




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	2011006NY_B18
Date Received	November 24, 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: December 15, 2020
Product #: 1001086264-3486349
Report #: 1001086264-3486349
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UL ID:	SV1TFDF
Sample Date:	November 20, 2020
Volume (L):	18.0

CONCENTRATIONS OF TOTAL AND INDIVIDUAL VOLATILE ORGANIC COMPOUNDS

Sample Location/Description		B18_LR_HALL_Field Blank	
Total Volatile Organic Compounds		6.7 µg/m³	
CAS Number	Compound	Concentration	
		µg/m³	ppb
13475-82-6	Heptane, 2,2,4,6,6-pentamethyl*	6.7	1.0
71-23-8	1-Propanol (Propyl alcohol)	2.2	0.9

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UL ID:	SV1TFD
Sample Date:	November 20, 2020
Volume (L):	18.8

CONCENTRATIONS OF TOTAL AND INDIVIDUAL VOLATILE ORGANIC COMPOUNDS

Sample Location/Description		B18_LR_HALL_Pre	
Total Volatile Organic Compounds		1,430 µg/m³	
CAS Number	Compound	Concentration	
		µg/m³	ppb
77-68-9	Propanoic acid, 2-methyl-, 3-hydroxy-2,2,4-trimethylpentyl ester (component of Texanol)	201	22.8
25265-77-4	2,2,4-Trimethyl-1,3-pentanediol monoisobutyrate	186	21.1
91-20-3	Naphthalene	73.7	14.1
108-88-3	Toluene (Methylbenzene)	71.0	18.8
66-25-1	Hexanal	38.4	9.4
80-56-8	Pinene, alpha (2,6,6-Trimethyl-bicyclo[3.1.1]hept-2-ene)	37.2	6.7
98-01-1	Furfural (2-Furaldehyde)	31.2	7.9
142-96-1	n-Butyl ether	29.6	5.6
71-36-3	1-Butanol (N-Butyl alcohol)	28.0	9.2
144-19-4	1,3-Pentanediol, 2,2,4-trimethyl	27.7	4.6
112-41-4	1-Dodecene	27.7	4.0
111-76-2	Ethanol, 2-butoxy	26.7	5.5
108-95-2	Phenol	22.4	5.8
127-91-3	Pinene, beta (6,6-Dimethyl-2-methylene-bicyclo[3.1.1]heptane)	20.2	3.6
96-29-7	2-Butanone, oxime*	19.6	5.5
67-64-1	Acetone	19.2	8.1
100-42-5	Styrene	18.8	4.4
141-32-2	Butyl acrylate (2-Propenoic Acid, butyl ester)	18.1	3.5
104-76-7	1-Hexanol, 2-ethyl	17.6	3.3
112445-69-9	Hexanoic acid, 2-ethyl-, nonyl ester*	16.7	1.5
124-19-6	Nonyl aldehyde (Nonanal)	16.4	2.8
5989-27-5	D-Limonene*	16.4	2.9
71-43-2	Benzene	15.9	5.0
80-62-6	Methyl methacrylate (2-Propenoic acid, 2-methyl-, methyl ester)	15.0	3.7
98-86-2	Acetophenone (Ethanone, 1-phenyl)*	13.9	2.8
208-96-8	Acenaphthylene*	13.2	2.1
100-52-7	Benzaldehyde	13.1	3.0
110-62-3	Pentanal	12.7	3.6
140-67-0	Estragole (4-Allylanisole)	12.3	2.0
123-86-4	Acetate, butyl	12.2	2.6
100-47-0	Benzonitrile	11.9	2.8
25551-13-7	Trimethylbenzene (All Isomers)	11.3	2.3
2682-20-4	3(2H)-Isothiazolone, 2-methyl-*	11.1	2.4
112-53-8	1-Dodecanol*	11.1	1.5

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CAS Number	Compound	Concentration	
		µg/m³	ppb
92-52-4	1,1'-Biphenyl*	10.8	1.7
1330-20-7	Xylenes (Total)	10.8	2.5
91-57-6	Naphthalene, 2-methyl	9.8	1.7
5877-42-9	1-Octyn-3-ol, 4-ethyl*	9.7	1.5
71-41-0	1-Pentanol (N-Pentyl alcohol)	9.4	2.6
1000099-98-7	1-Ethylpropyl 2-ethylhexanoate*	8.9	1.0
106-44-5	Phenol, 4-methyl (p-Cresol)*	8.6	1.9
142-62-1	Hexanoic acid	8.6	1.8
95-13-6	Indene*	8.1	1.7
541-02-6	Cyclopentasiloxane, decamethyl	8.1	0.5
108-65-6	1-Methoxy-2-propyl acetate*	7.5	1.4
95-48-7	Phenol, 2-methyl*	7.4	1.7
1002-69-3	Decane, 1-chloro*	7.2	1.0
112-40-3	Dodecane	7.0	1.0
99172-18-6	3,5-Heptadienal, 2-ethylidene-6-methyl-*	6.9	3.4
13187-99-0	2-Bromo dodecane*	6.5	0.6
1000309-21-9	Sulfurous acid, cyclohexylmethyl undecyl ester*	6.3	0.5
111-87-5	1-Octanol	6.2	1.2
106-62-7	1-Propanol, 2-(2-hydroxypropoxy)	6.0	1.1
620-02-0	2-Furancarboxaldehyde, 5-methyl*	5.9	1.3
109-67-1	1-Pentene	5.9	2.1
1000309-61-6	Oxalic acid, 4-chlorophenyl tetradecyl ester*	5.8	0.4
57-55-6	1,2-Propanediol (Propylene glycol)	5.7	1.8
60044-74-8	4-Ethoxy-2-butanone*	5.7	1.2
120-92-3	Cyclopentanone	5.6	1.6
103-11-7	2-Propenoic acid, 2-ethylhexyl ester (2-Ethylhexyl acrylate)	5.5	0.7
4265-25-2	Benzofuran, 2-methyl*	5.5	1.0
101-81-5	Benzene, 1,1'-Methylenebis (Diphenylmethane)	5.2	0.8
1070-32-2	1-Heptanol, 3-methyl-*	5.0	4.0
143-15-7	Dodecane, 1-bromo*	4.9	0.5
205983-99-9	2-Methoxyethyl 2-ethylhexanoate*	4.6	0.6
544-76-3	Hexadecane (Cetane)	4.6	0.5
100-41-4	Benzene, ethyl	4.5	1.0
1000333-92-5	2-Ethyl-1-butanol, methyl ether*	4.5	0.9
18891-13-9	Hexanedioic acid, ethyl methyl ester*	4.5	1.2
110-86-1	Pyridine	4.5	1.4
629-50-5	Tridecane	4.3	0.6
20286-46-8	Butyric acid, 1-propylpentyl ester*	4.3	0.5
13429-07-7	2-Propanol, 1-(2-methoxypropoxy)-*	4.0	0.7
3102-33-8	3-Penten-2-one, (E)-*	3.7	1.1
827-54-3	Naphthalene, 2-vinyl	3.6	0.6
1000296-76-1	6,7-Dihydro-5H-pyrrolo[2,1-c][1,2,4]triazole-3-carboxylic acid*	3.5	0.6
540-97-6	Cyclohexasiloxane, dodecamethyl	3.5	0.2
6712-79-4	Isopinocarveol*	3.4	0.5

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CAS Number	Compound	Concentration	
		µg/m³	ppb
107-87-9	2-Pentanone*	3.4	1.0
112-42-5	1-Undecanol	3.3	0.5
623-42-7	Butanoic acid, methyl ester*	3.3	0.8
1000327-11-8	3-Hydroxypropanoic acid 1-butyl ester*	3.1	0.5
534-22-5	Furan, 2-methyl-*	2.9	0.9
1000349-13-0	Malonic acid, 2-heptyl propyl ester*	2.9	0.3
111-70-6	1-Heptanol	2.9	0.6
103-44-6	Heptane, 3-[(ethenyloxy)methyl]*	2.8	0.4
73992-48-0	7-Methoxymethyl-2,7-dimethylcyclohepta-1,3,5-triene*	2.8	0.4
571-58-4	Naphthalene, 1,4-dimethyl	2.7	0.4
5077-67-8	1-Hydroxy-2-butanone*	2.7	0.7
123-91-1	1,4-Dioxane	2.6	0.7
2463-77-6	2-Undecenal*	2.6	0.4
33933-80-1	1-Nonanol, 4,8-dimethyl-*	2.5	0.4
98-00-0	2-Furanmethanol*	2.5	0.6
3363-56-2	2,5,6-Trimethylbenzimidazole*	2.5	0.4
107-21-1	1,2-Ethanediol (Ethylene glycol)	2.4	1.0
99-87-6	Benzene, 1-methyl-4-(1-methylethyl) (p-Cymene; 4-Isopropyltoluene)	2.4	0.4
544-10-5	Hexane, 1-chloro*	2.4	0.5
69121-76-2	2-Nonanol, 2-methylpropionate*	2.4	0.3
2461-18-9	Oxirane, [(dodecyloxy)methyl]-*	2.1	0.2
79-31-2	Propanoic acid, 2-methyl*	2.1	0.6
4170-30-3	2-Butenal	2.1	0.7
1703-52-2	Furan, 2-ethyl-5-methyl-*	2.1	0.5
141-79-7	3-Penten-2-one, 4-methyl*	2.0	0.5

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UL ID:	SV2TFD
Sample Date:	November 21, 2020
Volume (L):	19.1

CONCENTRATIONS OF TOTAL AND INDIVIDUAL VOLATILE ORGANIC COMPOUNDS

Sample Location/Description		B18_LR_HALL_Post	
Total Volatile Organic Compounds		710 µg/m³	
CAS Number	Compound	Concentration	
		µg/m³	ppb
71-43-2	Benzene	47.6	14.9
91-20-3	Naphthalene	39.3	7.5
100-42-5	Styrene	32.0	7.5
534-22-5	Furan, 2-methyl-*	28.0	8.3
109-67-1	1-Pentene	27.4	9.6
98-01-1	Furfural (2-Furaldehyde)	22.2	5.6
80-62-6	Methyl methacrylate (2-Propenoic acid, 2-methyl-, methyl ester)	17.7	4.3
108-95-2	Phenol	17.6	4.6
25265-77-4	2,2,4-Trimethyl-1,3-pentanediol monoisobutyrate	17.0	1.9
77-68-9	Propanoic acid, 2-methyl-, 3-hydroxy-2,2,4-trimethylpentyl ester (component of Texanol)	16.7	1.9
431-03-8	2,3-Butanedione	16.1	4.6
108-88-3	Toluene (Methylbenzene)	15.7	4.2
150-76-5	Mequinol*	15.2	3.0
71-36-3	1-Butanol (N-Butyl alcohol)	14.4	4.8
80-56-8	Pinene, alpha (2,6,6-Trimethyl-bicyclo[3.1.1]hept-2-ene)	13.5	2.4
100-52-7	Benzaldehyde	13.3	3.1
27751-88-8	Propanoic acid, 2,2-dimethyl-, octyl ester*	12.9	1.5
120-92-3	Cyclopentanone	12.6	3.7
78-93-3	2-Butanone (Methyl ethyl ketone, MEK)	12.1	4.1
53957-33-8	Benzenemethanol, 2,5-dimethyl-*	11.7	2.1
95-65-8	Phenol, 3,4-dimethyl-*	10.1	2.0
104-76-7	1-Hexanol, 2-ethyl	9.8	1.8
66-25-1	Hexanal	9.3	2.3
106-44-5	Phenol, 4-methyl (p-Cresol)*	9.0	2.0
67-64-1	Acetone	8.4	3.5
108-65-6	1-Methoxy-2-propyl acetate*	8.3	1.5
64-19-7	Acetic acid	8.3	3.4
91-10-1	Phenol, 2,6-dimethoxy*	7.8	1.2
93-51-6	Phenol, 2-methoxy-4-methyl*	7.7	1.4
95-48-7	Phenol, 2-methyl*	7.7	1.7
98-00-0	2-Furanmethanol*	7.1	1.8
92-52-4	1,1'-Biphenyl*	6.4	1.0
5989-27-5	D-Limonene*	6.3	1.1
98-86-2	Acetophenone (Ethanone, 1-phenyl)*	6.3	1.3
141-32-2	Butyl acrylate (2-Propenoic Acid, butyl ester)	5.8	1.1

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UL ID:	SV2TFD
Sample Date:	November 21, 2020
Volume (L):	19.1

CAS Number	Compound	Concentration	
		µg/m³	ppb
5077-67-8	1-Hydroxy-2-butanone*	5.8	1.6
1330-20-7	Xylenes (Total)	5.7	1.3
100-41-4	Benzene, ethyl	5.6	1.3
111-43-3	Propane, 1,1'-oxybis- (Di-n-propyl ether)*	5.6	1.3
121-33-5	Vanillin (Benzaldehyde, 4-hydroxy-3-methoxy-)*	5.5	0.9
600-14-6	2,3-Pentanedione*	5.3	1.3
102-62-5	Glycerol 1,2-diacetate*	5.1	0.7
19549-87-2	1-Heptene, 2,4-dimethyl*	5.1	1.0
110-86-1	Pyridine	5.0	1.5
623-36-9	2-Pentenal, 2-methyl*	4.9	1.2
10042-59-8	1-Heptanol, 2-propyl*	4.9	0.8
575-41-7	Naphthalene, 1,3-dimethyl-*	4.8	0.8
697-82-5	Phenol, 2,3,5-trimethyl-*	4.8	0.9
123-42-2	2-Pentanone, 4-hydroxy-4-methyl-*	4.7	1.0
71-23-8	1-Propanol (Propyl alcohol)	4.7	1.9
13547-07-4	Cyclohexene, 1-chloro-5-(1-chloroethenyl)-*	4.5	0.6
112-15-2	Ethanol, 2-(2-ethoxyethoxy), acetate*	4.4	0.6
6638-05-7	3,5-Dimethoxy-4-hydroxytoluene*	4.2	0.6
91-57-6	Naphthalene, 2-methyl	4.2	0.7
50996-03-7	Benzamide, N-(2-oxopropyl)-*	4.1	0.6
620-02-0	2-Furancarboxaldehyde, 5-methyl*	4.0	0.9
541-02-6	Cyclopentasiloxane, decamethyl	4.0	0.3
765-70-8	1,2-Cyclopentanedione, 3-methyl*	4.0	0.9
208-96-8	Acenaphthylene*	3.9	0.6
611-13-2	Methyl 2-furoate*	3.9	0.7
2785-89-9	Phenol, 4-ethyl-2-methoxy*	3.9	0.6
2550-21-2	2-Hexanone, 3-methyl*	3.8	0.8
1000079-39-0	N-Benzyl-2-aminocinnamate, methyl ester*	3.8	0.3
123-07-9	Phenol, 4-ethyl-*	3.7	0.7
123-86-4	Acetate, butyl	3.6	0.8
95-13-6	Indene*	3.5	0.7
1121-05-7	2-Cyclopenten-1-one, 2,3-dimethyl-*	3.5	0.8
1000187-36-8	6-Hydroxymethyl-5-methyl-bicyclo[3.1.0]hexan-2-one*	3.5	0.6
142-62-1	Hexanoic acid	3.4	0.7
6712-79-4	Isopinocarveol*	3.3	0.5
141-79-7	3-Penten-2-one, 4-methyl*	3.3	0.8
42781-12-4	2-Propanone, 1-(1-methylethoxy)-*	3.2	0.7
643-93-6	1,1'-Biphenyl, 3-methyl	3.2	0.5
536-60-7	Benzenemethanol, 4-(1-methylethyl)*	3.1	0.5
91-22-5	Quinoline*	3.1	0.6
111-76-2	Ethanol, 2-butoxy	3.0	0.6
56588-40-0	1H-Indene-1,2-diol, 2,3-dihydro-2-methyl-, cis-*	3.0	0.5
3855-26-3	Phenol, 2-ethyl-4-methyl-*	3.0	0.5
1000369-65-4	Diethylmalonic acid, pentyl 3-phenylpropyl ester*	3.0	0.2
3404-75-9	2-Heptene, 3-methyl-*	3.0	0.6

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Volume (L):	19.1

CAS Number	Compound	Concentration	
		µg/m³	ppb
7473-98-5	2-Hydroxy-iso-butyrophenone*	2.9	0.4
71-41-0	1-Pentanol (N-Pentyl alcohol)	2.8	0.8
1000196-88-1	2-Furanone, 2,5-dihydro-3,5-dimethyl*	2.8	0.6
1193-11-9	1,3-Dioxolane, 2,2,4-trimethyl*	2.7	0.6
625-33-2	3-Penten-2-one*	2.7	0.8
3102-33-8	3-Penten-2-one, (E)-*	2.5	0.7
7402-29-1	Butanoic acid, 3-phenylpropyl ester*	2.5	0.3
79-09-4	Propanoic acid	2.5	0.8
627-93-0	Dimethyl adipate*	2.5	0.3
115-18-4	3-Buten-2-ol, 2-methyl*	2.4	0.7
85763-57-1	11-Methyldodecanol*	2.4	0.3
4170-30-3	2-Butenal	2.4	0.8
75-05-8	Acetonitrile	2.3	1.4
17312-62-8	Decane, 5-propyl*	2.3	0.3
25551-13-7	Trimethylbenzene (All Isomers)	2.3	0.5
821-95-4	1-Undecene	2.3	0.4
769-78-8	Vinyl benzoate*	2.3	0.4
1120-73-6	2-Cyclopenten-1-one, 2-methyl*	2.2	0.5
2503-46-0	2-Propanone, 1-(4-hydroxy-3-methoxyphenyl)-*	2.1	0.3
98-82-8	Benzene, 1-methylethyl (Cumene)	2.0	0.4
17583-40-3	Benzonitrile, 2-(methylamino)-*	2.0	0.4
1000322-51-9	1-Isopropyl-1H-indole*	2.0	0.3
14368-41-3	3-Phenyl-2-pentenitrile*	2.0	0.3

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UL ID:	SV3TFD
Sample Date:	November 21, 2020
Volume (L):	26.2

CONCENTRATIONS OF TOTAL AND INDIVIDUAL VOLATILE ORGANIC COMPOUNDS

Sample Location/Description		B18_LR_HALL_HZA	
Total Volatile Organic Compounds		4,400 µg/m³	
CAS Number	Compound	Concentration	
		µg/m³	ppb
71-43-2	Benzene	140	43.9
631-61-8	Ammonium acetate*	135	42.8
91-20-3	Naphthalene	118	22.4
98-01-1	Furfural (2-Furaldehyde)	93.3	23.8
100-42-5	Styrene	91.7	21.5
108-95-2	Phenol	75.9	19.7
98-86-2	Acetophenone (Ethanone, 1-phenyl)*	69.7	14.2
98-83-9	a-Methylstyrene (iso-Propenylbenzene; (1-Methylethenyl)benzene)	69.1	14.3
108-88-3	Toluene (Methylbenzene)	68.8	18.3
93-51-6	Phenol, 2-methoxy-4-methyl*	68.2	12.1
91-57-6	Naphthalene, 2-methyl	67.6	11.6
90-05-1	Phenol, 2-methoxy*	67.4	13.3
95-13-6	Indene*	65.2	13.7
106-88-7	Oxirane, ethyl*	64.9	22.0
100-52-7	Benzaldehyde	63.3	14.6
91-10-1	Phenol, 2,6-dimethoxy*	63.0	10.0
108-65-6	1-Methoxy-2-propyl acetate*	62.6	11.6
1330-20-7	Xylenes (Total)	59.1	13.6
104-76-7	1-Hexanol, 2-ethyl	57.8	10.9
5932-68-3	trans-Isoeugenol*	57.0	8.5
92-52-4	1,1'-Biphenyl*	52.2	8.3
77-68-9	Propanoic acid, 2-methyl-, 3-hydroxy-2,2,4-trimethylpentyl ester (component of Texanol)	51.8	5.9
106-44-5	Phenol, 4-methyl (p-Cresol)*	51.4	11.6
2177-47-1	2-Methylindene*	50.7	9.5
74419-68-4	Histamine, N-benzoyl-2-cyano-*	50.4	5.1
116-09-6	2-Propanone, 1-hydroxy	50.2	16.6
98-00-0	2-Furanmethanol*	48.6	12.1
208-96-8	Acenaphthylene*	46.8	7.5
579-07-7	1,2-Propanedione, 1-phenyl	46.2	7.6
1000411-44-3	6-Hydroxy-2,6-dihydropyran-3-one*	45.1	9.7
621-58-9	Phenol, 5-ethenyl-2-methoxy-*	45.0	7.3
80-62-6	Methyl methacrylate (2-Propenoic acid, 2-methyl-, methyl ester)	44.7	10.9
765-70-8	1,2-Cyclopentanedione, 3-methyl*	43.7	9.5
25551-13-7	Trimethylbenzene (All Isomers)	43.7	8.9

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UL ID:	SV3TFD
Sample Date:	November 21, 2020
Volume (L):	26.2

CAS Number	Compound	Concentration	
		µg/m³	ppb
80-56-8	Pinene, alpha (2,6,6-Trimethyl-bicyclo[3.1.1]hept-2-ene)	43.1	7.7
767-60-2	1H-Indene, 3-methyl*	42.2	7.9
4265-25-2	Benzofuran, 2-methyl*	42.0	7.8
5989-27-5	D-Limonene*	41.6	7.5
100-41-4	Benzene, ethyl	41.3	9.5
25265-77-4	2,2,4-Trimethyl-1,3-pentanediol monoisobutyrate	41.0	4.6
95-48-7	Phenol, 2-methyl*	40.7	9.2
110-62-3	Pentanal	39.8	11.3
105-67-9	Phenol, 2,4-dimethyl	39.4	7.9
111-43-3	Propane,1,1'-oxybis- (Di-n-propyl ether)*	39.2	9.4
541-02-6	Cyclopentasiloxane, decamethyl	39.0	2.6
498-07-7	1,6-Anhydro-.beta.-D-glucopyranose (levoglucosan)*	38.8	5.9
874-23-7	Cyclohexanone, 2-acetyl*	38.7	6.7
100-47-0	Benzonitrile	38.1	9.0
22410-74-8	2,6-Octadien-1-ol, 2,7-dimethyl*	37.4	5.9
6638-05-7	3,5-Dimethoxy-4-hydroxytoluene*	35.9	5.2
2785-89-9	Phenol, 4-ethyl-2-methoxy*	34.9	5.6
612-17-9	1,4-Dihydronaphthalene*	34.8	6.5
66-25-1	Hexanal	34.8	8.5
91337-07-4	2-Isopropyl-5-methyl-1-heptanol*	34.6	4.9
142-62-1	Hexanoic acid	32.8	6.9
123-07-9	Phenol, 4-ethyl-*	32.8	6.6
534-22-5	Furan, 2-methyl-*	32.4	9.7
78-94-4	Methyl vinyl ketone (3-Buten-2-one)	31.8	11.1
620-02-0	2-Furancarboxaldehyde, 5-methyl*	31.8	7.1
1000309-57-5	Oxalic acid, 2-isopropylphenyl pentadecyl ester*	31.4	1.8
6100-74-9	Ethanone, 1-(3-hydroxy-4-methoxyphenyl)-*	31.0	4.6
143-13-5	Acetic acid, nonyl ester*	30.7	4.0
141-32-2	Butyl acrylate (2-Propenoic Acid, butyl ester)	30.1	5.7
3536-54-7	Bicyclo[3.1.0]hexan-3-ol, 4-methylene-1-(1-methylethyl)-, acetate*	29.9	3.8
20481-17-8	5-tert-Butylpyrogallol*	29.6	4.0
110-86-1	Pyridine	27.9	8.6
19550-03-9	2-Hexanol, 2,3-dimethyl-*	27.2	5.1
78-83-1	1-Propanol, 2-methyl (Isobutyl alcohol)	25.3	8.4
10059-13-9	2-Undecanethiol, 2-methyl*	24.3	2.9
52019-78-0	2-Hexanol, (S)*	24.3	5.8
930-27-8	Furan, 3-methyl*	23.8	7.1
541-05-9	Cyclotrisiloxane, hexamethyl	23.8	2.6
115-18-4	3-Buten-2-ol, 2-methyl*	23.2	6.6
83-32-9	Acenaphthene	22.3	3.5
600-14-6	2,3-Pentanedione*	21.8	5.3
1000349-13-5	Malonic acid, 2-heptyl hexyl ester*	21.8	1.9
5077-67-8	1-Hydroxy-2-butanone*	21.4	5.9

Date Issued: December 15, 2020
 Product #: 1001086264-3486349
 Report #: 1001086264-3486349
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UL ID:	SV3TFD
Sample Date:	November 21, 2020
Volume (L):	26.2

CAS Number	Compound	Concentration	
		µg/m³	ppb
821-95-4	1-Undecene	21.2	3.4
43067-41-0	1H-Indazole, 5,7-dimethyl-*	20.6	3.4
111-76-2	Ethanol, 2-butoxy	20.5	4.2
78-93-3	2-Butanone (Methyl ethyl ketone, MEK)	20.2	6.9
14641-93-1	.alpha.-D-Glucopyranose, 4-O-.beta.-D-galactopyranosyl-*	19.6	1.4
1121-05-7	2-Cyclopenten-1-one, 2,3-dimethyl-*	19.4	4.3
1000129-98-0	2,3-Anhydro-d-mannosan*	19.3	3.3
85763-57-1	11-Methyldodecanol*	19.2	2.3
105-37-3	Propanoic acid, ethyl ester (Ethyl propionate)	18.7	4.5
42781-12-4	2-Propanone, 1-(1-methylethoxy)-*	18.5	3.9
99-94-5	Benzoic acid, 4-methyl-*	18.2	3.3
1120-73-6	2-Cyclopenten-1-one, 2-methyl*	17.4	4.4
1000187-01-2	1,2-Dimethyl-4-oxocyclohex-2-enecarboxaldehyde*	16.8	2.7
4170-30-3	2-Butenal	16.7	5.8
60-35-5	Acetamide	16.4	6.8
96-33-3	2-Propenoic acid, methyl ester*	16.3	4.6
90-12-0	Naphthalene, 1-methyl	15.9	2.7
112-70-9	1-Tridecanol	15.7	1.9
10031-87-5	Acetic acid, 2-ethylbutyl ester*	15.4	2.6
120-92-3	Cyclopentanone	15.4	4.5
3008-40-0	1,2-Cyclopentanedione*	15.3	3.8
67-64-1	Acetone	14.9	6.3
3102-33-8	3-Penten-2-one, (E)-*	14.7	4.3
110-19-0	Acetic acid, 2-methylpropyl ester (Isobutyl acetate)*	14.5	3.0
2503-46-0	2-Propanone, 1-(4-hydroxy-3-methoxyphenyl)-*	14.1	1.9
627-08-7	Propane, 1-(1-methylethoxy)*	13.8	3.3
105-46-4	Acetic acid, 1-methylpropyl ester*	13.6	2.9
1127-76-0	Naphthalene, 1-ethyl*	13.2	2.1
1530-05-8	Heptane, 1,1-diphenyl-*	13.0	1.3
23783-42-8	Tetraethyleneglycol monomethylether*	12.1	1.1
118-71-8	Maltol*	11.8	2.3
121-33-5	Vanillin (Benzaldehyde, 4-hydroxy-3-methoxy-)*	11.6	1.9
98-82-8	Benzene, 1-methylethyl (Cumene)	11.4	2.3
26465-81-6	1H-Inden-1-one, 2,3-dihydro-3,3-dimethyl*	11.3	1.7
14368-41-3	3-Phenyl-2-pentenitrile*	11.1	1.7
20030-70-0	Cyclopropanecarboxylic acid, 2-phenyl-, methyl ester*	11.1	1.5
2785-87-7	Phenol, 2-methoxy-4-propyl-*	11.0	1.6
496-11-7	Indane	10.7	2.2
873-49-4	Cyclopropylbenzene	10.2	2.1
105-38-4	Propanoic acid, ethenyl ester*	10.0	2.4
3208-16-0	Furan, 2-ethyl	9.8	2.5
513-86-0	2-Butanone, 3-hydroxy*	9.7	2.7

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UL ID:	SV3TFD
Sample Date:	November 21, 2020
Volume (L):	26.2

CAS Number	Compound	Concentration	
		µg/m³	ppb
94-33-7	1,2-Ethanediol, monobenzoate*	9.7	1.4
110-13-4	2,5-Hexanedione*	8.9	1.9
19549-72-5	3-Heptanol, 2,4-dimethyl*	8.9	1.5
1119-40-0	Dimethyl glutarate	8.7	1.3
79-20-9	Acetate, methyl (Acetic acid, methyl ester)	8.4	2.8
109-08-0	Pyrazine, methyl*	8.3	2.2
646-06-0	1,3-Dioxolane	8.0	2.6
124-19-6	Nonyl aldehyde (Nonanal)	8.0	1.4
33467-76-4	2-Hepten-1-ol, (E)-*	7.9	1.7
109-67-1	1-Pentene	7.7	2.7
6137-06-0	2-Heptanone, 4-methyl*	7.4	1.4
530-48-3	Ethylene, 1,1-diphenyl-*	7.2	1.0
109-06-8	Pyridine, 2-methyl (2-Picoline)*	7.1	1.9
15176-21-3	1,4-Dioxane, 2,5-dimethyl*	7.0	1.5
126-98-7	2-Propenenitrile, 2-methyl-*	7.0	2.5
70220-06-3	3-Hexene, 1-methoxy, (Z)-*	6.9	1.5
107-21-1	1,2-Ethanediol (Ethylene glycol)	6.5	2.6
78-85-3	2-Propenal, 2-methyl	5.7	2.0
7446-09-5	Sulfur dioxide	5.4	2.1
1193-11-9	1,3-Dioxolane, 2,2,4-trimethyl*	5.3	1.1
544-76-3	Hexadecane (Cetane)	5.1	0.5
290-37-9	Pyrazine	5.1	1.5
3726-46-3	Cyclopentane, 1-ethyl-2-methyl-*	5.0	1.1
1487-18-9	Vinylfuran*	4.9	1.3
141-79-7	3-Penten-2-one, 4-methyl*	4.8	1.2
4359-46-0	1,3-Dioxolane, 2-ethyl-4-methyl*	4.7	1.0
23542-51-0	1-Pentene, 5-nitro-*	4.7	1.0
6343-47-1	3-Diethylamino-2,2-dimethylpropionaldehyde*	4.4	0.7
13019-20-0	3-Heptanone, 2-methyl*	3.2	0.6
627-69-0	1,2-Propanediol, 1-acetate*	3.0	0.6
1000334-81-5	2,4-Dioxaundecane*	2.8	0.4
107-18-6	2-Propen-1-ol*	2.7	1.1
692-24-0	3-Hexene, 2-methyl, (E)*	2.5	0.6
3710-43-8	2,4-Dimethylfuran*	2.3	0.6
75-05-8	Acetonitrile	2.2	1.3
71-23-8	1-Propanol (Propyl alcohol)	2.0	0.8

Date Issued: December 15, 2020
 Product #: 1001086264-3486349
 Report #: 1001086264-3486349
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UL ID:	SV4TFD
Sample Date:	November 21, 2020
Volume (L):	15.5

CONCENTRATIONS OF TOTAL AND INDIVIDUAL VOLATILE ORGANIC COMPOUNDS

Sample Location/Description		B18_House_B_FP	
Total Volatile Organic Compounds		3,600 µg/m³	
CAS Number	Compound	Concentration	
		µg/m³	ppb
71-43-2	Benzene	181	56.5
65-85-0	Benzoic Acid*	163	32.7
100-42-5	Styrene	157	36.9
64-19-7	Acetic acid	153	62.1
17882-01-8	Phenol, 3-[(trimethylsilyl)oxy]-*	121	16.2
108-88-3	Toluene (Methylbenzene)	97.4	25.9
100-41-4	Benzene, ethyl	94.6	21.8
98-01-1	Furfural (2-Furaldehyde)	77.8	19.8
498-07-7	1,6-Anhydro-.beta.-D-glucopyranose (levoglucosan)*	74.4	11.2
1000130-14-7	d-Glycero-d-tallo-heptose*	68.7	8.0
112-25-4	Ethanol, 2-(hexyloxy)*	67.3	11.2
98-83-9	a-Methylstyrene (iso-Propenylbenzene; (1-Methylethenyl)benzene)	67.0	13.9
104-76-7	1-Hexanol, 2-ethyl	61.0	11.5
5932-68-3	trans-Isoeugenol*	59.4	8.9
1000350-18-9	2H-1,4-Thiazine-2-acetamide, N-(2,5-dimethoxyphenyl)tetrahydro-3-oxo-*	55.5	4.4
120-80-9	1,2-Benzenediol*	52.7	11.7
40123-34-0	2,6-Dimethoxyphenyl-.beta.-phenylpropionate*	51.4	4.4
59832-96-1	Guaiacol, 4-butyl-*	49.4	6.7
2595-97-3	D-Allose*	48.8	6.6
5989-27-5	D-Limonene*	48.1	8.6
80-62-6	Methyl methacrylate (2-Propenoic acid, 2-methyl-, methyl ester)	46.0	11.2
99-94-5	Benzoic acid, 4-methyl-*	45.6	8.2
1330-20-7	Xylenes (Total)	44.7	10.3
116-09-6	2-Propanone, 1-hydroxy	44.1	14.6
112-05-0	Nonanoic acid	42.7	6.6
2896-60-8	1,3-Benzenediol, 4-ethyl*	41.9	7.4
33524-31-1	2,5-Dimethoxybenzyl alcohol*	40.2	5.8
91-20-3	Naphthalene	40.1	7.7
585-34-2	Phenol, m-tert-butyl*	38.3	6.2
24625-82-9	2- Bromopropionic acid, octyl ester*	38.1	3.5
488-17-5	1,2-Benzenediol, 3-methyl-*	36.7	7.2
600-14-6	2,3-Pentanedione*	35.8	8.7
110-62-3	Pentanal	35.7	10.1

Date Issued: December 15, 2020
Product #: 1001086264-3486349
Report #: 1001086264-3486349
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UL ID:	SV4TFD
Sample Date:	November 21, 2020
Volume (L):	15.5

CAS Number	Compound	Concentration	
		µg/m³	ppb
55956-25-7	2-Propanol, 1-[1-methyl-2-(2-propenyloxy)ethoxy]*	34.9	4.9
14372-00-0	Cyclopropanecarboxamide, N-n-butyl*	34.7	6.0
620-02-0	2-Furancarboxaldehyde, 5-methyl*	32.8	7.3
66-25-1	Hexanal	32.7	8.0
452-86-8	1,2-Benzenediol, 4-methyl-*	29.8	5.9
1541-20-4	Bi-2-cyclohexen-1-yl*	29.8	11.7
3404-67-9	Hexane, 3-methyl-4-methylene*	29.1	6.3
1638-16-0	2-Propanol, 1,1'-[(1-methyl-1,2-ethanediyl)bis(oxy)]bis*	28.9	3.7
105-60-2	Caprolactam	28.2	6.1
5077-67-8	1-Hydroxy-2-butanone*	28.2	7.8
1075-49-6	4-Vinylbenzoic acid*	27.3	4.5
930-30-3	2-Cyclopenten-1-one*	26.5	7.9
2785-89-9	Phenol, 4-ethyl-2-methoxy*	25.4	4.1
496-11-7	Indane	25.3	5.2
39986-37-3	2,4-Dimethyl-2-oxazoline-4-methanol*	24.8	4.7
19549-87-2	1-Heptene, 2,4-dimethyl*	24.5	4.7
1000129-98-0	2,3-Anhydro-d-mannosan*	23.4	4.0
94-33-7	1,2-Ethanediol, monobenzoate*	23.3	3.4
22410-74-8	2,6-Octadien-1-ol, 2,7-dimethyl*	23.3	3.7
99-86-5	1,3-Cyclohexadiene, 1-methyl-4-(1-methylethyl)-*	23.3	4.2
42781-12-4	2-Propanone, 1-(1-methylethoxy)-*	23.1	4.9
10020-43-6	Ethanol, 2-(octyloxy)-*	23.0	3.2
498-02-2	Ethanone, 1-(4-hydroxy-3-methoxyphenyl)-*	23.0	3.4
100-52-7	Benzaldehyde	22.6	5.2
126-86-3	2,4,7,9-Tetramethyl-5-decyn-4,7-diol*	22.5	2.4
107-21-1	1,2-Ethanediol (Ethylene glycol)	22.0	8.7
4792-15-8	Pentaethylene glycol*	21.5	2.2
141-32-2	Butyl acrylate (2-Propenoic Acid, butyl ester)	20.6	3.9
6117-80-2	2-Butene-1,4-diol, (Z)-*	20.1	5.6
60-35-5	Acetamide	20.1	8.3
6262-87-9	Benzenethiol, o-isopropyl-,*	20.0	3.2
80-56-8	Pinene, alpha (2,6,6-Trimethyl-bicyclo[3.1.1]hept-2-ene)	20.0	3.6
98-82-8	Benzene, 1-methylethyl (Cumene)	19.9	4.1
1000309-11-7	Sulfurous acid, hexyl 2-propyl ester*	18.5	2.2
25551-13-7	Trimethylbenzene (All Isomers)	17.8	3.6
71-41-0	1-Pentanol (N-Pentyl alcohol)	17.6	4.9
615-90-7	1,4-Benzenediol, 2,5-dimethyl-*	17.5	3.1
1000151-86-0	3-Carene-10-al*	17.5	2.8
71-36-3	1-Butanol (N-Butyl alcohol)	17.3	5.7
107-06-2	Ethane, 1,2-dichloro	17.1	4.2
541-05-9	Cyclotrisiloxane, hexamethyl	17.1	1.9
109-69-3	Butane, 1-chloro	16.8	4.4
109-08-0	Pyrazine, methyl*	16.6	4.3

Date Issued: December 15, 2020
 Product #: 1001086264-3486349
 Report #: 1001086264-3486349
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UL ID:	SV4TFD
Sample Date:	November 21, 2020
Volume (L):	15.5

CAS Number	Compound	Concentration	
		µg/m³	ppb
98-86-2	Acetophenone (Ethanone, 1-phenyl)*	16.4	3.3
10374-51-3	5-(Hydroxymethyl)dihydrofuran-2(3H)-one*	16.2	3.4
93-51-6	Phenol, 2-methoxy-4-methyl*	16.0	2.8
5131-66-8	2-Propanol, 1-butoxy	16.0	3.0
109-97-7	Pyrrole*	15.8	5.8
105-30-6	1-Pentanol, 2-methyl*	15.5	3.7
765-43-5	Ethanone, 1-cyclopropyl*	14.9	4.3
3944-37-4	1-Propanol, 2-(1-methylethoxy)-*	14.9	3.1
100-47-0	Benzonitrile	14.7	3.5
4170-30-3	2-Butenal	14.5	5.1
2425-77-6	1-Decanol, 2-hexyl*	14.2	1.4
108-65-6	1-Methoxy-2-propyl acetate*	13.9	2.6
95-13-6	Indene*	13.7	2.9
95-65-8	Phenol, 3,4-dimethyl-*	13.4	2.7
541-02-6	Cyclopentasiloxane, decamethyl	13.2	0.9
7659-86-1	2-Ethylhexyl mercaptoacetate*	13.2	1.6
1120-73-6	2-Cyclopenten-1-one, 2-methyl*	12.6	3.2
821-95-4	1-Undecene	11.4	1.8
1703-52-2	Furan, 2-ethyl-5-methyl-*	10.9	2.4
13393-63-0	Benzene, 1,4,9-decatrienyl-*	10.6	1.2
534-22-5	Furan, 2-methyl-*	10.1	3.0
127-19-5	Acetamide, N,N-dimethyl-*	9.6	2.7
765-03-7	1-Dodecyne	9.2	1.4
19780-66-6	1-Pentene, 3-ethyl-2-methyl	9.1	2.0
103-65-1	Benzene, propyl	9.1	1.8
7250-85-3	2-Butene, 1,4-diethoxy-*	8.9	1.5
59383-67-4	2-Cyclobutyl-2-propanol*	8.4	1.8
586-62-9	Cyclohexene, 1-methyl-4-(1-methylethylidene)*	8.2	1.5
4850-28-6	Cyclopentane, 1,2,4-trimethyl, (1a,2a,4a)-*	7.8	1.7
1121-05-7	2-Cyclopenten-1-one, 2,3-dimethyl-*	7.6	1.7
61142-79-8	1-Decene, 8-methyl-*	7.0	1.1
78-93-3	2-Butanone (Methyl ethyl ketone, MEK)	6.1	2.1
25044-01-3	1-Penten-3-one, 2-methyl-*	6.1	1.5
68-12-2	Formamide, N,N-dimethyl*	6.0	2.0
99-87-6	Benzene, 1-methyl-4-(1-methylethyl) (p-Cymene; 4-Isopropyltoluene)	5.6	1.0
78-94-4	Methyl vinyl ketone (3-Buten-2-one)	5.4	1.9
513-86-0	2-Butanone, 3-hydroxy*	5.2	1.4
95-54-5	1,2-Benzenediamine*	5.2	1.2
6137-06-0	2-Heptanone, 4-methyl*	5.1	1.0
4160-49-0	Bicyclo[3.1.0]hexan-2-one*	4.9	1.3
143-08-8	1-Nonanol*	4.9	0.8
1193-11-9	1,3-Dioxolane, 2,2,4-trimethyl*	4.9	1.0
4359-46-0	1,3-Dioxolane, 2-ethyl-4-methyl*	4.5	0.9
1487-18-9	Vinylfuran*	4.4	1.2
505-22-6	1,3-Dioxane*	4.4	1.2

Date Issued: December 15, 2020
 Product #: 1001086264-3486349
 Report #: 1001086264-3486349
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UL ID:	SV4TFD
Sample Date:	November 21, 2020
Volume (L):	15.5

CAS Number	Compound	Concentration	
		µg/m ³	ppb
563-80-4	2-Butanone, 3-methyl*	4.1	1.2
3848-24-6	2,3-Hexanedione*	4.0	0.8
67-64-1	Acetone	3.5	1.5
24648-33-7	2,4,6-Trimethyl-1,3,6-heptatriene*	3.3	0.6
464-17-5	Bicyclo[2.2.1]hept-2-ene, 1,7,7-trimethyl*	3.3	0.6
289-95-2	1,3-Diazine*	3.1	0.9
5076-20-0	Oxirane, tetramethyl-*	2.9	0.7
3710-43-8	2,4-Dimethylfuran*	2.7	0.7
79-20-9	Acetate, methyl (Acetic acid, methyl ester)	2.1	0.7
13057-17-5	Bromomethyl methyl ether*	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 individual VOCs.

Date Issued: December 15, 2020
Product #: 1001086264-3486349
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Project # 2011006NY_B18

1001086264-3486349



ACTIVE CHEMICAL SAMPLING CHAIN OF CUSTODY								
Company: ULVS (Healthy Buildings)			Contact: CARERESULTS@UL.COM			Project/P.O./Job Number: 2011006NY_B18		
Address: 3251 Old Lee Highway #100 Fairfax, VA 22030			Phone: 571.655.7919 Fax: 703.323.4440			Sample Date: 21 Nov 2020 Investigator: SAM.HORNER		
Please check the appropriate fields; Use separate COC for each sample method.		VOLATILE ORGANICS: IVOC SCAN: <input checked="" 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: Two (2) Week TAT Please – Looking for results December 8th. 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)
VFld01	2011006NY-18A/ s/n B26960	B18_LR_Hall_Pre	20 Nov 14:25	20 Nov 15:25	60	4257	0.3127	18.7599
VFld02	2011006NY-18B/ s/n B26946	B18_LR_HALL_Post	21 Nov 12:19	21 Nov 13:19	60	4257	0.3176	19.0572
VFld03	2011006NY-18C/ s/n B26288	B18_LR_HALL_HZA	21 Nov 11:27	21 Nov 12:08	41	5516	0.6388	26.1922
VFld04	2011006NY-18D/ s/n B26910	B18_LR_HALL_Field Blank						n/a
VFld05	2011006NY-18E/ s/n B27019	B18_House_B_FP	21 Nov 11:09	21 Nov 11:34	25	5102	0.6189	15.4714
					3486349			
Released By: Nelson Camacho Tirado (Print/Sign) <i>Nelson Camacho Tirado</i>			Date/Time: 23Nov2020		Method of Shipment: UPS Next		Description 2011006NY_B18	
Received By: <i>Sam Horner</i>			Date/Time: 11/24/20 10:50 AM		Sample Condition: Acceptable		Customer: UL Verification Services, Inc. Received Date: Aurora Project No.: 1001086264 Order No.: 2020-NOV-24 12:55:45 PM Oracle Project No.:	