

# **BUZZISPACE** **TEST REPORT**

**SCOPE OF WORK**

Standard Method Version 1.2 for CDPH 01350 on BuzziPicNic

**REPORT NUMBER**

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## TEST REPORT FOR BUZZISPACE INC.

Report No.: 103904378GRR-001

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## SECTION 1

### CLIENT INFORMATION

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**SECTION 2**

**SUMMARY AND CONCLUSION**

Test Method: Standard Method Version 1.2 for CDPH 01350  
ANSI/BIFMA M7.1-2011(r-2016)

Modeling Scenario: Open office (OO), Private office (PO), and school classroom (SC)

Method Deviations: Testing performed without deviation unless noted below.

**DESCRIPTION OF SAMPLES**

Manufacturer / Location Boerboom / Bergeijk, The Netherlands

Product Name BuzziPicNic

Product Number BuzziPicNic

Date of Manufacture 29-March-2019

Date of Collection 04-April-2019

Date of Shipment 04-April-2019

Date Received by Lab 08-April-2019

Date of Test Start and Duration 09-April-2019 / 168 Hours

As Received Sample Condition Good Condition

Lab Sample ID GRR1904080019

**WORK REQUESTED/APPLICABLE DOCUMENTS**

VOC Emissions Analysis: CDPH Standard Method v1.2  
ANSI/BIFMA M7.1-2011(r-2016)

Intertek Quote: Qu-00958329

**TEST RESULTS**

MODELING SCENARIO	RESULT (PASS/FAIL)	TVOC (mg m <sup>-3</sup> )
Open Office (OO)	PASS	0.2
Private Office (PO)	PASS	0.1
School Classroom (SC)	PASS	0.1

ACCEPTANCE CRITERIA	DISPOSITION (PASS/FAIL)
ANSI/BIFMA e3-2019 Section 7.6.1	PASS (PRIVATE OFFICE ONLY)
ANSI/BIFMA e3-2019 Section 7.6.2	PASS
ANSI/BIFMA e3-2019 Section 7.6.3	PASS

**SAMPLE DISPOSITION**

At the completion of testing, samples were disposed of in a routine manner.

**SECTION 3****CDPH STANDARD METHOD V1.2**

Date Received: 08-April-2019  
Dates Tested: 09-April-2019 to 16-April-2019

**DESCRIPTION OF SAMPLES:**

Part Description: BuzziPicNic Table  
Material Submitted: One (1) Ash Worksurface

**ACCEPTANCE CRITERIA:**

Referencing: CDPH Standard Method v1.2, Table 4.1  
ANSI/BIFMA e3-2019 Sections 7.6.1, 7.6.2, and 7.6.3  
LEED v4 - Low Emitting Materials

LEED v4 - TVOC Ranges:  $\leq 0.5 \text{ mg m}^{-3}$   
 $0.5 \text{ to } 5.0 \text{ mg m}^{-3}$   
 $\geq 5.0 \text{ mg m}^{-3}$

**TEST NOTES OR DEVIATIONS:**

Testing performed without deviation unless noted below.

**TEST SUMMARY:**

The emissions testing was performed according to ANSI/BIFMA M7.1-2011(r-2016) "*Standard Test Method for Determining VOC Emissions from Office Furniture Systems, Components and Seating*". The sample was cut on two sides, and the cut edges were taped with aluminized tape. The sample was placed in the testing chamber for 7 days. A photograph of the tested sample is included herein. Air samples were collected prior to the sample being placed in the chamber (0 hours), at 72 hours, and at 168 hours after initiating the test. The 72 h and the 168 h air samples were collected in duplicate. Samples analyzed for individual VOCs and TVOC were collected on multi-sorbent tubes containing glass wool, Tenax TA 35/60 and Carbograph 5 TD 40/60. These VOC samples were analyzed by thermal desorption-gas chromatography/mass-spectrometry, TD-GC/MS. TVOC<sub>Toluene</sub> represents the total of all identified and unidentified VOCs between n-C6 and n-C16 as measured by the GC/MS TIC method and expressed as a toluene equivalent value as defined in ANSI/BIFMA M7.1-2011(r-2016). Individual VOCs were calculated using calibration curves based on pure standards. Samples analyzed for low molecular weight aldehydes were collected on tubes treated with 2,4-di-nitrophenylhydrazine (DNPH). Low molecular weight aldehydes were analyzed using high performance liquid chromatography, HPLC. Total aldehydes were calculated as the sum of individual aldehyde concentrations as determined by HPLC and/or GC/MS.

**RESULTS:****Table 1: Sample and Chamber Conditions during Test Period**

PARAMETER		SYMBOL	VALUE	UNITS
Sample Dimensions	Length	-	0.193	m
	Width	-	0.195	m
	Thickness	-	0.035	m
Exposed Sample Surface Area		<i>A</i>	0.089	m <sup>2</sup>
Chamber Volume		<i>V</i>	0.116	m <sup>3</sup>
Chamber Loading Factor		<i>L</i>	0.77	m <sup>2</sup> m <sup>-3</sup>
Inlet Air Flow Rate		<i>Q</i>	0.116	m <sup>3</sup> h <sup>-1</sup>
Air Change Rate		<i>N<sub>ACH</sub></i>	1.00	h <sup>-1</sup>
Area Specific Flow Rate		<i>q<sub>A</sub></i>	1.303	m h <sup>-1</sup>
Chamber Pressure (Range)		<i>P</i>	16.8 (11.4-22.3)	Pa
Average Temperature (Range)		<i>T</i>	22.4 (22.2-23.5)	°C
Average Humidity (Range)		RH	49.9 (47.3-51.5)	% RH
Testing Duration		<i>t</i>	336	h

**Table 2: Test chamber background VOC concentrations in µg m<sup>-3</sup>.**

COMPOUND	CAS No.	<i>C<sub>io</sub></i>
Formaldehyde	50-00-0	1.9
TVOC	-	6.8

**Table 3: Test chamber TVOC and formaldehyde concentrations in µg m<sup>-3</sup>.**

COMPOUND	CAS No.	72 H	168 H
Formaldehyde	50-00-0	1.3	< 1.0
TVOC	-	476	379

**Table 4: Test chamber TVOC and formaldehyde emission factors in µg m<sup>-2</sup> h<sup>-1</sup>.**

COMPOUND	CAS No.	72 H	168 H
Formaldehyde	50-00-0	1.7	< 1.3
TVOC	-	620	494

**Table 5: Summary and Pass/Fail Criteria based on the VOC emission factors (EF) at 168 h for individual furniture components in ANSI/BIFMA e3-2019, section 7.6.1.**

CHEMICAL NAME	ACCEPTANCE CRITERIA		CALCULATED EFs	PASS/FAIL	
	OPEN PLAN*	PRIVATE OFFICE*		OPEN PLAN	PRIVATE OFFICE
Formaldehyde (µg/m <sup>2</sup> h)	≤ 42.3	≤ 85.1	< 1.3	Pass	Pass
TVOC (µg/m <sup>2</sup> h)	≤ 345	≤ 694	494	Fail	Pass
Total Aldehyde (µmol/m <sup>2</sup> h)	≤ 2.8	≤ 5.7	< 0.1	Pass	Pass
4-phenylcyclohexene (µg/m <sup>2</sup> h)	≤ 4.5	≤ 9.0	< 0.3	Pass	Pass

\*As defined in ANSI/BIFMA M7.1-2011(r-2016).

**Table 6: Summary and Pass/Fail Criteria based on the VOC emission factor (EF) at 336 hours for individual furniture components in ANSI/BIFMA e3-2019, section 7.6.2. Only detected VOCs with acceptance criteria are listed.**

CHEMICAL NAME	ACCEPTANCE CRITERIA (µg/m <sup>2</sup> h)		CALCULATED EFs (µg/m <sup>2</sup> h)	PASS/FAIL	
	OPEN PLAN*	PRIVATE OFFICE*		OPEN PLAN	PRIVATE OFFICE
Formaldehyde	≤ 11	≤ 23	< 1.3	Pass	Pass
2-Propanol, 1-methoxy-	≤ 2413	≤ 4874	2	Pass	Pass
Toluene	≤ 103	≤ 209	1	Pass	Pass
Formamide, N,N-dimethyl-	≤ 28	≤ 56	4	Pass	Pass
Ethylbenzene	≤ 689	≤ 1392	23	Pass	Pass
Xylenes (m, o, & p combined)	≤ 241	≤ 487	116	Pass	Pass
Phenol	≤ 68.9	≤ 139	1.9	Pass	Pass

\*As defined in ANSI/BIFMA M7.1-2011(r-2016).

**Table 7: Summary and Pass/Fail Criteria based on the VOC emission factor at 336 hours for individual furniture components in ANSI/BIFMA e3-2019, section 7.6.3.**

CHEMICAL NAME	ACCEPTANCE CRITERIA (µg/m <sup>2</sup> h)		CALCULATED EFs (µg/m <sup>2</sup> h)	PASS/FAIL	
	OPEN PLAN*	PRIVATE OFFICE*		OPEN PLAN	PRIVATE OFFICE
Formaldehyde	≤ 6.2	≤ 12.5	< 1.3	Pass	Pass

\*As defined in ANSI/BIFMA M7.1-2011(r-2016).

**Table 8: Measured concentrations of VOCs specified in ANSI/BIFMA X7.1-2011(r-2016), ANSI/BIFMA e3-2019 and CDPH Standard Method V1.2 table 4-1. Values presented in µg/m<sup>3</sup>.**

CHEMICAL NAME	72 HOUR AIR SAMPLES				168 HOUR AIR SAMPLES			
	#1	#2	MEAN	DIFF (%)	#1	#2	MEAN	DIFF (%)
Formaldehyde	1.2	1.4	1.3	11.0	< 1.0	< 1.0	-	-
2-Propanol, 1-methoxy-	1.8	1.6	1.7	11.3	1.6	1.7	1.7	6.8
Toluene	1.5	1.5	1.5	5.3	1.0	1.0	1.0	3.0
Formamide, N,N-dimethyl-	3.7	3.6	3.6	4.1	2.8	3.4	3.1	17.9*
Ethylbenzene	29.5	27.6	28.6	6.4	22.3	21.9	22.1	1.7
Xylenes (m, o, & p combined)	136.3	127.7	132.0	6.5	107.0	105.8	106.4	1.1
Phenol	1.4	1.4	1.4	1.7	1.6	1.4	1.5	11.0
TVOC <sub>Toluene</sub>	492	459	476	6.9	384	374	379	2.6

\*Relative difference between samples 1 and 2 exceeds 15% due to proximity to the detection limit.

**Table 9: Calculated chamber emission factors (EF) of VOCs specified in ANSI/BIFMA X7.1-2011 (r-2016) and ANSI/BIFMA e3-2019 and CDPH Standard Method V1.2 table 4-1.**

CHEMICAL NAME	EMISSION FACTOR (µg/m <sup>2</sup> h)		POWER LAW COEFFICIENTS	
	72 HOUR	168 HOUR	A	B
Formaldehyde	1.7	< 1.3	85.16	0.914
2-Propanol, 1-methoxy-	2.2	2.2	2.628	0.0373
Toluene	1.9	1.3	13.79	0.459
Formamide, N,N-dimethyl-	4.7	4.1	10.37	0.183
Ethylbenzene	37.2	28.8	136.1	0.303
Xylenes (m, o, & p combined)	172.1	138.6	512.1	0.255
Phenol	1.8	2.0	1.253	-0.0906
TVOC <sub>Toluene</sub>	620	494	1952	0.268

If the "B" coefficient is in the range  $-0.15 < b < 0.15$  the emission source is considered to be constant and the 336 h result is calculated by averaging the 72 and 168 h results.

**Table 10: Molar basis calculated emission factors (EF) of identified individual and total aldehydes specified in ANSI/BIFMA M7.1-2011(r-2016).**

ALDEHYDES	CAS #	MOLECULAR WEIGHT (g/mol)	EMISSION FACTOR ( $\mu\text{mol}/\text{m}^2\text{h}$ )	
			72 HOUR	168 HOUR
Formaldehyde	50-00-0	30.03	0.06	< 0.04
Acetaldehyde	75-07-0	44.05	< 0.04	< 0.04
Propionaldehyde	123-38-6	58.08	< 0.02	< 0.02
n-Butyraldehyde	123-72-8	72.11	< 0.01	< 0.01
Benzaldehyde	100-52-7	106.12	< 0.01	< 0.01
Valeraldehyde	110-62-3	86.13	< 0.01	< 0.01
Hexaldehyde	66-25-1	100.16	< 0.01	< 0.01
Total Aldehydes	-	-	< 0.14	< 0.14

**Table 11: Calculated chamber emission factors (EF) at 336 hours of VOCs specified in ANSI/BIFMA X7.1-2011(r-2016) and ANSI/BIFMA e3-2019 and CDPH Standard Method V1.2 table 4-1.**

CHEMICAL NAME	336 HOUR EF ( $\mu\text{g}/\text{m}^2\text{h}$ )
Formaldehyde	< 1.3
2-Propanol, 1-methoxy-	2.2
Toluene	1.0
Formamide, N,N-dimethyl-	3.6
Ethylbenzene	23.3
Xylenes (m, o, & p combined)	116.2
Phenol	1.9



Individual emitted VOCs identified above the lower limits of quantitation are listed in Table 5; VOCs which are listed on chemical of concern lists or have CRELs are indicated.

The measured chamber concentrations and corresponding emission factors of identified individual VOCs and TVOCs are listed in Table 6.

In Tables 4, 6 and 7, emission factors were calculated using equation 3.1 in CDPH Standard Method V1.2:

$$EF_{Ai} = \frac{Q \times (C_{it} - C_{io})}{A_c}$$

The inlet flow rate,  $Q$  ( $m^3 h^{-1}$ ), is the measured flow rate of air into the chamber. The chamber concentration,  $C_{it}$  ( $\mu g m^{-3}$ ), is the concentration of a target VOC<sub>i</sub>, formaldehyde and other carbonyl compounds measured at time  $t$ . The chamber background concentration,  $C_{io}$  ( $\mu g m^{-3}$ ), is the corresponding concentration measured with the chamber operating without a test specimen. The exposed surface area of the test specimen in the chamber,  $A_c$  ( $m^2$ ), is determined from the measurements made at the time of specimen preparation.

**Table 12: VOCs detected above lower limits of quantitation in air samples at 336 hours.**

VOC	CAS No.	SURROGATE <sup>1</sup>	CREL <sup>2</sup> ( $\mu g m^{-3}$ )	CARB TAC <sup>3</sup>	PROP 65 LIST <sup>4</sup>
Formaldehyde	50-00-0		9	Yes	Yes
2-Propanol, 1-methoxy-	107-98-2		7000	No	No
Toluene	108-88-3		300	Yes	Yes
Formamide, N,N-dimethyl-	68-12-2		80	Yes	Yes
Ethylbenzene	100-41-4		2000	Yes	Yes
Xylenes (m, o, & p combined)	108-38-3 95-47-6 106-42-3		700	Yes	No
Phenol	108-95-2		200	Yes	No
Methyl Isobutyl Ketone	108-10-1	X	-	Yes	Yes
Acetic acid, butyl ester	123-86-4	X	-	No	No

<sup>1</sup>Indicates which non-listed VOCs were quantified using surrogate compounds, all other compounds were quantified using pure compounds.

<sup>2</sup>Chronic Reference Exposure Level (CREL) as defined by California Office of Environmental Health Hazard Assessment.

<sup>3</sup>Substance is listed on California Air Resource Board's (CARB) Toxic Air Contaminant (TAC) identification list.

<sup>4</sup>Substance known to the state of California to cause cancer or reproductive toxicity according to California's Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65).

**Table 13: Measured chamber concentrations and corresponding emission factors of individual VOCs listed in Table 4-1 of CDPH 01350 V1.2. at 168 hours.**

VOC	CAS No.	CHAMBER CONCENTRATION ( $\mu\text{g m}^{-3}$ )	EMISSION FACTOR ( $\mu\text{g m}^{-2} \text{h}^{-1}$ )
Formaldehyde	50-00-0	< 1.0	< 1.3
Acetaldehyde	75-07-0	< 1.5	< 1.9
Vinyl acetate	108-05-4	< 0.7	< 0.9
Epichlorohydrin	106-89-8	< 0.3	< 0.4
Ethanol, 2-methoxy-, acetate	110-49-6	< 0.5	< 0.7
Isopropyl Alcohol	67-63-0	< 0.3	< 0.4
Ethene, 1,1-dichloro-	75-35-4	< 0.2	< 0.2
Methylene chloride	75-09-2	< 0.3	< 0.3
Carbon disulfide	75-15-0	< 1.5	< 1.9
Methyl tert-butyl ether	1634-04-4	< 2.1	< 2.7
n-Hexane	110-54-3	< 0.1	< 0.1
Trichloromethane (Chloroform)	67-66-3	< 0.1	< 0.1
Ethanol, 2-methoxy-	109-86-4	< 0.4	< 0.6
Ethane, 1,1,1-trichloro-	71-55-6	< 0.2	< 0.3
Benzene	71-43-2	< 0.1	< 0.1
Carbon Tetrachloride	56-23-5	< 0.1	< 0.2
2-Propanol, 1-methoxy-	107-98-2	<b>1.7</b>	<b>2.2</b>
Ethylene glycol	107-21-1	< 8	< 10.4
Trichloroethylene	79-01-6	< 0.1	< 0.1
1,4-Dioxane	123-91-1	< 0.1	< 0.1
Ethanol, 2-ethoxy-	110-80-5	< 0.5	< 0.6
Toluene	108-88-3	<b>1.0</b>	<b>1.3</b>
Formamide, N,N-dimethyl-	68-12-2	<b>3.1</b>	<b>4.1</b>
Tetrachloroethylene	127-18-4	< 0.1	< 0.1
Benzene, chloro-	108-90-7	< 0.1	< 0.1
Ethylbenzene	100-41-4	<b>22.1</b>	<b>28.8</b>
Xylene (-m, -p, & -o)	108-38-3, 95-47-6, 106-42-3	<b>106.4</b>	<b>138.6</b>
Styrene	100-42-5	< 0.2	< 0.2
2-Ethoxyethyl acetate	111-15-9	< 0.6	< 0.8
Phenol	108-95-2	<b>1.5</b>	<b>2.0</b>
Benzene, 1,4-dichloro-	106-46-7	< 0.2	< 0.3
Isophorone	78-59-1	< 0.4	< 0.5
Naphthalene	91-20-3	< 0.3	< 0.4

**Table 14: Measured chamber concentrations and corresponding emission factors of identified individual VOCs and TVOC at 168 hours.**

VOC	CAS No.	CHAMBER CONCENTRATION ( $\mu\text{g m}^{-3}$ )	EMISSION FACTOR ( $\mu\text{g m}^{-2} \text{h}^{-1}$ )
Methyl Isobutyl Ketone	108-10-1	14.0	18.3
Acetic acid, butyl ester	123-86-4	178	232.2
TVOC	-	379	494

**Exposure Scenario Modeling and Evaluation:**

Estimated building concentrations for the listed scenarios were calculated using equation 3.2a of CDPH Standard Method V1.2:

$$C_{Bi} = \frac{EF_{Ai} \times A_B}{Q_B}$$

The area specific emission rate  $EF_A$  at 336 hours (14 days) total exposure time is multiplied by the ratio of the exposed surface area of the installed material in the building,  $A_B$  ( $\text{m}^2$ ), to the flow rate of outside ventilation air,  $Q_B$  ( $\text{m}^3 \text{h}^{-1}$ ).

The modeling parameters used for the given scenarios are listed in Table 8. The modeled concentrations of identified individual VOCs are listed in Tables 9 & 10. Whether the modeled concentrations meet the maximum allowable concentration requirements specified in Table 4.1 of CDPH Standard Method V1.2 are also indicated.

**Table 15: Standard modeling parameters for worksurface.**

PARAMETER	SYMBOL	VALUE	UNITS
Exposed Surface Area Installed in <i>Open Office (OO)</i>	$A_B$	6.10	$\text{m}^2$
Air flow rate of <i>Open Office (OO)</i>	$Q_B$	15.0	$\text{m}^3 \text{h}^{-1}$
Exposed Surface Area Installed in <i>Private Office (PO)</i>	$A_B$	6.73	$\text{m}^2$
Air flow rate of <i>Private Office (PO)</i>	$Q_B$	34.7	$\text{m}^3 \text{h}^{-1}$
Exposed Surface Area Installed in <i>Classroom (SC)</i>	$A_B$	25.9	$\text{m}^2$
Air flow rate of <i>Classroom (SC)</i>	$Q_B$	191	$\text{m}^3 \text{h}^{-1}$

Table 16: Modeled concentrations of individual VOCs specified in Table 4-1 of CDPH 01350 V1.2.

VOC	CAS NO.	MODELED CONCENTRATION ( $\mu\text{g m}^{-3}$ )			CONC. LIMIT ( $\mu\text{g m}^{-3}$ )	RESULT Pass (P) /Fail (F)		
		OO	PO	SC		OO	PO	SC
Formaldehyde	50-00-0	< 0.5	< 0.3	< 0.2	9	P	P	P
Acetaldehyde	75-07-0	< 0.8	< 0.4	< 0.3	70	P	P	P
Vinyl acetate	108-05-4	< 0.4	< 0.2	< 0.1	100	P	P	P
Epichlorohydrin	106-89-8	< 0.2	< 0.1	< 0.1	1.5	P	P	P
Ethanol, 2-methoxy-, acetate	110-49-6	< 0.3	< 0.1	< 0.1	45	P	P	P
Isopropyl Alcohol	67-63-0	< 0.2	< 0.1	< 0.1	3,500	P	P	P
Ethene, 1,1-dichloro-	75-35-4	< 0.1	< 0.1	< 0.1	35	P	P	P
Methylene chloride	75-09-2	< 0.1	< 0.1	< 0.1	200	P	P	P
Carbon disulfide	75-15-0	< 0.8	< 0.4	< 0.3	400	P	P	P
Methyl tert-butyl ether	1634-04-4	< 1.1	< 0.5	< 0.4	4,000	P	P	P
n-Hexane	110-54-3	< 0.1	< 0.1	< 0.1	3,500	P	P	P
Trichloromethane (Chloroform)	67-66-3	< 0.1	< 0.1	< 0.1	150	P	P	P
Ethanol, 2-methoxy-	109-86-4	< 0.2	< 0.1	< 0.1	30	P	P	P
Ethane, 1,1,1-trichloro-	71-55-6	< 0.1	< 0.1	< 0.1	500	P	P	P
Benzene	71-43-2	< 0.1	< 0.1	< 0.1	1.5	P	P	P
Carbon Tetrachloride	56-23-5	< 0.1	< 0.1	< 0.1	20	P	P	P
2-Propanol, 1-methoxy-	107-98-2	0.9	0.4	0.3	3,500	P	P	P
Ethylene glycol	107-21-1	< 4.2	< 2	< 1.4	200	P	P	P
Trichloroethylene	79-01-6	< 0.1	< 0.1	< 0.1	300	P	P	P
1,4-Dioxane	123-91-1	< 0.1	< 0.1	< 0.1	1,500	P	P	P
Ethanol, 2-ethoxy-	110-80-5	< 0.3	< 0.1	< 0.1	35	P	P	P
Toluene	108-88-3	<b>0.4</b>	<b>0.2</b>	<b>0.1</b>	150	P	P	P
Formamide, N,N-dimethyl-	68-12-2	<b>1.5</b>	<b>0.7</b>	<b>0.5</b>	40	P	P	P
Tetrachloroethylene	127-18-4	< 0.1	< 0.1	< 0.1	17.5	P	P	P
Benzene, chloro-	108-90-7	< 0.1	< 0.1	< 0.1	500	P	P	P
Ethylbenzene	100-41-4	<b>9.5</b>	<b>4.5</b>	<b>3.2</b>	1,000	P	P	P
Xylene (-m, -p, & -o)	108-38-3, 95-47-6, 106-42-3	<b>47.3</b>	<b>22.5</b>	<b>15.8</b>	350	P	P	P
Styrene	100-42-5	< 0.1	< 0.1	< 0.1	450	P	P	P
2-Ethoxyethyl acetate	111-15-9	< 0.3	< 0.2	< 0.1	150	P	P	P
Phenol	108-95-2	<b>0.8</b>	<b>0.4</b>	<b>0.3</b>	100	P	P	P
Benzene, 1,4-dichloro-	106-46-7	< 0.1	< 0.1	< 0.1	400	P	P	P
Isophorone	78-59-1	< 0.2	< 0.1	< 0.1	1,000	P	P	P
Naphthalene	91-20-3	< 0.1	< 0.1	< 0.1	4.5	P	P	P

**Table 17: Modeled concentrations of identified non-listed individual VOCs.**

VOC	CAS NO.	MODELED CONCENTRATION ( $\mu\text{g m}^{-3}$ )			CONC. LIMIT ( $\mu\text{g m}^{-3}$ )	Result Pass (P) /Fail (F)		
		OO	PO	SC		OO	PO	SC
Methyl Isobutyl Ketone	108-10-1	6.2	3.0	2.1	-	-	-	-
Acetic acid, butyl ester	123-86-4	79.4	37.9	26.5	-	-	-	-
TVOC <sub>Toluene</sub>	-	167	79.6	55.7	-	-	-	-

**PHOTOGRAPHS:**

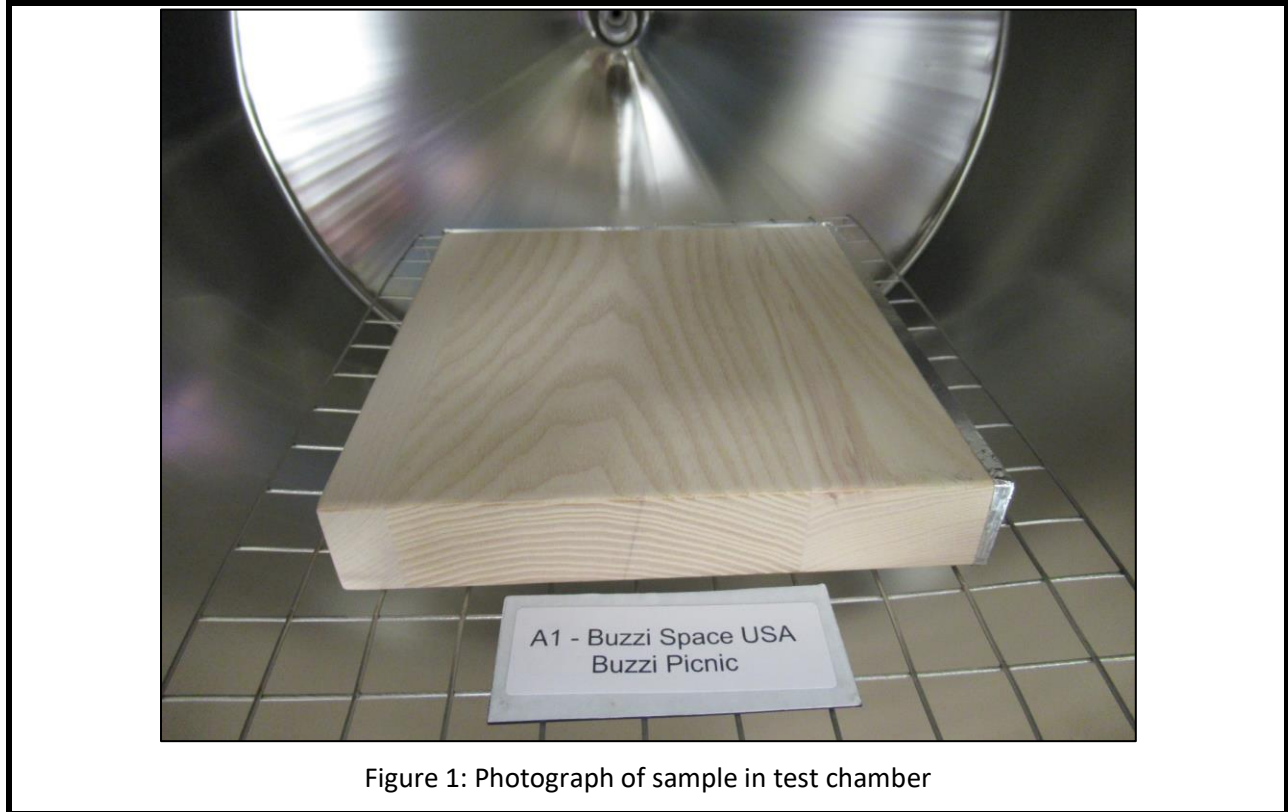


Figure 1: Photograph of sample in test chamber

**SECTION 4**

**FACILITIES AND EQUIPMENT:**

**GCMS**


INSTRUMENTATION USED:	Markes TD-100 Thermal Desorption Agilent 7890A GC Agilent 5975C MS
COLUMN USED:	Agilent HP-Ultra 2 (GC)

**HPLC**

INSTRUMENTATION USED:	Agilent 1260 Infinity Series
COLUMN USED:	Poroshell 120 EC-C18

**SECTION 5**

**CHAIN OF CUSTODY**

	<b>Ship To:</b> Attn: VOC Laboratory 4700 Broadmoor Ave SE Suite 200 Kentwood, MI 49512 Phone: 616-656-7401		<b>Chain of Custody for Chemical Testing</b> Intertek Quotation Number: Purchase Order (enter Company and Number):																	
	<b>Customer Information</b> Company: Buzzispace Street Address: Ankerrui 20/5 City/State/Postal code: Antwerp Country: Belgium Contact Name & Title (for reporting): Astrid de Chaffoy Contact Phone/Fax Numbers: Contact E-mail Address: <a href="mailto:astrid.dechaffoy@buzzi.space">astrid.dechaffoy@buzzi.space</a> Financially Responsible Co. :		<b>Shipping Details</b> Packed & Shipped By: <i>Boerboom</i> Shipping Date: <i>4/4/19</i> Carrier/Airbill Number: <i>WAWBIL 9349681246</i>																	
<b>Manufacturer Information (If Different)</b> Company: Boerboom City/State/Country: Bergeijk, The Netherlands Contact Name/Title: Bas Boerboom Phone Number/E-mail Address: +31 497 531 200		<b>Requested Testing</b> Test to be performed:		<b>Customer Request for Certification</b> Clean Air Silver™ Certification: <input type="checkbox"/> YES Clean Air Gold™ Certification: <input type="checkbox"/> YES																
<b>Sample Details</b> Product Commercial Name*: BuzziPicNic Product Commercial Part No. (if not part of the name)*: BuzziPicNic Manufacturer Sample Tracking ID: S-000000332 Date Manufactured*: 29/03/19 Product Category & Use*: Table Sample Construction Materials*: Ash Plant Name & Location*: Boerboom Collection Location within Plant: Date & Time Collected*: 4/04/19 Number of Sample Pieces*: 1 Sample Collected by*: Bas Boerboom Phone/Fax Numbers*: +31 497 531 200 E-mail Address*: <a href="mailto:info@boerboom.nl">info@boerboom.nl</a>		<b>Special Customer Instructions</b>		<b>Customer Authorizes Laboratory to Submit Copies of Test Reports To:</b> Contact: Email Address: Organization: Contact: Email Address: Organization:																
<b>Intertek Use Only</b> Condition of Shipping Package: <i>Good</i> Condition of Sample: <i>Good</i> Sample ID: <i>GRR190408019</i> GIN: <i>G 103904378</i> *Indicates required field		<b>Sample Handling*</b>																		
<table border="1"> <thead> <tr> <th></th> <th>Printed Name*</th> <th>Signature*</th> <th>Date*</th> <th>Company*</th> </tr> </thead> <tbody> <tr> <td>Relinquished By:</td> <td><i>A. DE CHAFFOY</i></td> <td><i>[Signature]</i></td> <td><i>11/4/19</i></td> <td><i>Buzzispace</i></td> </tr> <tr> <td>Received by:</td> <td><i>Amanda Tengen</i></td> <td><i>[Signature]</i></td> <td><i>23-April-2019</i></td> <td><i>Intertek</i></td> </tr> </tbody> </table>			Printed Name*	Signature*	Date*	Company*	Relinquished By:	<i>A. DE CHAFFOY</i>	<i>[Signature]</i>	<i>11/4/19</i>	<i>Buzzispace</i>	Received by:	<i>Amanda Tengen</i>	<i>[Signature]</i>	<i>23-April-2019</i>	<i>Intertek</i>				
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