11032009 - 33 STD01

file name

To Page No. ____

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

Project No. _____

Book No. 2246 TITLE Preparing a PCB congener # 17[illegible]

From Page No. Std

2,2,3,3',4,5,6'-Hepta[illegible]

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C-174S-TP
2,2',3,3',4,5,6'-Heptachlorobiphenyl
100 µg/mL in Isooctane
Lot: A9100230
Exp. Apr 13, 2017

1 mL

11/3/09

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 Sonicate to Sol'n

STD11032009-34STD00

Paper.

To prepare a 5 ug/ml std of 2,2',3,3',4,5,6'-Heptachlo[illegible] in Hexane

- 50 ul of STD11032009-34STD00
- 950 ul of Hexane

final concentration
5 ug/ml
STD11032009-34STD01

filename

To Page No.

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

Project No. _____
Book No. 2246

LE Preparing a PCB congen #180

n Page No. See "2,2,3,4,4,5,5-Heptachlorobiphenyl

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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

C-180S-TP 1 mL
2,2',3,4,4',5,5'-Heptachlorobiphenyl
100 µg/mL in Isooctane
Lot: B7090096
Exp. Sep 14, 2017

11/3/09

FLAMMABLE

STORAGE Sonicate to Sol'n

STD 11 03 2009-35 STD00

Procedure

To prepare a 5ug/ml STD of 2,2,3,4,4,5,5-Heptachlorobiphenyl in hexane

- 50 ul of STD11032009-35 STD00
- 950 ul of hexane

final concentration 5ug/ml
STD 11032009-35 STD01

filename

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To Page No. _____

essed & Understood by me,	Date	Invented by:	Date
		Recorded by:	4/1/10

Project No. _____

Book No. 2246 TITLE Preparing a PCB Conger #181 "2,2,3,4,4,5,6-Heptachlorobiphenyl

From Page No. 5Tle

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C-181S-TP
2,2',3,4,4',5,6-Heptachlorobiphenyl
100 µg/mL in Isooctane
Lot: B2020148
Exp. Feb 13, 2012

1 mL

11/3/09

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 Sonicate to Sol'n

STD11032009-36STD00

Purpose:
To prepare a 5 ug/ml std of 2,2',3,4,4',5,6-Heptachlorobiphenyl in Hexane

- 50 ml of STD11032009-36STD00
- 950 ul of hexane

final concentration
5 ug/ml
STD11032009-36STD01

[illegible]

To Page No. .

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

Project No. _____

TITLE Preparing a PCB cover #182 Book No. 2246

rom Page No. Stat "2,2,3,4,4,5,6-Heptachlorobiphenyl"

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C-182S-TP 1 mL
2,2',3,4,4',5,6'-Heptachlorobiphenyl
100 µg/mL in Isooctane
Lot: B3040344
Exp. Apr 29, 2013

11/04/09

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 Sonicate to Sol'n

STD11042009-37STD00

Purpose: To prepare a 5 ug/ml std of 2,2,3,4,4,5,6 Heptachlorobiphenyl in hexane

- 50 ul of STD11042009-37STD00
- 950 ul of hexane

final concentration
STD11042009-37STD01

file me

To Page No. ____

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

Recorded by:

Project No. _____

Book No. 2246 TITLE PCB AS Preparation of PCB congener # 186 "2,2',3,4,5,6,6'-Heptachlo

From Page No. 5 Tab

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C-186S-TP
2,2',3,4,5,6,6'-Heptachlorobiphenyl
100 µg/mL in Isooctane
Lot: B1090040
Exp. Sep 1, 2011

1 mL
11/04/09

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 Sonicate to Sol'n

STD 11042009-38 STD00

preparation:

To prepare a 5 ug/ml STD of 2,2,3,4,5,6,6-Heptachlorob in hex

- 50 ul of STD11042009-38 STD00
- 950 ul of hexane

final concentration
5 ug/ml
STD11042009-38 STD01

[illegible]

To Page No

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

TITLE AS PCB purpose of PCB Congeno # 187 Project No. _____ Book No. 2246

From Page No. Start "2,2,3,4,5,5,6-Heptachlorobiphenyl"

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C-187S-TP
2,2',3,4',5,5',6-Heptachlorobiphenyl
100 µg/mL in Isooctane
Lot: 209091284
Exp. Sep 24, 2019

1 mL
11/4/09

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 Sonicate to Sol'n

STD11042009-39 STD00

Purpose.
To prepare a 5 ug/ml STD of 2,2,3,4,5,5,6-Heptachlorobiphenyl in hexane

- 50ul of STD11042009-39STD00
- 950ul of hexane

final concentration
5 ug/ml
STD11042009-39 STD01

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To Page No. _____

Witnessed & Understood by me, | Date | Invented by: Andys | Date 4/1/10
Recorded by:

Project No.

Book No. 2246 TITLE Preparation of PCB Congener Std 193

From Page No. 57.2

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FOR LABORATORY USE ONLY

C-193S-TP 1 mL

2,3,3',4',5,5',6-Heptachlorobiphenyl

100 µg/mL in Isooctane

Lot: B1090043

Exp. Sep 1, 2011

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

STORAGE Sonicate to Sol'n

FLAMMABLE

11/04/09

STD11042009-40STD00

Purpose:

To prepare a 5 ug/ml std of 2,3,3',4',5,5',6-Heptachlorobi in hexane

- 50 ul of STD11042009-40STD00
- 950 ul of hexane

final concentration 5 ug/ml

STD11042009-40STD0C

file name

To Page No

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

Project No.

LE Preparation of PCB Congeners # 194 Book No. 2246

n Page No. 5-h

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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 Sonicate to Sol'n

C-194S-TP 1 mL
2,2',3,3',4,4',5,5'-Octachlorobiphenyl
100 µg/mL in Isooctane
Lot: B5100172
Exp. Oct 19, 2015

11/04/09

FLAMMABLE

STD11042009-41STD00

Purpose:
To prepare a 5ug/ml STD of 2,2,3,3,4,4,5,5-Octachlorobiphenyl in hexane

-50ul of STD11042009-41STD00
-950ul of hexane

final concentration
5ug/ml
STD11042009-41STD01

file me

Expires on 4/1/10

To Page No.

essed & Understood by me, | Date | Invented by: [signature] | Date 4/1

Recorded by:

Project No.
Book No. 2246 TITLE PCB Congener Mix #1
Retention Wi

From Page No. Start

STD11122009-42STD00

The following components were added diluted from Stock solutions (100 mg/mL) to create a 1:20 dilution (5mg/mL) in hexane. (100 µL each, the r hexanes →

- STD11022009-13STD00
- STD11022009-14STD00
- STD11022009-17STD00
- STD11022009-23STD00
- STD11032009-25STD00
- STD11032009-27STD00
- STD11042009-39STD00

Diluted Stock (42STD00) to 50 ng/mL in hexanes.

→ STD11122009-42STD01

STD11122009-42STD02

- Diluted 42STD01 to 5 ng/mL in hexane.

To Page N

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	11/12/09

TITLE PCB Congener Mix #2 Project No. Book No. 2246

From Page No. 5T

Retention Windows

STD11122009-43STD00

The following stock solutions were used to create a dilution (5 ng/mL) in hexanes. (100 mL of each)

- STD11022009-16STD00
- STD11022009-19STD00
- STD11032009-26STD00
- STD11032009-31STD00
- STD11032009-35STD00
- STD11042009-41STD00

STD11122009-43STD01

Diluted stock (43STD00) to 50 ng/mL in hexanes.

STD11122009-43STD02

Diluted 43STD01 to 5 ng/mL in hexanes.

To Page No. E

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by: [signature]	11/12/09

Project No.

Book No. 2246 TITLE

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C-004S-TP 1 mL
2,2'-Dichlorobiphenyl
100 µg/mL in Isooctane
Lot: B8030005
Exp. Mar 3, 2018

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 Sonicate to Sol'n

STD11132009-44STD00

Empty (4-1-10) [illegible]

To Page N

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	1/13/09

Project No.

TITLE

Book No. 2246

From Page No. 51

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

C-001S-TP 1 mL
2-Chlorobiphenyl
100 µg/mL in Isooctane
Lot: B2120306
Exp. Dec 27, 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 Sonicate to Sol'n

STD11132009-45STD00

Empty (4-1-10) Seals

To Page No.

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	11/13/09

Project No.

Book No. 2246 TITLE

From Page No.

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

C-206S-TP 1 mL
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl
100 µg/mL in Isooctane
Lot: B3070143
Exp. Jul 16, 2013

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 Sonicate to Sol'n

STD11132009 - 46STD00

Empty 4 1/2 1/10 ads

To Page No.

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	11/13/09

Project No. _____
LE _____ Book No. 2246
n Page No. ____

2,2',3,3',4,4',5,5'-Octachloro[$^{13}C_{12}$]biphenyl
50 µg/mL in Nonane (1.2 mL)
CAS: 20262-75-6
STD11162009-47STD00

2,2',3,3',4,4',5,5'-OCTACHLORO(13 C)BIPHENYL 50ug/mL
STD11162009-474STD00

CM

LOT #: MB1940206
expire on 4/6/10

1/8/10

(13C) 2,2',3,3',4,4',5,5'-Octachlorobiphenyl
STD11162009-47STD01

CM

50/µg/mL in Nonane

Lot # MB1940206

1/26/10

(13C) 2,2',3,3',4,4',5,5'-Octachlorobiphenyl 50ng/mL
STD11162009-47STD02 (1/26/10)

CM

expiry on 3/29/10

Lot # MB1940209

To Page No. ____

essed & Understood by me, | Date | Invented by: | Date 11/16/09
Recorded by: CM

Project No.
Book No. 2244 TITLE

From Page No.

(13 C)2,2',3,3',4,4',5,5',6-NONACHLOROBIPHENYL 50ug/mL
STD11162009-48STD00

in Nonane

CAS# 208263-75-6
Lot # MB20601995

expires on 4/

1/26/10

(13C) 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl
STD11162009-48STD01 (1/26/10)

in nonane
Lot # MB20601995

To Page N

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	1/1/10/09

Project No. _____

TITLE _____ Book No. 2246

From Page No. ____

(13 C) 2,2'-DICHLOROBIPHENYL 50ug/mL
STD11162009-49STD00

in Nonane

LOT # MB 004 0900
CAS# ~~22~~ 234432-86-1

exp'd 4/6/10 only

1/8/10

(13C) 2,2'-Dichlorobiphenyl 50ug/mL
STD11162009-49STD01

in nonane

Lot # 0040900

1/26/10

(13C) 2,2'-Dichlorobiphenyl 50ug/mL
STD11162009-49STD03 (1/26/10)

02

in nonane
Lot # 0040900

– exp'd 3/29/10

To Page No. ____

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	11/16/09

Project No. _____
Book No. 2246 TITLE _____

From Page No. ____

(13 C) 2,2',5,5'-TETRACHLOROBIPHENYL 50ug/mL
STD11162009-50STD00

in Nonane

Lot # MB052108 empty 4/16/1
CAS # 208263-80-3

1/8/10

(13C) 2,2',5,5'-Tetrachlorobiphenyl 50ug/mL
STD11162009-50STD01 in nonane

Lot # MB052108

1/26/10

(13C) 2,2',5,5'-Tetrachlorobiphenyl 50ug/mL
STD111620009-50STD02 (1/26/2010)

— empty 3/24/1

Lot: MB052108

To Page No

Witnessed & Understood by me,	Date	Invented by:	Date
			01/11/2011

Project No.

E Book No. 2246

Page No.

(13 C) 3,3',4,4'-TETRACHLOROBIPHENYL 50ug/mL
STD11162009-51STD00

CM

in Nonane
LOT# MB0770606
CAS# 105600-23-5

entry on
4/8/10

26/10

(13C) 3,3',4,4'-Tetrachlorobiphenyl 50ug/mL
STD11162009-51STD01 (1/26/2010)

— a

lot: MB0770606

— all used up — Am 03/08/10

To Page No.

essed & Understood by me,

Date

Invented by:

Recorded by: CM

Date 11/6/09

Project No.
Book No. 2244 TITLE DCB Congener Mix #5

From Page No. ST

STD11162009-52STD00

Equal 100 µL portions of the ~~mixture~~ standards below were combined to make a 5ng/mL dilution in hexane.

- STD 11132009-46STD00
- STD 11132009-45STD00
- STD11132009-44STD00

STD11162009-52STD01

diluted stock to 50 ng/mL in hexanes

STD11162009-52STD02

diluted 52STD01 to 5ng/mL in hexanes

STD11162009-52STD03
- diluted STD11162009-52STD01 (50ng/mL) by 1 to 2 to equal 25ng/mL

STD11162009-52STD04
- diluted STD11162009-52STD01 (50ng/mL) by 1 to 5 to equal 10ng/mL

To Page No

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	11/16/09

TITLE PCB ^{13}C Congener Mixture

Project No.

Book No.

From Page No. 8

STD11162009-53STD00

Equal 200 µL portions of the standards (50 µg/mL) were combined together to make a 5 µg/mL ~~stan~~ dilution in hexane

- STD 11 16 2009 - 47 STD00
- STD 11 16 2009 - 48 STD 00
- STD 11 16 2009 - 49 STD 00
- STD 11 16 2009 - 50 STD 00
- STD 11 16 2009 - 51 STD 00

EMPTY - 10/31/2011

To Page No.

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	11/16/09

Project No.

Book No.

TITLE

From Page No.

2,4,5,6-TETRACHLORO-M-XYLENE

STD11182009-54STD00

2000 µg/mL in acetone

To Pa

Witnessed & Understood by me,

Date

Invented by:

Recorded by:

Date 11/18/09

Project No. _____

LE _____ Book No. _____

Page No. ____

Internal Standard

STD11182009-55STD00 CM

Equal ~~4200 µL~~ 400 µL portions of the stock solns listed below were ~~mixed to~~ combined in hexanes: (2mL total volume)

STD11162009-49STD00
STD11162009-50STD00
STD11162009-47STD00

12/9/09

STD11182009-55STD01

- Made the same way as 55STD00

— Expt 4/6/09

1/8/10

STD11182009-55STD02 CM
Internal Standard (1/8/10)

Made same way as original STD; however, using:

→ STD11162009-49STD01
→ STD11162009-50STD01
→ STD11162009-47STD01

1/14/10

STD11182009-55STD03 CM
Internal Standard (1/14/10)

4/10

STD11182009-55STD04 CM Made w/ 49STD02, 50STD02 and 47STD02 To Page No. ____
Internal Standard (1/26/10)

essed & Understood by me, | Date | Invented by: | Date 11/18/09

Recorded by: CM

Project No. _____
Book No. _____ TITLE _____

From Page No. ____

Surrogates

STD11182009-56STD00

200 mL portions of STD11182009-51STD00 and STD11182009-48STD00 were combined with 5 mL of STD11182009-54STD00 and diluted to 2.0 mL in hexanes

12/15/09

Made another vial of Surrogates the same as above

STD11182009-56STD01 - expire 4/16 4.

1/8/10

STD11182009-56STD02
PCB Surrogates (1/8/10)

Made same way as above

1/14/10

STD11182009-56STD03
PCB Surrogates (1/14/10) - empty 12/21/11 AS

1/26/10

STD11182009-56STD04
PCB Surrogates (1/26/10)

made w/ 51STD01, 48STD01, 54STD01

To Page No

Witnessed & Understood by me,	Date	Invented by:	Date 1/18/09
		Recorded by:	

Project No. - 044

LE - PCB congen STD mix

Book No.

Page No. 5 ul

STD11182009-57STD00 PCB CONGENERS MIX

- added 250 ul of the following std @100ug in 5 ml Volume flask and diluted to 5 ml with Hexane

(1) STD11032009 - 26STD00 - 2,3,4,4,5 - Pentachlor (#123
(2) STD11032009 - 35STD00 - 2,2,3,4,4,5,5 - Heptac (#180)
(3) STD11022009 - 19STD00 - 2,2,5,5 - Tetrach (#52)
(4) STD11032009 - 23STD00 - 3,3,4,4 Tetrach (#77)
(5) STD11042009 - 37STD00 - 2,2,3,4,5,5,6 - Hept (#187)
(6) STD11032009 - 25STD00 - 2,3,4,4,5 - Penta (#118)
(7) STD11042009 - 41STD00 - 2,2,3,3,4,4,5,5 - Oct (#194)
(8) STD11022009 - 14STD00 - 2,3. Dichloro (#5)
(9) STD11022009 - 15STD00 - 2,3,4 - trichlor (#17)
(10) STD11022009 - 17STD00 - 2,4,4 - trichlor (#28)
(11) STD11022009 - 13STD00 - 4 - chloro (#3)
(12) STD11132009 - 45STD00 - 2 - chloro (#1)
(13) STD11132009 - 46STD00 - 2,2,3,3,4,4,5,6,6 - Nona (#206)
(14) STD11132009 - 44STD00 - 2,2 - dichlor (#4)
(15) STD11032009 - 31STD00 - 2,2,4,4,5,6 - Hexa (#154)
(16) STD11032009 - 27STD00 - 2,2,3,3,4,6 - Hex (#132)

- final volume was 5 ug/ml

18/10

STD11182009-57STD01
PCB Congeners (1/8/10)

Made the same as above

14/10

STD11182009-57STD02
PCB Congeners (1/14/10)

To Page No. END

essed & Understood by me, | Date | Invented by: [signature] | Date 11/18

Recorded by:

Project No. _____
Book No. _____ TITLE Calibration Mix 5

From Page No. ____

CW

CAL11182009-58CAL00 CAL. MIX 5

The following components were added to a 10 mL volumetric flask and diluted with hexanes!

→ 400 µL of PCB Stock (STD11182009-57STD00)
→ 400 µL of Surrogates Stock (STD11182009-56STD00)
→ 200 µL of I.S. Stock (STD11182009-55STD00)

To Page No

Witnessed & Understood by me,	Date	Invented by:	Date 11/18/09
		Recorded by:	

.E Calibration Mix 4

Project No.

Book No.

Page No.

CAL11182009-59CAL00 CAL. MIX 4

The following components were added to a 10 mL volumetric flask and diluted with hexanes:

→ 200 µL of PCB Stock (STD11182009 - 57STD00)
→ 200 µL of Surrogates Stock (STD11182009-56STD00)
→ 200 µL of I.S. Stock (STD11182009 - 55STD00)

To Page No.

ssed & Understood by me,

Date

Invented by:

Recorded by:

Date 11/18/09

Project No. _____

Book No. _____ TITLE Calibration Mix 3

From Page No. ____

CAL11182009-60CAL00 CAL. MIX 3

The following components were added to a 10 volumetric flask and diluted with hexane

→ 100 µL of PCB Stock (STD) 1118~~09~~ cm 2009-5 STD
→ 100 µL of Surrogates Stock (STD) 1118~~09~~ cm 2009-~~STD~~ cm 56 ST
→ 200 µL of I.S. Stock (STD) 1118 2009 ~~STD~~ cm 5.5 STD

To Page No

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	11/18/09

TITLE Calibration Mix 2 Project No. _____ Book No. _____

From Page No. ____

CAL11182009-61CAL00 CAL. MIX 2 CM

The following components were added to a 10 mL volumetric flask and diluted with hexanes:

→ 50 µL of PCB Stock (STD11182009-57STD00)
→ 50 µL of Surrogate Stock (STD11182009-56STD00)
→ 200 µL of IS Stock (STD11182009-55STD00)

	1	2	3	4	5	
pcb ConStock (1) ug/ml	100			"1000ng = 1 ug		
Stock (2) ug/ml	5	FV (ml) 5	amt of each (ml)	0.25		
Amount added (ml)	0.02	0.05	0.1	0.2	0.4	Total amount needed (ml)
FV (ml)=	10					0.77
ng/ml	10	25	50	100	200	
	10	25	50	100	200	
surrogates Stock (1) ug/ml	50	FV (ml) 2	amt of each (ml)	0.2		
surrogates Stock (2) ug/ml	2000					
Stock (3) ug/ml	5	FV (ml) 2	amt of each (ml)	0.005		
Amount added (ml)	0.02	0.05	0.1	0.2	0.4	
FV (ml)=	10					0.77
ng/ml	10	25	50	100	200	
	10	25	50	100	200	
IS Stock (1)ug/ml	50					
Stock (2) ug/ml	10	FV (ml) 2	amt of each (ml)	0.4		
Amount added (ml)	0.2	0.2	0.2	0.2	0.2	
FV (ml)=	10					1
ng/ml	200	200	200	200	200	
	200	200	200	200	200	
volume						
nt need to fill to 10 mls	0.24	0.3	0.4	0.6	1	
	9.76	9.7	9.6	9.4	9	

stock	Surrogate	Interal std
probiphenyl		
probiphenyl		
ichlorobiphenyl		
ichlorobiphenyl		X
-Trichlorobiphenyl		
-Trichlorobiphenyl		
5'-Tetrachlorobiphenyl		
,4,4'-Tetrachlorobiphenyl		X
	X	

To Page No. ____

Witnessed & Understood by me, | Date | Invented by: | Date 11/18/09

Recorded by: CM

Project No. _____
Book No. _____ TITLE Calibration Mix 1

From Page No. ____

CAL11182009-62CAL00 CAL. MIX 1

The following components were added to a 10 volumetric flask and diluted with hexane.

→ 20 µL of PCB Stock (STD11182009-57STD
→ 20 µL of Surrogate Stock (STD11182009-56STD
→ 200 µL of I.S. Stock (STD11182009-55STD

To Page No.

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	11/18/09

Project No. _____

TITLE _____ Book No. _____

From Page No. ____

STD11192009-63STD00

DILUTED 2,4,5,6 TETRACHLORO-M-XYLENE

- diluted in ~~10 mL~~ 2mL
5 mL

To Page No. ____

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

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Book No. _____ TITLE _____

From Page No. ____

2800GS EXP:12/13 2ml

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

2-Chlorobiphenyl Solution
100ug/ml In Hexane
Lot: 435-1B

FLAMMABLE-REPRODUCTIVE HAZARD

WARNING!: READ your MSDS before HANDLING chemical.

STD12142009-64STD00

To Page N

Witnessed & Understood by me,	Date	Invented by:	Date

Project No. _____

E _____ Book No. _____

Page No. ____

3620GS EXP:12/12 2ml

CHEM SERVICE

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

2.2'-Dichlorobiphenyl Solution
100ug/ml In Hexane
Lot: 435-12B

FLAMMABLE-REPRODUCTIVE HAZARD

WARNING!: READ your MSDS before HANDLING chemical.

STD 12142009-65STD00

Canyon # 4

To Page No. ____

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

Recorded by:

Project No. _____

Book No. _____ TITLE _____

From Page No. ____

8235GS EXP:10/11 2ml

CHEM SERVICE

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

2.4.4'-Trichlorobiphenyl Solution
100ug/ml In Hexane
Lot: 414-14B

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

STD 12142009-665TD00

Canyer #28

To Page No

Witnessed & Understood by me,	Date	Invented by:	Date

Project No. _____

TITLE _____ Book No. _____

From Page No. ____

7825GS EXP:06/12 2ml

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

2.2'.5.5'-Tetrachlorobiphenyl Solution
100ug/ml In Hexane
Lot: 422-141A

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

STD 12142009 - 67STD00

Conyer # 52

To Page No. ____

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

Project No. _____

Book No. _____ TITLE _____

From Page No. ____

9031GS EXP:11/12 2ml

CHEM SERVICE

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

2,3,4,4',5-Pentachlorobiphenyl Solution
100ug/ml In Hexane
Lot: 433-19B

FLAMMABLE-REPRODUCTIVE HAZARD

WARNING!: READ your MSDS before HANDLING chemical.

STD12142009-68STD00

Conza # 48 AS

Cayer #114

To Page No

Witnessed & Understood by me,	Date	Invented by:	Date

Project No. _____

LE _____ Book No. _____

n Page No. ____

5020GS EXP:10/13 2ml

CHEM SERVICE

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

2.2'.4.4'.5.6'-Hexachlorobiphenyl Solution
100ug/ml in Hexane
Lot:370-139B

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

STD12142009 - 69STDOC

To Page No. ____

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

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Project No. 049
Book No. 2246 TITLE C#180-

From Page No. ____

9044GS EXP:07/13 2ml

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

2,2',3,4,4',5,5'-Heptachlorobiphenyl
Solution
100ug/ml in Hexane Lot: 399-153B

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

STD 12142009- 70STD00
C#180

- STD12142009-70STD01
  - made ~~at~~ as a 1:25 dilution of STD12142009-70
- 40 ul of STD12142009-70STD
- 960 ul of Hexane
  Conc of 40 ug/ml

To Page No. ____

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	12/11

Project No. _____

TITLE _____ Book No. _____

From Page No. ____

6680GS EXP:7/15 2ml

CHEM SERVICE

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

2.2'.3.3'.4.4'.5.5'-Octachlorobiphenyl
Solution
100ug/ml in Hexane
Lot:370-139C
FLAMMABLE-REPRODUCTIVE HAZARD
WARNING!: READ your MSDS before HANDLING chemical.

STD 12142009- 7/STD80

Camp #144

To Page No. ____

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

Project No.
Book No. TITLE - IAP - Calibration Check Std

From Page No. Std

purpose: To prepare a IAP - calibration Check Standard Std

IAP12142009-72IAP00

- added 250 ul of the following in 5 ml volumetric

(1) STD 1214 2009-64STD00 - 2-Chlorobiphenyl (100 ug/ml)
(2) STD-12142009-65STD00 - 2,2-Dichlorobiphenyl (100 ug/ml)
(3) -STD-12142009-66STD00 - 2,4,4'-Trichlorobiphenyl (100 ug/ml)
(4) -STD-12142009-67STD00 - 2,2',5,5'-Tetrachlorobiphenyl (100 ug/ml)
(5) -STD-12142009-68STD00 - 2,3,4,4',5-Pentachlorobiphenyl (100 ug/ml)
(6) -STD-12142009-69STD00 - 2,2',4,4',5',6-Hexachlorobiphenyl (100 ug/ml)
(7) -STD-12142009-70STD00 - 2,2,3,4,4',5,5'-Heptachlorobiphenyl (100 ug/ml)
(8) -STD 12142009-71STD00 - 2,2,3,3',4,4',5,5'-Octachlorobiphenyl (100 ug/ml)

- To give a final volume of 5 ug/ml

IAP dilution of ~~from~~ standard # IAP12142009-72IAP00

0.099 ml ~~ml~~ of STD 11182009-55STD01 was added to a 5 ml volumetric flask -

0.099 ml of IAP12142009-72IAP00 was added to the same 5 ml volumetric and diluted to volume with hexane -

NJR-12/17/09

To Page No.

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	12/14/09

TITLE Calibration 1-11-10

Project No. _____

Book No. _____

From Page No. ____

1/11/10

~~CAL 01112010-73CAL01~~
~~CAL 01112010-73CAL02~~
~~CAL 01112010-73CAL03~~
~~CAL 01112010-73CAL04~~
~~CAL 01112010-73CAL05~~
~~CAL 01112010-73CAL06~~

did not work

CAL 01142010-73CAL01
CAL 01142010-73CAL02
CAL 01142010-73CAL03
CAL 01142010-73CAL04
CAL 01142010-73CAL05
CAL 01142010-73CAL06

1 2 3 4 5 6

PCB congener Combi Stock (1) ug/ml	100			"1000ng = 1 ug			
		FV (ml)	amt of each (ml)				
Stock (2) ug/ml	5	5		0.25			Total amount needed (ml)
Amount added (ul)	10	20	50	100	200	400	780
FV (ml)=	10						
ng/ml	5	10	25	50	100	200	
	5	10	25	50	100	200	
surrogates Stock (1) ug/ml	50	FV (ml)	amt of each (ml)				
		2		0.2			
surrogates Stock (2) ug/ml	2000	FV (ml)	amt of each (ml)				
Stock (3) ug/ml	5	2		0.005			
Amount added (ul)	10	20	50	100	200	400	780
FV (ml)=	10						
ng/ml	5	10	25	50	100	200	
	5	10	25	50	100	200	
IS Stock (1)ug/ml	50						
		FV (ml)	amt of each (ml)				
Stock (2) ug/ml	10	2		0.4			
Amount added (ul)	200	200	200	200	200	200	1200
FV (ml)=	10						
ng/ml	200	200	200	200	200	200	
	200	200	200	200	200	200	
Total volume (ml)	0.22	0.24	0.3	0.4	0.6	1	
Amount needed of hexane(ml) to fill to 10 m	9.78	9.76	9.7	9.6	9.4	9	

	PCB stock	Surrogate	Interal std	2nd source	CAS #
1	2-Chlorobiphenyl			X	
3	4-Chlorobiphenyl				
4	2,2'-Dichlorobiphenyl		X	X	
5	2,3-Dichlorobiphenyl				
17	2,2',4-Trichlorobiphenyl				
28	2,4,4'-Trichlorobiphenyl			X	
52	2,2',5,5'-Tetrachlorobiphenyl		X	X	
77	3,3',4,4'-Tetrachlorobiphenyl	X			
123	2',3,4,4',5-Pentachlorobiphenyl			X	

	PCB Congener Combination Stock solution
1	(C#1) 2-Chlorobiphenyl
2	(C#3) 4-Chlorobiphenyl
3	(C#4) 2,2'-Dichlorobiphenyl
4	(C#5) 2,3-Dichlorobiphenyl
5	(C#17) 2,2',4-Trichlorobiphenyl
6	(C#28) 2,4,4'-Trichlorobiphenyl
7	(C#52) 2,2',5,5'-Tetrachlorobiphenyl
8	(C#77) 3,3',4,4'-Tetrachlorobiphenyl
9	(C#123) 2',3,4,4',5-Pentachlorobiphenyl
10	(C#118) 2,3',4,4',5-Pentachlorobiphenyl

To Page No. ____

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	1/11/10

Project No.
Book No.
TITLE

From Page No. 51

STD011120-74STD00

200 µL of PCB Congeners [STD111182009-57STD01] and 200 µL of PCB Surrogates [STD111182009-56STD01] were added to a 2 mL volumetric flask and brought to volume with hexane.

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Witnessed & Understood by me,	Date	Invented by:	Date 1/11/10
		Recorded by:	

Project No. _____

TITLE _____ Book No. _____

From Page No. ____

NOTEBOOK INSERT LABEL

Chrysene-d12 4-8416

Lot: LB68048 EXP: JUN/2012 STORAGE: ROOM TEMP. 1 x 1ml

DATE RECEIVED: _____

SUPELCO Analytical
595 North Harrison Road • Bellefonte, PA
16823-0048 USA • Phone 814-359-3441

2000 ~~ug/ml~~ ug/ml in CH_2Cl_2

STD01122010 - 75 STD00

To Page No. ____

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

Project No. _____

Book No. _____ TITLE _____

From Page No. ____

NOTEBOOK INSERT LABEL

Phenanthrene-d10 48710-U

Lot: LB70961 EXP: OCT/2012 STORAGE: REFRIGERATE 1 x 1ml

DATE RECEIVED: _____

SUPELCO

595 North Harrison Road • Bellefonte, PA 16823-0048 USA • Phone 814-359-3441

2000 ug/ml in CH_2Cl_2

STD01122010-76STD00

To Page No.

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

Project No. 0C.6
Book No. 2246

E 01112010-77IAP-00

Page No.

IAP AS

IPA 01112010 PCB

AS

01112010-77IAP00 PCB

Purpose:

To prep a IAP standard for the Cal cover mode

- 45 ul of 12142009-72 IAP00 (5 ug/ml)
- 100 ul of 11182009-55STD03 (IS)

in 5 ml of hexane

final concentration is 45 ng/ml

To Page No.

essed & Understood by me, | Date | Invented by: | Date 1/13

Recorded by:

Project No. _____

Book No. _____ TITLE _____

From Page No. ____

1,2,3,4,5,6,7,8-Octachloronaphthalene
STD01122010-78STD00 100ug/mL

in MeOH

Lot # B6020150-1A

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

N-003S 1 mL
1,2,3,4,5,6,7,8-Octachloronaphthalene
100 (µg/mL) in MeOH
Lot: B6020150-1A
Exp. Oct 29, 2011

FLAMMABLE

FOR LABORATORY USE ONLY
WARNING: This product contains a chemical(s) known to the State of California to cause birth defects or other reproductive harm.

STORAGE Ambient

To Page No.

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	1/24/10

Project No. 649

TITLE – IAP – 01152010 – 79 IAP

Book No. 2246

From Page No. Sln

IAP01152010-79IAP00

Purpose
To prepare a IAP standard for the cal curve made on 12/14/2010 by Cong Mach

– 45 ml of IAP12142009 – 72 IAP00 (5 ug/ml)
– 100 ml of STD11182009 – 55 STD03 ~~(IS – [illegible])~~ IS
– (IS) – dilution at 01/4/10
in 5 ml volume flask with Hexane
–
for
final concentration of 45 ng/ml

AS

To Page No.

Witnessed & Understood by me,	Date	Invented by: [signature]	Date
		Recorded by:	1/15

Project No. 044

Book No. 2246 TITLE Decachlorobiphenyl STD Sol

From Page No. [illegible]

Congen # 209

STD02192010-80STD00

PPS-150-1
Lot: CC-3147
Exp: 11/30/2010
ULTRA
1 mL
Decachlorobiphenyl Solution
1 analyte(s) at 1000 µg/mL in toluene
250 Smith St, No Kingstown, RI 02852 USA
For Lab Use Only

STD02192010-80STD00

- Open & Transfer to a Vail on 2/19/10 Andy

To Page No

Witnessed & Understood by me,	Date	Invented by:	Date
		[illegible]	2/19

Project No. 049

TITLE Calibration Curve for Scanning Sec Book No. 2246

From Page No. STD

- Flex calibration curve contains

STD11022009-14STD00 (C#5) - 2,3-Dichlorobiphenyl
STD11022009-19STD00 (C#52) - 2,2,5,5-Tetrachlorobiphenyl
STD02192010-80STD00 (C#209) - 2,2,3,3,4,4,5,5,6,6-Dechlorobiphenyl

in hexane for fenuron concentration of 5ug/ml

- 250ul of both C#5 & C#52 was added to a 5.0ml volume flask
- 25ul of C#209 was added to the 5.0ml volume flask -
- it was brought to final volume with Hexane

STD02192010-81STD00

STD02192010-81STD00
5 ug/ml PCB short stock std 02-19-10

empty on 5/10/11
AS

To Page No.

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by: [signature]	2/19

Project No. 044
Book No. 2246 TITLE Recovery Standard Check Stan

From Page No. 52

The Recovery Check Standard contains

STD 1116 2009-48 STD01 - 2,2,3,3,4,4,5,5,6 - (CB) Nonachlorobiphenyl (C#206)

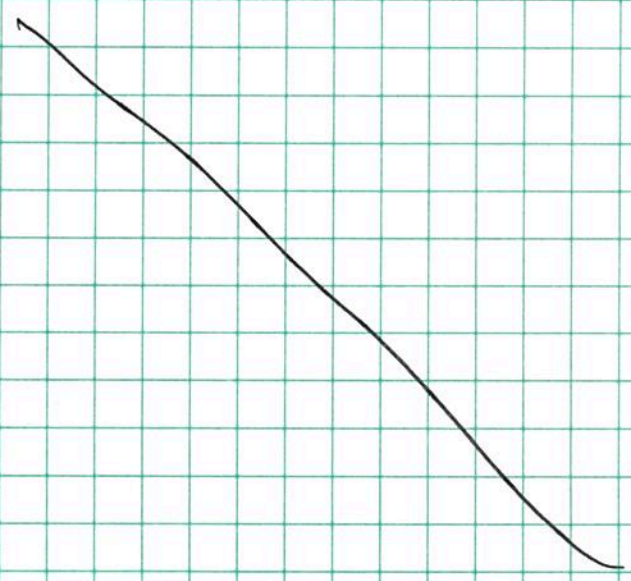
STD 1116 2009-51 STD01 - 3,3,4,4 - (CB) Tetrachlorobiphenyl (C#77)

STD 1118 2009-54 STD00 - 2,4,5,6 Tetrachloro-m-xylene (TMX)

in hexane: - the final concentration is a 5 ug/ml

~500 ul of both C#206 & C#77, 12.5 ul of TMX were added to 5.0 ml volume flask and brought to volume with hexane

STD02192010-82STD00 5 ug/ml(Recovery std)



To Page No

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	2/19

Project No. 049

TITLE Internal Standard

Book No. 2246

From Page No. 56

This internal standard contains

STD11162009-49STD03 - 2,2-(C13) Dichlorobiphenyl (C#4)
STD11162009-50STD03 2,2,5,5-(C13) Tetrachlorobiphenyl (C#52)
STD11162009-47STD02 - 2,2,3,3,4,4,5,5-Octachlorobiphenyl (C#194)

in hexane. The final concentration is 10 ug/ml

- 400 ul of C#4, C#52 & C#194 added to 2.0 ml volume flask and brought to volume with hexane

STD02222010-83STD00 10 ug/ml(IS std) — E.

- Empty 3/29/10

To Page No. 58

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	2/22

Project No. 049

Book No. 2246 TITLE - Surrogate dilution

From Page No. 5 ult

purpose: To dilute the surrogate std down at a working level

STD02222010 - 84STD00

STD02222010-84STD00
(10 ng/ml Recovery std)

Method

- add 10ul of STD1118 2009-56 STD04 to reference in a 5.0 ml volume flask

- took an aliquot of STD0222010 - 84-STD0. placed into 1ml volume flask and added 20ul of STD11182009-55STD04 - filled to volume with the solution to 1ml.

- ran on GC/MS Filename - STD0053.D
STD0054.D
STD0055.D

~~STD0222010-84STD01~~ AS

-

To Page No.

Witnessed & Understood by me,	Date	Invented by: [signature]	Date 2/8/2
		Recorded by:	

Project No. 049

TITLE Surrogate dilution

Book No. 2246

From Page No. STL

purpose: To dilute the surrogate stock STD ~~to~~ a working level.

STD02232010-85 STD 00 — data file name: STD0056.D

—

added 5 ul of STD ~~0118~~ 01262010 2009-56 STD04 (Surrogate Stock)
20 ul of STD 0118 2010-55 STD04 (Internal Stock)
to a 1.0 ml volumetric flask and brought to volume with hexane — final concent 25 mg/ml

STD 02232010-85 STD01

added 10 ul of STD 01262010-56 STD04 (Surrogate Stock)
20 ul of STD 01182010-55 STD04 (Internal Stock)
to a 1.0 ml volumetric flask and

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Witnessed & Understood by me,	Date	Invented by: Andy	Date 2/23
		Recorded by:	

Project No. _____

Book No. _____ TITLE _____

From Page No. ____

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

Project No. 049

TITLE PCB congen STD dilution

Book No. 2246

From Page No. Sal

Purpose: To dilute the PCB congen STD solution to 10 ng/ml

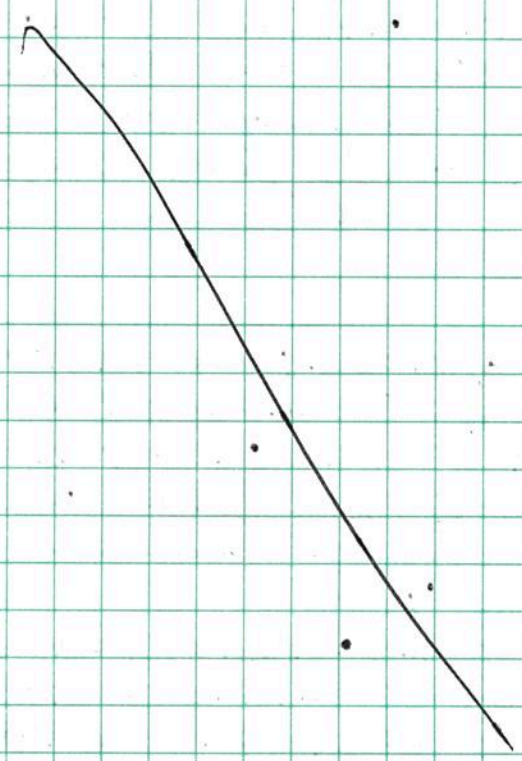
- add 4ml of STDH1182009-57STD02 to 2ml volume flask - bring to volume with Hexane

- Took an aliquot of 196ml and add 4ml of STD1182009-55STD-04:

STD02252010-87STD00

STDO225201-87STD00
10ng/ml

tg



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

Project No. 049
Book No. 2246 TITLE PCB Calculation Cur 02-25-20

From Page No. 5k

CAL02252010-88CAL

CAL02252010-88CAL01

5 ul of STD02192010-82 STD00 - Recovery STD
5 ul of STD02192010-81 STD00 - PCB Congeners
50 ul of STD02222010-83 STD00 - Intersind
into 5 ml volume flask brought to volume with hexane
- final concentration 5 ng/ml

CAL02252010-88CAL02

10 ul of STD02192010-82-STD00 - Recovery Std
10 ul of STD02192010-81 STD00 - PCB Congeners
50 ul of STD02222010-83 STD00 - IS
into 5 ml volume flask brought to volume with
hexane final concentration 10 ng/ml

CAL02252010-88CAL03

25 ul of STD02192010-82 STD00
25 ul of STD02192010-81 STD00
50 ul of ST.02222010-83 STD00
into a 5 ml volume flask brought to volume with
hexane - final concentration 25 ng/ml

CAL02252010-88CAL04

50 ul of STD02192010-82 STD00
50 ul of STD02192010-81 STD00
50 ul of STD02222010-83 STD00
into a 5 ml volume flask brought to volume with
hexane - final concentration 50 ng/ml

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Witnessed & Understood by me,	Date	Invented by: Andy	Date
		Recorded by:	7/28

TLE PCBCAbulate Curve 02-25-2010 Project No. 049
Book No. 2246

m Page No. 88

CAL02252010-88CAL05

100 ul of STD 02192010-82 STD00
100 ul of STD 02192010-81 STD00
50 ul of STD 02222010-83 STD00
into a 5 ml Volume flask brought to Volume with
hexane final Concentration 100 ng/ml

CAL02252010-88CAL06

200 ul of STD 02192010-82 STD00
200 ul of STD 02192010-81 STD00
50 ul of STD 02222010-83 STD00
into a 5 ml Volume flask brought to Volume with
hexane final Concentration 200 ng/ml

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Recorded by: | 2/25

Project No. 649
Book No. 2246 TITLE PCB Conge Check

From Page No. ____

STD02262010-90STD00
10ng/ml (

The mixture was made by preparation A's address

4 ul of STD01142010-57STD02 - PCB Stock base
4 ul of STD01262010-56 STD04 - Recog ch

to a 2 ml volumetric flask

an aliquot was taken and placed into a 1 ml flask and 20 ul of STD02222010-83STD00 (IS) - N
- brought to volume with hexane.

- EC/MS - file name STD0061.D

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		Recorded by:	2/26

Project No. 049

TITLE Recovery STD for Temple Hyler - Wipe Book No. 2246

From Page No. —

This can stock STD contains

STD 1116 2009-51STD01 - (1/26/2010) 3,344 C13 Tetrachlorethylene
~~@ 50~~ AS

- hexane the final concentration is @ 5 ug/ml

- 200 ml of STD1116 2009-51 STD01 was added to a 2 ml volume from and brought to volume with hexane

STD03042010-91STD - Recovered

STD03042010-91STD00
5 ug/ml Recovery std 03-04-10

Empty on 11/18/10

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		Recorded by:	3/4

Project No. _____

Book No. _____ TITLE IAP03042010 - 92IAP00

From Page No. ____

IAP - mate waxing

To Page No

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	3/4

Project No. 044

TITLE IAP 03052010-IAP00 Book No. 2246

From Page No. ____

Purpose: To prepare a IAP carrier Conger #52 for chrome

- this standard was prepared by Xiaoyu Liu on 3/5/10

IAP						
IAP was made by Xiaoyu Liu on 3/5/2010: 20 uL of STD12142009-67STD00 was diluted to 5mL hexane						
to make 03052010-IAP0, then 500 uL of 03052010-IAP0 was dilute to 2mL of hexane to make o3052010-IAP.						
03052010-IAP0						
Analytes	%Purity (GC/MS)	Certiifed Analyte	Volume (uL)	Concentration	Company	Lot #
		Concentration (ng/uL)		(ng/uL)		
(C#52) 2,2',5,5'-Tetrachlorobiphenyl	100±5%	100.0	20	400.00	ChemService	422-141A
03052010-IAP						
	03052010-IAP0		Concentration			
Analytes	Concentration (ng/uL)	Volume (uL)	(ng/uL)			
(C#52) 2,2',5,5'-Tetrachlorobiphenyl	400.00	500	100.0			

AS

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

Book No. 2246 TITLE PCB - Congen Recently STD

From Page No. ____

(13C) 2,2',5,5' tETRACHLOROBIPHENYL 50ug/ml
STD03152010-94STD00 (03/15/10)

Open 3/15/10
Lot# -

Purpose on working Stand soln @ 5 ug/ml by add 500ul to 5ml vol filler bring to volume over [illegible]
AS

(13C) 2,2',5,5' Tetrachlorobiphenyl 5ug/ml
STD03152010-94STD01 (03/15/10)

empty on
5/10/20
AS

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Witnessed & Understood by me,	Date	Invented by: [signature]	Date
		Recorded by:	3/15

Project No. 049

TITLE PCB Internal Standard Stock Book No. 2246

From Page No. ____

The internal standard scale on check

~~2,2"~~ P.

STD 11162009-49 STD03 2,2-Dichlorobiphenyl (C13)
STD 11162009-50 STD02 2,2,5,5-Tetrachlorobiphenyl (C13)
STD 11162009-47 STD02 2,2,3,3,4,4,5,5-Octachlorobiphenyl (C13)

Prepare the final concentration as 10 ug/ml

- 200ul of C#4, C#52 & C#194 was added to 1ml volume flask and brought to volume with [illegible]

STD03292010-95STD00
Internal Standard 10 ug/ml

Empty on 5/10/2011

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Witnessed & Understood by me,	Date	Invented by: [signature]	Date
		Recorded by:	3/29

Project No. 044
Book No. 2246 TITLE PCB congen # 209 "Decachlorobiphenyl"

From Page No. ____

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

C-209S-TP 1 mL
Decachlorobiphenyl
100 µg/mL in Isooctane
Lot: 209061205
Exp. Jun 15, 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 Sonicate to Sol'n
AS

C#209 Decachlorobiphenyl
04012010-96STD00

To Page

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Project No. 049

TITLE PCB Congen # 180

Book No. 2244

From Page No. —— 2,2',3,4,4'5,5'- Heptachloro-biphenyl

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

C-180S-TP

1 mL

2,2',3,4,4',5,5'-Heptachlorobiphenyl

100 µg/mL in Isooctane

Lot: B7090096

Exp. Sep 14, 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

Sonicate to Sol'n

C#180 2,2'3,4,4'5,5' Heptachlorobiphenyl
04012010-97STD00

To Page No. ——

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	4/1

Project No. 049
Book No. 2246 TITLE PCB Congen #5 "2-3-Dichlorobiphenyl

From Page No. ____

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

C-005S-TP 1 mL
2,3-Dichlorobiphenyl
100 µg/mL in Isooctane
Lot: B3040274
Exp. Apr 24, 2013

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 Sonicate to Sol'

C#5 2,3-Dichlorobiphenyl
04012010-98STD00

To Page N

Witnessed & Understood by me,	Date	Invented by: Andy	Date 4/1

Project No. 049

.E PCB Congen #2

Book No. 2246

Page No. ____

2-chlorobiphenyl

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

C-001S-TP 1 mL

2-Chlorobiphenyl

100 µg/mL in Isooctane

Lot: B2120306

Exp. Dec 27, 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

Sonicate to Sol'

C#2 2-Chlorobiphenyl

04012010-99STD00

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essed & Understood by me,

Date

Invented by: [signature]

Recorded by:

Date 6/11

Project No. 049

Book No. 2246 TITLE PCB · Conger # 3

4 - Chloro-biphenyl

From Page No. ____

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

C-003S-TP

4-Chlorobiphenyl

100 µg/mL in Isooctane

Lot: B2060372

Exp. Jun 24, 2012

1 mL

FLAMMABLE

FOR LABORATORY USE ONLY

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

STORAGE Sonicate to Sol

AS

C#3 4-Chlorobiphenyl

04012010-100STD00

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Witnessed & Understood by me,	Date	Invented by:	Date
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TITLE PCB Congen #4

Project No. 049

Book No. 2046

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2,2-Dichlorobiphenyl

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

C-004S-TP

2,2'-Dichlorobiphenyl

100 µg/mL in Isooctane

1 mL

Lot: B8030005

Exp. Mar 3, 2018

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

Sonicate to Sol'

C#4 2,2'-Dichlorobiphenyl

04012010-101STD00

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Witnessed & Understood by me,	Date	Invented by: Andy S	Date
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Project No. 049
Book No. 2246 TITLE PCB Comp #17

From Page No. ____

2,2',4 - Trichlorobiphenyl

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

C-017S-TP 1 mL
2,2',4-Trichlorobiphenyl
100 µg/mL in Isooctane
Lot: B6060082
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 Sonicate to Sol'n

C#17 2,2'4-Trichlorobiphenyl
04012010-102STD00

Empty on 5/10/20
AS

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

TITLE PCB Congen # 28 Book No. 2246

From Page No. 2, 4, 4' - Trichlorobiphenyl

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

C-028S-TP 1 mL

2,4,4'-Trichlorobiphenyl

100 µg/mL in Isooctane

Lot: B9030174

Exp. Mar 12, 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 Sonicate to Sol'

AS

C#28 2,4,4'-Trichlorobiphenyl

04012010-103STD00

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Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	4/1

Project No. 049
Book No. 2246 TITLE PCB Congen #52
2, 2', 5, 5'- Tetrachlorobi

From Page No. ____

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

C-052S-TP 1 mL
2,2',5,5'-Tetrachlorobiphenyl
100 µg/mL in Isooctane
Lot: B8110112
Exp. Nov 11, 2018

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 Sonicate to Sol'

C#52 2,2',5,5'-Tetrachlorobiphenyl
04012010-104STD00

04012010- 'STD01

Dilution 1:20 in xane (lot # 096

Empty on 5/11/20

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Witnessed & Understood by me,	Date	Invented by:	Date
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'LE PCB Congen # 123

Project No. 049

Book No. 2246

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" 2,3,4,4,5- Pentachlorobiphenyl

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

C-123S-TP 1 mL

2',3,4,4',5-Pentachlorobiphenyl

100 µg/mL in Isooctane

Lot: B6060025

Exp. Jun 5, 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.

Sonicate to Sol'

STORAGE

C#123 2'3,4,4',5'-Pentachloro-
04012010-105STD00

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essed & Understood by me,

Date

Invented by: Andy S

Recorded by:

Date 4/1

Project No. 049
Book No. 2246 TITLE PCB Congen #118
'2,3',4,4',5-Pentachlorobiphenyl

From Page No. ____

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

C-118S-TP
2,3',4,4',5-Pentachlorobiphenyl
100 µg/mL in Isooctane
Lot: B7050021
Exp. May 2, 2017

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 Sonicate to Sol'n

45

C#118 2,3',4,4',5-Pentachloro-
04012010-106STD00

04012010-106STD01

Dilution 1:20 in hexane
(lot #096976)

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Project No. 049

'LE PCB Range # 132

Book No. 2244

m Page No. ____ 2,2',3,3',4,6'-Hexachlorobiphenyl

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

C-132S-TP

2,2',3,3',4,6'-Hexachlorobiphenyl

100 µg/mL in Isooctane

Lot: A9090189

Exp. Apr 12, 2017

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

Sonicate to Sol'

C#132 2,2',3,3',4,6'-Hexachloro-
04012010-107STD00

04012010-107STD01

Dilution 1:20 in hexane (lot # 096976)

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essed & Understood by me,

Date

Invented by: Andy [signature]

Recorded by:

Date 4/1

Project No. 6019

Book No. 2246 TITLE PCB Congeer #187

From Page No. ____

2,2',3,4,5,5',6-Heptachlor

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

C-187S-TP 1 mL

2,2',3,4',5,5',6-Heptachlorobiphenyl

100 µg/mL in Isooctane

Lot: 209091284

Exp. Sep 24, 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 Sonicate to Sol'

C#187 2,2',3,4',5,5',6-Heptachloro-
04012010-108STD00

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		Recorded by:	4/1

Project No. 049

TITLE PCB Congen # 194

Book No. 224

From Page No. ____

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

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

C-194S-TP 1 mL

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

100 µg/mL in Isooctane

Lot: 209111004

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

Sonicate to Sol'

C#194 2,2',3,3',4,4',5,5'-Octachloro-

04012010-109STD00

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Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	4/1

Project No. ~~2246~~ 044 AS

Book No. 2246 TITLE PCB Conger #206

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2, 2', 3, 3', 4, 4' 5, 5', 6- Norm

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C-206S-TP 1 mL

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

100 µg/mL in Isooctane

Lot: B3070143

Exp. Jul 16, 2013

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 Sonicate to Sol'

C#206 2,2',3,3',4,4',5,5',6-Nonachloro-
04012010-110STD00

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		Recorded by:	4/11

TITLE PCB Congen Stock STD

Project No. 044

Book No. 2246

From Page No. ____

04012010-111STD00
PCB congener stock std(5ug/ml)

The PCB congen Stock STD contain 250 ml of the following Congenitor were added a a 5 ml volumetric flask & brought to volume with hexane

11032009-23STD00 - 3,3',4,4'- Tetrachloro biphenyl (C#7
1 32009-31STD00 - 2,2',4,4'5,6'-Hexachlorobiphenyl (C#154)
4012010-98STD00 - 2,3 Dichloro biphenyl (C#5)
04012010-96STD00 - Decachloro biphenyl (C#209
04012010-108STD00 - 2,2'3,4',5,5',6 - Heptachloro biphenyl (C
04012010-105STD00 - 2,3,4,4'5 - Pentachloro biphenyl (C#123)
04012010-97STD00 - 2,2',3,4,4',5,5'- Heptachloro biphenyl (C#1
04012010-100STD00 - 4, Chloro biphenyl (C#3)
04012010-101STD00 - 2,2 - Dichloro biphenyl (C#4)
04012010-99STD00 - 2, Chloro biphenyl (C#1)
04012010-102STD00 - 2,2',4 - Trichloro biphenyl (C#17)
04012010-110STD00 - 2,2',3,3',4,4,5,5',6 - Nonachloro biphenyl (C
04012010-104STD00 - 2,2,5,5 - Tetrachloro biphenyl (C#52)
04012010-107STD00 - 2,2,3,3',4,6' - Hexachloro biphenyl (C#132)
04012010-109STD00 - 2,2,3,3,4,4'5,5'- Octachloro biphenyl (C#194)
04012010-106STD00 - 2,3,4,4,5 - Pentachloro biphenyl (C#118)
04012010-103STD00 - 2,4,4' - Trichloro biphenyl

Final Concentration 5 ug/ml

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Witnessed & Understood by me,	Date	Invented by: [signature]	Date
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Project No. 044
Book No. 2246 TITLE Carry #4 (C13)
2,2-Dichlorobiphenyl

From Page No. ____

(13c) 2,2' Dichlorobiphenyl @ 50ug/ml
04062010-112STD00

MBP-4
lot # MB0040506
1.2 ml @ 50 ug/ml in Nonane
Wellington Labs

Empty 6/28/10
AS

To Page

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

E Conge # 52 (C13)

Project No. 049

Book No. 2246

Page No. ____

2,2',5,5' Tetrachlorobiphenyl

(13c) 2,2',5,5' Tetrachlorobiphenyl @ 50ug/ml
04062010-113STD00

MBP-52
Lot # MB0521208
1.2 ml @ 50ug/ml in None
Wellington labs

Expl 6/28/10
[illegible]

To Page No. ____

ed & Understood by me,

Date

Invented by: [illegible]

Recorded by:

Date 4/6

Project No. 044

Book No. 2246 TITLE - C#194 (13c)

From Page No. ____

2,2',3,3',4,4',5,5 octachlorobiphenyl

(13c) 2,2',3,3',4,4',5,5 Octachlorobiphenyl
@ 50ug/ml 04062010-114STD00

MBP - 194
Lot MBP 1940206
1.2 ml @ 50 ug/ml in Nonane
Wellington labs

Entry on 61
Aug

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Witnessed & Understood by me, | Date | Invented by: [signature] | Date 4/16

Project No. 044

LE PCB Internal Standard Stock Solution Book No. 2246

n Page No. ____

Internal Standard 10ug/ml
04062010-115STD00

AS

The internal standard stock solution contains the following

04062010-112STD00 - (13C) - 2,2' Dichlorobiphenyl
04062010-113STD00 - (13C) 2,2,5,5-Tetrachlorobiphenyl
04062010-114STD00 - (13C) 2,2,3,3,4,4,5,5-Octachlorobiphenyl

Prepare the final concentration was @ 10ug/ml

- 1.0 ml of C#4 (C13), C#52 (C13) & C#144 (C13) was added to 5 ml volume flask and brought to volume with hexane

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

Recorded by: | 4/6

Project No. 049
Book No. 2246 TITLE PCB Congeners Calibration Cal for

From Page No. 5 Ot

04062010-116CAL

04062010-116CAL01

5 ul of 02192010-082STD00 "Recovery Check"
5 ul of 04012010-111STD00 "PCB Congeners"
100 ul of 04062010-115STD00 "IS"
into a 5 ml volumetric flask brought to volume with hexane
final concentration = 5 ng/ml

04062010-116CAL02

10 ul of 02192010-082STD00 "Recovery Check"
10 ul of 04012010-111STD00 "PCB Congeners"
100 ul of 04062010-115STD00 "IS
into a 5 ml volumetric flask brought to volume with hexane
final concentration = 10 ng/ml

04062010-116CAL03

25 ul of 02192010-82STD00
25 ul of 04012010-111STD00
100 ul of 04062010-115STD00
into ~~hexane~~ a 5 ml volumetric flask brought to volume with hexane
final concentration = 25 ng/ml

To Page N

Witnessed & Understood by me,	Date	Invented by: Andy S	Date
		Recorded by:	4/1

Project No. 049

LE PCB Compr Calibration Curve for 04-06-2010 Book No. 2246

n Page No. 116

4062010 - 116 CAL04

100ul of 02192010 - 82 STD00 "Recovery Check

100ul of 04012010 - 111 STD00 "PCB Compr mix"

200ul of 04062010 - 115 STD00 "IS"

into a 10ml volumetric flask brought to volume with hexane final concentration = 50 mg/ml

4062010 - 116 CAL05

100 ul of 02192010 - 82 STD00 "Recovery Check

100 ul of 04012010 - 111 STD00 "PCB Comp Stock

100ul of 04062010 - 115 STD00 "IS"

into a 5ml volumetric flask brought to volume with hexane

final concentration = 100 mg/ml

4062010 - 116 CAL06

200ul of 02192010 - 82 STD00 "Recovery Check

200ul of 04012010 - 111 STD00 "PCB Compr Stock

100 ul of 04062010 - 115 STD00

into a 5ml volumetric flask brought to volume with hexane

final concentration = 200 mg/ml

Note - The internal standard concentration was double

- Curve re-made on 04072010 -

To Page No. End

essed & Understood by me, | Date | Invented by: [signature] | Date 4/6

Recorded by:

Project No. 049
Book No. 2246 TITLE PCB - Calibration Curve of 04-07

From Page No. Start

: 04072010-118CAL

04072010-118CAL01

5ul of 02192010-82STD00 "Recovery STD
5ul of 04012010-111STD00 "PCB Congeners"
50ul of 04062010-115STD00 "IS"
into a 5ml volume flask brought to volume with hex
final concentration = 5ng/ml

04072010-118CAL02

10ul of 02192010-82STD00 "Recovery STD"
10ul of 04012010-111STD00 "PCB Congeners
50ul of 04062010-115STD00 "IS"
into a 5ml volume flask brought to volume with hexane
final concentration = 10ng/ml

04072010-118CAL03

25ul of 02192010-82STD00 "Recovery STD"
25ul of 04012010-111STD00 "PCB Congeners"
50ul of 04062010-115STD00 "IS"
into a 5ml volume flask brought to volume with
hexane. final concentration = 25ng/ml

04072010-118CAL04

100ul of 02192010-82STD00 "Recovery STD"
100ul of 04012010-111STD00 "PCB Congeners"
100ul of 04062010-115STD00 "IS"
into a 10ml volume flask brought to volume with hex
final concentration = 50ng/ml

To Page N

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	4/1

Project No. 049

LE PCB-Calibration Curve for 04-07-2010 Book No. 2246

n Page No. 118

04072010 - 118CAL05

100ul of 02192010 - 82STD00 "Recovery
100ul of 04012010 - 111 STD00 "PCB Comp Stock
50 ~~100ul~~ AS ul of 04062010 - 115STD00 "IS"
into a 5ml volume flask brought to volume with hexane

final concentration = 100 ng/ml

04072010 - 118CAL06

200ul of 02192010 - 82STD00 "Recovery Check"
200ul of 04012010 - 111 STD00 "PCB Comp Stock"
50ul of 04062010 - 115STD00 "IS"
into a 5ml volume flask brought to volume with hexane

final concentration = 200 ng/ml

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Recorded by: | 4/7

Project No. 049

Book No. 2246 TITLE IAP — for PCB Cargo li

From Page No. ____

04152010-IAP-00

IAP PCB Calibrations				
	C#52	C#28	#194	C#180
Std stock ID	67STD-00	66STD-00	71STD-00	70STD-00
Date	April 8, 2010	April 8, 2010	April 8, 2010	April 8, 2010
Callibration ID				
Std Stock conc., µg/ml	100	100	100	100
Std Stock purity, %	99	99	99	99
Volume of Std, mL	0.1	0.08	0.1	[illegible]
Total volume dilution 1(D1), mL	2	2	2	[illegible]
Concentration of Std, µg	4.95	3.96	4.95	[illegible]97
Volume of D1, mL	0.0235	0.0235	0.0235	[illegible]0235
Total volume dilution 2, mL	2	2	2	2
Concentration of Std, ng	58.16	46.53	58.16	34.90

KS

Made by Nancy Roche

To Page No

Witnessed & Understood by me, | Date | Invented by: | Date 4/5

Project No. 647

TITLE PCB - Congen Recovery Standard

Book No. 2240

From Page No. 57

- prepared a working Recovery Standard @ 5 ug/ml by added 200 ul of 04202010-121STD00 (13C) 2,2',5,5' Tetrachlorobiphenyl to 2 ml volume flask & brought it to volume with hexane.

(13C) 2,2',5,5' Tetrachlorobiphenyl 5 ug/ml
04202010-121STD00 (recovery std)

AS

To Page No. Ee

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	4/20

Project No. 049
Book No. 2246 TITLE 2,2',5,5' Tetrachlorobiphenyl (C#52)

From Page No. 55

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

C-052N-240MG 240 mg
2,2',5,5'-Tetrachlorobiphenyl
N/A
Lot: 103106AG-AC
Exp. Nov 1, 2016

HARMFUL

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

STORAGE Ambient

4 5

04 29 2010 - 122 STOOD

To Page No

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

LE 2, 3 Dichlorobiphenyl

Project No. 049

Book No. 2246

n Page No. ____

(C#5)

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

C-005N-240MG

2,3-Dichlorobiphenyl

N/A

Lot: 970602R-AC

Exp. Jul 28, 2015

240 mg

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

2,3-Dichlorobiphenyl
04292010-123STD00

To Page No. ____

essed & Understood by me,

Date

Invented by: [illegible]

Recorded by:

Date 4/29

Project No. 044

Book No. 2246 TITLE ~~Dechlor~~ Decachlorobiphenyl CC#20

From Page No. ____

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C-209N-240MG 240 mg

2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl

N/A

Lot: 073108MT

Exp. Aug 8, 2018

HARMFUL

FOR LABORATORY USE ONLY

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

STORAGE Ambient

Decachlorobiphenyl
04292010-124STD00

To Page No

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

TITLE 1% Total PCB in Oil base pin

Project No. 045

Book No. 224G

From Page No. See

Purpose: To create the 1% Total PCBs in an Oil base paint.

Procedure - weigh in ~ 0.15 g each PCB into a 60 ml amber jar and add ~ 44 g of paint

Notebook ID	description		weight (g)	difference (g)	% PCBs (w/w)
	Empty amber 60 ml jar	jar	74.4725		
04292010-124STD00	(C#209) Decachlorobiphenyl	jar + 1 pcb	74.6225	0.1500	**0.34%**
04292010-122STD00	(C#52) 2,2',5,5'-Tetrachlorobi	jar +2 pcb	74.7733	0.1508	**0.34%**
04292010-123STD00	(C#5) 2,3-Dichlorobiphenyl	jar +3 pcb	74.9269	0.1536	**0.34%**
S03100	Sherwin Williams all surface Enamel Oil based Primer	jar +3 pcb + paint	119.4693	44.5424	**total % pcb (w/w)**
			total amt(g)	44.9968	**1.01%**

AS

pTrack # S03101
04292010 - 125STD00

Discarded 11/15/2011
JM

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Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	4/29

Project No. 044

Book No. 2246 TITLE 2,3-Dichlorobiphenyl Coupe #5

From Page No. 5

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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.

C-005N-600MG 600 mg

2,3-Dichlorobiphenyl

N/A

Lot: 19664

Exp. Jul 28, 2015

HARMFUL

STORAGE Ambient

2,3-Dichlorobiphenyl
05202010-126STD00

To Page No

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

Project No. 044

LE 2,2',5,5'-Tetrachlorobiphenyl Book No. 2246

n Page No. Conc #52

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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.

C-052N-600MG 600 mg

2,2',5,5'-Tetrachlorobiphenyl

N/A

Lot: 103106AG-AC

Exp. Nov 1, 2016

HARMFUL

STORAGE Ambient

2,2',5,5'-Tetrachlorobiphenyl
05202010-127STD00

To Page No.

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

Recorded by: | 5/20

Project No. 044
Book No. 2246 TITLE Decachlorobiphenyl
C #209

From Page No. ____

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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

C-209N-600MG 600 mg
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl
N/A
Lot: 072808MT-AC
Exp. Jul 29, 2018

HARMFUL

Decachlorobiphenyl
05202010-128STD00

To Page

Witnessed & Understood by me, | Date | Invented by: Andy | Date 5/20

Project No. 049

TITLE 1% Total PCB in oil Buildings Book No. 2246

rom Page No. ____

1% Total PCBs in oil based primer
05202010-129STD00

Notebook ID	description		weight (g)	difference (g)	% PCBs (w/w)
	Empty amber 60 ml jar	jar	75.2418		
04292010-128STD00	(C#209) Decachlorobiphenyl	jar + 1 pcb	75.3927	0.1509	**0.34%**
04292010-127STD00	(C#52) 2,2',5,5'-Tetrachlorobi	jar +2 pcb	75.5426	0.1499	**0.34%**
04292010-126STD00	(C#5) 2,3-Dichlorobiphenyl	jar +3 pcb	75.6945	0.1519	**0.34%**
S03100	Sherwin Williams all surface Enamel Oil based Primer	jar +3 pcb + paint	120.1978	44.5033	**total % pcb (w/w)**
			total amt(g)	44.9560	**1.01%**

AB

pTract # S04100

Discarded 11/15/2011
[illegible]

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Witnessed & Understood by me, | Date | Invented by: [illegible] | Date

Recorded by: | 5/20

Project No. 644
Book No. 2240 TITLE C#206 (C13)

From Page No. ____

(13c) 2,2',3,3',4,4',5,5',6 Nonachlorobiphenyl
5212010-130STD00

Lot # MB 2060199S
in Nonane

To Page

Witnessed & Understood by me,	Date	Invented by:	Date
			6/21

LE (c13) 2', 2, 5, 5 - Tetrachlor Project No. 8219
Book No. 2246

n Page No. ____ C#77

(13c) 2,2',5,5' Tetrachlorobiphenyl
5212010-131STD00

Lot #MB0771209

in Name

To Page No. ____

essed & Understood by me, | Date | Invented by: [signature] | Date 5/21

Recorded by:

Project No.: 049
Book No. 2246 TITLE Recovery Check Std

From Page No. ____

05212010-132STD00
5ug/ml (recovery std)

The Recovery Check Standards are

05212010-130STD0 - 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (C#206)

05212010-131STD00 2,2',5,5'-Tetrachlorobiphenyl (C#77)

10182005-54STD00 - Tetrachloroxylene - (TMX)

in hexane the final conc is 5ug/ml

- 500ul of both C#206 & C#77, 12.5ul of TMX was added to 5ml volume hexane and brought to volume with hexane

To Page N

Witnessed & Understood by me,	Date	Invented by: Andy S	Date 5/21
		Recorded by:	

LE Recovery Check Standard

Project No. 049

Book No. 2246

n Page No. [illegible]

06142010-133STD00
5 ug/ml (recovery std)

The Recovery Check Standard Stock contains the following.

05212010-130STD00 - 2, 2', 3, 4, 4, 5, 5', 6-Nonachlorobiphenyl (C#206)

05212010-131STD00 2, 2', 5, 5' tetrachlorobiphenyl (C#77)

11182009-54STD00- Tetrachlor~~obiphenyl~~ m-xylene.-(TMX)

in hexane. The final concentration in 5 ug/mL

- 500 ul of both C#206 & C#77, 12.5 ul of TMX were added to 5 mL ~~of~~ volumetric flask and brought ~~to~~ volume with hexane.

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Recorded by:

Project No. 044
Book No. 2246 TITLE Recovery Check Standard for 6/2

From Page No. ____

10 ul of RCS 06142010-133STDCC
10 ul of IS 04062010-115STDCC
in a 1ml Volume flask
- brought to volume with Hexane - Lot 0915

final Concentration = 50 ng/ml

GC/MS - Data file: RCS0056
RCS 0057
RCS 0058

To Page No

Witnessed & Understood by me, | Date | Invented by: | Date 6/24

TITLE PCB Internal Standard Stock Sol

Project No. 049

Book No. 2246

From Page No. ____

Internal Standard 10 ug/mL
06282010-135STD00

This internal Standard Stock Solution contains the following

04062010-112 STD00 (C^{13}) 2,2' Dichlorobiphenyl
04062010-113 STD00 (C^{13}) 2,2',5,5'-Tetrachlorobiphenyl
04062010-114 STD00 (C^{13}) 2,2',3,3',4,4',5,5'-Octachlorobiphenyl

in hexane the final concentration is 10 ug/ml

- 200 ml of (C#4 (C^{13}), C#52 (C^{13}) & (194 (C^{13}) was added to 1 ml vary fast and brought to volume with hexane

To Page No. ____

Witnessed & Understood by me,	Date	Invented by: [signature]	Date
		Recorded by:	6/28

Project No. 044
Book No. 2246 TITLE Recovery Check Standards

From Page No. ____

10 ul of RCS 06142010 - 132 STD 00
10 ul of IS 06282010 - 135 STD 00

in a 1 ml volume flask
brought to volume with Reagent
(Lot # 09'5

final concentration of RCS = 50 ng/ml

File name RCS 0060
RCS 0061
RCS 0062

To Page N

Witnessed & Understood by me,	Date	Invented by: [signature]	Date 6/29/10
		Recorded by:	

Project No. 049

TLE STD for Commercial Lab Clin Book No. 2246

m Page No. ____

07062010-137STD00

- added 100ul of the following in 2ml volume flex

(1) 04012010-104STD00 - C#52 - 2,2',5,5' - Tetrachlorobiphenyl 100ug/ml
(2) 04012010-106STD00 - C#118 - 2,3',4,4',5 - Pentachlorobiphenyl (100ug/ml)

final concentration 5ug/ml in hexane
Lot #

07062010-137STD01

- added 10ul of 07062010-137STD00 in to 2ml volume flexible: brought to volume with hexane final concentration ~~50 mg/ml~~ 25 mg/ml AS

07062010-137STD02

- added 5ul of 07062010-137STD00 in a 2ml volume flex: brought to volume with hexane final concentration = ~~25 mg/ml~~ AS
12.5 mg/ml

To Page No. 1

...essed & Understood by me,	Date	Invented by: [signature]	Date
		Recorded by:	7/6/10

Project No. 049
Book No. 2246 TITLE Recy Check STD for 7/8

From Page No. ____

10 ul of RCS 06142010 - 133 STD oc
10 ul of IS 06282010 - 135 STD oc

in 1 ul of [illegible] (Lot # 0957)

final concentration = 50 ng/ml

File name: RCS 0066
0067
0068

To Page No

Witnessed & Understood by me,	Date	Invented by: [illegible] S	Date 7/9
		Recorded by:	

Project No. 049

LE Cayer C#206 -

Book No. 2246

n Page No. ____

(13c) 2,2,3,3',4,4'5,5',6 Nonachorobiphenyl
0712010-139STD00

Lot # MB 20601995
in None
50 ug/ml

To Page No. ____

essed & Understood by me,

Date

Invented by: Andy [signature]

Recorded by:

Date 7/12

Project No. 049

Book No. 2246 TITLE Congen # 77

From Page No. ____

(13c) 3,3',4,4' Tetrachorobiphenyl
0712010-140STD00

Lot # MB0771209
xi Neu
50 ug/ml

EMPTY -3/10/2011 [illegible]

To Page No

Witnessed & Understood by me,	Date	Invented by: [illegible]	Date
		Recorded by:	[illegible]

Project No. 049
Book No. 2246

ITLE Recovery Stock Std.

om Page No. ____

07122010-141STD00
5ug/mL Recovery check standard

Recovery check standard composed of:

(13c) 2,2',3,3',4,4',5,5',6 Nonachlorobiphenyl (07122010-139STD00)
(13c) 3,3',4,4' Tetrachlorobiphenyl (07122010-140STD00)
2,4,5,6 Tetrachloro-M-xylene (STD111182009-54STD00)

500 µL 2,2',3,3',4,4',5,5',6 Nonachlorobiphenyl
500 µL 3,3',4,4' tetrachlorobiphenyl
12.5 µL 2,4,5,6 tetrachloro-m-xylene
Take up to 5mL in hexane. (Lot # 096976)

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

Project No. _____

Book No. _____ TITLE _____

From Page No. ____

07132010-142STD00
(13C)2,2'dichlorobiphenyl

Lot # MB00409 00

50 µg/mL in hexane

To Page No

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	7/13/10 [illegible]

Project No. _____

TITLE _____ Book No. _____

From Page No. ____

07132010-143STD00
(13C)2,2'5,5'- tetrachlorobiphenyl

Lot # MB 0521208

50 ug/mL in nonane

To Page No. _

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by: J. Nardin	7/13/2010

Project No. 044
Book No. 2246 TITLE

From Page No.

07132010-144STD00
(13C)2,2'3,3'4,4'5,5'- octachlorobiphenyl

Lot # MB19 40206

50 ug/mL in nonane

To Page

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	7/13/2010

.E Internal Standard for PCB

Project No. 044
Book No. 2246

Page No.

07132010-145STD00
10ug/mL Internal Standard

Internal Standard composed of:

1 mL (13c) 2,2' dichlorobiphenyl (07132010-142STD00)
1 mL (13c) 2,2' 5,5' tetrachlorobiphenyl (07132010-143STD00)
1 mL (13c) 2,2',3,3',4,4',5,5' octachlorobiphenyl (07132010-144STD00)

brought to 5mL in hexane (lot # 096976)

To Page No.

sed & Understood by me,	Date	Invented by:	Date
		Recorded by: J. Nardin	7/13/2010

Project No. _____

Book No. _____ TITLE Preparing PCB congener # 138

From Page No. ____

JR
SI

07142010-146STD00

2,2,3,4,4,5-Hexachlorobiphenyl (STD 11032009-28STD00)

50 µL 2,3,3,4,4,5 Hexachlorobiphenyl
950 µL Hexane (lot # 096976)

07142010-146STD00
2,2',3,4,4',5-Hexachlorobiphenyl

To Page N

Witnessed & Understood by me,	Date	Invented by:	Date
			07/14/2010

Project No. _____

TITLE Preparing PCB Congener # 168

Book No. _____

From Page No. ____

07142010-147STD00

2,3',4,4',5',6 - Hexachlorobiphenyl (STD11032009-32STD00)

50 uL 2,3',4,4',5',6-Hexachlorobiphenyl
950 uL Hexane (lot # 096976)

07142010-147STD00
2,3',4,4',5',6-Hexachlorobiphenyl

To Page No. ____

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by: J. Nardin	07/14/2010

Project No.
Book No.
TITLE Preparing PCB congener # 153

From Page No.

07142010 - 148 STD00

2,2',4,4',5,5'- Hexachlorobiphenyl (STD 11032009- 30 STD00)

50 uL 2,2',4,4',5,5' Hexachlorobiphenyl
950 uL Hexane (lot # 096976)

07142010-148STD00
2,2',4,4',5,5'-Hexachlorobiphenyl

To Page No

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	07/14/2010

Project No. _____

TITLE Preparing PCB congener # 186

Book No. _____

From Page No. ____

07142010 - 149 STD 00

2,2', 3,4,5,6,6' - Heptachlorobiphenyl (STD11042009-35 STD00)

50 µL 2,2',3,4,5,6,6'-Heptachlorobiphenyl
950 µL Hexane (Lot # 096976)

07142010-149STD00
2,2',3,4,5,6,6'-Heptachlorobiphenyl

To Page No. ____

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by: J. Nardin	07/14/2010

Project No. _____

Book No. _____ TITLE Preparing PCB congener # 66

From Page No. ____

07142010 - 150 STD 00

2,3',4,4' - Tetrachlorobiphenyl (STD 11D22009 - 20 STD 00)

50 uL 2,3',4,4' - Tetrachlorobiphenyl
950 uL Hexane (lot # 096976).

07142010-150STD00
2,3',4,4'-Tetrachlorobiphenyl

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	07/14/2010

TITLE Preparing PCB congener # 101

Project No. _____

Book No. _____

From Page No. ____

07142010 - 151 STD00

2,2',4,5,5'-pentachlorobiphenyl (STD11032009-21STD00)

50 uL 2,2',4,5,5' pentachlorobiphenyl
950 uL hexane (lot # 09697)

07142010-151STD00
2,2',4,5,5'-Pentachlorobiphenyl

To Page No. ____

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by: J. Nardin	07/14/2010

Project No.
Book No.
TITLE Preparing PCB congener # 106

From Page No.

07142010-152STD00

2,3,3',4,5 pentachlorobiphenyl (STD11032009-24STD00)

50ul 2,3,3',4,5-pentachlorobiphenyl
950ul Hexane (lot #096976)

07142010-152STD00
2,3,3',4,5-Pentachlorobiphenyl

To Page No.

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by: J. Nardin	07/14/2010

TLE Preparing PCB congener #140

Project No.

Book No.

m Page No.

07142010 - 153 STD 00

2,2', 3, 4, 4', 6- Hexachlorobiphenyl (STD11032009-29STD00)

50 mL 2,2', 3,4,4'6 -Hexachlorobiphenyl
950 mL Hexane (Lot# 096976).

07142010-153STD00
2,2',3,4,4',6-Hexachlorobiphenyl

To Page No.

essed & Understood by me,	Date	Invented by:	Date
		Recorded by: T. Nardin	07/14/2010

Project No. 044
Book No. 2246 TITLE Aroclor 1254 Standard

From Page No. ____

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

AS-E0135-3 1 mL
Aroclor 1254
1000 µg/mL Isooctane
Lot: 209071294
Exp. Jul 30, 2019

FLAMMABLE

S12100
FOR LABORATORY USE ONLY
WARNING: This product contains chemicals known to the State of California to cause cancer and birt defects or other reproductive harm
STORAGE Ambient

AS

07152010-154STD00

Aroclor 1254 (1002 ug/ml)
07152010-154STD00

07152010-154STD01

Aroclor 1254 (10 ug/ml)
07152010-154STD01

10.0 ml of 07152010-154STD00 into a 1 ml volum and brought to volume with hexane (Lot #).
final concentration = 10.02 ug/ml

07152010-154STD02

10.0 ml of 07152010-154STD01
10.0 ml of 07132010-145STD00 (FS)
brought to volume with hexane
concentration = 100 ug/ml

To Page No

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	7/15

Project No. _____

'LE Recovery Chec Standard 07152010 - 07162010 Book No. _____

n Page No. ____

07152010–07162010
recovery check standard

10 uL 07122010-141 STD 00 Recovery Check std.
10 uL 07132-10 - 145 STD 00 Internal Standard
980 ul Hexane (~~lot # 067967~~)
lot # 096976

To Page No. ____

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

Recorded by: J. Nardin | 07/16/2018

Project No. _____

Book No. _____ TITLE ~~Preparing PCB congener 77~~ JN

From Page No. ____

07162010-STD00
3,3',4,4'-Tetrachlorobiphenyl

~~50 ul 3,3',4,4'-Tetrachlorobiphenyl~~
~~950 ul Hexane (lot # 096976).~~ JN.

JN.

To Page No.

Witnessed & Understood by me,	Date	Invented by:	Date

TITLE Congeners C77

Project No.

Book No.

From Page No.

07162010-157STD00
3,3',4,4'-Tetrachlorobiphenyl

Lot # B7090068

100 µg/mL in Isooctane.

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

C-077S-TP 1 mL

3,3',4,4'-Tetrachlorobiphenyl
100 µg/mL in Isooctane
Lot: B7090068
Exp. Sep 11, 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

Sonicate to Sol

07162010-157STD01
3,3',4,4'-Tetrachlorobiphenyl

Dilute 07162010-157STD00 1:20 in hexane:
50 µL 07162010-157STD00
950 µL Hexane (lot # 096976)

To Page No.

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

Project No. 0419
Book No. 22416 TITLE Congener # C-154

From Page No. ____

07162010-158STD00
2,2',4,4',5,6'-Hexachlorobiphenyl

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

C-154S-TP 1 mL
2,2',4,4',5,6'-Hexachlorobiphenyl
100 µg/mL in Isooctane
Lot: B3040341
Exp. Apr 29, 2013

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 Sonicate to Sol'

07162010-158STD01
2,2',4,4',5,6'-Hexachlorobiphenyl

Dilute 07162010-158STD00 1:20 in hexane

50 µL 07162010-158STD00
950 µL hexane (lot # 096976)

To ... No

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

Project No. 044

Book No. 2246

TIE Aroclor 1254 - STD (Neat

m Page No. ___

07202010-159STD00
Aroclor 1254 (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

Empty on 9/2/2010
AS

To Page No. ___

...essed & Understood by me,	Date	Invented by: Andy S	Date
		Recorded by:	7/20

Project No. 049
Book No. 2246
TITLE 0.74% 1254 Aroclor in Oil based primer

From Page No. ____

S09700

Ptrack # **S09700**

Notebook ID	description		weight (g)	difference (g)	% PCBs (w/w)
	Empty amber 60 ml jar	jar	72.667		
07202010-159STD00	Aroclor 1254	jar + Aroclor 1254	73.0025	0.3355	**0.74%**
S03100	Sherwin Williams all surface Enamel Oil based Primer	jar +Aroclor 1254 + paint	118.1645	45.1620	**total % pcb (w/w)**
			total amt(g)	45.4975	**0.74%**

AS

07202010-160STD00
0.74% 1254 Aroclor in oil based primer

AS

Discarded 11/15/20

Page

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

Project No.
Book No.

Recovery Check Standard 07202010-7/20/2010

Page No.

07202010–07202010
recovery check standard

10 ml 07132010-1415STD00 Recovery Check Standard
10 ml 07132010-1455STD00 - Fatty Standard

To Page No.

ssed & Understood by me,	Date	Invented by: Andy Recorded by:	Date 7/20

Project No. 649
Book No. 2246 TITLE 0.73% 1254 Aroclor in oil based primer

From Page No. ____

S09700

Ptrack # **S09700**

Notebook ID	description		weight (g)	difference (g)	% PCBs (w/w)
	Empty amber 60 ml jar	jar	72.9055		
07202010-159STD00	Aroclor 1254	jar + Aroclor 1254	73.1170	0.2115	**0.73%**
S03100	Sherwin Williams all surface Enamel Oil based Primer	jar +Aroclor 1254 + paint	101.9547	28.8377	**total % pcb (w/w)**
			total amt(g)	29.0492	**0.73%**

AS

07262010-162STD00
0.73% 1254 Aroclor in oil based primer

AS

Discarded 11/15/2
4M

Page

Witnessed & Understood by me,	Date	Invented by: Andy S	Date 7/26

TITLE PCB congen #C105

Project No. 046
Book No. 2246

From Page No. ____

07262010-163STD00
2,3,3'4,4'-Pentachlorobipenyl

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C-105S-TP
2,3,3',4,4'-Pentachlorobiphenyl
100 µg/mL in Isooctane
Lot: B5060140
Exp. Jun 15, 2015

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

07262010-163STD01 5ug/ml
2,3,3'4,4'-Pentachlorobipenyl

Diluted 07262010-163-STD00 1:20 in hexane
50 ul of 07262010-163STD00
950 ul of Hexane (Lot # 696976)

To Page No. ____

Witnessed & Understood by me,	Date	Invented by: Cindy S	Date 7/14
		Recorded by:	

Project No. 049
Book No. 2246 TITLE

From Page No.

07282010-164STD00
Recovery Stock Standard

100 ul of (13c) 3, 3', 4, 4' - Tetrachloro biphenyl 07122018-140
100 ul of (13c) 2, 2, 3, 3, 4, 4, 5, 5, 6 - Nonachloro biphenyl 07122010-
2.5 ul of TMX - 01182009-54 STD 00
in 1 ml volume ne folr
final Concentration = 50 g/ml

07282010-164STD01
50 ng/uL

To Page No.

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

Project No. 049

TITLE Congeneer # 110 - 2,3,3',4',6-Pentac Book No. 2246

From Page No. ____

08042010-165STD00
2,3,3',4',6-Pentachlorobiphenyl

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

C-110S-TP 1 mL
2,3,3',4',6-Pentachlorobiphenyl
100 µg/mL in Isooctane
Lot: B7040122
Exp. Apr 13, 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 AS

08042010-165STD01

Dilution 1:20. Made 11/29/2010. Hexane lot # 104946

To Page No. ____

Witnessed & Understood by me,	Date	Invented by: [signature]	Date
		Recorded by:	8/4

Project No. 49
Book No. 02246 TITLE Congener Mix 77, 110, 154

From Page No. ____

08052010-166 STD00

50 µL 07162010-158STD00 — 2,2',4,4',5,6'-Hexachlorobiphen
50 µL 08042010-165STD00 — 2,3,3',4,6-pentachlorobiphenyl
50 µL 07162010-157STD00 — 3,3',4,4'-Tetrachlorobiphenyl

Brought to 1mL in hexane, Lot # 096157

To Page No. ____

Witnessed & Understood by me,	Date	Invented by:	Date
			8/5/2010

TITLE - PCB Congener Stock Soln

Project No. 044

Book No. 2246

From Page No. ____

08062010 - 167 STD00

08062010-167STD00
PCB Congener stock soln. 5ug/mL

The PCB congener Stock Solution contain 250 ul of the fallow carpenter were added to a 5.0 ml volumetric flask & brought to volume with hexane Clot # 00961577

10032009 - 21STD00 - C#101 - 2,2',4,5,5' - Pentachlorobiphenyl
04012010 - 102STD00 - C#17 - 2,2',4 - Trichlorobiphenyl
04012010 - 104STD00 - C#52 - 2,2',5,5 Tetrachlorobiphenyl
10022007 - 220STD00 - C#66 - 2,3',4,4' Tetrachlorobiphenyl
07162010 - 158STD00 - C#154 2,2',4,4,5,6 - Hexachlorobiphenyl
07262010 - 163STD00 - C#105 2,3,3,4,4 - Pentachlorobiphenyl
04012010 - 106STD00 - C#118 2,3',4,4',5 - Pentachlorobiphenyl
08042010 - 165STD00 - C#110 2,3,3',4',6 - Pentachlorobiphenyl
07162010 - 157STD00 - C#77 3,3',4,4' - Tetrachlorobiphenyl
04012010 - 108STD00 C#187 2,2,3,4,5,5',6 - Heptachlorobiphenyl

final concentration 5ug/ml

To Page No. ____

Witnessed & Understood by me,	Date	Invented by: Andy St	Date
		Recorded by:	8/6

Project No. 049
Book No. 2246 TITLE PCB Congen Cal Curve 8/6

From Page No. ____

08062010 - 168CAL

08062010 - 168CAL01 (5 ng/ml)

5 ul of 0806-167STD00 "PCB congen Stock
5 ul of 07122010-141STD00 "PCB - Recvy Check STD
50 ul of 07132010-145STD00 "Inter Standard

into a 5 ml volume flask brought to volume with hexane final concentration 5 ng/ml

08062010-168CAL02 (10 ng/mL)

10 ul of 08062010-167STD00 "PCB congen Stock STD
10 ul of 07122010-141STD00 "PCB - Recvy Check STD
50 ul of 07132010-145STD00 "Inter Standard"
into a 5 ml volume flask brought to volume with hexane final concentration 10 ng/ml

08062010-168CAL03 (25 ng/mL)

25 ul of 08062010-167STD00 "PCB congen Stock STD
25 ul of 07122010-141STD00 "PCB Recvy Check STD
50 ul of 07132010-145STD00 "IS"

into a 5 ml volume flask brought to volume with hexane
final concentration 25 ng/ml

To Page No. ____

Witnessed & Understood by me, | Date | Invented by: Andy [signature] | Date 6/8

Project No. 049

TITLE PCB conger Cal Curve

Book No. 2246

From Page No. 168

08062010 - 168CAL04 (50ng/mL)

100 ul of 08062010 167STD00 "PCB conger Stock"
100 ul of 07122010 - 141 STD00 "PCB RCS"
100 ul of 07132010 - 145 STD00 "IS"

into a 10 ml volume flask brought to volume with hexane final conductor 50 ng/ml

08062010 - 168CAL05 (100ng/mL)

100 ul of 08062010 - 167STD00 "PCB conger Stock"
100 ul of 07122010 - 141 STD00 "PCB RCS"
50 ul of 07132010 - 145 STD00 "IS"
into a 5 ml volume flask brought to volume with hexane final conductor 100 ng/ml

08062010 - 168CAL06 (200ng/mL)

200 ul of 08062010 - 167STD00 "PCB conger Sto
200 ul of 07122010 - 141 STD00 "PCB RCS
50 ul of 07132010 - 145 STD00 "IS"

into a 5 ml volume flask brought to volume with hexane

final conductor

200 ng/ml

To Page No.

Witnessed & Understood by me,	Date	Invented by: [signature]	Date
		Recorded by:	6/8

Project No. 049
Book No. 2246 TITLE PCB C13 - CH 77

From Page No. ____

08092010-170STD00
13C-33'44'-Tetrachlorobiphenyl

Lot # MB0771209
1.2 mL, 50 µg/mL in nonane

EMPTY - 3/10/2011 - [illegible]

To Page No.

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	8/9/2010

Project No. 049

TITLE C13 labelled C#206

Book No. 2246

From Page No. ____

08092010-171STD00
13C-22'33'44'55'6-Nonachlorobiphenyl

Lot # MB20601995
1.2 mL, 50 ug/mL in nonane.

To Page No. ____

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by: J. Nardin	8/9/2010

Project No. 049
Book No. 2246 TITLE Recovery Check Standard

From Page No. ____

08092010-172 STD00

Recovery check Standard:

Combine the follow compounds:

25 ul of 11182009-054STD00 - TMX
1000 ul of 08092010-170 STD00 - 1,2-3,3,4,4-Tetrachlorobiphenyl
1000 ul of 08092010-171 STD00 - 1,3,6-2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl

into 10 ml hexane (Lot# 049157)

final concentration is 5 ug/ml

Empty on 6/27/11

To Page No.

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	8/9

TITLE IAP standards

Project No. 047

Book No. 2246

From Page No. ____

08092010-173STD00
33'44'-Tetrachlorobiphenyl

7835GS EXP:07/14 2ml

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

3.3'.4.4'-Tetrachlorobiphenyl Solution
100ug/ml in Hexane
Lot: 447-49C

FLAMMABLE-REPRODUCTIVE HAZARD

WARNING!: READ your MSDS before HANDLING chemical.

To Page No. ____

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by: J. Warden	8/9/2010

Project No. 049
Book No. 2246 TITLE IAP Standard

From Page No. ____

08092010-174STD00
22'455;-Pentachlorobiphenyl

6789GS EXP:06/13 2ml

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

2,2',4,5,5'-Pentachlorobiphenyl Solution
100ug/ml In Hexane
Lot: 450-45B

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

CA 101

To Page No.

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

TITLE IAP 08092010

Project No. 049
Book No. 2246

From Page No. ____

IAP PCB Calibrations				
	52	118	66 77	101
Std stock ID	67STD-00	68STD-00	173STD-00	174STD-00
Date	12/14/09	12/14/09	08/09/10	08/09/10
Callibration ID				
Std Stock conc., µg/ml	100	100	100	100
Std Stock purity, %	99	99	99	99
Volume of Std, mL	0.059	0.058	0.059	0.058
Total volume dilution 1(D1), mL	2	2	2	2
Concentration of Std, µg	2.9205	2.871	2.9205	2.871
Volume of D1, mL	0.047	0.047	0.047	0.047
Total volume dilution 2, mL	2	2	2	2
Concentration of Std, ng	68.63	67.47	68.63	67.47
Volume of D2, mL				
Total volume dilution 2, mL				
Volume IS, mL				
Concentration of Std, ng				

08092010-175IAP00

08092010-175IAP11

- 08092010-175IAP01 - was re made due an Internal addition error

Andy

To Page No. ____

Witnessed & Understood by me, | Date | Invented by: | Date 8/4

Recorded by:

Project No. 049

Book No. 2246 TITLE Standard for Commercial Lab

From Page No. ____

Q10081001

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 ug/ml

To Page No. .

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	8/10/2010

TLE Standard for commercial Lab

Project No. 049

Book No. 2246

m Page No. ____

Q10081002

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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

605 mg/mL

To Page No. ____

essed & Understood by me,

Date

Invented by:

Recorded by: J. Nardin

Date 8/10/2018

Project No. 0114
Book No. 2246 TITLE IAP - Standard

From Page No. ____

08092010-178IAP01

IAP PCB Calibrations				
	52	X	77	101
Std stock ID	67STD-00	68STD-00	173STD-00	174STD-00
Date	12/14/09	12/14/09	08/09/10	08/09/10
Callibration ID				
Std Stock conc., µg/ml	100	100	100	100
Std Stock purity, %	99	99	99	99
Volume of Std, mL	0.059	0.058	0.059	0.058
Total volume dilution 1(D1), mL	2	2	2	2
Concentration of Std, µg	2.9205	2.871	2.9205	2.871
Volume of D1, mL	0.048	0.048	0.048	0.048
Total volume dilution 2, mL	2	2	2	2
Concentration of Std, ng	70.09	68.90	70.09	68.90
Volume of D2, mL				
Total volume dilution 2, mL				
Volume IS, mL	0.022	0.022	0.022	0.022
Concentration of Std, ng				

AS

C=

C#118 (68STD-00) was not C#118 but C#114
due for it was not used

To Page No. ____

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

Project No. 049

TLE Ruyadrcl Std

Book No. 2-16

m Page No. ____

07202010 - 08122010
Rcam Chds STD

10ul of 07122010-141-STD00 RCS
10ul of 07132010-145 STD00 - FS

brought to lab with keyhole (Lot # 101 790)

To Page No. ____

nessed & Understood by me,	Date	Invented by: [signature]	Date 8/20
		Recorded by:	

Project No. 044
Book No. 2246 TITLE Recovery Check Standard

From Page No. ____

07282010 - 08122010 -

10 ul of 07282010 - 164 STD 02
10 ul of 07132010 - 145 STD 00

brought to 1 ml with Methanol (lot 1017907)

final concentration 50 ng/ml

To Page No. .

Witnessed & Understood by me,	Date	Invented by:	Date

Project No. 049

LE Recon check Standard

Book No. 2244

n Page No.

08042010 - 08122010

10 ul - 07122010 - 141 STM - Rungen Stud
10 ul 07132010 - 145 STM FS

brought to 1 ml without hydrazine (lot 101790)

found concentration 50 ng/ml

To Page No.

nessed & Understood by me,

Date

Invented by: [signature]

Recorded by:

Date 8/13

Project No. 99
Book No. 2246 TITLE Recovery Check STD

From Page No. ____

08092010 - 08192010

10ul of 07~~28~~ 12 AS 2010 - 141 STD 00 Recovery Check STD 0.
10ul of 07132010 - 145 STD IS

brought to 1ml with hexane (lot 101798)

final concentration = 50 ng/ml

To Page No.

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

TLE Reagan Chem STD

Project No. 49

Book No. 2246

om Page No. ____

08102010 - 08192010

10 ul of 07122010 - 141 STDOU Reagan Chem STD
10 ul of 07132010 - 145 STDOU IS

brought to 1 ml with hexane (lot # 10794)

final concentration = 50 ng/ml

To Page No. ____

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

Recorded by:

Project No. 049
Book No. 2246 TITLE Recovery Check STD

From Page No. ____

08122010 - 08192010

10ul of 08092010-172 STD00 Recovery Check STD
10ul of 07132010-145 STD00 IS

brought to 1ml with Methanol (Lot #101790)

final concentration of 50ng/ml

To Page No. .

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	8/19

Project No. 049

TLE Reagan Chem STD

Book No. 2246

om Page No. ____

08162010 - 08192010

10 ul of 08092010 - 772STD00 Reag STD
10 ul of 07132010 - 145STD00 IS

brought to 1 ml with [illegible] (Lot # 101790)

final concn of 50 ng/ml

To Page No. ____

essed & Understood by me,	Date	Invented by: Cindy St	Date
		Recorded by:	8/19

Project No. 049
Book No. 2246 TITLE Aroclor 1254 (Neat)

From Page No. ____

08272010-186STD00
Aroclor 1254 (neat)

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

C-254N-1G 1 gram
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

Empty on 9/21/2016

To Page No. -

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	8/27/2010

Project No. 049
Book No. 2246

TITLE 0.71% - Aroclor 1254 in Paint

From Page No. ____

0.71% 1254 Aroclor in an oil based primer (w/w)
08132010-187STD00
4
08312010-187STD00

Ptrack # **S10000**

Notebook ID	description		weight (g)	difference (g)	% PCBs (w/w)
	Empty amber 60 ml jar	jar	72.7666		
08312010-187STD00	Aroclor 1254	jar + Aroclor 1254	73.0895	0.3229	**0.71%**
S03100	Sherwin Williams all surface Enamel Oil based Primer	jar +Aroclor 1254 + paint	118.2664	45.1769	**total % pcb (w/w)**
			total amt(g)	45.4998	**0.71%**

Discarded 11/15/2011 AM

To Page No. ____

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

Project No. 044
Book No. 2246 TITLE 0.7% 1254 Aroclor in primer

From Page No. ____

0.72% 1254 Aroclor in an oil based primer (w/w)
09022010-188STD00

Ptrack # **S10000**

Notebook ID	description		weight (g)	difference (g)	% PCBs (w/w)
	Empty amber 60 ml jar	jar	72.6952		
08312010-187STD00	Aroclor 1254	jar + Aroclor 1254	73.0357	0.3405	**0.72%**
S03100	Sherwin Williams all surface Enamel Oil based Primer	jar +Aroclor 1254 + paint	120.3491	47.3134	**total % pcb (w/w)**
			total amt(g)	47.6539	**0.71%**

AS

Discarded 11/15/2011

To Page No. .

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

Project No. 044

TITLE Aroclor 1254

Book No. 2246

From Page No. ____

09082010-189STD00
Aroclor 1254 (neat)

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

C-254N-1G
1 gram
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

EMPTY 12/13/2010

To Page No. ____

Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	9/8

Project No. 04 c

Book No. 2246 TITLE — 1.0% 1254 Aroclor in hex

From Page No. ____

09082010-190STD00

1.14 % Aroclor 1254 in hexane (solution)

S10200

Notebook ID	description		weight (g)	difference (g)	% PCBs (w/
	Empty clear 12 ml vial	vial	10.039		
09082010-189STD00	Aroclor 1254	vial+ Aroclor 1254	10.1528	0.1138	**1.14%**
Hexane	Fisher Scientific (lot # 095289)	Vial+ Aroclor 1254+ hexane	10.0000	mL	**total % pcb (w/v)**
			total amt(g)	0.1138	**1.14%**

AS

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Witnessed & Understood by me,	Date	Invented by:	Date
		Recorded by:	9/8

Project No. 049

TITLE Recovery Check Standard

Book No. 2246

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RCS - 09072010 - 08092010-172 STD 00.

- 20 ul of 08092010-172STD00
- 20 uL of Internal standard 07132010-145STD00
- Bring to 2 mL with hexane, lot # 095289

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

Project No. 049

Book No. 2246 TITLE RCS - 09132010

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RCS - 09132010

20 ul of 08092010 - 122 STD00 - RCS

20 ul of 07132010 - 145 STD00 - IS

bring to 2 ml with hexane (lot #

final ul [illegible]

50 ng/ml of an RCS

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