



FIELD SAMPLING TEST REPORT	
Customer Information	UL ENVIRONMENT INC. caresults@ul.com 2211 Newmarket Parkway Suite 106 Marietta GA 30067
HB Project Number	2009049NY
Date Received	October 7, 2020
Testing Laboratory Location	UL Environment - Marietta, 2211 Newmarket Parkway, Marietta, GA 30067-9399 USA
Authorized by	 Allyson M. McFry Chemistry Laboratory Director
<p>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. UL Environment employees did not collect samples nor visit the site where samples were collected. Interpretation of data is left to the client or persons who conducted the field work.</p> <p>Sources of additional information are also available from:</p> <ol style="list-style-type: none">1. Molhave, L., "Volatile Organic Compounds, Indoor Air Quality and Health," The 5th International Conference on Indoor Air Quality and Climate, Toronto, Canada, 1990.2. State of California Air Resources Board, Indoor Air Quality Guideline for Formaldehyde in the Home, August, 2004. http://www.arb.ca.gov/research/indoor/formaldGL08-04.pdf3. Morey, P. R., Horner, W. E., Epstien, B. L., Worthan, A. G., and Black, M. S. (2000). Indoor Air Quality in Nonindustrial Occupational Environments, in R.L. Harris (Ed.) <u>Patty's Industrial Hygiene</u> (5th ed., pp. 3149-3241). John Wiley & Sons.	

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Date Prepared: October 20, 2020
Product #: 1001056156-3371160
Report #: 1001056156-3371160
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UL ID:	FLD01 (V)
Sample Date:	October 4, 2020
Volume (L):	20.2

CONCENTRATIONS OF TOTAL AND INDIVIDUAL VOLATILE ORGANIC COMPOUNDS

Sample Location/Description		Burn_03_BR_04_Pre	
Total Volatile Organic Compounds		1,770 µg/m³	
CAS Number	Compound	Concentration	
		µg/m³	ppb
71-43-2	Benzene	3.1	1.0
100-41-4	Benzene, ethyl	BQL	BQL
108-88-3	Toluene (Methylbenzene)	24.4	6.5
1330-20-7	Xylenes (Total)	60.7	14.0

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UL ID:	FLD01F (V)
Sample Date:	October 4, 2020
Volume (L):	18.0

CONCENTRATIONS OF TOTAL AND INDIVIDUAL VOLATILE ORGANIC COMPOUNDS

Sample Location/Description		Field Blank	
Total Volatile Organic Compounds		BQL µg/m³	
CAS Number	Compound	Concentration	
		µg/m³	ppb
71-43-2	Benzene	BQL	BQL
100-41-4	Benzene, ethyl	BQL	BQL
108-88-3	Toluene (Methylbenzene)	BQL	BQL
1330-20-7	Xylenes (Total)	BQL	BQL

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UL ID:	FLD02 (V)
Sample Date:	October 4, 2020
Volume (L):	18.0

CONCENTRATIONS OF TOTAL AND INDIVIDUAL VOLATILE ORGANIC COMPOUNDS

Sample Location/Description		Burn_03_BR_04_Post	
Total Volatile Organic Compounds		16.0 µg/m³	
CAS Number	Compound	Concentration	
		µg/m³	ppb
71-43-2	Benzene	7.4	2.3
100-41-4	Benzene, ethyl	BQL	BQL
108-88-3	Toluene (Methylbenzene)	BQL	BQL
1330-20-7	Xylenes (Total)	BQL	BQL

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UL ID:	FLD03 (V)
Sample Date:	October 4, 2020
Volume (L):	18.1

CONCENTRATIONS OF TOTAL AND INDIVIDUAL VOLATILE ORGANIC COMPOUNDS

Sample Location/Description		Burn_04_LR_Hall_Pre	
Total Volatile Organic Compounds		990 µg/m³	
CAS Number	Compound	Concentration	
		µg/m³	ppb
71-43-2	Benzene	4.3	1.3
100-41-4	Benzene, ethyl	BQL	BQL
108-88-3	Toluene (Methylbenzene)	5.5	1.5
1330-20-7	Xylenes (Total)	BQL	BQL

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UL ID:	FLD04 (V)
Sample Date:	October 4, 2020
Volume (L):	21.2

CONCENTRATIONS OF TOTAL AND INDIVIDUAL VOLATILE ORGANIC COMPOUNDS

Sample Location/Description		Burn_04_LR_Hall_Post	
Total Volatile Organic Compounds		646 µg/m³	
CAS Number	Compound	Concentration	
		µg/m³	ppb
71-43-2	Benzene	72.0	22.5
100-41-4	Benzene, ethyl	4.8	1.1
108-88-3	Toluene (Methylbenzene)	19.8	5.2
1330-20-7	Xylenes (Total)	3.1	0.7

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UL ID:	FLD05 (V)
Sample Date:	October 4, 2020
Volume (L):	18.0

CONCENTRATIONS OF TOTAL AND INDIVIDUAL VOLATILE ORGANIC COMPOUNDS

Sample Location/Description		Field Blank	
Total Volatile Organic Compounds		$\mu\text{g}/\text{m}^3$	
CAS Number	Compound	Concentration	
		$\mu\text{g}/\text{m}^3$	ppb
71-43-2	Benzene	BQL	BQL
100-41-4	Benzene, ethyl	BQL	BQL
108-88-3	Toluene (Methylbenzene)	BQL	BQL
1330-20-7	Xylenes (Total)	BQL	BQL

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VOC samples analyzed by thermal desorption/mass spectrometry according to UL Environment Method 55-CH-W0866 (based on USEPA Compendium Method TO-17 and ASTM 6196).

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

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.

*Indicates best NIST/EPA/NIH library match only.

BQL denotes below quantifiable level of $2 \mu\text{g}/\text{m}^3$ (instrument calibration using authentic standard).

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.

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Project # 2009049NY

1001056156-3371160



ACTIVE CHEMICAL SAMPLING CHAIN OF CUSTODY								
Company: ULVS (Healthy Buildings)			Contact: CARESULTS@UL.COM			Project/P.O./Job Number: 2009049NY		
Address: 3251 Old Lee Highway #100 Fairfax, VA 22030			Phone: 571.655.7919 Fax: 703.323.4440			Sample Date: 04OCT2020 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:								
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	2009049NY-03A/ s/n B26855	Burn_03_BR_04_Pre	08:46	09:53	67	2018	0.301 L	20.16 L
V02	2009049NY-03B/ s/n B26419	Burn_03_BR_04_Post	12:47	13:47	60	2018	0.299 L	17.97 L
V01F	2009049NY-03C/ s/n B26479	Field Blank						n/a 18
Released By: SAM.HORNER (Print/Sign) <i>SAH</i>			Date/Time: 05OCT2020		Method of Shipment: UPS Next Day		Description: VOC Tubes	
Received By: <i>DAH</i>			Date/Time: 10/6/20 10:30 AM		1Z 23X 304 01 9905 7141 Sample Condition		3371160	

Customer: UL Environment Inc.
 Received Date: 2020-OCT-07 09:11:07 AM
 Aurora Project No.: 1001056156
 Order No.:
 Oracle Project No.:

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ACTIVE CHEMICAL SAMPLING CHAIN OF CUSTODY								
Company: ULVS (Healthy Buildings)			Contact: CARERESULTS@UL.COM			Project/P.O./Job Number: 2009049NY		
Address: 3251 Old Lee Highway #100 Fairfax, VA 22030			Phone: 571.655.7919 Fax: 703.323.4440			Sample Date: 04-05OCT2020		
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:								
UL ID	SAMPLE ID/ TUBE ID	SAMPLE LOCATION/ DESCRIPTION	START TIME	STOP TIME	TIME SAMPLED (MIN)	PUMP ID #	FLOW RATE (L/MIN)	VOLUME (L)
V03	2009049NY-04A/ s/n B26207	Burn_04_LR_Hall_Pre	17:05	18:05	60	2018	0.301 L	18.09 L
V04	2009049NY-04B/ s/n B26891	Burn_04_LR_Hall_Post	12:19	13:19	60	2018	0.353 L	21.18 L
V05	2009049NY-04C/ s/n B26468	Field Blank						n/a
Released By: SAM HORNER (Print/Sign)			Date/Time: 05OCT2020		Method of Shipment: UPS Next Day			
Received By: <i>[Signature]</i>			Date/Time: 10/6/20 10:30 AM		Sample Condition: Acceptable			
					Description: 3371160			
					Customer: UL Environment Inc.			
					Received Date: 2020-OCT-07 09:11:07 AM			
					Aurora Project No.: 1001056156			
					Order No.: 2020-OCT-07 09:11:07 AM			
					Oracle Project No.:			

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