




FIELD SAMPLING TEST REPORT	
Customer Information	UL VERIFICATION SERVICES, INC. LST.FAI.HBDCResults@ul.com 3251 Old Lee Highway, Suite 100 Fairfax VA 22030 USA
HB Project Number	2010030NY_B12_D5
Date Received	November 6, 2020
Testing Laboratory Location	UL Environment - Marietta, 2211 Newmarket Parkway, Marietta, GA 30067-9399 USA
Method	USEPA Compendium Method TO-17 ; ASTM 6196
Authorized by	 Allyson M. McFry Chemistry Laboratory Director
<p>Sampling: Reported data were obtained from samples and sampling information as provided by the on-site investigator. These data and general information are provided to assist the investigator in an overall IAQ assessment. Interpretation of data is left to the client or persons who conducted the field work.</p> <p>This test is accredited and meets the requirements of ISO/IEC 17025 as verified by ANSI National Accreditation Board. Refer to certificate and scope of accreditation AT-1297.</p> <p>This report shall not be reproduced, except in full, without permission from UL. Results contained within this report only apply to the actual product tested under the testing conditions documented in this report.</p>	

Date Issued: November 23, 2020
Product #: 1001079085-3445188
Report #: 1001079085-3445188
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UL ID:	SV1TFDF
Sample Date:	November 5, 2020
Volume (L):	18.0

CONCENTRATIONS OF TOTAL AND INDIVIDUAL VOLATILE ORGANIC COMPOUNDS

Sample Location/Description		B12_D5_LR_Hall_Field Blank	
Total Volatile Organic Compounds		BQL	
CAS Number	Compound	Concentration	
		µg/m³	ppb
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UL ID:	SV1TFD
Sample Date:	November 5, 2020
Volume (L):	18.3

CONCENTRATIONS OF TOTAL AND INDIVIDUAL VOLATILE ORGANIC COMPOUNDS

Sample Location/Description		B12_D5_LR_Hall_AM	
Total Volatile Organic Compounds		37.0 µg/m³	
CAS Number	Compound	Concentration	
		µg/m³	ppb
64-19-7	Acetic acid	11.8	4.8
98-01-1	Furfural (2-Furaldehyde)	5.3	1.4
91-20-3	Naphthalene	5.1	1.0
77-68-9	Propanoic acid, 2-methyl-, 3-hydroxy-2,2,4-trimethylpentyl ester (component of Texanol)	4.3	0.5
66-25-1	Hexanal	3.7	0.9
100-42-5	Styrene	3.7	0.9
25265-77-4	2,2,4-Trimethyl-1,3-pentanediol monoisobutyrate	3.3	0.4
116-09-6	2-Propanone, 1-hydroxy	2.7	0.9
108-95-2	Phenol	2.5	0.7
142-62-1	Hexanoic acid	2.4	0.5
80-56-8	Pinene, alpha (2,6,6-Trimethyl-bicyclo[3.1.1]hept-2-ene)	2.0	0.4
932-66-1	Ethanone, 1-(1-cyclohexen-1-yl)*	2.0	0.4

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UL ID:	SV2TFD
Sample Date:	November 5, 2020
Volume (L):	18.2

CONCENTRATIONS OF TOTAL AND INDIVIDUAL VOLATILE ORGANIC COMPOUNDS

Sample Location/Description		B12_D5_LR_Hall_60_AM	
Total Volatile Organic Compounds		59.1 µg/m³	
CAS Number	Compound	Concentration	
		µg/m³	ppb
64-19-7	Acetic acid	74.3	30.2
116-09-6	2-Propanone, 1-hydroxy	14.1	4.7
66-25-1	Hexanal	6.1	1.5
100-42-5	Styrene	6.0	1.4
120-92-3	Cyclopentanone	5.3	1.6
98-01-1	Furfural (2-Furaldehyde)	4.1	1.1
77-68-9	Propanoic acid, 2-methyl-, 3-hydroxy-2,2,4-trimethylpentyl ester (component of Texanol)	4.1	0.5
57-55-6	1,2-Propanediol (Propylene glycol)	3.0	0.9
108-95-2	Phenol	2.7	0.7
80-62-6	Methyl methacrylate (2-Propenoic acid, 2-methyl-, methyl ester)	2.6	0.6
91-20-3	Naphthalene	2.5	0.5
141-32-2	Butyl acrylate (2-Propenoic Acid, butyl ester)	2.3	0.4
5989-27-5	D-Limonene*	2.2	0.4
25265-77-4	2,2,4-Trimethyl-1,3-pentanediol monoisobutyrate	2.0	0.2

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UL ID:	SV3TFD
Sample Date:	November 5, 2020
Volume (L):	18.3

CONCENTRATIONS OF TOTAL AND INDIVIDUAL VOLATILE ORGANIC COMPOUNDS

Sample Location/Description		B12_D5_LR_Hall_PM	
Total Volatile Organic Compounds		87.2 µg/m³	
CAS Number	Compound	Concentration	
		µg/m³	ppb
64-19-7	Acetic acid	14.2	5.8
120-92-3	Cyclopentanone	7.1	2.1
116-09-6	2-Propanone, 1-hydroxy	5.5	1.8
98-01-1	Furfural (2-Furaldehyde)	5.5	1.4
108-95-2	Phenol	5.2	1.3
142-62-1	Hexanoic acid	4.8	1.0
765-70-8	1,2-Cyclopentanedione, 3-methyl*	4.8	1.0
628-61-5	Octane, 2-chloro*	4.3	0.7
80-56-8	Pinene, alpha (2,6,6-Trimethyl-bicyclo[3.1.1]hept-2-ene)	4.2	0.8
65-85-0	Benzoic Acid*	3.8	0.8
100-52-7	Benzaldehyde	3.8	0.9
91-20-3	Naphthalene	3.8	0.7
112-34-5	Ethanol, 2-(2-butoxyethoxy)	3.7	0.6
66-25-1	Hexanal	3.7	0.9
98-86-2	Acetophenone (Ethanone, 1-phenyl)*	3.4	0.7
112-15-2	Ethanol, 2-(2-ethoxyethoxy), acetate*	3.2	0.4
77-68-9	Propanoic acid, 2-methyl-, 3-hydroxy-2,2,4-trimethylpentyl ester (component of Texanol)	3.1	0.4
25265-77-4	2,2,4-Trimethyl-1,3-pentanediol monoisobutyrate	2.8	0.3
124-19-6	Nonyl aldehyde (Nonanal)	2.8	0.5
71-41-0	1-Pentanol (N-Pentyl alcohol)	2.6	0.7
96-48-0	2(3H)-Furanone, dihydro (Butyrolactone)	2.4	0.7
127-91-3	Pinene, beta (6,6-Dimethyl-2-methylene-bicyclo[3.1.1]heptane)	2.3	0.4
95-48-7	Phenol, 2-methyl*	2.2	0.5
106-44-5	Phenol, 4-methyl (p-Cresol)*	2.2	0.5

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UL ID:	SV4TFD
Sample Date:	November 5, 2020
Volume (L):	18.5

CONCENTRATIONS OF TOTAL AND INDIVIDUAL VOLATILE ORGANIC COMPOUNDS

Sample Location/Description		B12_D5_LR_Hall_60_PM	
Total Volatile Organic Compounds		26.6 µg/m³	
CAS Number	Compound	Concentration	
		µg/m³	ppb
64-19-7	Acetic acid	6.8	2.8
98-01-1	Furfural (2-Furaldehyde)	4.6	1.2
91-20-3	Naphthalene	4.6	0.9
77-68-9	Propanoic acid, 2-methyl-, 3-hydroxy-2,2,4-trimethylpentyl ester (component of Texanol)	4.3	0.5
25265-77-4	2,2,4-Trimethyl-1,3-pentanediol monoisobutyrate	3.7	0.4
66-25-1	Hexanal	2.6	0.6
108-95-2	Phenol	2.4	0.6
116-09-6	2-Propanone, 1-hydroxy	2.3	0.8
30434-65-2	2-Cyclopenten-1-one, 3,4,4-trimethyl-*	2.0	0.4

Individual compounds and TVOC (total volatile organic compounds) are calibrated relative to toluene.

Field Blanks: Reported concentrations based on 18.0 L of volume sampled for VOCs. Actual field blanks are not intended to have a measurable amount of air sampled.

*Denotes quantified using multipoint authentic standard curve. Other VOCs quantified relative to toluene.

Values below 2.0 µg/m³ are for information purposes only. Chemical was detected, but below the quantifiable level of 0.04 µg based on a standard of 18 L air collection volume.

UL Environment's quality assurance program monitors blank sorbent media to ensure that the residual background does not exceed UL Environment's quality objective of ≤ 36 ng of total VOC.

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Project # 2010030NY B12_D5

1001079085-3445188



ACTIVE CHEMICAL SAMPLING CHAIN OF CUSTODY								
Company: ULVS (Healthy Buildings)			Contact: CARERESULTS@UL.COM			Project/P.O./Job Number: 2010030NY_B12_D5		
Address: 3251 Old Lee Highway #100 Fairfax, VA 22030			Phone: 571.655.7919			Sample Date: 05 Nov 2020		
			Fax: 703.323.4440			Investigator: SAM.HORNER		
Please check the appropriate fields; Use separate COC for each sample method.	VOLATILE ORGANICS: IVOC SCAN: <input type="checkbox"/> TOP 20 IVOC <input type="checkbox"/> TVOC ONLY <input type="checkbox"/> OTHER <input type="checkbox"/> B.T.E.X.							
	ALDEHYDE SCAN: <input type="checkbox"/> FORMALDEHYDE ONLY <input type="checkbox"/>				ANALYSIS: LEED V4 <input type="checkbox"/> LEED V4.1 <input type="checkbox"/> OTHER <input type="checkbox"/> B.T.E.X.			
	TAT: Standard <input checked="" type="checkbox"/> Next Day Rush* <input type="checkbox"/> * Rush charges apply; please call in advance to confirm availability							
Comments: One (1) Week TAT Please - Looking for results by COB Friday November 13th. Thank you								
UL ID	SAMPLE ID/ TUBE ID	SAMPLE LOCATION/ DESCRIPTION	START TIME	STOP TIME	TIME SAMPLED (MIN)	PUMP ID #	FLOW RATE (L/MIN)	VOLUME (L)
V01	2010030NY-12P/ s/n B27025	B12_D5_LR_Hall_AM	08:31	12:31	240	2018	0.076065	18.2556
V02	2010030NY-12Q/ s/n B26881	B12_D5_LR_Hall_60_AM	08:20	09:20	63	5116	0.29355	18.2001
V03	2010030NY-12R/ s/n B26229	B12_D5_LR_Hall_PM	12:40	16:40	240	2018	0.076065	18.2556
V04	2010030NY-12S/ s/n B26478 458	B12_D5_LR_Hall_60_PM	09:15	10:15	60	4257	0.307425	18.4455
V05	2010030NY-12T/ s/n B26201	B12_D5_LR_Hall_Field Blank						n/a
					3445188			
Released By: SAM.HORNER (Print/Sign)			Date/Time: 05 Nov 2020		Method of Shipment: UPS Next Da		Description 2010030NY_B12_D5 3445188	
Received By: <i>[Signature]</i>			Date/Time: 11/6/20 10:25 AM		Sample Condition		Customer: UL Verification Services, Inc. Received Date: Aurora Project No.: 1001079085 Order No.: 2020-NOV-06 02:28:56 PM Oracle Project No.:	

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