GREENGUARD CERTIFICATION TEST REPORT					
Customer Information	BIO SLEEP CONCEPT INC CHRISTIAN MOURGUET 5919 INTERVALE DR RIVERSIDE CA 92506				
Product Description	Versailles Latex Mattress				
Test Group	Bedding - 01				
Category	Residential				
Test Type	Initial				
Test Method	UL 2821 "GREENGUARD Certification Program Method for Measuring and Evaluating Chemical Emissions From Building Materials, Finishes and Furnishings Using Dynamic Environmental Chambers"				
GREENGUARD & GREENGUARD Gold	**TVOC**	**Formaldehyde**	**Total Aldehydes**	**CREL/TLV**	**NMP**
	✓	✓	✓	✓	✓
✓ - meets criteria; X - over criteria					
Laboratory Approval	Allyson M. McFry Chemistry Laboratory Director				

MODELING FOR PREDICTED AIR CONCENTRATION					
Certification Program	**Environment Basis**	**Modeling Basis**	**Surface Area (m^2)**	**Room Volume (m^3)**	**ACH (1/hr)**
GREENGUARD and GREENGUARD Gold	EPA Exposure Factors Handbook	mattress	2.6	34.9	0.45

PHOTOGRAPH OF SAMPLE

GREENGUARD RESULTS SUMMARY

Product Description	Versailles Latex Mattress		
GREENGUARD & GREENGUARD Gold Acceptable IAQ Criteria		**168 Hour Product Measurement**	**Product Compliance for IAQ**
TVOC[a]	**≤ 0.22 mg/m³**	0.040 mg/m³	Yes
Formaldehyde	**≤ 0.0073 ppm**	< 0.001 ppm	Yes
Total Aldehydes[b]	**≤ 0.043 ppm**	< 0.001 ppm	Yes
1-Methyl-2-Pyrrolidinone	**≤ 0.16 mg/m³**	< 0.001 mg/m³	Yes
Individual VOCs	**≤ 1/100 TLV and ≤ ½ chronic REL**	See Below	

[a] "TVOC" is the sum of all VOCs measured via TD/GC/MS which elute between n-hexane (C_6) and n-hexadecane (C_{16}) quantified using calibration to a toluene surrogate.

[b] "Total Aldehydes" is the sum of all measured normal aldehydes from formaldehyde to nonanal, plus benzaldehyde. Heptanal through nonanal are analyzed using TD/GC/MS. The remaining aldehydes are analyzed using HPL/UV methodology. All aldehydes are quantified to authentic standards.

Note that certain environments and/or modeling scenarios may prevent assessment of low level CREL and TLV analytes due to the emissions being below the lower LOQ (0.04 µg). For example, benzene ½ CREL is 1.5 µg/m³.

Product Description	Versailles Latex Mattress				
COMPOUNDS FOUND WITH EXISTING TLV OR CHRONIC REL					
CAS Number	**Compound**	**1/100 TLV[a] (µg/m³)**	**½ CA Chronic REL[b] (µg/m³)**	**168 Hour Product Measurement (µg/m³)**	**Product Compliance for IAQ**
75-15-0	Carbon disulfide	31.3	400	5	Yes
142-82-5	Heptane	16,400	---	0.9	Yes
100-42-5	Styrene	850	450	20	Yes
108-88-3	Toluene (Methylbenzene)	750	150	1	Yes

[a] American Conference of Governmental Industrial Hygienists. Threshold Limit Values for Chemical Substances and Physical Agents. Cincinnati, OH: ACGIH.

[b] http://www.oehha.ca.gov/air/allrels.html - Chronic Reference Exposure Levels (CRELs) Adopted by the State of California Office of Environmental Health Hazard Assessment (OEHHA).

PROJECT DESCRIPTION

This study was conducted using a UL Environment's GREENGUARD test method following the requirements of GREENGUARD Certification program. The product was monitored for emissions of total volatile organic compounds (TVOC), formaldehyde, target list aldehydes, and other individual volatile organic compounds (VOCs) over a 168 hour exposure period. These emissions were measured and the resultant air concentrations were determined for each of the potential pollutants. Determination of compliance is based on predicted air concentrations modeled using the GREENGUARD program room loading.

Report Outline:

For UL Environment's technical references and resources click here or https://industries.ul.com/wp-content/uploads/sites/2/2018/02/Technical-references-and-resources.pdf

For Product Evaluation Methodologies information click here or https://industries.ul.com/wp-content/uploads/sites/2/2018/02/Product-Evaluation-Methodologies-GG.pdf

For Quality Control Program or Environmental Chamber Evaluations information click here or https://industries.ul.com/wp-content/uploads/sites/2/2018/02/Quality-Control-Procedures.pdf

For RSD, Quality Assurance Report or other quality documents, Request here or contact ULE.

TABLE 1

ENVIRONMENTAL CHAMBER STUDY PARAMETERS	
Product Description	Versailles Latex Mattress
Product Manufacture Date	May 21, 2019
Product Collection Date	Not Provided
Product Shipping Date	May 21, 2019
Date Received	May 28, 2019
Accredited Laboratory Location*	ULE - Marietta
Test Description	The product was received by UL Environment as packaged and shipped by the customer. The package was visually inspected and stored in a controlled environment immediately following sample check-in. Just prior to loading, the product was unpackaged and prepared for the required loading. The sample was placed inside the environmental chamber, and tested according to the specified protocol.
Test Period	5/30/2019 - 6/6/2019**
Area	one-sided area = 1.976 m^2
Chamber Volume	5.46 m^3
Product Loading	0.36 m^2/m^3
Test Conditions	1.00 ± 0.05 ACH 50% RH ± 5% RH 22.7ºC - 23.4ºC

**Unable to confirm product meets all GREENGUARD sampling requirements. Date(s) not provided on the Chain of Custody.

The temperature range specification is 23°C ± 1°. The actual temperature range listed above may vary slightly. If the range is outside this specification, data was reviewed to ensure a negative impact did not occur.

*Accredited Laboratory Locations	
Location	**Address**
ULE – Marietta	UL Environment 2211 Newmarket Parkway, Marietta, GA 30067-9399 USA
ULE – Guangzhou	UL Verification Services (Guangzhou) 1-3F & Room 501, Building 2 (R&D Center A1), No. 25, South Huanshi Avenue, Nansha District, Guangzhou 511458, China
ULE - Cabiate	UL International Italia S.r.l ATTN: IAQ Laboratory Via Europa, 9, I – 22060 – Cabiate (Como), Italia
UL - Shimadzu	Shimadzu Techno-Research, Inc. 1, Nishinokyo-Shimoaicho Nakagyo-ku, Kyoto 604-8436 Japan
KCL	Korea Conformity Laboratories #805, I-Valley, 149 Gongdan-ro Gunpo-si, Gyeonggi-do, 15849 Korea

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.

TABLE 2

Product Description	Versailles Latex Mattress	
TVOC EMISSION FACTORS AND PREDICTED AIR CONCENTRATIONS		
Elapsed Exposure Hour*	**Emission Factor µg/m²•hr**	**Predicted Air Concentration** µg/m³**
6	1,540	254
24	921	153
48	595	95
72	435	72
96	342	59
168	240	40
Power Law Decay Constant = k_T = 0.689		
FORMALDEHYDE EMISSION FACTORS AND PREDICTED AIR CONCENTRATIONS		
Elapsed Exposure Hour*	**Emission Factor µg/m²•hr**	**Predicted Air Concentration****
		µg/m³ / **ppm**
6	6.6	1 / 0.001
24	BQL	< 1 / < 0.001
48	BQL	< 1 / < 0.001
72	BQL	< 1 / < 0.001
96	BQL	< 1 / < 0.001
168	BQL	< 1 / < 0.001
TOTAL ALDEHYDE EMISSION FACTORS AND PREDICTED AIR CONCENTRATIONS		
Elapsed Exposure Hour*	**Emission Factor µg/m²•hr**	**Predicted Air Concentration****
		µg/m³ / **ppm**
6	76.4	13 / 0.004
24	31.5	5 / 0.002
48	24.1	4 / 0.001
72	22.8	4 / 0.001
96	20.6	3 / 0.001
168	BQL	< 1 / < 0.001
Power Law Decay Constant = k_A = 0.306		

*Exposure hours are nominal (± 1 hour).

BQL = Below quantifiable level of 0.04 µg based on a standard 18 L air collection volume for VOCs and 0.1 µg based on a standard 45 L air collection volume for aldehydes.

**Predicted Air Concentrations are based on GREENGUARD modeling predicted concentration parameters. For more information click here.

TABLE 3

Product Description	Versailles Latex Mattress						
EMISSION FACTORS OF IDENTIFIED INDIVIDUAL VOLATILE ORGANIC COMPOUNDS							
CAS Number	**Compound**	**Elapsed Exposure Hour µg/m²•hr**					
		6	**24**	**48**	**72**	**96**	**168**
142-82-5	Heptane	326	172	91.3	46.8	28.9	5.7
100-42-5	Styrene†	290	224	184	165	148	118
---	Unresolved hydrocarbons	238	156	96.7	75.5	64.5	39.9
75-15-0	Carbon disulfide†	169	50.4	27.3	34.1	24.8	28.4
589-34-4	Hexane, 3-methyl	146	81.3	36.1	20.1	13.3	
591-76-4	Hexane, 2-methyl	108	52.8	19.6	8.2		
108-88-3	Toluene (Methylbenzene)	93.4	48.6	29.4	19.7	15.5	6.9
13435-09-1	Silanediamine, 1,1-dimethyl-N,N'-diphenyl-*	52.1	48.7	44.8	39.9	40.5	37.5
80-62-6	Methyl methacrylate (2-Propenoic acid, 2-methyl-, methyl ester)	45.9	18.5	9.2			
1640-89-7	Cyclopentane, ethyl	28.9	15.5	7.5			
124-18-5	Decane	23.7	17.6	12.9	11.9	10.3	8.0
66-25-1	Hexanal	21.9	11.6	7.3	5.8		
1330-20-7	Xylenes (Total)†	19.3	7.9	5.8			
108-87-2	Cyclohexane, methyl	13.2	8.0				
71-36-3	1-Butanol (N-Butyl alcohol)†	13.0	5.6				
100-41-4	Benzene, ethyl†	11.3	6.9				
617-84-5	Formamide, N,N-diethyl-*	9.9	8.1	5.9			
17302-01-1	Heptane, 3-ethyl-3-methyl	9.8	6.8	8.1	6.1		
124-19-6	Nonyl aldehyde (Nonanal)†	9.5	9.1	6.9	9.0	7.0	
2453-00-1	Cyclopentane, 1,3-dimethyl*	9.3					
104-76-7	1-Hexanol, 2-ethyl†	8.7	6.1				
541-05-9	Cyclotrisiloxane, hexamethyl	8.2					
111-65-9	Octane	7.9					
592-13-2	Hexane, 2,5-dimethyl	7.6					
112-40-3	Dodecane†	6.6	6.3	5.6	5.6		
112-34-5	Ethanol, 2-(2-butoxyethoxy)	6.1	6.0				
78-93-3	2-Butanone (Methyl ethyl ketone, MEK)†	6.0					
2532-58-3	Cyclopentane, 1,3-dimethyl, cis*	5.8					

*Indicates NIST/EPA/NIH best library match only based on retention time and mass spectral characteristics.

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

Quantifiable level is 0.04 µg based on a standard 18 L air collection volume.

TABLE 4

Product Description	Versailles Latex Mattress

EMISSION FACTORS OF TARGET LIST ALDEHYDES

CAS Number	**Compound**	**Elapsed Exposure Hour µg/m²•hr**					
		6	**24**	**48**	**72**	**96**	**168**
4170-30-3	2-Butenal	BQL	BQL	BQL	BQL	BQL	BQL
75-07-0	Acetaldehyde	**15.2**	**6.9**	**6.6**	**6.1**	**6.6**	BQL
100-52-7	Benzaldehyde	BQL	BQL	BQL	BQL	BQL	BQL
5779-94-2	Benzaldehyde, 2,5-dimethyl	BQL	BQL	BQL	BQL	BQL	BQL
529-20-4	Benzaldehyde, 2-methyl	BQL	BQL	BQL	BQL	BQL	BQL
620-23-5 / 104-87-0	Benzaldehyde, 3- and/or 4-methyl	BQL	BQL	BQL	BQL	BQL	BQL
123-72-8	Butanal	BQL	BQL	BQL	BQL	BQL	BQL
590-86-3	Butanal, 3-methyl	BQL	BQL	BQL	BQL	BQL	BQL
50-00-0	Formaldehyde	**6.6**	BQL	BQL	BQL	BQL	BQL
66-25-1	Hexanal	**38.2**	**15.5**	**10.5**	**7.7**	**6.9**	BQL
110-62-3	Pentanal	**6.9**	BQL	BQL	BQL	BQL	BQL
123-38-6	Propanal	BQL	BQL	BQL	BQL	BQL	BQL

BQL = Below quantifiable level of 0.1 µg based on a standard 45 L air collection volume.

TABLE 5

SUPPLEMENTAL EMISSIONS INFORMATION

The table below represents this product's identified chemical emissions found on certain regulatory lists. This list only provides a statement regarding possible health effects associated with this compound and not the relative risks of exposure. Proper interpretation of the risks associated with exposure to a given regulated compound requires a more detailed evaluation of toxicological activity. Certain purchasing programs may require this information be submitted.

Product Description		Versailles Latex Mattress					
CAS Number	**Compound**	**✓() = FOUND IN LISTING (CLASS)**					
		CAL PROP. 65	**NTP**	**IARC**	**CAL AIR TOXICS**	**CREL**	**TLV**
71-36-3	1-Butanol (N-Butyl alcohol)†				✓(IVB)		✓
78-93-3	2-Butanone (Methyl ethyl ketone, MEK)†				✓(IIA)		✓
75-07-0	Acetaldehyde	✓(1)	✓(2B)	✓(2B)	✓(IIA)	✓	✓
100-41-4	Benzene, ethyl†	✓(1)		✓(2B)	✓(IIA)	✓	✓
75-15-0	Carbon disulfide†	✓(2)			✓(IIA)	✓	✓
108-87-2	Cyclohexane, methyl						✓
50-00-0	Formaldehyde	✓(1)	✓(2A)	✓(1)	✓(IIA)	✓	✓
142-82-5	Heptane						✓
80-62-6	Methyl methacrylate (2-Propenoic acid, 2-methyl-, methyl ester)			✓(3)	✓(IIA)		✓
111-65-9	Octane						✓
110-62-3	Pentanal						✓
100-42-5	Styrene†	✓(1)	✓(2B)	✓(2B)	✓(IIA,III)	✓	✓
108-88-3	Toluene (Methylbenzene)	✓(2)		✓(3)	✓(IIA)	✓	✓
1330-20-7	Xylenes (Total) †			✓(3)	✓(IIA)	✓	✓

†Denotes quantified using multipoint authentic standard curve

CAL Prop. 65: California Health and Welfare Agency, Proposition 65 Chemicals
1 = known to cause cancer
2 = known to cause reproductive toxicity

NTP: National Toxicology Program
2A = known to be carcinogenic to humans
2B = reasonably anticipated to be carcinogenic to humans

IARC: International Agency on Research of Cancer
1 = carcinogenic to humans
2A = probably carcinogenic to humans
2B = possibly carcinogenic to humans
3 = unclassifiable as to carcinogenicity to humans
4 = probably not carcinogenic to humans

California Air Toxics

- I = Substances identified as Toxic Air Contaminants, known to be emitted in California, with a full set of health values reviewed by the Scientific Review Panel.
- IIA = Substances identified as Toxic Air Contaminants, known to be emitted in California, with one or more health values under development by the Office of Environmental Health Hazard Assessment for review by the Scientific Review Panel.
- IIB= Substances NOT identified as Toxic Air Contaminants, known to be emitted in California, with one or more health values under development by the Office of Environmental Health Hazard Assessment for review by the Scientific Review Panel.
- III = Substances known to be emitted in California and are NOMINATED for development of health values or additional health values.
- IVA = Substance identified as Toxic Air Contaminants, known to be emitted in California and are TO BE EVALUATED for entry into Category III.
- IVBA =Substance NOT identified as Toxic Air Contaminants, known to be emitted in California and are TO BE EVALUATED for entry into Category III.
- V = Substance identified as Toxic Air Contaminants, and NOT KNOWN TO BE EMITTED from stationary source facilities in California based on information from the AB 2588 Air Toxic "Hot Spots" Program and the California Toxic Release Inventory.
- VI = Substances identified as Toxic Air Contaminants, NOT KNOWN TO BE EMITTED from stationary source facilities in California, and are active ingredients in pesticides in California.

CREL: California Office of Environmental Health's Hazard Assessment (OEHHA), Chronic Reference Exposure Levels

- ✓ = Found in Listing

ACGIH TLV American Conference of Governmental Industrial Hygienists Threshold Limit Values for Chemical Substances and Physical Agents.

- ✓ = Found in Listing.

CHAIN OF CUSTODY

2321529 2321529

Description: Versailles Latex Mattress

Customer: BIO SLEEP CONCEPT Inc
Received Date: 2019-MAY-29 09:18:40 AM
Aurora Project No.: 1000708692
Order No.: 12775259
Oracle Project No.: 4788929829

1 of 4

CUTDBE437

INTERNAL Use Only			
Project #	1000708692		
Product #	2321529		
Order #	12775259		
Task Line	1.1.11	UL BU	
____ of ____	91204/128695		

1000 28388

☐ *Rush Request – Subject to upcharge. Customer must confirm with UL prior to submitting product.*

GREENGUARD Test Information

Test Type	◉ Certification Test • Annual/Initial Year _____			○ Out-of-Scope Test
	○ Quarterly Test • Year _____ Quarter _____			○ Profile Study Test
Service Line	☐ GREENGUARD ☑ GREENGUARD GOLD ☐ Other _____			
Test Group	Bedding - 01			
Product Category	Bedding		**Subcategory**	
Application	☐ Floor/Ceiling ☐ Panel		☐ Wall ☐ Work Surface	☐ Other: _____
Wet Products Only	Coverage Rate		Density	Specific Gravity

Product and Company Information

Product Description	Versailles Latex Mattress		
Manufacture ID#	1179539-92		
Company Name	Bio Sleep Concept Inc.	**Date Manufactured**	05/21/2019
		Contact Name	Christian Mourguet
Address	5919 Intervale Drive	**Job Title**	
	Riverside, CA 92506	**Contact Phone**	951-369-4971
		Contact Email	cmourguet@biosleepconcept.com

Collection Information

Collector Name		**Date Collected**	
Collector Phone		**Time Collected**	
Collector Signature		**Collection Location**	

Shipping Information

Carrier	FedEx		
Shipper Name	Natural Felt/Lee Goode	**Date Shipped**	05/21/2019
Shipper Phone	971-242-8510	**Time Shipped**	2:00pm
Shipper Signature	Lee Goode	**Air Bill #**	612205831307

Sample Submitted to

◉ **UL Environment (Marietta)** 2211 Newmarket Pkwy Suite 106 Marietta, GA 30067, USA	○ **UL Verification Services (Guangzhou)** Building A1, 3F, Nansha Science and Technology Innovation Ctr. No. 25, South Huanshi Avenue, Nansha District, Guangzhou 511458, China	○ **UL International Italia S.r.l** ATTN: IAQ Laboratory Via Europa, 9 I – 22060 – Cabiate (Como), Italia	○ Other

Post Testing Sample Disposition
(Sample will be disposed of 30 days after report is issued if information below is not provided)

Return Shipping Co.		**Customer Shipping Acct #**	

Internal Use Only – Receiving Information

Receiver Name			**Receiver Signature**	
Condition Upon Arrival	◉ Acceptable	○ Not Acceptable	**Receive Date**	5/28/19
Condition Notes			**Receive Time**	2:45 PM
Completed By		**Based On**		**Date**

00-EN-F0853 – Issue 5.0