

#### **Prep Standard - Chemical Standard Summary**

Order ID : 03572

Test : Diesel Range Organics

Prepbatch ID : PB154659,

Sequence ID/Qc Batch ID: FE083123,

#### Standard ID :

EP2372,PP22108,PP22137,PP22315,PP22316,PP22317,PP22320,PP22321,PP22322,PP22323,PP22324,PP22325,PP 22326,

#### Chemical ID :

E3412,E3515,E3518,E3532,E3533,E3548,P10828,P11476,P11477,P11576,P11577,P11855,P11856,P11857,P11858,P11 968,P11969,P11971,P12616,P12626,P8445,

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

#### Extractions STANDARD PREPARATION LOG

Recipe ID 3923	NAME Baked Sodium Sulfate	<u>NO.</u>	Prep Date	Expiration Date	Prepared By	<u>ScaleID</u> Extraction_SC	<u>PipetteID</u> None	Supervised By RUPESHKUMAR SHAH
5923	4000.00000gram of E3412 = Final C	EP2372	08/02/2023 00.000 gram	10/23/2023		ALE_2 (EX-SC-2)	INUTIE	08/02/2023
<u>Recipe</u> <u>ID</u>	NAME	<u>NO.</u>	Prep Date	Expiration Date	<u>Prepared</u> <u>By</u>	<u>ScaleID</u>	PipettelD	<u>Supervised By</u> Ankita Jodhani
147	20 PPM DRO Surrogate Spike Solution	<u>PP22108</u>	06/08/2023	12/01/2023	Abdul Mirza	None	None	06/12/2023
<u>FROM</u>	1.00000ml of P11576 + 1.00000ml of Quantity: 200.000 ml	P11577 + ′	1.00000ml of F	P11968 + 1.000	00ml of P11969	9 + 196.00000m	l of E3515 = F	Final

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#### Pest/Pcb STANDARD PREPARATION LOG

Recipe ID 3609 FROM	NAME 20 PPM DRO SPIKE SOLUTION (RESTEK) 1.00000ml of P11855 + 1.00000ml of	<u>NO.</u> PP22137	Prep Date 06/19/2023 i8.00000ml of	12/13/2023	Prepared By Yogesh Patel Quantity: 50.00	<u>ScaleID</u> None	PipettelD None	Supervised By Ankita Jodhani 06/20/2023
<u>Recipe</u> <u>ID</u> 3908	NAME 2/200 PPM Herb Mega Mix 2nd Source (RESTEK+ABSOLUTE)	<u>NO.</u> PP22315	Prep Date 07/05/2023	Expiration Date 12/30/2023	<u>Prepared</u> <u>By</u> Abdul Mirza	<u>ScaleID</u> None	PipettelD None	<u>Supervised By</u> Ankita Jodhani 07/06/2023

0.20000ml of P10828 + 1.00000ml of P12616 + 1.00000ml of P12626 + 1.00000ml of P8445 + 96.80000ml of E3533 = Final FROM Quantity: 100.000 ml

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5.00000ml of E3533 + 0.50000ml of PP22315 = Final Quantity: 1.000 ml	<u>Recipe</u> <u>ID</u> 3909	NAME 1000 PPB HERB MIX ICV STD(RESTEK+ABSOLUTE)	<u>NO.</u> PP22316	Prep Date 07/05/2023	Expiration Date 12/30/2023	Prepared By Abdul Mirza	<u>ScaleID</u> None	PipetteID None	Supervised By Ankita Jodhani 07/06/2023
	FROM	5.00000ml of E3533 + 0.50000ml of	PP22315 =	Final Quantit	y: 1.000 ml				

<u>Recipe</u> <u>ID</u> 3910	NAME 750 PPB ICV HERB STD(RESTEK+ABSOLUTE)	<u>NO.</u> PP22317	Prep Date 07/05/2023	Expiration Date 12/30/2023	<u>Prepared</u> <u>By</u> Abdul Mirza	<u>ScaleID</u> None	<u>PipetteID</u> None	Supervised By Ankita Jodhani 07/06/2023
FROM	0.25000ml of E3533 + 0.75000ml of I	PP22316 =	Final Quantity	y: 1.000 ml				07/06/2023

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Recipe ID 433	<u>NAME</u> 100/100 PPM DRO (Restek)	<u>NO.</u> PP22320	Prep Date 07/06/2023	Expiration Date 12/08/2023	<u>Prepared</u> <u>By</u> Yogesh Patel	<u>ScaleID</u> None	<u>PipetteID</u> None	Supervised By Ankita Jodhani 07/06/2023
<u>FROM</u>	1.00000ml of P11857 + 1.00000ml of	P11858 + 1	1.00000ml of F	211969 + 7.000	00ml of E3532	= Final Quantit	y: 10.000 ml	
Recipe ID	NAME	<u>NO.</u>	Prep Date	Expiration Date	<u>Prepared</u> <u>By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u> Ankita Jodhani

<b>Recipe</b>				Expiration	Prepared			Supervised By
<u>ID</u>	NAME	<u>NO.</u>	Prep Date	<u>Date</u>	<u>By</u>	<u>ScaleID</u>	PipettelD	Ankita Jodhani
3796	100/100 PPM DRO STD (CPI)	<u>PP22321</u>	07/06/2023	12/08/2023	Yogesh Patel	None	None	
								07/06/2023
FROM	1.00000ml of P11476 + 1.00000ml of	P11477 + 1	1.00000ml of F	P11971 + 7.000	00ml of E3532	= Final Quantit	y: 10.000 ml	

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Recipe ID 435	NAME 50 PPM ICC DRO STD (Restek)	<u>NO.</u> PP22322	Prep Date 07/06/2023	Expiration Date 12/08/2023	Prepared By Yogesh Patel	<u>ScaleID</u> None	<u>PipetteID</u> None	Supervised By Ankita Jodhani 07/06/2023
<u>FROM</u>	0.50000ml of E3532 + 0.50000ml of I	PP22320 =	Final Quantity	y: 1.000 ml				
Desine				Evaluation	Dronorod			Supervised By

<u>Recipe</u> <u>ID</u> 437	NAME 20 PPM ICC DRO STD (Restek)	<u>NO.</u> PP22323	<b>Prep Date</b> 07/06/2023	Expiration Date 12/08/2023	<u>Prepared</u> <u>Βγ</u> Yogesh Patel	<u>ScaleID</u> None	<u>PipetteID</u> None	Supervised By Ankita Jodhani 07/06/2023
FROM	0.80000ml of E3532 + 0.20000ml of	PP22320 =	Final Quantity	y: 1.000 ml				01100/2023

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Recipe ID 438	NAME 10 PPM ICC DRO STD (Restek)	<u>NO.</u> PP22324	Prep Date 07/06/2023	Expiration Date 12/08/2023	<u>Prepared</u> <u>By</u> Yogesh Patel	<u>ScaleID</u> None	<u>PipetteID</u> None	Supervised By Ankita Jodhani 07/06/2023
FROM	0.90000ml of E3532 + 0.10000ml of	PP22320 =	Final Quantity	y: 1.000 ml				

<u>Recipe</u> <u>ID</u> 439	NAME 5 PPM ICC DRO STD (Restek)	<u>NO.</u> PP22325	Prep Date 07/06/2023	Expiration Date 12/08/2023	<u>Prepared</u> <u>By</u> Yogesh Patel	<u>ScaleID</u> None	<u>PipetteID</u> None	Supervised By Ankita Jodhani 07/06/2023
FROM	0.90000ml of E3532 + 0.10000ml of	 PP22322 =	Final Quantity	y: 1.000 ml				07700/2023

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Recipe ID 3797	NAME 50 PPM DRO ICV STD (CPI)	<u>NO.</u> PP22326	Prep Date 07/06/2023	Expiration Date 12/08/2023	<u>Prepared</u> <u>By</u> Yogesh Patel	<u>ScaleID</u> None	<u>PipetteID</u> None	Supervised By Ankita Jodhani 07/06/2023
FROM	0.50000ml of E3532 + 0.50000ml of I	PP22321 =	Final Quantit	y: 1.000 ml				



#### CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	PC19631-100 / SODIUM SULFATE, ANHYDROUS, PEST GRADE, 1	139404	10/23/2023	10/18/2022 / Rajesh	10/13/2022 / Rajesh	E3412
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9644-A4 / Methylene Chloride,U-Resi, Cycle-Tainer (215L)	23C1362018	12/01/2023	06/01/2023 / Rajesh	05/17/2023 / Rajesh	E3515
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9644-A4 / Methylene Chloride,U-Resi, Cycle-Tainer (215L)	23E0962014	12/13/2023	06/13/2023 / Rajesh	06/07/2023 / Rajesh	E3518
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9644-A4 / Methylene Chloride,U-Resi,	23E0962014	12/26/2023	06/27/2023 / Rajesh	06/26/2023 / Rajesh	E3532
	Cycle-Tainer (215L)					
Supplier		Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Supplier Seidler Chemical	Cycle-Tainer (215L)	Lot # 23C2462011		Date Opened /		
	Cycle-Tainer (215L) ItemCode / ItemName BA-9262-03 / Hexane,		Date	Date Opened / Opened By 07/03/2023 / Rajesh	Received By 06/29/2023 /	Lot #



#### CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	70934 / Dalapan methyl ester	062121	12/30/2023	06/30/2023 / Abdul	06/22/2021 / dhaval	P10828
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
CPI International	Z-110400-05-01 / TRPH Standard (C8-C40), 500 mg/L, 1 ml	472647	07/27/2023	01/27/2023 / yogesh	02/10/2022 / Yogesh	P11476
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
CPI International	Z-110400-05-01 / TRPH Standard (C8-C40), 500 mg/L, 1 ml	472647	01/06/2024	07/06/2023 / yogesh	02/10/2022 / Yogesh	P11477
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	72072 / n-Tetracosane-d50, 1000 ug/ml	091120	12/08/2023	06/08/2023 / Abdul	03/14/2022 / yogesh	P11576
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	72072 / n-Tetracosane-d50, 1000 ug/ml	091120	12/08/2023	06/08/2023 / Abdul	03/14/2022 / yogesh	P11577
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31266 / Florida TRPH Standard	A0184585	12/19/2023	06/19/2023 / yogesh	06/17/2022 / Yogesh	P11855



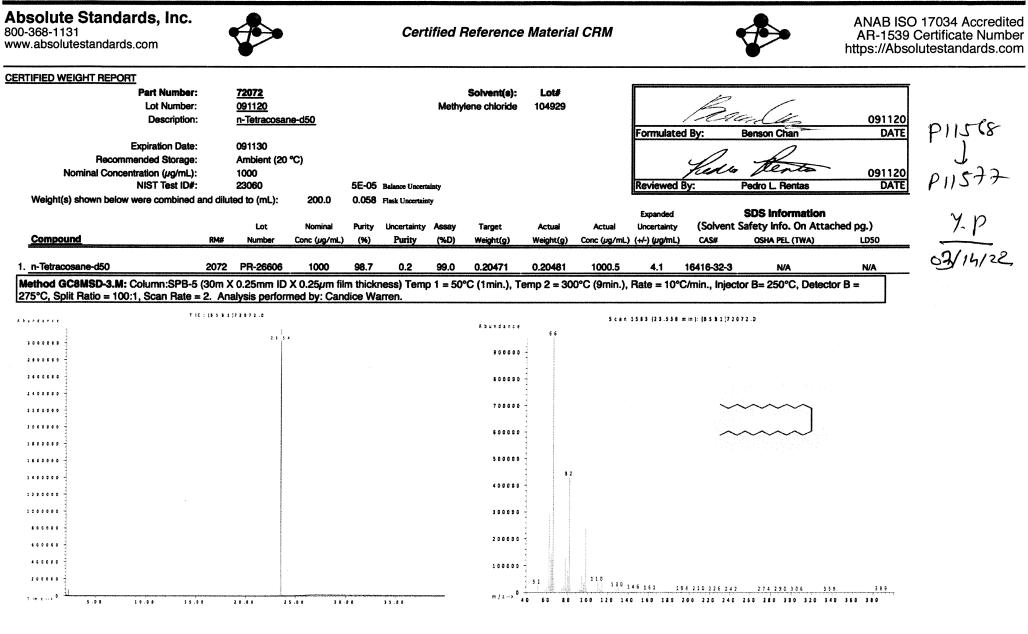
#### CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31266 / Florida TRPH Standard	A0184585	12/19/2023	06/19/2023 / yogesh	06/17/2022 / Yogesh	P11856
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31266 / Florida TRPH Standard	A0184585	01/06/2024	07/06/2023 / yogesh	06/17/2022 / Yogesh	P11857
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31266 / Florida TRPH Standard	A0184585	01/06/2024	07/06/2023 / yogesh	06/17/2022 / Yogesh	P11858
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	72072 / n-Tetracosane-d50, 1000 ug/ml	091120	12/08/2023	06/08/2023 / Abdul	07/25/2022 / Yogesh	P11968
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	72072 / n-Tetracosane-d50, 1000 ug/ml	091120	12/08/2023	06/08/2023 / Abdul	07/25/2022 / Yogesh	P11969
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	72072 / n-Tetracosane-d50, 1000 ug/ml	091120	01/06/2024	07/06/2023 / yogesh	07/25/2022 / Yogesh	P11971



#### CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32062 / Herbicide Mix, 500/8000, Standard #4 [methyl ester] 200ug/mL, hexane, 1mL/ampul	A0155055	01/05/2024	07/05/2023 / Abdul	07/03/2023 / Abdul	P12616
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32055 / Herbicide Mix, 500/8000, Standard #1 [methyl ester] 200ug/mL, hexane, 1mL/ampul	A192429	01/05/2024	07/05/2023 / Abdul	07/03/2023 / Abdul	P12626
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	32050 / Herbicide, 8000 series, 515 Surrogate [ester] 2,4-dichlorophenyl acetic acid methyl ester, 1mL, 200ug/mL, Hexane	a0143143	01/05/2024	07/05/2023 / Abdul	03/28/2019 / Ankita	P8445



• The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.

Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).

• Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.

• All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.

• Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result,"

NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).



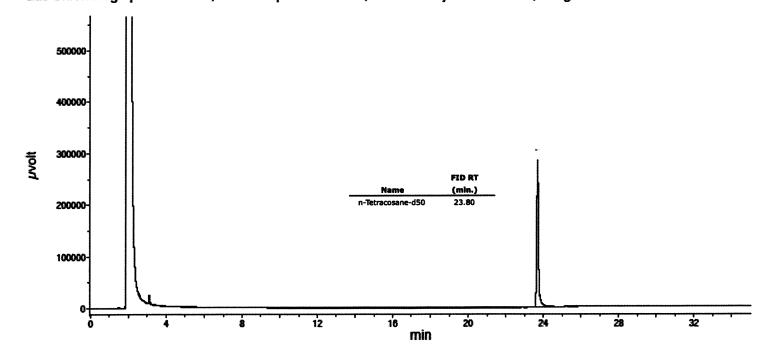


Run 75, "P72072 L091120 [1000µg/mL in MeCl2]"

Run Length: 35.00 min, 20999 points at 10 points/second. Created: Thu, Sep 17, 2020 at 9:46:03 AM. Sampled: Sequence "091420-GC4M2", Method "GC4-M1". Analyzed using Method "GC4-M1".

#### Comments

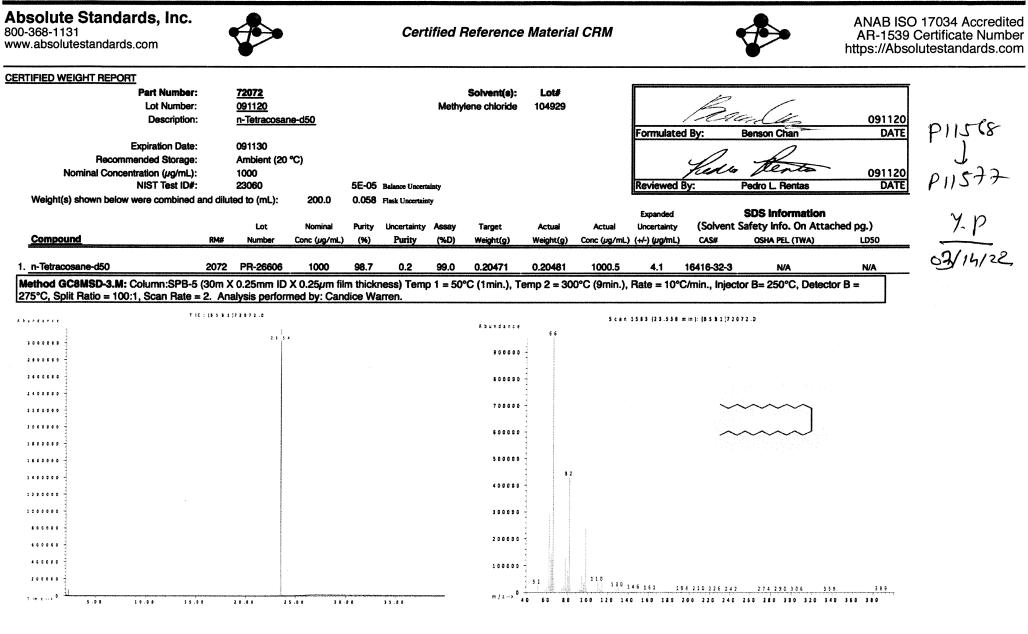
GC4-M1 Analysis by Candice Warren Column ID SPB5 L#60062-01A : 30 meter x 0.53mm x 1.5um Film Thickness Flow rates; Total Flow = 300 ml/min, Helium (carrier) = 6.5 mL, Helium (make-up) = 25 mL, Hydrogen (detector) = 30 mL, Air (detector) =360 mL Oven Temp 1 = 50°C (1 min), Rate = 10°C/min, Oven Temp 2 = 300°C (9 min), Total Run Time = 35 Minutes. Injector Temp = 200°C, FID Temp = 300°C, FID Signal = eDaq Channel 1. Gas Chromatograph = HP 5890, Auto Sampler = HP 7673, Standard Injection = 0.5 uL, Range = 3



Absolute Standards Inc.		PO Box 5585 Hamden, CT 06518-058	585		Phone: 203-281-2917 FAX: 203-281-2922
	Safety Data Sheet (SDS)	GHS/OSHA Compliant	npliant		
Section I Product and Con	ompany Identification				
IDENTITY ANALYTIC Manufacturer's Name Address	ANALYTICAL STANDARD DISSOLVED IN METHYLENE CHLORIDE lame ABSOLUTE STANDARDS INC Emergency Telephone 44 Rossotto Dr. Emergency Telephone	AETHYLENE CHL( Emergency Tele Emergency Tele	THYLENE CHLORIDE Emergency Telephone USA & CANADA Emergency Telephone International	A	1-800-535-5053 1-352-323-3500
Section II - Hazards Identi	Hamden CT, 06514 tification	Date Prepared/F	Tevised		May 1, 2019
	GHS Classification in accordance with 29	dance with 29 CF	CFR 1910 (OSHA HCS)		
H302 Harmful if H351 Suspecte P271 Use in ver P302,332 If on skin,	Harmful if swallowed. Suspected of causing cancer. Use in ventilated area If on skin, wash with soap and water	H315,H320 H335 P280 P305,351,338	Causes skin and eye irritation. May cause respiratory irritation. Use gloves, eye protection/face sheild If in eyes, remove contacts, rinse with water	e irritation. ory irritation. otection/face sh contacts, rinse v	heild with water
<ul> <li></li> <li><td>Signal Word: WARNING</td><td></td><td></td><td></td><td></td></li></ul>	Signal Word: WARNING				
Section III - Composition					
Components:		CAS#:	OSHA PEL (TWA)	LD50 orl-rat	% (optional)
Dichloromethane	Methylene chloride	75-09-2	50 ppm	> 2,000 mg/kg	> 97
See Certified Weight Report F INTENDED USE: REFERENCE MA Section IV. FIRST AID MEASURES	Report For Other Analytes Present At Trace ENCE MATERIAL EASURES	esent At Trace	Quantities.		
General advice If inhaled In case of skin contact In case of eye contact If swallowed	Consult a physician. Show this safety data sheet to the doctor in attendance.Move to safe area. If inhaled, move person into fresh air. If not breathing, give artificial respiration. Consult a physician. Wash with soap and water. Consult a physician. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Do NOT induce vomiting. Rinse mouth with water. Consult a physician.	ata sheet to the doctor not breathing, give arti hysician. r at least 15 minutes ar with water. Consult a pl	in attendance.Move to saf ficial respiration. Consult a nd consult a physician. hysician.	safe area. ult a physician.	
Section V. FIREFIGHTING	G MEASURES				
Suitable extinguishing media Protective equipment for fire	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Wear self contained breathing apparatus for fire fighting if necessary.	foam, dry chemical or c aratus for fire fighting it	carbon dioxide. f necessary.		
Section VI. ACCIDENTAL	. RELEASE MEASURES				
Personal precautions Environmental precautions Clean up	Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Vapours accumulate to form explosive concentrations. Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Contain spillage, and then collect and place in container for disposal according to local regulations (see section 13).	hing vapors, mist or ga plosive concentrations e to do so. Do not let p lace in container for dis	as. Ensure adequate ventili orduct enter drains. sposal according to local re	ation. Remove all s egulations (see sect	ources of tion 13).
Section VII. HANDLING AN	ND STORAGE				
Precautions for safe handling Storage Conditions	Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use ventilation Keep away from sources of ignition. No smoking. Prevent the build up of electrostatic charge. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.	void inhalation of vapc urces of ignition. No s Iry and well-ventilated j	our or mist. moking. Prevent the build. place. Containers which ar	up of electrostatic c e opened must be e	charge. carefully resealed
Section VIII. EXPOSURE	Section VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION	TION			
Methylene chloride 75-09-2 TVM 50 ppm Potential for skin absorption, ingestion and inhalation. Personal protective equipment Respiratory protect Avoid contact with skin, eyes and clothing. Wash han	50 ppm stion and inhalation. Respiratory protection clothing. Wash hands th	Handle with gloves. Gloves must be inspected prior to use oroughly after handling the product.		Eye protection.	
Section IX - PHYSICAL/CH	HEMICAL CHARACTERISTICS				
Boiling Point	40°C	Specific Gravity (H2O = 1)	(H2O = 1)		1.325
Methylene chloride-SDS	S.xls	Page 1 of 2			Printed: 3/10/22

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Vapor Pressure (mm Hg) Vapor Density (AIR = 1) Solubility in Water Appearance and Odor Appearance and Odor <b>Section X. STABILITY AN</b> Chemical stability Possibility of hazardous reaction Conditions to avoid Materials to avoid	e (mm Hg) (AIR=1)	353	Melting Point	
Vapor Density Solubility in <i>W</i> i Appearance ar <b>Section X. STI</b> Chemical stability Possibility of hazi Conditions to avoic Materials to avoic Hazardous decor	(AIR = 1)			-07°C
Solubility in We Appearance at Section X. ST. Chemical stability Possibility of hazi Conditions to avoid Materials to avoid Hazardous decor		2.93	Evaporation rate (Butvi Acetate = 1)	0.12-
Appearance ar Section X. ST. Chemical stability Possibility of haz: Conditions to avoid Materials to avoid Hazardous decor	ater Slightly soluble			
Section X. STI Chemical stability Possibility of haza Conditions to avoir Materials to avoir Hazardous decor		ss Liquid W	CLEAR, COLORLESS LIQUID WITH CHARACTERISTIC PUNGENT ODOR.	
Chemical stability Possibility of hazi Conditions to avoi Materials to avoic Hazardous decor	ABILITY AND REACTIVITY			
Saction YI TC	dous reactions osition products - N	mmended storag ks, extreme temp iinum, Oxidizing	Stable under recommended storage conditions. No data available Heat, flames, sparks, extreme temperature and sunlight. Alkali metals, Aluminum, Oxidizing agents, Bases, Amines, Magnesium, Acids, Vinyl compounds to data available	
	Section XI. TOXICOLOGICAL INFORMATION			
LD50 Oral - Rat - > 2,000 mg/k LC50 Inhalation - Rat - 52,000 LD50 Dermal - Rat - 52,000 m Toxic if absorbed through skin. Eye damage/eye irritation Toxic if inhaled. Causes respira Toxic if swallowed.	LD50 Oral - Rat - > 2,000 mg/kg LC50 Inhalation - Rat - 52,000 mg/kg LD50 Dermal - Rat - > 2,000 mg/kg Toxic if absorbed through skin. Causes skin irritation. Toxic if inhaled. Causes respiratory tract irritation. Toxic if swallowed.			
Section XII. E	Section XII. ECOLOGICAL INFORMATION FOR REPORTABLE QUANTITY OF 1000 lbs	R REPORTAE	ILE QUANTITY OF 1000 lbs.	
LC50 EC50	193.00 mg/l - 96 h 1,682.00 mg/l - 48 h			
Section XIII. L	Section XIII. DISPOSAL CONSIDERATIONS			
Dispose with normal Laboratory	mal Laboratory Solvent Waste.			
Section XIV. TRANSPOR	TRANSPORT INFORMATION			
DOT (US) UN number: 1593 Class: 6 Proper shipping name: Dic Reportable Quantity (RQ):	DOT (US) UN number: 1593 Class: 6.1 Packing group: III Proper shipping name: Dichloromethane Reportable Quantity (RQ): 1000 lbs	IATA UN number: Proper shipp	IATA UN number: 1593 Class: 6.1 Packing group: III Proper shipping name: Dichloromethane	
Section XV. R	Section XV. REGULATORY INFORMATION			
OSHA Hazards SARA 302: No ch	Flammable liquid, Target Organ Effect, hemicals in this material are subject to the	t, Toxic by inhala e reporting requi	OSHA Hazards Flammable liquid, Target Organ Effect, Toxic by inhalation., Toxic by ingestion, Toxic by skin absorption, Irritant SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.	
Section XVI. N	Section XVI. Misc. INFORMATION			
The information in 1910.1200 et. seq.) supervised by a per usage, protective of usages of use or in STANDARDS INC MERCHANTABIL MERCHANTABIL MERCHANTABIL MERCHANTABIL	this Material Safety Data Sheet meets the requirer and Global Harmonized System (GHS). This doco reson trained in chemical handling. The user is resp lothing including eye and face guards and respirato alth effects. This chemical may interact with other afthe ffects. This chemical any interact with other networkin with other chemical any substances. AEX C DISCLAIMS ANY OTHER WARRANTIES, EX C DISCLAIMS ANY OTHER WARRANTIES, EX ULTY OR ITS FITURES FIOR A PARTICULLAR AI ULTA angers of use are not heeded. READ ALL PR periodically revise this Material Safety Data Sheet periodically revise this Material Safety Data Sheet	nents of the United { ument is intended of consible for determin or must be used to a substances. Since it substances. Since it SOLUTE STANDA ZPRESSED OR IMI PPLICATION. The RECAUTIONARY I & If you have any q	The information in this Material Safety Data Sheet meets the requirements of the United States Occupational Safety and Health Act and regulations promulgated thereunder (29 CFR 1910.1200 et. seq.) and Global Harmonized System (GHS). This document is intended only as a guide to the appropriate precautionary handling of the material by trained personnel, or supervised by a person trained in chemical handling. The user is responsible for determining the precautions and dangers of this chemical for his or her particular application. Depending on usage, protective clothing including eye and face guards and respirators must be used to avoid contact with material or breathing chemical vapors/fumes. Exposure to this product may have strong adverse health effects. This chemical may interact with other substances. ABSOLUTE STANDARDS NC. Cuants that the chemical meets the specifications set forth on the label. ABSOLUTE STANDARDS NC DISCLAMIS ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS STANDARDS NC DISCLAMIS ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS MARDARDS NC DISCLAMIS SANY OTHER WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS MARDARDS NC DISCLAMIS SANY OTHER WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS MARDARDS NC DISCLAMIS SANY OTHER WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS MARDARDS NC DISCLAMIS SANY OTHER WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS MARDARDS NC STANDARDS NC STORD SANT SANT SANT SANT SANT SANT SANT SANT	er (29 CFR fersonnel, or ion. Depending on s product may have f all the potential ceil. ABSOLUTE all ABSOLUTE liable, Absolute



• The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.

Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).

• Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.

• All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.

• Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result,"

NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).



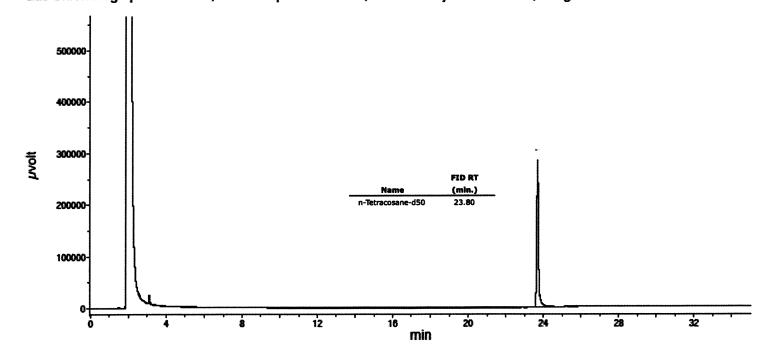


Run 75, "P72072 L091120 [1000µg/mL in MeCl2]"

Run Length: 35.00 min, 20999 points at 10 points/second. Created: Thu, Sep 17, 2020 at 9:46:03 AM. Sampled: Sequence "091420-GC4M2", Method "GC4-M1". Analyzed using Method "GC4-M1".

#### Comments

GC4-M1 Analysis by Candice Warren Column ID SPB5 L#60062-01A : 30 meter x 0.53mm x 1.5um Film Thickness Flow rates; Total Flow = 300 ml/min, Helium (carrier) = 6.5 mL, Helium (make-up) = 25 mL, Hydrogen (detector) = 30 mL, Air (detector) =360 mL Oven Temp 1 = 50°C (1 min), Rate = 10°C/min, Oven Temp 2 = 300°C (9 min), Total Run Time = 35 Minutes. Injector Temp = 200°C, FID Temp = 300°C, FID Signal = eDaq Channel 1. Gas Chromatograph = HP 5890, Auto Sampler = HP 7673, Standard Injection = 0.5 uL, Range = 3



Absolute Standards Inc.		PO Box 5585 Hamden, CT 06518-058	585		Phone: 203-281-2917 FAX: 203-281-2922
	Safety Data Sheet (SDS)	GHS/OSHA Compliant	npliant		
Section I Product and Con	ompany Identification				
IDENTITY ANALYTIC Manufacturer's Name Address	ANALYTICAL STANDARD DISSOLVED IN METHYLENE CHLORIDE lame ABSOLUTE STANDARDS INC Emergency Telephone 44 Rossotto Dr. Emergency Telephone	AETHYLENE CHL( Emergency Tele Emergency Tele	THYLENE CHLORIDE Emergency Telephone USA & CANADA Emergency Telephone International	A	1-800-535-5053 1-352-323-3500
Section II - Hazards Identi	Hamden CT, 06514 tification	Date Prepared/F	Tevised		May 1, 2019
	GHS Classification in accordance with 29	dance with 29 CF	CFR 1910 (OSHA HCS)		
H302 Harmful if H351 Suspecte P271 Use in ver P302,332 If on skin,	Harmful if swallowed. Suspected of causing cancer. Use in ventilated area If on skin, wash with soap and water	H315,H320 H335 P280 P305,351,338	Causes skin and eye irritation. May cause respiratory irritation. Use gloves, eye protection/face sheild If in eyes, remove contacts, rinse with water	e irritation. ory irritation. otection/face sh contacts, rinse v	heild with water
<ul> <li></li> <li><td>Signal Word: WARNING</td><td></td><td></td><td></td><td></td></li></ul>	Signal Word: WARNING				
Section III - Composition					
Components:		CAS#:	OSHA PEL (TWA)	LD50 orl-rat	% (optional)
Dichloromethane	Methylene chloride	75-09-2	50 ppm	> 2,000 mg/kg	> 97
See Certified Weight Report F INTENDED USE: REFERENCE MA Section IV. FIRST AID MEASURES	Report For Other Analytes Present At Trace ENCE MATERIAL EASURES	esent At Trace	Quantities.		
General advice If inhaled In case of skin contact In case of eye contact If swallowed	Consult a physician. Show this safety data sheet to the doctor in attendance.Move to safe area. If inhaled, move person into fresh air. If not breathing, give artificial respiration. Consult a physician. Wash with soap and water. Consult a physician. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Do NOT induce vomiting. Rinse mouth with water. Consult a physician.	ata sheet to the doctor not breathing, give arti hysician. r at least 15 minutes ar with water. Consult a pl	in attendance.Move to saf ficial respiration. Consult a nd consult a physician. hysician.	safe area. ult a physician.	
Section V. FIREFIGHTING	G MEASURES				
Suitable extinguishing media Protective equipment for fire	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Wear self contained breathing apparatus for fire fighting if necessary.	foam, dry chemical or c aratus for fire fighting it	carbon dioxide. f necessary.		
Section VI. ACCIDENTAL	. RELEASE MEASURES				
Personal precautions Environmental precautions Clean up	Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Vapours accumulate to form explosive concentrations. Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Contain spillage, and then collect and place in container for disposal according to local regulations (see section 13).	hing vapors, mist or ga plosive concentrations e to do so. Do not let p lace in container for dis	as. Ensure adequate ventili orduct enter drains. sposal according to local re	ation. Remove all s egulations (see sect	ources of tion 13).
Section VII. HANDLING AN	ND STORAGE				
Precautions for safe handling Storage Conditions	Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use ventilation Keep away from sources of ignition. No smoking. Prevent the build up of electrostatic charge. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.	void inhalation of vapc urces of ignition. No s Iry and well-ventilated j	our or mist. moking. Prevent the build. place. Containers which ar	up of electrostatic c e opened must be e	charge. carefully resealed
Section VIII. EXPOSURE	Section VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION	TION			
Methylene chloride 75-09-2 TVM 50 ppm Potential for skin absorption, ingestion and inhalation. Personal protective equipment Respiratory protect Avoid contact with skin, eyes and clothing. Wash han	50 ppm stion and inhalation. Respiratory protection clothing. Wash hands th	Handle with gloves. Gloves must be inspected prior to use oroughly after handling the product.		Eye protection.	
Section IX - PHYSICAL/CH	HEMICAL CHARACTERISTICS				
Boiling Point	40°C	Specific Gravity (H2O = 1)	(H2O = 1)		1.325
Methylene chloride-SDS	S.xls	Page 1 of 2			Printed: 3/10/22

(

Vapor Pressure (mm Hg) Vapor Density (AIR = 1) Solubility in Water Appearance and Odor Appearance and Odor <b>Section X. STABILITY AN</b> Chemical stability Possibility of hazardous reaction Conditions to avoid Materials to avoid	e (mm Hg) (AIR=1)	353	Melting Point	
Vapor Density Solubility in <i>W</i> i Appearance ar <b>Section X. STI</b> Chemical stability Possibility of hazi Conditions to avoic Materials to avoic Hazardous decor	(AIR = 1)			-07°C
Solubility in We Appearance at Section X. ST. Chemical stability Possibility of hazi Conditions to avoid Materials to avoid Hazardous decor		2.93	Evaporation rate (Butvi Acetate = 1)	0.12-
Appearance ar Section X. ST. Chemical stability Possibility of haz: Conditions to avoid Materials to avoid Hazardous decor	ater Slightly soluble			
Section X. STI Chemical stability Possibility of haza Conditions to avoir Materials to avoir Hazardous decor		ss Liquid W	CLEAR, COLORLESS LIQUID WITH CHARACTERISTIC PUNGENT ODOR.	
Chemical stability Possibility of hazi Conditions to avoi Materials to avoic Hazardous decor	ABILITY AND REACTIVITY			
Saction YI TC	dous reactions osition products - N	mmended storag ks, extreme temp iinum, Oxidizing	Stable under recommended storage conditions. No data available Heat, flames, sparks, extreme temperature and sunlight. Alkali metals, Aluminum, Oxidizing agents, Bases, Amines, Magnesium, Acids, Vinyl compounds to data available	
	Section XI. TOXICOLOGICAL INFORMATION			
LD50 Oral - Rat - > 2,000 mg/k LC50 Inhalation - Rat - 52,000 LD50 Dermal - Rat - 52,000 m Toxic if absorbed through skin. Eye damage/eye irritation Toxic if inhaled. Causes respira Toxic if swallowed.	LD50 Oral - Rat - > 2,000 mg/kg LC50 Inhalation - Rat - 52,000 mg/kg LD50 Dermal - Rat - > 2,000 mg/kg Toxic if absorbed through skin. Causes skin irritation. Toxic if inhaled. Causes respiratory tract irritation. Toxic if swallowed.			
Section XII. E	Section XII. ECOLOGICAL INFORMATION FOR REPORTABLE QUANTITY OF 1000 lbs	R REPORTAE	ILE QUANTITY OF 1000 lbs.	
LC50 EC50	193.00 mg/l - 96 h 1,682.00 mg/l - 48 h			
Section XIII. L	Section XIII. DISPOSAL CONSIDERATIONS			
Dispose with normal Laboratory	mal Laboratory Solvent Waste.			
Section XIV. TRANSPOR	TRANSPORT INFORMATION			
DOT (US) UN number: 1593 Class: 6 Proper shipping name: Dic Reportable Quantity (RQ):	DOT (US) UN number: 1593 Class: 6.1 Packing group: III Proper shipping name: Dichloromethane Reportable Quantity (RQ): 1000 lbs	IATA UN number: Proper shipp	IATA UN number: 1593 Class: 6.1 Packing group: III Proper shipping name: Dichloromethane	
Section XV. R	Section XV. REGULATORY INFORMATION			
OSHA Hazards SARA 302: No ch	Flammable liquid, Target Organ Effect, hemicals in this material are subject to the	t, Toxic by inhala e reporting requi	OSHA Hazards Flammable liquid, Target Organ Effect, Toxic by inhalation., Toxic by ingestion, Toxic by skin absorption, Irritant SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.	
Section XVI. N	Section XVI. Misc. INFORMATION			
The information in 1910.1200 et. seq.) supervised by a per usage, protective of usages of use or in STANDARDS INC MERCHANTABIL MERCHANTABIL MERCHANTABIL MERCHANTABIL	this Material Safety Data Sheet meets the requirer and Global Harmonized System (GHS). This doco reson trained in chemical handling. The user is resp lothing including eye and face guards and respirato alth effects. This chemical may interact with other afthe ffects. This chemical any interact with other networkin with other chemical any substances. AEX C DISCLAIMS ANY OTHER WARRANTIES, EX C DISCLAIMS ANY OTHER WARRANTIES, EX ULTY OR ITS FITURES FOR A PARTICULAR AI ULTA angers of use are not heeded. READ ALL PR periodically revise this Material Safety Data Sheet periodically revise this Material Safety Data Sheet	nents of the United { ument is intended of consible for determin or must be used to a substances. Since it substances. Since it SOLUTE STANDA ZPRESSED OR IMI PPLICATION. The RECAUTIONARY I & If you have any q	The information in this Material Safety Data Sheet meets the requirements of the United States Occupational Safety and Health Act and regulations promulgated thereunder (29 CFR 1910.1200 et. seq.) and Global Harmonized System (GHS). This document is intended only as a guide to the appropriate precautionary handling of the material by trained personnel, or supervised by a person trained in chemical handling. The user is responsible for determining the precautions and dangers of this chemical for his or her particular application. Depending on usage, protective clothing including eye and face guards and respirators must be used to avoid contact with material or breathing chemical vapors/fumes. Exposure to this product may have strong adverse health effects. This chemical may interact with other substances. ABSOLUTE STANDARDS NC. Cuants that the chemical meets the specifications set forth on the label. ABSOLUTE STANDARDS NC DISCLAMIS ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS STANDARDS NC DISCLAMIS ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS MARDARDS NC DISCLAMIS SANY OTHER WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS MARDARDS NC DISCLAMIS SANY OTHER WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS MARDARDS NC DISCLAMIS SANY OTHER WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS MARDARDS NC DISCLAMIS SANY OTHER WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS MARDARDS NC STANDARDS NC STORD SAND SANS OF SUPERSIDES ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS MARDARDS NC STORD SAND SANS OF SUPERSIDES SAND SANS OF SUPERSIDES AND SAND SANS SAND SANS SAND SANS OF SUPERSIDES AND SAND SAND SAND SAND SAND SAND SAND	er (29 CFR fersonnel, or ion. Depending on s product may have f all the potential ceil. ABSOLUTE all ABSOLUTE liable, Absolute

INTERNATIONAL	Santa (7 (800)8 (707	Santa Kosa, CA 95403 (707)525-5788 (800)878-7654 Toll Free (707)545-7901 Fax	Date	Manufacturer's Quality System Audited & Registered by TUV USA to ISO 9001:2015 Received:
	Certific	<b>Certificate of Analysis</b>	ysis Rev 0	Page 1 of 1
Catalog No.: Lot No.: Storage: Z-110400 472647 ≤ -10 °C -05-01	Solvent: Hexane	Exp. Date: 11/18/2023 TRP	Descr lard (C8-C40),	n an
-10PAK Compound	CAS No.	Purity (%)	Compound Lot No.	Concentration, mg/L
decane (C10)	124-18-5	99.5	415.7.1P	$500.2 \pm 2.29$
docosane (C22)	629-97-0	66	420.1.1P	502.4 ± 5.5
dodecane (C12)	112-40-3	99.2	416.7.1P	500.7 ± 2.29
dotriacontane (C32)	544-85-4	86	425.29.2P	499.8 ± 5.47
eicosane (C20)	112-95-8	98.9	419.29.1P	505.1 ± 2.31
hexacosane (C26)	630-01-3	99.3	422.7.2P	500 ± 2.29
hexatriacontane (C36)	630-06-8	86	427.29.1P	500.3 ± 5.48
n-hexadecane (U16)	544-76-3	99.45	368.271.1P	$499.6 \pm 2.23$
octacosane (C28)	630-02-4	98.7	423.400.1P	498.3 ± 5.45
n-octadecane (C18)	593-45-3	99.5	418.29.1P	$501.9 \pm 2.24$
octane (C8)	111-65-9	99.5	385.9.1P	499.8 ± 2.23
octatriacontane (C38)	7194-85-6	66	428.7.1P	499.8 ± 2.29
tetracontane (C40)	4181-95-7	100	429.7.1P	504.1 ± 5.52
n-tetradecane (C14)	629-59-4	66	417.29.4P	500.4 ± 5.48
tetratriacontane (C34)	14167-59-0	98.1	426.7.2P	499.6 ± 2.28
triacontane (C30)	638-68-6	99.5	424.7.1.1P	499.9 ± 2.29
tetracosane (C24)	646-31-1	66	421.1.1P	500.1 ± 5.47
pintoq y.p. 1 pintox 02/20/22				
Let the standard warm to room temperature and sonicate before opening.	ening.			*Not a certified

ertified value

Jarrett Howard Chemist

All weights are traceable through N. I. S. T. Test No. 822/264157-00. Concentration (correct for purity) and uncertainty (95% confidence) values listed are determined gravimetriclly.

Certified By:



INTERNATIONAL	Santa (7 (800)8 (707	Santa Kosa, CA 95403 (707)525-5788 (800)878-7654 Toll Free (707)545-7901 Fax	Date	Manufacturer's Quality System Audited & Registered by TUV USA to ISO 9001:2015 Received:
	Certific	<b>Certificate of Analysis</b>	ysis Rev 0	Page 1 of 1
Catalog No.: Lot No.: Storage: Z-110400 472647 ≤ -10 °C -05-01	Solvent: Hexane	Exp. Date: 11/18/2023 TRP	Descr lard (C8-C40),	n an
-10PAK Compound	CAS No.	Purity (%)	Compound Lot No.	Concentration, mg/L
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docosane (C22)	629-97-0	66	420.1.1P	502.4 ± 5.5
dodecane (C12)	112-40-3	99.2	416.7.1P	500.7 ± 2.29
dotriacontane (C32)	544-85-4	86	425.29.2P	499.8 ± 5.47
eicosane (C20)	112-95-8	98.9	419.29.1P	505.1 ± 2.31
hexacosane (C26)	630-01-3	99.3	422.7.2P	500 ± 2.29
hexatriacontane (C36)	630-06-8	86	427.29.1P	500.3 ± 5.48
n-hexadecane (U16)	544-76-3	99.45	368.271.1P	$499.6 \pm 2.23$
octacosane (C28)	630-02-4	98.7	423.400.1P	498.3 ± 5.45
n-octadecane (C18)	593-45-3	99.5	418.29.1P	$501.9 \pm 2.24$
octane (C8)	111-65-9	99.5	385.9.1P	499.8 ± 2.23
octatriacontane (C38)	7194-85-6	66	428.7.1P	499.8 ± 2.29
tetracontane (C40)	4181-95-7	100	429.7.1P	504.1 ± 5.52
n-tetradecane (C14)	629-59-4	66	417.29.4P	500.4 ± 5.48
tetratriacontane (C34)	14167-59-0	98.1	426.7.2P	499.6 ± 2.28
triacontane (C30)	638-68-6	99.5	424.7.1.1P	499.9 ± 2.29
tetracosane (C24)	646-31-1	66	421.1.1P	500.1 ± 5.47
pintoq y.p. 1 pintox 02/20/22				
Let the standard warm to room temperature and sonicate before opening.	ening.			*Not a certified

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Jarrett Howard Chemist

All weights are traceable through N. I. S. T. Test No. 822/264157-00. Concentration (correct for purity) and uncertainty (95% confidence) values listed are determined gravimetriclly.

Certified By:



<b>ards,</b> ds.com	lnc.			
Absolute Stand 00-368-1131 www.absolutestandare	Standa	00-368-1131	vww.absolutestandards.com	

**Certified Reference Material CRM** 



ANAB ISO 17034 Accredited AR-1539 Certificate Number https://Absolutestandards.com

	51 113 1381 156166	64 93 121	Expanded SDS Information Lot Nominal Purity Uncertainty Target Actual Actual Uncertainty (Solvent Safety Info. On Attached p RM# Number Conc (ug/mL) (%) Purity Weight(g) Weight(g) Conc (ug/mL) (µg/mL) CAS# 0SHA PEL (TWA)	Part Number: 70934 Solvent(s): Lot#		Reviewed B           Expanded           tctual         Uncertainty           ( <i>uy/mL</i> )         ( <i>ug/mL</i> )           ( <i>uy/mL</i> )         ( <i>ug/mL</i> )           Scan 343 (5.996 rr         97           97         97           97         93           77         93           77         113	Actual A Veight(g) Conc Veight(g) Conc 0.01035 1( 0.01035 1( 59 10 59 59 50 50 50 50 50 50 50 50 50 50	weight(g) y Weight(g) y Weight(g) 1 = 50°C (1min.) 1 + 10000 1 + 10000 1 + 10000 1 + 10000 1 + 10000 1 + 10000 2 + 10000	Purity Uncertaii (%) Purity 97.6 0.5 thickness) Temp	Conc (ug/mt) 1000 1000 1000 1000 1000 1000 1000 100	# Number X 0.25mm ID X 0.25mm ID S9170934.D		
200000 64 93 121 51 77 93 121 m/z>0 51 77 113 13&1 156166 20 80 100 120 110 150 00 200 200	64 77 93		$\frac{334 \text{ Bit 6100} 1000 \text{ 97.6} 0.5 \text{ 0.01027} 0.01036 \text{ 1008.1} 14.2 \text{ 17640-02.7} \text{ MA}}{14.2 \text{ 17640-02.7} \text{ MA}}$ Alter 2 - Analysis performed by: Melisea Stouiet. In Rate = 1. Analysis performed by: Melisea Stouiet. Tric: (BSB9)70934.D $\frac{110000}{140000}$ $\frac{140000}{140000}$ $\frac{140000}{140000}$ $\frac{110000}{100000}$ $\frac{1100000}{100000}$ $\frac{1100000}{100000}$	Let Muncher: $\underline{O22121}$ Methanic D'Nie-US D'Alber-US			000	55F					
200000 64 93 121 m/z>0 51 77 93 121 m/z>0 51 77 113 13&156166	64 53		$\frac{934 \text{ Bil 6100} \text{ ioo} \text{ 97.6} \text{ 0.5} \text{ 0.01027} \text{ 0.01035} \text{ 1006.1} \text{ 14.2} \text{ 17640-02.7} \text{ NA}}{142 \text{ 17640-02.7} \text{ NA}}$ All Column:SPB-5 (30m X 0.25mm ID	Lot Number: $\underbrace{02121}{04}$ Lot Number: $\underbrace{02121}{04}$ Methanol DY18-US Pescription: $\underbrace{02121}{04}$ Methanol DY18-US Fermulated By: $\underbrace{Pertinentity and the methy ease.}{Pertinentity in the methy interest By: Pertinentity interest By: Pertinentity interest By: Pertinentity interest By: \underbrace{Pertinentity interest By: Pertinentity interest By: Pertinentity interest By: Pertinentity interest By: \underbrace{Pertinentity interest By: Pertinentity interest By: Pertinentity interest By: Pertinentity interest By: Pertinentity interest By: \underbrace{Pertinentity interest By: Pertinentity interest By: \underbrace{Pertinentity interest By: Pertinentity interest By: Pertinentity interest By: Pertinentity interest By: Pertinentity interest By: \underbrace{Pertinentity interest By: Pertinentity interest By: \underbrace{Pertinentity interest By: Pertinentity interest By: Py: Py: Py: Py: Py: Py: Py: Py: Py: P$			UQ.	4000					
200000 64 93 121 m/z>0 51 77 93 121 m/z>0 51 200 100 100 100 100 000 000 000 000 00	64 77 93	400000	$\frac{334 \text{ Bi16100} 1000 \text{ g7.6} 0.5 0.01027 0.01035 1008.1 14.2 17640-02.7 MA}{14.2 17640-02.7 MA}$ Alf: Column:SPB-5 (30m X 0.25mm ID X	Lot Number: $\underbrace{\text{Description:}}_{\text{Description:}}$ $\underbrace{\text{Description:}}_{\text{Description:}$ $\underbrace{\text{Description:}}_{\text{Description:}}$ $\underbrace{\text{Description:}}_{\text{Description:}$ $\underbrace{\text{Description:}}_{\text{Description:}}$ $\underbrace{\text{Description:}}_{\text{Description:}}$ $\text{De$			200	~~~~					
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600000 400000 200000 64 3 121 m/2>0 51 77 93 121 113 1361 156166 200 80 40 100 100 400 500 500 500 500 500 500 500 500 5	64 77 93	60000 40000	$\frac{334 \text{ Bit6100} 1000 \text{ B7.6} 0.5 0.01027 0.01035 1008.1 14.2 17640-02.7 WA}{discass Nem ID X 0.25mm ID X 0.25mm ID X 0.25mm ID in thickness Nem I = 50°C (1min.), Temp 2 = 300°C (9min.), Rate = 10°C/min., Injector B= 200°C, Detector B. at Rate = 2. Analysis performed by: Melissa Stoniet. Tric: (BSBB)70934.D Abundance S. Analysis performed by: Rate = 10°C/min., Injector B= 200°C, Detector B. at Rate = 2. Analysis performed by: Melissa Stoniet. Tric: (BSBB)70934.D Abundance S. Analysis performed by: Rate = 10°C/min., Injector B= 200°C, Detector B. at Rate = 2. Analysis performed by: Melissa Stoniet. Tric: (BSBB)70934.D Abundance S. Analysis performed by: Rate = 10°C/min., Injector B= 200°C, Detector B. at Rate = 2. Analysis performed by: Rate = 10°C/min., Injector B= 200°C, Detector B. at Rate = 2. Analysis performed by: Rate = 10°C/min., Injector B= 200°C, Detector B. at Rate = 2. Analysis performed by: Rate = 10°C/min., Injector B= 200°C, Detector B. at Rate = 2. Analysis performed by: Rate = 10°C/min., Injector B= 200°C, Detector B. at Rate = 2. Analysis performed by: Rate = 10°C/min., Injector B= 200°C, Detector B. at Rate = 2. Analysis performed by: Rate = 10°C/min., Injector B= 200°C, Detector B. at Rate = 2. Analysis performed by: Rate = 10°C/min., Injector B= 200°C, Detector B. at Rate = 2. Analysis performed by: Rate =$	Lot Number: $\frac{022121}{Description:}$ $\frac{022121}{Description:}$ $\frac{022121}{Description:}$ $\frac{022121}{Description:}$ $\frac{021213}{Description:}$ $\frac{000}{Description:}$ $\frac{1000}{Description:}$ $1$			2						
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$\frac{1}{20000} + \frac{1}{20000} + \frac{1}{20000} + \frac{1}{200000} + \frac{1}{200000} + \frac{1}{200000} + \frac{1}{200000} + \frac{1}{20} + \frac{1}{21} + \frac{1}{2$	100000 1400000 1200000 1000000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 100000 1000000		934         8116100         1000         97.6         0.5         0.01027         0.01035         1008.1         14.2         17640-02-7         NA           A: Column:SPB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9min.), Rate = 10°C/min., Injector B= 200°C, Detector B.         NA           an Rate = 2. Analysis performed by: Melissa Stonier.         TIC: [BSB9]70934.D         Scan 343 (5.996 min): [BSB9]70934.D	Lot Number:       062121       Methanol       DY186-US       Pershant Chauhan       06         Description:       Delapon methyl ester       062126       Prashant Chauhan       0         Expiration Date:       062126       Retrigenate (4 °C)       Persity       <		'n	59			د ۲			
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$e_{1}^{\alpha} = \frac{1}{2} e_{1}^{\alpha} = \frac{1}{2} e_{1$	934         B116100         1000         97.6         0.5         0.01027         0.01035         1008.1         14.2         17640-02-7         NA           A: Column:SPB-5 (30m X 0.25µm fI) A thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9min.), Rate = 10°C/min., Injector B= 200°C, Detector B.         Mate = 2.         Analysis performed by: Melissa Stonier.         NA           TIC: [BSB9170934.D         Scan 343 (5.996 min): [BSB9170934.D         Scan 343 (5.996 min): [BSB9170934.D	Lot Number:       062121       Methanol       DY186-US         Description:       Dalapon methyl ester       Formulated By:       Prashart Chauhan       0         Expiration Date:       062126       Formulated By:       Prashart Chauhan       0         mended Storage:       Refrigerate (4°C)       Ferniolated By:       Prashart Chauhan       0         samended Storage:       Refrigerate (4°C)       Ferniolated By:       Prashart Chauhan       0         samended Storage:       Refrigerate (4°C)       Ferniolated By:       Prashart Chauhan       0         samended Storage:       Refrigerate (4°C)       EcoS Balmoc Usecrainy       Methanol       0         were combined and diluted to (mL):       10.0       0.003       Fast Usecrainy       Reviewed By:       Prashart Chauhan       0         were combined and diluted to (mL):       10.0       0.003       Fast Usecrainy       Reviewed By:       Solvent Safety Info. On Attached pg.         Mwet       Namber       Conc (ug/mL)       (s)       Punity       Target       Actual       Usecrainy       (Solvent Safety Info. On Attached pg.)         Mwet       Namber       Conc (ug/mL)       (s)       Dost       Actual       Usecrainy       (solvent Safety Info. On Attached pg.)       Dost       Dost			JCe	Abundar					0.0
Abundance $59$ $-\frac{2}{7}$ $-\frac{2}$	Abundance $\int_{9}^{2} \int_{1}^{2} \int_{1$	Abundance $\vec{p}_{1} = \vec{p}_{1} = \vec{p}_{1}$ $\vec{p}_{1} = \vec{p}_{1}$ $\vec{p}_{2} = \vec{p}_{2}$ $\vec{p}_{2} = \vec{p}_{2}$ $\vec{p}_{3} = \vec{p}_{3}$ $\vec{p}_{3} = \vec{p}_{3}$	934         8116100         1000         97.6         0.5         0.01027         0.01035         1008.1         14.2         17640-02-7         NA           4: Column:SPB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9min.), Rate = 10°C/min., Injector B= 200°C, Detector B:         an Rate = 2.         Analysis performed by: Melissa Stoniet.	Lot Number:       062121       Methanol       DY186-US       Methanol       DY186-US         Description:       Dalapon methyl ester       062126       Prashamt Chauhan       06         Expiration Date:       062126       Pethanol       DY186-US       Prashamt Chauhan       06         Expiration (ug/mL):       000       Retrieve (4 °C)       Retrieve (4 °C)       Prashamt Chauhan       06         Settation (ug/mL):       000       State Uncertainty       Retrieve (4 °C)       Prashamt Chauhan       06         write combined and diluted to (mL):       10.0       0.003       Rak Uncertainty       Reviewed By:       Pedro L Rentash       06         write combined and diluted to (mL):       10.0       0.003       Rak Uncertainty       Reviewed By:       Stery Info. On Attached pg)       06         Market       Lot       Number       Conc (ug/mL)       (weight(g))       Weight(g))       Conc (ug/mL)       0105         Market       Stelee       Stelee       Description       100       Stelee       Steleee	in): [BSB9]70934 D	Scan 343 (5.996 r					19]70934.D		
Trc: [asser]70934.D Abundance Sean 343 (5.996 min); [BSB9]70934 $ \begin{array}{ccccccccccccccccccccccccccccccccccc$	TC: [BSB9]70934.D Abundance San 343 (5.996 min): [BSB9]70934 $ \begin{array}{ccccccccccccccccccccccccccccccccccc$	Trc: [BSB]70934.D Abundance $5_{97}$ (5.996 min): [BSB9]70934 $a_{1} + a_{1} + a_{2} + a_{2$	934 8116100 1000 97.6 0.5 0.01027 0.01035 1008.1 14.2 17640-02-7 N/A	Lot Number:     062121       Description:     Delapon methyl ester       Description:     Delapon methyl ester       Expiration Date:     062126       Expiration Date:     062126       Immeded Storage:     Refrigerate (4 °C)       Sentration (µg/mL):     1000       Immeded Storage:     SE-05       Sentration (µg/mL):     1000       Immeded Storage:     SE-05       Sentration (µg/mL):     000       Immeded Storage:     Sentration       Immeded Storage:     Lot       NiST Test ID#:     Lot       Immeded Storage:     Sentration       Immeded Storage:     Sentration       Immeded Storage:     Sentration       Immeded Storage:     Lot       Immeded Storage:     Sentration       Immeded Storage:     Sentration       Immeded Storage:     Sentration       Immeded Storage:     Lot       Immeded Storage:     Lot       Immeded Storage:     Sentration       Immeded Stora	nin., Injector B= 200°C, Detector B = 275°C,	(9min.), Rate = 10°C/	.), Temp 2 = 300°C	0 1 = 50°C (1min.	thickness) Temp	X 0.25μm film lelissa Stonier.	X 0.25mm ID erformed by: M	TIC: IBSF	0 0
<b>RMSD 3.1M:</b> Column: SPB-5 (30m X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9min.), Rate = 10°C min., Injector B = 209°C. Detector B = 275°C. 100.1.5can Rate = 2. Aunysis performed by: Melisa Stouler. Tro: (essen)roas.t.D Tro: (essen)roas.t.D Tro: (essen)roas.t.D Tro: (essen)roas.t.D Tro: (essen)roas.t.D Tro: (essen)roas.t.D Tro: (essen)roas.t.D Tro: (essen)roas.t.D Abundance Scan 343 (5.996 min.); Rate = 10°C min., Injector B = 200°C. Detector B = 275°C. Tro: (essen)roas.t.D Tro: (essen)r	SMSD-3.M: Column:SP3 (30m X 0.25m ID X 0.25m flm thickness) Tenp 1 = 50°C (1min.), Rate = 10°C/min., Injector B= 200°C. Detector B = 215°C. = 100.1, Scan Rate = 2. Analysis performed by: Milksa Storik. Tric: [aseaprosa.t.D Tric: [aseapros	SMSD3.3.4: Colum::SPB.5 (30n X 0.25mm ID		Lot Number:       062121       Methanol       DY186-US       Methanol       DY186-US         Description:       Dalapon methyl ester       Description       Descr	N/A				97.6			unn:SPB-5 (30m e = 2. Analysis p TIC: rase	6.03
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were contributed for (n1): 100 0000 manual period for the manual	were combined and diluted to (m1): 100 0.003 Fault Libertum, Target Actual Incrementary. Tender Solvent Safety Infic. On Attached part Actual Verticing Colorent Safety Infic. On Attached part Actual Verticing (Solvent Safety Infic. On Attached part Actual Verticing) (Solvent Safety Infic. On Attached part Actual Verticing (Solvent Safety Infic. On Attached part Actual Verticing) (Solvent Safety Infic. On Attached part Actual Verticing (Solvent Safety Infic. On Attached part Actual Verticing) (Solvent Safety Infic. On Attached part Actual Verticing (Solvent Safety Infic. On Attached part Actual Verticing) (Solvent Safety Infic. On Attached part Actual Verticing (Solvent Safety Infic. On Attached part Actual Verticing) (Solvent Safety Infic. On Attached part Actual Verticing (Solvent Safety Infic. On Attached part Actual Verticing) (Solvent Safety Infic. On Attached part Actual Verticing (Solvent Safety Infic. On Attached part Actual Verticing) (Solvent Safety Infic. On Attached part Actual Verticing (Solvent Safety Infic. On Attached part Actual Verticing) (Solvent Safety Infic. On Attached Part Actual Verticing (Solvent Safety Infic. On Attached Part Actual Verticing) (Solvent Safety Infic. On Attached Part Actual Verticing (Solvent Safety Infic. On Attached Part Actual Verticing) (Solvent Safety Infic. On Attached Part Actual Verticing (Solvent Safety Infic. On Attached Part Actual Verticing) (Solvent Safety Infic. On Attached Part Actual Verticing (Solvent Safety Infic. On Attached Part Actual Verticing (Solvent Safety Infic. On Attached Part Actual Verticing) (Solvent Safety Infic. On Attached Part Actual Verticing (Solvent Safety Infic. On Attached Part Actual Verticing (Solvent Safety Infic. On Attached Part Actual Verticing) (Solvent Safety Infic. On Attached Part Actual Verticing (Solvent Safety Infic. On Attached Part Actual Verticing (Solvent Safety Infic. On Attached Part Actual Verticing) (Solvent Safety Infic. On Attached Part Actual Verticing (Solvent Safety Infic. On Attached Part Actual Verticin	were combined and diluted to (m1): 100 000 Fau Libermany Target Acual Acua Acual Ac	10.0 0.003 Flask Uncertainty	062121 Dalapon methyl ester Methanol DY186-US Formulated By: Prashant Chauhan 06 062126	lede terte 00			ncertainty +rtainty	0.003 Flask Unce	10.0	liluted to (mL): Lot	e combined and c RW RM mm:SPB-5 (30m rtc: rpse	thyl ester MSD-3.M: Colt (00:1, Scan Rate e. o3
The figure is the figure (4 °C) in the figure (4 °C) is an interval of the figure (4 °C) interval of the figure (	$\begin{array}{c cccc} \label{eq:constraint} & \mbox{finited to (rrt.} & fi$	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	s (4 °C) 5E-05 Balance Uncertainty 10.0 0.003 Flast Uncertainty	<u>062121</u> <u>Datapon methyl ester</u> <u>Formulated By: Prashant Chauhan</u>	0			(ncertainty ertainty	5E-05 Balance Un 0.003 Flask Unce	s (4 °C) 10.0	Hefrigerate 1000 6UTB Miuted to (mL): Lot	led Storage: ion (µg/mL): ST Test ID#: e combined and c e combined and c and c	Hecommend inal Concentrati NIS NIS NISD-3.M: Colu MSD-3.M: Colu MSD-3.M: Colu
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	The formation operator of the formation operator (a) and the formation operator (b) is the formation operator (c) is the form	e (4 °C) 5E-05 Balance Uncertainty 10.0 0.003 Flast Uncertainty 10.0 0.003 Flast Uncertainty	062121 Dalapon methyl ester	Prashant Chauhan			incertainty erainty	5E-05 Balance Un 0.003 Flask Unce	e (4 °C) 10.0	uoz 1.20 Refrigerate 1000 6UTB Kiluted to (mL): Lot	inauon Jaue: led Storage: ion (µg/mL): ST Test ID#: e combined and c e combined and c and	e. 03
Experience of the conduction Date: Constrained Stringer (4 conduction) the control Stringer (4 conduction) for the control St	Extrained Date: 02213 Extrained Storage: Refrigerate (4°C) antended Storage: Refrigerate (4°C) antended Storage: Refrigerate (4°C) antended Storage: Constrained (4°C) antended Constrained (4°C)	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	9 (4 °C) 5E-05 Balance Uncertainty 10.0 0.003 Flast Uncertainty 10.0 0.003 Flast Uncertainty	062121 Methanol	ler l	Formulated		incertainty retainty	5E-05 Balance Un 0.003 Flaak Unce	s (4 °C) 10.0	062126 Refrigerate 1000 6UTB Kuted to (mL): Lot	iration Date: led Storage: ion (µg/mL): ST Test ID#: e combined and c e combined and c and start rest analysis p rts: rest	Expinition of the second of th
Description:     Description: <thd< th=""><th><math display="block">\begin{array}{c c} \label{eq:product} \hline Description: Description: Description: Description: Description: Description: Constrained Stronger: The product of the product</math></th><td><math display="block"> \begin{array}{c cccc} \mbox{Description:} &amp; Des</math></td><td>ethyl ester     Eornulated By:     Prashant Chauhan       5(4 °C)     5E-05 Balance Uncertainty     06       10.0     0.003 Flast Uncertainty     06</td><td></td><td>T C</td><td>Formulated</td><td></td><td>incertainity remains</td><td>5E-05 Balance Un 0.003 Flaak Unce</td><td>ethyl ester 6 (4 °C) 10.0</td><td>Delapon m 062126 1000 6UTB 6UTB fituted to (mL): Lot</td><td>Description: iration Date: led Storage: ion (μg/mL): ST Test ID#: e combined and c e combined and c e = 2. Analysis p z = 2. Analysis p</td><td>Expi Expi inal Concentrati inal Concentrati Nit inal Concentrati invi event e.o3</td></thd<>	$\begin{array}{c c} \label{eq:product} \hline Description: Description: Description: Description: Description: Description: Constrained Stronger: The product of the product$	$ \begin{array}{c cccc} \mbox{Description:} & Des$	ethyl ester     Eornulated By:     Prashant Chauhan       5(4 °C)     5E-05 Balance Uncertainty     06       10.0     0.003 Flast Uncertainty     06		T C	Formulated		incertainity remains	5E-05 Balance Un 0.003 Flaak Unce	ethyl ester 6 (4 °C) 10.0	Delapon m 062126 1000 6UTB 6UTB fituted to (mL): Lot	Description: iration Date: led Storage: ion (μg/mL): ST Test ID#: e combined and c e combined and c e = 2. Analysis p z = 2. Analysis p	Expi Expi inal Concentrati inal Concentrati Nit inal Concentrati invi event e.o3

Part # 70934 Lot # 062121

1 of 1



E 3412



MIRADOR 201, COL. MIRADOR MONTERREY, N.L. MEXICO CP 64070 TEL +52 81 13 52 57 57 www.pgm.com.mx

#### **CERTIFICATE OF ANALYSIS**

	ULFATE CRYSTALS AN	HYDROUS
	E RMB3375)	FORMULA : Na <sub>2</sub> SO <sub>4</sub>
SPECIFICATION NUMBER: 6399		RELEASE DATE: OCT/28/2021
LOT NUMBER : 139404	Description of the second s	
TEST	SPECIFICATION	IS LOT VALUES
Assay (Na <sub>2</sub> SO <sub>4</sub> )	Min. 99.0%	99.8 %
pH of a 5% solution at 25%	5.2 - 9.2	6.0
Insoluble matter	Max. 0.01%	0.005 %
Loss on ignition	Max. 0.5%	0.1%
Chloride (Cl)	Max. 0.001%	<0.001 %
Nitrogen compounds (as N)	Max. 5 ppm	<5 ppm
Phosphate (PO <sub>4</sub> )	Max. 0.001%	<0.001 %
Heavy metals (as Pb)	Max. 5 ppm	<5 ppm
Iron (Fe)	Max. 0.001%	<0.001 %
Calcium (Ca)	Max. 0.01%	
Magnesium (Mg)	Max. 0.005%	0.002 %
Potassium (K)	Max. 0.008%	0.001 %
Extraction-concentration suitability	Passes test	0.002 %
Appearance	Passes test	Passes test
dentification	Passes test	Passes test
solubility and foreing matter	Passes test	Passes test
Retained on US Standard No. 10 sieve	Max. 1%	Passes test
Retained on US Standard No. 60 sieve		0.2 %
hrough US Standard No. 60 sieve	Min. 94%	97.6 %
	Max. 5%	2.1 %
hrough US Standard No. 100 sieve	Max. 10%	0.2 %
		A. S. S.
	COMMENTS	
		-23
		QC: PhC Irma Belmares

If you need further details, please call our factory or contact our local distributor.

Recd. 57 RP on 10/13/22

RE-02-01, Ed. 3

Methylene Chloride ULTRA RESI-ANALYZED For Organic Residue Analysis (dichloromethane)





Material No.: 9266-A4 Batch No.: 23C1362018 Manufactured Date: 2023-01-26 Expiration Date: 2024-04-26 Revision No.: 0

#### **Certificate of Analysis**

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	< 1
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	≤ 10	5
Assay (CH2Cl2) (by GC, exclusive of preservative, corrected for water)	≥ 99.8 %	100.0 %
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	0.9 ppm
Titrable Acid (µeq/g)	≤ 0.3	< 0.1
Chloride (CI)	≤ 10 ppm	< 5 ppm
Water (by KF, coulometric)	≤ 0.02 %	< 0.01 %

For Laboratory,Research,or Manufacturing Use MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: USA Packaging Site: Phillipsburg Mfg Ctr & DC

E3515

ames Techies Jamie Ethier Vice President Global Quality

Methylene Chloride ULTRA RESI-ANALYZED For Organic Residue Analysis (dichloromethane)





Material No.: 9266-A4 Batch No.: 23E0962014 Manufactured Date: 2023-04-24 Expiration Date: 2024-07-23 Revision No.: 0

#### **Certificate of Analysis**

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	2
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	≤ 10	6
Assay (CH2Cl2) (by GC, exclusive of preservative, corrected for water)	≥ 99.8 %	100.0 %
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	< 0.1 ppm
Titrable Acid (µeq/g)	≤ 0.3	< 0.1
Chloride (Cl)	≤ 10 ppm	5 ppm
Water (by KF, coulometric)	≤ 0.02 %	< 0.01 %

For Laboratory,Research,or Manufacturing Use MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: USA Packaging Site: Phillipsburg Mfg Ctr & DC

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Methylene Chloride ULTRA RESI-ANALYZED For Organic Residue Analysis (dichloromethane)





Material No.: 9266-A4 Batch No.: 23E0962014 Manufactured Date: 2023-04-24 Expiration Date: 2024-07-23 Revision No.: 0

#### **Certificate of Analysis**

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	2
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	≤ 10	6
Assay (CH2Cl2) (by GC, exclusive of preservative, corrected for water)	≥ <b>99.8</b> %	100.0 %
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	< 0.1 ppm
Titrable Acid (µeq/g)	≤ 0.3	< 0.1
Chloride (Cl)	≤ 10 ppm	5 ppm
Water (by KF, coulometric)	≤ 0.02 %	< 0.01 %

For Laboratory,Research,or Manufacturing Use MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: USA Packaging Site: Phillipsburg Mfg Ctr & DC



temetakel.

Hexanes (95% n-hexane) BAKER RESI-ANALYZED® Reagent





Material No.: 9262-03 Batch No.: 23C2462011 Manufactured Date: 2023-03-10 Expiration Date: 2024-06-08 Revision No.: 0

#### **Certificate of Analysis**

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	< 1
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	≤ 10	1
ECD-Sensitive Impurities (as Ethylene Dibromide) – Single Impurity Peak (ng/mL)	≤ 5	< 1
Assay (Total Saturated C6 Isomers) (by GC, corrected for water)	≥ 99.5 %	99.7 %
Assay (as n-Hexane) (by GC, corrected for water)	≥ 95 %	97 %
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	0.3 ppm
Substances Darkened by H₂SO₄	Passes Test	Passes Test
Water (by KF, coulometric)	≤ 0.05 %	< 0.01 %

For Laboratory,Research,or Manufacturing Use MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: USA Packaging Site: Phillipsburg Mfg Ctr & DC

Reed. 57 R? on 6123/23 E 3533



#### PO: 230629-01 PRODUCT CODE: SHIP DATE: 7/12/2023

**Methylene Chloride** ULTRA RESI-ANALYZED For Organic Residue Analysis (dichloromethane)





Material No.: 9266-A4 Batch No.: 23F1262016 Manufactured Date: 2023-05-17 Expiration Date: 2024-08-15 Revision No.: 0

#### Certificate of Analysis

Specification	Result	
< 5		
≤ 10		
≥ 99.8 %		
≤ 10	5	
≤ 1.0 ppm	< 1.0 mag	
≤ 0.3	< 0.1	
≤ 10 ppm	< 5 ppm	
≤ 0.02 <b>%</b>	< 0.01 %	
	<ul> <li>≤ 5</li> <li>≤ 10</li> <li>≥ 99.8 %</li> <li>≤ 10</li> <li>≤ 1.0 ppm</li> <li>≤ 0.3</li> <li>≤ 10 ppm</li> </ul>	<ul> <li>≤ 5</li> <li>&lt; 1</li> <li>≤ 10</li> <li>≥ 99.8 %</li> <li>≤ 10</li> <li>≤ 10</li> <li>≤ 1.0 ppm</li> <li>&lt; 1.0 ppm</li> <li>&lt; 0.3</li> <li>&lt; 0.1</li> <li>≤ 10 ppm</li> <li>&lt; 5 ppm</li> </ul>

For Laboratory, Research, or Manufacturing Use MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: USA Packaging Site: Phillipsburg Mfg Ctr & DC Manufacturer source batch: MG23E17953





<b>CERTIFIED REF</b>	Certificate
RESTEK	110 Benner Circle Bellefonte, PA 16823-8812 Tel: (800)356-1688 Fax: (814)353-1309

**Certificate of Analysis** 





ERENCE MATERIAL

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## FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE. This Reference Material is intended for I aboratory Use Only as a standarr

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. :	31266	Lot No.: <u>A0184585</u>	P11852
Description :	Florida TRPH Standard		L X
	Florida TRPH Standard 500µg/mL, Hexane, 1mL/ampul	, 1mL/ampul	The F
Container Size :		Pkg Amt: > 1 mL	DIVE
Expiration Date :	May 31, 2029	Storage: 25°C nominal	
Handling:	Sonicate prior to use.	Ship: Ambient	. 1

# CERTIFIED VALUES

1 n-(			(weight/volume)	(95% C	(95% C.L.; K=2)	
Per Per	n-Octane (C8) <b>CAS #</b> 111-65-9 Purity 99%	(Lot SHBN3807)	500.3 μg/mL	+/- 2.9718 +/- 12.4305 +/- 14.9001	дтрадит разрадит разрадит	Gravimetric Unstressed Stressed
2 CA Pu	n-Decane (C10) <b>CAS #</b> 124-18-5 Purity 99%	(Lot SHBN8619)	501.7 μg/mL	+/- 2.9797 +/- 12.4637 +/- 14.9398	μg/mL 7 μg/mL 8 μg/mL	Gravimetric Unstressed Stressed
3 D-I CA	n-Dodecane (C12) <b>CAS #</b> 112-40-3 Purity 99%	(Lot SHBN7174)	504.7 μg/mL	+/- 2.9976 +/- 12.5382 +/- 15.0291	μg/mL 2 μg/mL 1 μg/mL	Gravimetric Unstressed Stressed
4 CA Pu	n-Tetradecane (C14) <b>CAS #</b> 629-59-4 <b>Purity</b> 99%	(Lot STBJ3715)	503.7 µg/mL	+/- 2.9916 +/- 12.5133 +/- 14.9993	μg/mL 3 μg/mL 3 μg/mL	Gravimetric Unstressed Stressed
5 n-F CA	n-Hexadecane (C16) <b>CAS #</b> 544-76-3 <b>Purity</b> 98%	(Lot SHBM4146)	502.7 μg/mL	+/- 2.9861 +/- 12.4903 +/- 14.9717	μg/mL 3 μg/mL 7 μg/mL	Gravimetric Unstressed Stressed
φ <b>Γ</b>	n-Octadecane (C18) <b>CAS #</b> 593-45-3 <b>Purity</b> 98%	(Lot UESNG)	502.7 µg/mL	+/- 2.9861 +/- 12.4903 +/- 14.9717	μg/mL 3 μg/mL 7 μg/mL	Gravimetric Unstressed Stressed
7 n-) CA	n-Eicosane (C20) <b>CAS #</b> 112-95-8 <b>Purity</b> 97%	(Lot MKCN8767)	500.5 µg/mL	+/- 2.9729 +/- 12.4352 +/- 14.9056	μg/mL 2 μg/mL 6 μg/mL	Gravimetric Unstressed Stressed

Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	
hg/mL hg/mL	µg/mL µg/mL µg/mL	μg/mL μg/mL μg/mL	hg/mL µg/mL µg/mL	нg/mL µg/mL µg/mL	hg/mL µg/mL µg/mL	hg/mL Jm/gµ µg/mL	дт/вµ Jm/gµ µg/mL	μg/mL μg/mL μg/mL	μg/mL μg/mL μg/mL	
2.9778 12.4554 14.9298	2.9837 12.4802 14.9596	2.9758 12.4471 14.9199	2.9837 12.4802 14.9596	2.9745 12.4416 14.9134	2.9758 12.4471 14.9199	2.9877 12.4968 14.9795	2.9877 12.4968 14.9795	2.9787 12.4593 14.9345	2.9978 12.5390 15.0301	
-/+ +	-/+ -/+	-/+ -/+	-/+ -/+	-/+ -/+	-/+ -/+	-/+ -/+	-/+ -/+	-/+ -/+	-/+ +	
µg/mL	μg/mL	μg/mL	μg/mL	μg/mL	μg/mL	μg/mL	μg/mL	µg/mL	µg/mL	
501.3	502.3	501.0	502.3	500.8	501.0	503.0	503.0	501.5	504.7	
(Lot MKCL8918)	(Lot MKCN2863)	(Lot MKCD4540)	(Lot BCCG0084)	(Lot MKCJ4572)	(Lot BCBW0661)	(Lot OML4N)	(Lot U25B014)	(Lot 0000127235)	(Lot PADGI)	
n-Docosane (C22) <b>CAS #</b> 629-97-0 <b>Purity</b> 99%	n-Tetracosane (C24) <b>CAS #</b> 646-31-1 <b>Purity</b> 99%	n-Hexacosane (C26) CAS # 630-01-3 Purity 99%	n-Octacosane (C28) <b>CAS #</b> 630-02-4 <b>Purity</b> 99%	n-Triacontane (C30) CAS # 638-68-6 Purity 98%	n-Dotriacontane (C32) <b>CAS #</b> 544-85-4 <b>Purity</b> 99%	n-Tetratriacontane (C34) CAS # 14167-59-0 Purity 99%	n-Hexatriacontane (C36) CAS # 630-06-8 Purity 99%	n-Octatriacontane (C38) CAS # 7194-85-6 Purity 97%	n-Tetracontane (C40) CAS # 4181-95-7 Purity 98%	Hexane <b>CAS #</b> 110-54-3 <b>Purity</b> 99%
∞	6	10	11	12	13	14	15	16	17	Solvent:

01-Aug-2020 rev.

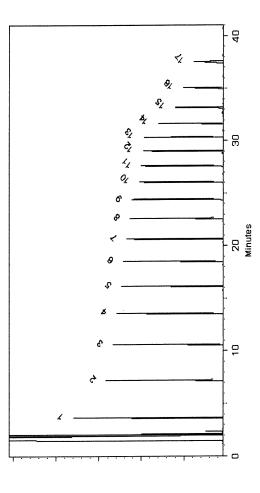


Carrier Gas: hydrogen-constant pressure 10 psi.

**Temp. Program:** 40°C (hold 2 min.) to 330°C @ 10°C/min. (hold 10 min.)

**Inj. Temp:** <sup>250°C</sup> **Det. Temp:** 330°C

Det. Type: FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.



Date Mixed: 27-Apr-2022 Balance: 1128360905

Date Passed: 29-Apr-2022

Pang-Yun Lo - CC Antilyet

N

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

# General Certified Reference Material Notes

## Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field. .

### **Purity Notes:**

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/µECD, GC/MS, LC/MS, RI, and/or melting point.
- ∢ Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution. ٠
- Purity of isomeric compounds is reported as the sum of the isomers. Purity values are rounded to the nearest whole number. ٠

## **Certified Uncertainty Value Notes:**

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value ( includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$J_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

- k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at nonstored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at standard temperature conditions. •
  - conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions as specified below. .

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, are available by contacting Restek Technical Service at www.restek.com/Contact-Us. .
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred. .

## Manufacturing Notes:

Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

### Handling Notes

environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and which includes complete instructions.

<b>CERTIFIED REF</b>	Certificate
RESTEK	110 Benner Circle Bellefonte, PA 16823-8812 Tel: (800)356-1688 Fax: (814)353-1309

**Certificate of Analysis** 





ERENCE MATERIAL

www.restek.com

## FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE. This Reference Material is intended for I aboratory Use Only as a standarr

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. :	31266	Lot No.: <u>A0184585</u>	D11852
Description :	Florida TRPH Standard		۲ ۲
	Florida TRPH Standard 500µg/mL, Hexane, 1mL/ampul	, 1mL/ampul	TI-Jo
Container Size :		Pkg Amt: > 1 mL	DIVE
Expiration Date :	May 31, 2029	Storage: 25°C nominal	
Handling:	Sonicate prior to use.	Ship: Ambient	

# CERTIFIED VALUES

Order	Compound		Grav. Conc. (weight/volume)	(95% C	схраниец опсенаниу (95% С.L.; K=2)	
1	n-Octane (C8) <b>CAS #</b> 111-65-9 <b>Purity</b> 99%	(Lot SHBN3807)	500.3 μg/mL	+/- 2.9718 +/- 12.4305 +/- 14.9001	рд/mL 5 µg/mL 1 µg/mL	Gravimetric Unstressed Stressed
7	n-Decane (C10) <b>CAS #</b> 124-18-5 Purity 99%	(Lot SHBN8619)	501.7 μg/mL	+/- 2.9797 +/- 12.4637 +/- 14.9398	μg/mL 7 μg/mL 8 μg/mL	Gravimetric Unstressed Stressed
m	n-Dodecane (C12) <b>CAS #</b> 112-40-3 <b>Purity</b> 99%	(Lot SHBN7174)	504.7 μg/mL	+/- 2.9976 +/- 12.5382 +/- 15.0291	μg/mL 2 μg/mL 1 μg/mL	Gravimetric Unstressed Stressed
4	n-Tetradecane (C14) CAS # 629-59-4 Purity 99%	(Lot STBJ3715)	503.7 µg/mL	+/- 2.9916 +/- 12.5133 +/- 14.9993	μg/mL 3 μg/mL 3 μg/mL	Gravimetric Unstressed Stressed
Ś	n-Hexadecane (C16) <b>CAS #</b> 544-76-3 <b>Purity</b> 98%	(Lot SHBM4146)	502.7 μg/mL	+/- 2.9861 +/- 12.4903 +/- 14.9717	μg/mL 3 μg/mL 7 μg/mL	Gravimetric Unstressed Stressed
Q	n-Octadecane (C18) <b>CAS #</b> 593-45-3 <b>Purity</b> 98%	(Lot UESNG)	502.7 µg/mL	+/- 2.9861 +/- 12.4903 +/- 14.9717	μg/mL 3 μg/mL 7 μg/mL	Gravimetric Unstressed Stressed
٢	n-Eicosane (C20) <b>CAS #</b> 112-95-8 <b>Purity</b> 97%	(Lot MKCN8767)	500.5 µg/mL	+/- 2.9729 +/- 12.4352 +/- 14.9056	μg/mL 2 μg/mL 6 μg/mL	Gravimetric Unstressed Stressed

Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	
hg/mL hg/mL hg/mL	hg/mL µg/mL µg/mL	hg/mL µg/mL µg/mL	hg/mL µg/mL µg/mL	hg/mL µg/mL µg/mL	µg/mL µg/mL µg/mL	дт/mL Jm/gц µg/mL	μg/mL μg/mL μg/mL	μg/mL μg/mL μg/mL	μg/mL μg/mL	
2.9778 12.4554 14.9298	2.9837 12.4802 14.9596	2.9758 12.4471 14.9199	2.9837 12.4802 14.9596	2.9745 12.4416 14.9134	2.9758 12.4471 14.9199	2.9877 12.4968 14.9795	2.9877 12.4968 14.9795	2.9787 12.4593 14.9345	2.9978 12.5390 15.0301	
-/ -/ -/ + + +	-/+ -/+	-/+ -/+	-/+ -/+	-/+ -/+	-/+ -/+	-/+ +	-/+ -/+	-/+ -/+	-/+ +	
µg/mL	μg/mL	μg/mL	μg/mL	μg/mL	μg/mL	μg/mL	μg/mL	µg/mL	µg/mL	
501.3	502.3	501.0	502.3	500.8	501.0	503.0	503.0	501.5	504.7	
(Lot MKCL8918)	(Lot MKCN2863)	(Lot MKCD4540)	(Lot BCCG0084)	(Lot MKCJ4572)	(Lot BCBW0661)	(Lot OML4N)	(Lot U25B014)	(Lot 0000127235)	(Lot PADGI)	
n-Docosane (C22) <b>CAS #</b> 629-97-0 <b>Purity</b> 99%	n-Tetracosane (C24) <b>CAS #</b> 646-31-1 <b>Purity</b> 99%	n-Hexacosane (C26) CAS # 630-01-3 Purity 99%	n-Octacosane (C28) <b>CAS #</b> 630-02-4 <b>Purity</b> 99%	n-Triacontane (C30) CAS # 638-68-6 Purity 98%	n-Dotriacontane (C32) <b>CAS #</b> 544-85-4 <b>Purity</b> 99%	n-Tetratriacontane (C34) CAS # 14167-59-0 Purity 99%	n-Hexatriacontane (C36) CAS # 630-06-8 Purity 99%	n-Octatriacontane (C38) CAS # 7194-85-6 Purity 97%	n-Tetracontane (C40) CAS # 4181-95-7 Purity 98%	Hexane <b>CAS #</b> 110-54-3 <b>Purity</b> 99%
∞	6	10	11	12	13	14	15	16	17	Solvent:

01-Aug-2020 rev.

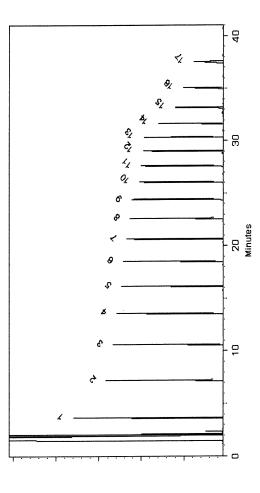


Carrier Gas: hydrogen-constant pressure 10 psi.

**Temp. Program:** 40°C (hold 2 min.) to 330°C @ 10°C/min. (hold 10 min.)

**Inj. Temp:** <sup>250°C</sup> **Det. Temp:** 330°C

Det. Type: FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.



Date Mixed: 27-Apr-2022 Balance: 1128360905

Date Passed: 29-Apr-2022

Fang-Yun Lo - CC Antilyet

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# General Certified Reference Material Notes

## Expiration Notes:

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- Purity of isomeric compounds is reported as the sum of the isomers. Purity values are rounded to the nearest whole number. ٠

## **Certified Uncertainty Value Notes:**

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$J_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

- k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at nonstored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at standard temperature conditions. •
  - conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions as specified below. .

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, are available by contacting Restek Technical Service at www.restek.com/Contact-Us. .
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred. .

## Manufacturing Notes:

Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

### Handling Notes

environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and which includes complete instructions.

<b>CERTIFIED REF</b>	Certificate
RESTEK	110 Benner Circle Bellefonte, PA 16823-8812 Tel: (800)356-1688 Fax: (814)353-1309

**Certificate of Analysis** 





ERENCE MATERIAL

www.restek.com

## FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE. This Reference Material is intended for I aboratory Use Only as a standarr

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. :	31266	Lot No.: <u>A0184585</u>	D11852
Description :	Florida TRPH Standard		۲ ۲
	Florida TRPH Standard 500µg/mL, Hexane, 1mL/ampul	, 1mL/ampul	TI-Jo
Container Size :		Pkg Amt: > 1 mL	DIVIC UNIT
Expiration Date :	May 31, 2029	Storage: 25°C nominal	
Handling:	Sonicate prior to use.	Ship: Ambient	

# CERTIFIED VALUES

Order	Compound		Grav. Conc. (weight/volume)	(95% C	схраниец опсенаниу (95% С.L.; K=2)	
1	n-Octane (C8) <b>CAS #</b> 111-65-9 <b>Purity</b> 99%	(Lot SHBN3807)	500.3 μg/mL	+/- 2.9718 +/- 12.4305 +/- 14.9001	рд/mL 5 µg/mL 1 µg/mL	Gravimetric Unstressed Stressed
7	n-Decane (C10) <b>CAS #</b> 124-18-5 Purity 99%	(Lot SHBN8619)	501.7 μg/mL	+/- 2.9797 +/- 12.4637 +/- 14.9398	μg/mL 7 μg/mL 8 μg/mL	Gravimetric Unstressed Stressed
m	n-Dodecane (C12) <b>CAS #</b> 112-40-3 <b>Purity</b> 99%	(Lot SHBN7174)	504.7 μg/mL	+/- 2.9976 +/- 12.5382 +/- 15.0291	μg/mL 2 μg/mL 1 μg/mL	Gravimetric Unstressed Stressed
4	n-Tetradecane (C14) CAS # 629-59-4 Purity 99%	(Lot STBJ3715)	503.7 µg/mL	+/- 2.9916 +/- 12.5133 +/- 14.9993	μg/mL 3 μg/mL 3 μg/mL	Gravimetric Unstressed Stressed
Ś	n-Hexadecane (C16) <b>CAS #</b> 544-76-3 <b>Purity</b> 98%	(Lot SHBM4146)	502.7 μg/mL	+/- 2.9861 +/- 12.4903 +/- 14.9717	μg/mL 3 μg/mL 7 μg/mL	Gravimetric Unstressed Stressed
Q	n-Octadecane (C18) <b>CAS #</b> 593-45-3 <b>Purity</b> 98%	(Lot UESNG)	502.7 µg/mL	+/- 2.9861 +/- 12.4903 +/- 14.9717	μg/mL 3 μg/mL 7 μg/mL	Gravimetric Unstressed Stressed
٢	n-Eicosane (C20) <b>CAS #</b> 112-95-8 <b>Purity</b> 97%	(Lot MKCN8767)	500.5 µg/mL	+/- 2.9729 +/- 12.4352 +/- 14.9056	μg/mL 2 μg/mL 6 μg/mL	Gravimetric Unstressed Stressed

Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	
hg/mL hg/mL hg/mL	hg/mL µg/mL µg/mL	hg/mL µg/mL µg/mL	hg/mL µg/mL µg/mL	hg/mL µg/mL µg/mL	µg/mL µg/mL µg/mL	дт/g/ Jm/gи рg/mL	μg/mL μg/mL μg/mL	μg/mL μg/mL μg/mL	μg/mL μg/mL	
2.9778 12.4554 14.9298	2.9837 12.4802 14.9596	2.9758 12.4471 14.9199	2.9837 12.4802 14.9596	2.9745 12.4416 14.9134	2.9758 12.4471 14.9199	2.9877 12.4968 14.9795	2.9877 12.4968 14.9795	2.9787 12.4593 14.9345	2.9978 12.5390 15.0301	
-/ -/ -/ + + +	-/+ -/+	-/+ -/+	-/+ -/+	-/+ -/+	-/+ -/+	-/+ +	-/+ -/+	-/+ -/+	-/+ +	
µg/mL	μg/mL	μg/mL	μg/mL	μg/mL	μg/mL	μg/mL	μg/mL	µg/mL	µg/mL	
501.3	502.3	501.0	502.3	500.8	501.0	503.0	503.0	501.5	504.7	
(Lot MKCL8918)	(Lot MKCN2863)	(Lot MKCD4540)	(Lot BCCG0084)	(Lot MKCJ4572)	(Lot BCBW0661)	(Lot OML4N)	(Lot U25B014)	(Lot 0000127235)	(Lot PADGI)	
n-Docosane (C22) <b>CAS #</b> 629-97-0 <b>Purity</b> 99%	n-Tetracosane (C24) <b>CAS #</b> 646-31-1 <b>Purity</b> 99%	n-Hexacosane (C26) CAS # 630-01-3 Purity 99%	n-Octacosane (C28) <b>CAS #</b> 630-02-4 <b>Purity</b> 99%	n-Triacontane (C30) CAS # 638-68-6 Purity 98%	n-Dotriacontane (C32) <b>CAS #</b> 544-85-4 <b>Purity</b> 99%	n-Tetratriacontane (C34) CAS # 14167-59-0 Purity 99%	n-Hexatriacontane (C36) CAS # 630-06-8 Purity 99%	n-Octatriacontane (C38) CAS # 7194-85-6 Purity 97%	n-Tetracontane (C40) CAS # 4181-95-7 Purity 98%	Hexane <b>CAS #</b> 110-54-3 <b>Purity</b> 99%
∞	6	10	11	12	13	14	15	16	17	Solvent:

01-Aug-2020 rev.

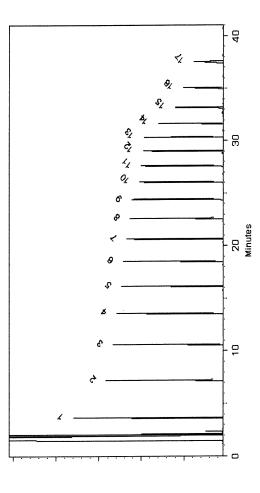


Carrier Gas: hydrogen-constant pressure 10 psi.

**Temp. Program:** 40°C (hold 2 min.) to 330°C @ 10°C/min. (hold 10 min.)

**Inj. Temp:** <sup>250°C</sup> **Det. Temp:** 330°C

Det. Type: FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.



Date Mixed: 27-Apr-2022 Balance: 1128360905

Date Passed: 29-Apr-2022

Fang-Yun Lo - CC Antilyet

NU.

# General Certified Reference Material Notes

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environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and which includes complete instructions.

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RESTEK	110 Benner Circle Bellefonte, PA 16823-8812 Tel: (800)356-1688 Fax: (814)353-1309

**Certificate of Analysis** 





ERENCE MATERIAL

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. :	31266	Lot No.: <u>A0184585</u>	D11852
Description :	Florida TRPH Standard		۲ ۲
	Florida TRPH Standard 500µg/mL, Hexane, 1mL/ampul	, 1mL/ampul	TI-Jo
Container Size :		Pkg Amt: > 1 mL	DIVIC UNIT
Expiration Date :	May 31, 2029	Storage: 25°C nominal	
Handling:	Sonicate prior to use.	Ship: Ambient	

# CERTIFIED VALUES

1 n-(			(weight/volume)	(95% C	(95% C.L.; K=2)	
Per Per	n-Octane (C8) <b>CAS #</b> 111-65-9 Purity 99%	(Lot SHBN3807)	500.3 μg/mL	+/- 2.9718 +/- 12.4305 +/- 14.9001	дтрадит разрадит разрадит	Gravimetric Unstressed Stressed
2 CA Pu	n-Decane (C10) <b>CAS #</b> 124-18-5 Purity 99%	(Lot SHBN8619)	501.7 μg/mL	+/- 2.9797 +/- 12.4637 +/- 14.9398	μg/mL 7 μg/mL 8 μg/mL	Gravimetric Unstressed Stressed
3 D-I CA	n-Dodecane (C12) <b>CAS #</b> 112-40-3 Purity 99%	(Lot SHBN7174)	504.7 μg/mL	+/- 2.9976 +/- 12.5382 +/- 15.0291	μg/mL 2 μg/mL 1 μg/mL	Gravimetric Unstressed Stressed
4 CA Pu	n-Tetradecane (C14) <b>CAS #</b> 629-59-4 <b>Purity</b> 99%	(Lot STBJ3715)	503.7 µg/mL	+/- 2.9916 +/- 12.5133 +/- 14.9993	μg/mL 3 μg/mL 3 μg/mL	Gravimetric Unstressed Stressed
5 n-F CA	n-Hexadecane (C16) <b>CAS #</b> 544-76-3 <b>Purity</b> 98%	(Lot SHBM4146)	502.7 μg/mL	+/- 2.9861 +/- 12.4903 +/- 14.9717	μg/mL 3 μg/mL 7 μg/mL	Gravimetric Unstressed Stressed
φ <b>Γ</b>	n-Octadecane (C18) <b>CAS #</b> 593-45-3 <b>Purity</b> 98%	(Lot UESNG)	502.7 µg/mL	+/- 2.9861 +/- 12.4903 +/- 14.9717	μg/mL 3 μg/mL 7 μg/mL	Gravimetric Unstressed Stressed
7 n-) CA	n-Eicosane (C20) <b>CAS #</b> 112-95-8 <b>Purity</b> 97%	(Lot MKCN8767)	500.5 µg/mL	+/- 2.9729 +/- 12.4352 +/- 14.9056	μg/mL 2 μg/mL 6 μg/mL	Gravimetric Unstressed Stressed

Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	Gravimetric Unstressed Stressed	
hg/mL hg/mL	µg/mL µg/mL µg/mL	μg/mL μg/mL μg/mL	hg/mL µg/mL µg/mL	нg/mL µg/mL µg/mL	hg/mL µg/mL µg/mL	hg/mL Jm/gµ µg/mL	дт/вµ Jm/gµ µg/mL	μg/mL μg/mL μg/mL	μg/mL μg/mL μg/mL	
2.9778 12.4554 14.9298	2.9837 12.4802 14.9596	2.9758 12.4471 14.9199	2.9837 12.4802 14.9596	2.9745 12.4416 14.9134	2.9758 12.4471 14.9199	2.9877 12.4968 14.9795	2.9877 12.4968 14.9795	2.9787 12.4593 14.9345	2.9978 12.5390 15.0301	
-/+ +	-/+ -/+	-/+ -/+	-/+ -/+	-/+ -/+	-/+ -/+	-/+ -/+	-/+ -/+	-/+ -/+	-/+ +	
µg/mL	μg/mL	μg/mL	μg/mL	μg/mL	μg/mL	μg/mL	μg/mL	µg/mL	µg/mL	
501.3	502.3	501.0	502.3	500.8	501.0	503.0	503.0	501.5	504.7	
(Lot MKCL8918)	(Lot MKCN2863)	(Lot MKCD4540)	(Lot BCCG0084)	(Lot MKCJ4572)	(Lot BCBW0661)	(Lot OML4N)	(Lot U25B014)	(Lot 0000127235)	(Lot PADGI)	
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01-Aug-2020 rev.

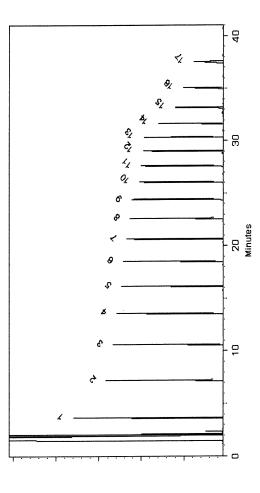


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Det. Type: FID



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Date Mixed: 27-Apr-2022 Balance: 1128360905

Date Passed: 29-Apr-2022

Fang-Yun Lo - CC Antilyet

NU.

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0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

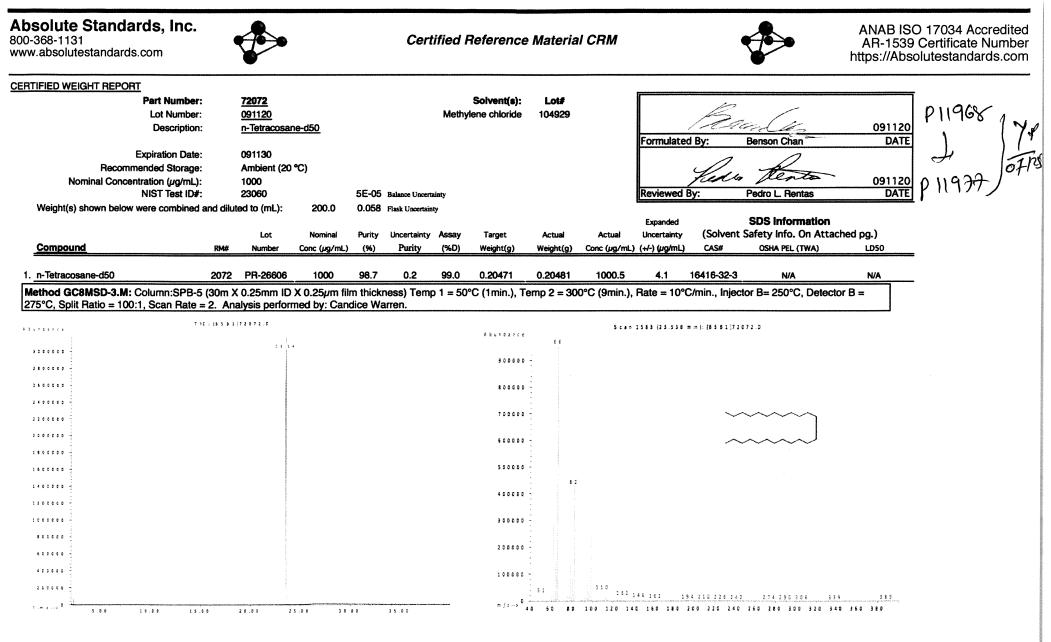
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• The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.

- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result,"
- NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).



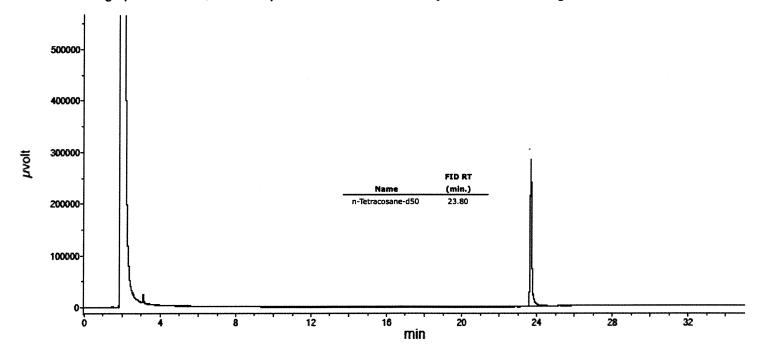


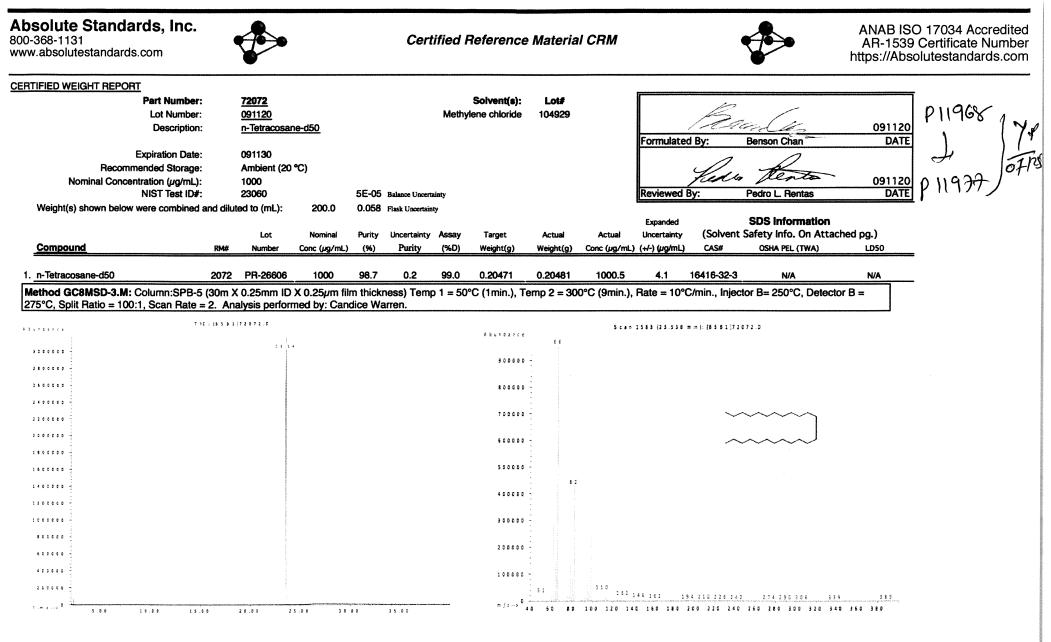
Run 75, "P72072 L091120 [1000µg/mL in MeCl2]"

Run Length: 35.00 min, 20999 points at 10 points/second. Created: Thu, Sep 17, 2020 at 9:46:03 AM. Sampled: Sequence "091420-GC4M2", Method "GC4-M1". Analyzed using Method "GC4-M1".

#### Comments

GC4-M1 Analysis by Candice Warren Column ID SPB5 L#60062-01A : 30 meter x 0.53mm x 1.5um Film Thickness Flow rates; Total Flow = 300 ml/min, Helium (carrier) = 6.5 mL, Helium (make-up) = 25 mL, Hydrogen (detector) = 30 mL, Air (detector) =360 mL Oven Temp 1 = 50°C (1 min), Rate = 10°C/min, Oven Temp 2 = 300°C (9 min), Total Run Time = 35 Minutes. Injector Temp = 200°C, FID Temp = 300°C, FID Signal = eDaq Channel 1. Gas Chromatograph = HP 5890, Auto Sampler = HP 7673, Standard Injection = 0.5 uL, Range = 3





• The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.

- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result,"
- NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).



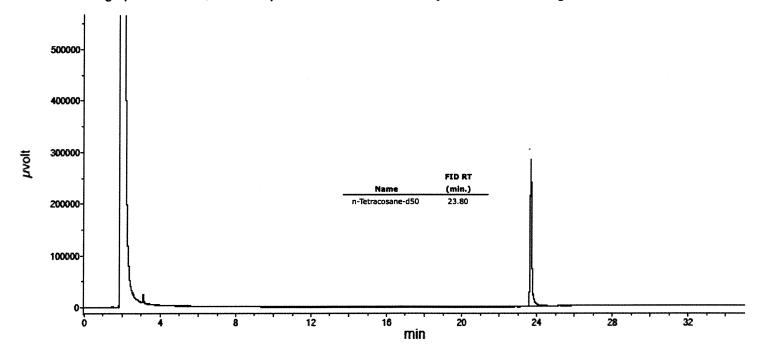


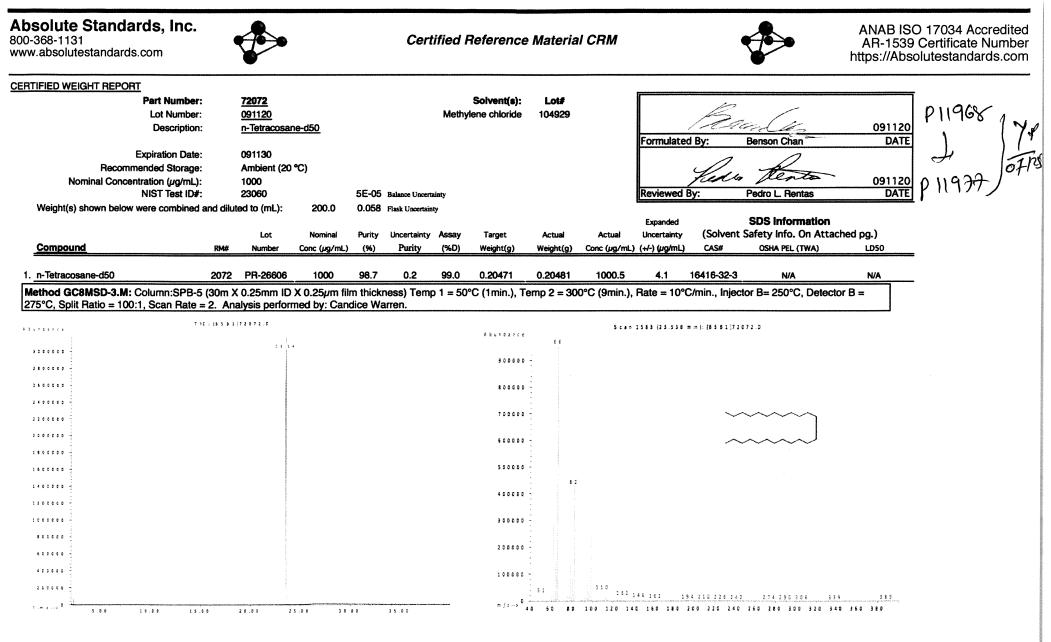
Run 75, "P72072 L091120 [1000µg/mL in MeCl2]"

Run Length: 35.00 min, 20999 points at 10 points/second. Created: Thu, Sep 17, 2020 at 9:46:03 AM. Sampled: Sequence "091420-GC4M2", Method "GC4-M1". Analyzed using Method "GC4-M1".

#### Comments

GC4-M1 Analysis by Candice Warren Column ID SPB5 L#60062-01A : 30 meter x 0.53mm x 1.5um Film Thickness Flow rates; Total Flow = 300 ml/min, Helium (carrier) = 6.5 mL, Helium (make-up) = 25 mL, Hydrogen (detector) = 30 mL, Air (detector) =360 mL Oven Temp 1 = 50°C (1 min), Rate = 10°C/min, Oven Temp 2 = 300°C (9 min), Total Run Time = 35 Minutes. Injector Temp = 200°C, FID Temp = 300°C, FID Signal = eDaq Channel 1. Gas Chromatograph = HP 5890, Auto Sampler = HP 7673, Standard Injection = 0.5 uL, Range = 3





• The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.

- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
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- NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).



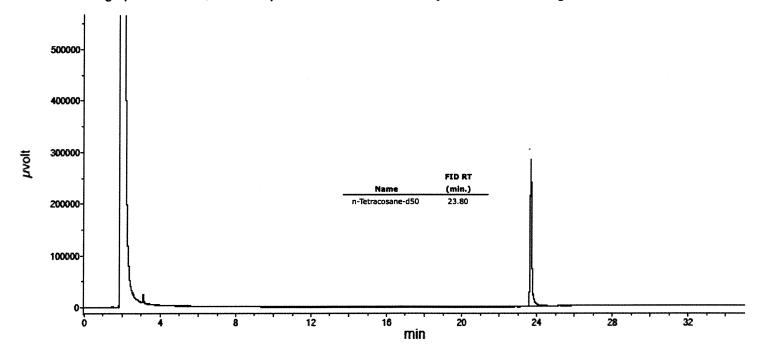


Run 75, "P72072 L091120 [1000µg/mL in MeCl2]"

Run Length: 35.00 min, 20999 points at 10 points/second. Created: Thu, Sep 17, 2020 at 9:46:03 AM. Sampled: Sequence "091420-GC4M2", Method "GC4-M1". Analyzed using Method "GC4-M1".

#### Comments

GC4-M1 Analysis by Candice Warren Column ID SPB5 L#60062-01A : 30 meter x 0.53mm x 1.5um Film Thickness Flow rates; Total Flow = 300 ml/min, Helium (carrier) = 6.5 mL, Helium (make-up) = 25 mL, Hydrogen (detector) = 30 mL, Air (detector) =360 mL Oven Temp 1 = 50°C (1 min), Rate = 10°C/min, Oven Temp 2 = 300°C (9 min), Total Run Time = 35 Minutes. Injector Temp = 200°C, FID Temp = 300°C, FID Signal = eDaq Channel 1. Gas Chromatograph = HP 5890, Auto Sampler = HP 7673, Standard Injection = 0.5 uL, Range = 3





110 Benner Circle Bellefonte, PA 16823-8812 Tel: (800)356-1688 Fax: (814)353-1309

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### **Certificate of Analysis**

**CERTIFIED REFERENCE MATERIAL** 



#### FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE. This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed. 32062 Catalog No. : Lot No.: A0155055 **Description**: Herbicide Mix #4/ME (Methyl Ester) Herbicide Mix #4/ME (Methyl Ester) 200µg/mL, Hexane/Methyl-tert-butyl-ether, 1mL/ampul Container Size : 2 mL > 1 mL Pkg Amt: **Expiration Date :** November 30, 2026 10°C or colder Storage:

### CERTIFIED VALUES

Elution Order		c	Compound	Grav. (weight/			Expanded (95% C.L.;	Uncertainty K=2)	
1	CAS #	robenzoic acid 2905-67-1 99%	methyl ester (Lot 3903900)	200.0	μg/mL	+/- +/- +/-	1.4182 6.7507 6.7507	μg/mL μg/mL μg/mL	Gravimetric Unstressed Stressed
2		sole 100-17-4 99%	(Lot 24765/7)	200.0	µg/mL	+/- +/- +/-	1.4182 6.7507 6.7507	μg/mL μg/mL μg/mL	Gravimetric Unstressed Stressed
3		oanisole 1825-21-4 99%	(Lot 7921100)	200.0	µg/mL	+/- +/- +/-	1.4182 6.7507 6.7507	μg/mL μg/mL μg/mL	Gravimetric Unstressed Stressed
4	CAS #	n methyl ester 7286-84-2 98%	(Lot 6487100)	199.9	µg/mL	+/- +/- +/-	1.4176 6.7480 6.7480	μg/mL μg/mL μg/mL	Gravimetric Unstressed Stressed
5	CAS #	nethyl ester 51592-45-8 99%	(Lot 817100)	200.0	μg/mL	+/- +/- +/-	1.4182 6.7507 6.7507	μg/mL μg/mL μg/mL	Gravimetric Unstressed Stressed
6		ethyl ester 14143-55-6 98%	(Lot 386-21B)	201.9	µg/mL	+/- +/- +/-	1.4315 6.8141 6.8141	μg/mL μg/mL μg/mL	Gravimetric Unstressed Stressed
7	CAS #	nyl ester (Chlord 1861-32-1 99%	hal-dimethyl) (Lot 8008700)	200.0	µg/mL	+/- +/- +/-	1.4182 6.7507 6.7507	μg/mL μg/mL μg/mL	Gravimetric Unstressed Stressed

8	Acifluorfen methyl ester		200.0 μg/mL	+/- 1.4182	μg/mL	Gravimetric
	CAS # 50594-67-7	(Lot 6282300)		+/- 6.7507	μg/mL	Unstressed
	Purity 99%			+/- 6.7507	µg/mL	Stressed

Solvent: Hexane/Methyl-tert-butyl-ether CAS # 110-54-3/1634-04-4 Purity 99%

**Column:** 30m x 0.25mm x 0.25µm Rtx-5 (cat.#10223)

Carrier Gas: hydrogen-constant pressure 10 psi.

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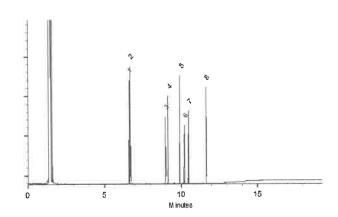
Temp. Program:

75°C (hold 1 min.) to 330°C @ 20°C/min. (hold 10 min.)

Inj. Temp: 250°C

Det. Temp: 330°C

Det. Type: FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael Maye

Date Mixed: 14-Nov-2019 Balance: 1128353505

Date Passed: 18-Nov-2019



110 Benner Circle Bellefonte, PA 16823-8812 Tel: 1-814-353-1300 Fax: 1-814-353-1309

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### **CERTIFIED REFERENCE MATERIAL**

### **Certificate of Analysis**

chromatographic plus



Halah



### FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

			etermination of the analyte	
Catalog No. :	32055	Lot No.:	A0192429	267
Description :	Herbicide Mix #1/ME (Methyl Ester)			- 8 4 20
	Herbicide Mix #1/ME (Methyl Ester)	200 µg/mL, Hexan	ne, 1mL/ampul	ي له ا
Container Size :	2 mL	Pkg Amt:	> 1 mL	
Expiration Date :	December 31, 2029	Storage:	10°C or colder	And 23
Handling:	This product is photosensitive.	Ship:	Ambient	
				V GISI

#### CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Dicamba methyl ester	6597-78-0	11705400	99%	201.6 µg/mL	+/- 3.4204
2	Dichlorprop methyl ester	57153-17-0	11672100	99%	201.4 µg/mL	+/- 3.4170
3	2,4-D methyl ester	1928-38-7	10048000	99%	201.2 μg/mL	+/- 3.4136
4	2,4,5-TP (silvex) methyl ester	4841-20-7	6364900	99%	201.2 μg/mL	+/- 3.4136
5	2,4,5-T methyl ester	1928-37-6	6875800	98%	200.7 μg/mL	+/- 3.4052
6	Dinoseb methyl ether	6099-79-2	12914300	99%	200.8 µg/mL	+/- 3.4068
7	2,4-DB methyl ester	18625-12-2	12542000	99%	201.0 μg/mL	+/- 3.4102

Solvent: Hexane

> CAS # 110-54-3 Purity 99%

\* Expanded Uncertainty displayed in same units as Grav. Conc.



### **Quality Confirmation Test**

Column: 30m x 0.25mm x 0.25µm Rtx-5 (cat.#10223) Carrier Gas: hydrogen-constant pressure 10 psi. Temp. Program: 40°C (hold 2 min.) to 330°C @ 10°C/min. (hold 10 min.) Inj. Temp: 250°C Det. Temp: 330°C Det. Type: FID Split Vent: 2 ml/min. lnj. Vol 1µľ D 10 20 30 40 Minutes This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application. A Right 1128360905 Date Mixed: 09-Dec-2022 Balance Serial # Penelope Riglin - Operations Tech I . . Manufactured under Restek's ISO 9001:2015 Jennifer Pollino - Operations Tech III - ARM QC Date Passed: 12-Dec-2022 **Registered Quality System** Certificate #FM 80397





### CERTIFIED REFERENCE MATERIAL

### **Certificate of Analysis**



110 Benner Circle Bellefonte, PA 16823-8812 Tel: (800)356-1688 Fax: (814)353-1309

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### FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE. This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. :	32050	Lot No.:	<u>A0143143</u>	7	AJ
Description :	2,4-Dichlorophenylacetic Acid Methy	yl Ester Standard		P8445	07/29/19
	515 Surrogate (ester) 2, 4-dichlorop 200µg/mL, Hexane, 1mL/ampul	henyl Acetic Acid I	Methyl Ester		Juno
Container Size :	<u>2 mL</u>	Pkg Amt:	> 1 mL		
Expiration Date :	August 31, 2025	Storage:	10°C or colder		
Handling:	This product is photosensitive.	•			

### CERTIFIED VALUES

Elution Order		Compound		Grav. Conc. (weight/volume)		Expanded (95% C.L.	l Uncertainty ; K=2)	
1	2,4-Dich CAS # Purity	llorophenyl acetic aci 55954-23-9 99%	d methyl ester (Lot CSC42194-01)	200.0	μg/mL	1.4182 6.7507 6.7507	μg/mL μg/mL μg/mL	Gravimetric Unstressed Stressed
Solvent:	Hexane					 		

CAS # 110-54-3

Purity 99%

**Column:** 30m x 0.25mm x 0.25μm Rtx-5 (cat.#10223)

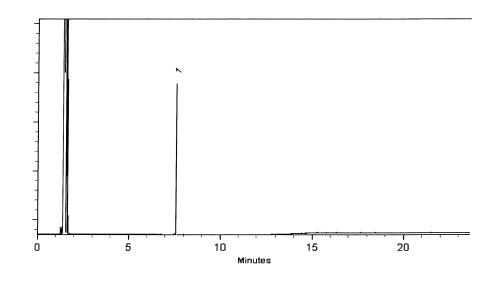
Carrier Gas: hydrogen-constant pressure 10 psi.

**Temp. Program:** 75°C (hold 1 min.) to 330°C @ 20°C/min. (hold 10 min.)

Inj. Temp: 250°C

Det. Temp: 330°C

Det. Type: FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

And T. Su Russ Bookhamer - Operations Technician I

#### hnician | Date Mixed: 12-Nov-2018

Balance: 1128360905



Date Passed: 13-Nov-2018