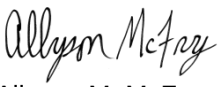
FIELD SAMPLING TEST REPORT	
Customer Information	UL VERIFICATION SERVICES, INC. LST.FAI.HBDCResults@ul.com 3251 Old Lee Highway, Suite 100 Fairfax VA 22030 USA
HB Project Number	2010030NY_B11
Date Received	November 4, 2020
Testing Laboratory Location	UL Environment - Marietta, 2211 Newmarket Parkway, Marietta, GA 30067-9399 USA
Method	USEPA Compendium Method TO-17 ; ASTM 6196
Authorized by	 Allyson M. McFry Chemistry Laboratory Director

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.

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.

Date Issued: November 13, 2020
Product #: 1001070976-3438657
Report #: 1001070976-3438657

UL ID:	SV1TFDF
Sample Date:	October 30, 2020
Volume (L):	18.0

CONCENTRATIONS OF TOTAL AND INDIVIDUAL VOLATILE ORGANIC COMPOUNDS

Sample Location/Description	B11_BR_04_Field Blank
Total Volatile Organic Compounds	BQL

CAS Number	Compound	Concentration	
		µg/m³	ppb
109-67-1	1-Pentene	2.7	0.9

Date Issued: November 13, 2020
Product #: 1001070976-3438657
Report #: 1001070976-3438657

UL ID:	SV1TFD
Sample Date:	October 30, 2020
Volume (L):	18.3

CONCENTRATIONS OF TOTAL AND INDIVIDUAL VOLATILE ORGANIC COMPOUNDS

Sample Location/Description	B11_BR_04_Pre
Total Volatile Organic Compounds	821 µg/m³

CAS Number	**Compound**	**Concentration**	
		µg/m³	**ppb**
25265-77-4	2,2,4-Trimethyl-1,3-pentanediol monoisobutyrate	316	35.7
541-02-6	Cyclopentasiloxane, decamethyl	88.0	5.8
66-25-1	Hexanal	30.2	7.4
64-19-7	Acetic acid	26.1	10.6
91-20-3	Naphthalene†	21.0	4.0
108-88-3	Toluene (Methylbenzene)	19.1	5.1
78-93-3	2-Butanone (Methyl ethyl ketone, MEK)	18.4	6.3
108-95-2	Phenol†	15.9	4.1
98-01-1	Furfural (2-Furaldehyde)	15.4	3.9
80-56-8	Pinene, alpha (2,6,6-Trimethyl-bicyclo[3.1.1]hept-2-ene)	15.2	2.7
112-41-4	1-Dodecene	14.4	2.1
124-19-6	Nonyl aldehyde (Nonanal) †	13.1	2.3
111-76-2	Ethanol, 2-butoxy	12.9	2.7
58175-57-8	2-Propyl-1-pentanol*	11.9	2.2
142-96-1	n-Butyl ether	11.8	2.2
5989-27-5	D-Limonene*	11.3	2.0
98-56-6	Benzene, 1-chloro-4-(trifluoromethyl)-*	9.7	1.3
127-91-3	Pinene, beta (6,6-Dimethyl-2-methylene-bicyclo[3.1.1]heptane)	9.5	1.7
71-41-0	1-Pentanol (N-Pentyl alcohol)	8.8	2.4
71-36-3	1-Butanol (N-Butyl alcohol)	8.0	2.6
629-50-5	Tridecane	8.0	1.1
110-62-3	Pentanal	7.7	2.2
144-19-4	1,3-Pentanediol, 2,2,4-trimethyl	7.4	1.2
10032-15-2	Butanoic acid, 2-methyl-, hexyl ester*	6.4	0.8
141-32-2	Butyl acrylate (2-Propenoic Acid, butyl ester)	5.8	1.1
112-40-3	Dodecane†	5.7	0.8
1000099-98-7	1-Ethylpropyl 2-ethylhexanoate*	5.5	0.6
287-92-3	Cyclopentane	5.4	1.9
100-52-7	Benzaldehyde	5.3	1.2
112-53-8	1-Dodecanol*	5.3	0.7
116-09-6	2-Propanone, 1-hydroxy	5.2	1.7
140-67-0	Estragole (4-Allylanisole)	5.2	0.9
106-44-5	Phenol, 4-methyl (p-Cresol)*	5.0	1.1
100-42-5	Styrene†	5.0	1.2
208-96-8	Acenaphthylene*	4.5	0.7

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Sample Date:	October 30, 2020
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CAS Number	Compound	Concentration	
		µg/m³	ppb
2473-03-2	1-Chloroundecane*	4.4	0.6
98-86-2	Acetophenone (Ethanone, 1-phenyl)*	4.4	0.9
91-57-6	Naphthalene, 2-methyl	4.3	0.7
40933-45-7	2,4-Dimethylhexanedioic acid*	4.2	0.6
638-25-5	Pentyl octanoate*	4.2	0.5
92-52-4	1,1'-Biphenyl*	4.2	0.7
111-87-5	1-Octanol	3.9	0.7
112-31-2	Decanal*	3.8	0.6
120-92-3	Cyclopentanone	3.8	1.1
123-86-4	Acetate, butyl	3.6	0.8
629-64-1	Heptane, 1,1'-oxybis*	3.5	0.4
1330-20-7	Xylenes (Total) †	3.4	0.8
620-02-0	2-Furancarboxaldehyde, 5-methyl*	3.3	0.7
4926-90-3	Cyclohexane, 1-ethyl-1-methyl*	3.2	0.6
57-55-6	1,2-Propanediol (Propylene glycol)	3.1	1.0
818-72-4	1-Octyn-3-ol	2.9	0.6
1896-62-4	3-Buten-2-one, 4-phenyl-, (E)-*	2.7	0.5
95-48-7	Phenol, 2-methyl*	2.7	0.6
3891-99-4	2,6,10-Trimethyltridecane*	2.6	0.3
80-62-6	Methyl methacrylate (2-Propenoic acid, 2-methyl-, methyl ester)	2.6	0.6
98-00-0	2-Furanmethanol*	2.4	0.6
142-62-1	Hexanoic acid	2.4	0.5
111-70-6	1-Heptanol	2.4	0.5
71-43-2	Benzene†	2.4	0.7
112-29-8	Decane, 1-bromo*	2.3	0.3
79-31-2	Propanoic acid, 2-methyl*	2.3	0.6
67-64-1	Acetone	2.2	0.9
6846-50-0	TXIB (2,2,4-Trimethyl-1,3-pentanediol diisobutyrate)	2.2	0.2
4821-04-9	3-Cyclohexen-1-ol, 4-methyl-1-(1-methylethyl)-, acetate*	2.1	0.3
103-11-7	2-Propenoic acid, 2-ethylhexyl ester (2-Ethylhexyl acrylate)	2.1	0.3
95-13-6	Indene*	2.0	0.4
50746-55-9	Bicyclo[3.1.1]heptane, 2,6,6-trimethyl-3-(2-propenyl)-, (1.alpha.,2.beta.,3.alpha.,5.alpha.)-*	2.0	0.3
141-78-6	Acetate, ethyl	2.0	0.6
18720-66-6	3-Heptanol, 6-methyl-*	2.0	0.4

UL ID:	SV2TFD
Sample Date:	October 30, 2020
Volume (L):	18.0

CONCENTRATIONS OF TOTAL AND INDIVIDUAL VOLATILE ORGANIC COMPOUNDS

Sample Location/Description	B11_BR_04_Post
Total Volatile Organic Compounds	282 µg/m³

CAS Number	Compound	Concentration	
		µg/m³	ppb
100-42-5	Styrene†	50.8	11.9
71-43-2	Benzene†	37.7	11.8
64-19-7	Acetic acid	23.4	9.5
116-09-6	2-Propanone, 1-hydroxy	21.9	7.2
91-20-3	Naphthalene†	19.9	3.8
80-62-6	Methyl methacrylate (2-Propenoic acid, 2-methyl-, methyl ester)	17.0	4.1
108-95-2	Phenol†	10.5	2.7
108-88-3	Toluene (Methylbenzene)	10.2	2.7
19549-87-2	1-Heptene, 2,4-dimethyl*	9.7	1.9
98-01-1	Furfural (2-Furaldehyde)	7.3	1.9
42781-12-4	2-Propanone, 1-(1-methylethoxy)-*	6.7	1.4
609-31-4	1-Butanol, 2-nitro-*	5.7	1.2
120-92-3	Cyclopentanone	5.2	1.5
98-83-9	a-Methylstyrene (iso-Propenylbenzene; (1-Methylethenyl)benzene)	5.0	1.0
141-32-2	Butyl acrylate (2-Propenoic Acid, butyl ester)	4.6	0.9
100-41-4	Benzene, ethyl†	4.5	1.0
95-13-6	Indene*	4.4	0.9
100-47-0	Benzonitrile	4.4	1.0
100-52-7	Benzaldehyde	4.3	1.0
25265-77-4	2,2,4-Trimethyl-1,3-pentanediol monoisobutyrate	4.2	0.5
90-05-1	Phenol, 2-methoxy*	4.0	0.8
627-08-7	Propane, 1-(1-methylethoxy)*	3.9	0.9
1330-20-7	Xylenes (Total) †	3.8	0.9
106-44-5	Phenol, 4-methyl (p-Cresol)*	3.2	0.7
71-36-3	1-Butanol (N-Butyl alcohol)	3.1	1.0
66-25-1	Hexanal	3.0	0.7
98-86-2	Acetophenone (Ethanone, 1-phenyl)*	3.0	0.6
91-57-6	Naphthalene, 2-methyl	2.9	0.5
814-78-8	3-Buten-2-one, 3-methyl*	2.6	0.8
271-89-6	Benzofuran*	2.4	0.5
15176-21-3	1,4-Dioxane, 2,5-dimethyl*	2.3	0.5
620-02-0	2-Furancarboxaldehyde, 5-methyl*	2.3	0.5
95-48-7	Phenol, 2-methyl*	2.2	0.5
541-02-6	Cyclopentasiloxane, decamethyl	2.2	0.1
541-05-9	Cyclotrisiloxane, hexamethyl	2.2	0.2

UL ID:	SV2TFD
Sample Date:	October 30, 2020
Volume (L):	18.0

CAS Number	Compound	Concentration	
		µg/m³	ppb
92-52-4	1,1'-Biphenyl*	2.1	0.3
600-14-6	2,3-Pentanedione*	2.1	0.5
208-96-8	Acenaphthylene*	2.1	0.3
765-33-3	1-Methyl-1-silacyclobutane*	2.1	0.6
78-93-3	2-Butanone (Methyl ethyl ketone, MEK)	2.0	0.7
534-22-5	Furan, 2-methyl-*	2.0	0.6
5989-27-5	D-Limonene*	2.0	0.4
111-76-2	Ethanol, 2-butoxy	2.0	0.4
4170-30-3	2-Butenal	2.0	0.7

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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UL ID:	SV2TFD
Sample Date:	October 30, 2020
Volume (L):	18.0

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Project # 2010030NY_B11

1001070976 - 3438657

ACTIVE CHEMICAL SAMPLING CHAIN OF CUSTODY

Company: ULVS (Healthy Buildings)	Contact: CARESULTS@UL.COM	Project/P.O./Job Number: 2010030NY_B11
Address: 3251 Old Lee Highway #100 Fairfax, VA 22030	Phone: 571.655.7919 Fax: 703.323.4440	Sample Date: 30 OCT 2020 Investigator: SAM.HORNER

Please check the appropriate fields; Use separate COC for each sample method.

VOLATILE ORGANICS: IVOC SCAN: _____ TOP 20 IVOC _____ TVOC ONLY _____ OTHER B.T.E.X.

ALDEHYDE SCAN: _____ FORMALDEHYDE ONLY _____ ANALYSIS: LEED V4 ___ LEED V4.1 ___ OTHER B.T.E.X.

TAT: Standard X Next Day Rush* _____ * Rush charges apply; please call in advance to confirm availability

Comments: One (1) Week TAT Please – Looking for results by COB Tuesday November 10th. 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-11A/ s/n B26974	B11_BR_04_Pre	08:21	09:21	60	4257	0.30545	18.3270 L
V02	2010030NY-11B/ s/n B26901	B11_BR_04_Post	11:41	12:41	60	4257	0.30066	18.0393 L
V01F	2010030NY-11C/ s/n B26948	B11_BR_04_ Field Blank						n/a

Released By: SAM.HORNER (Print/Sign) _____ Date/Time: 03Nov2020 Method of Shipment: UPS Next Da

Received By: _____ Date/Time: 11/4/20 10:15 AM Sample Condition Acceptable

3438657

3438657

Description 2010030NY_B11

Customer: UL Verification Services, Inc.

Received Date: 2020-NOV-04 01:04:41 PM

Aurora Project No.: 1001070976

Order No.:

Oracle Project No.:

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Date Issued: November 13, 2020
Product #: 1001070976-3438657
Report #: 1001070976-3438657