1 Cover Page

RF Exposure Evaluation Report

Application No.:	SHEM2101000541CR
FCC ID:	2AYV6EHEATER
Applicant:	ChangZhou BoMedent Medical Technology Co., Ltd.
Address of Applicant:	No. 9 Changyang Road, West Taihu Science Technology Industrial Park, Changzhou, China
Manufacturer:	ChangZhou BoMedent Medical Technology Co., Ltd.
Address of Manufacturer:	No. 9 Changyang Road, West Taihu Science Technology Industrial Park, Changzhou, China
Factory:	ChangZhou BoMedent Medical Technology Co., Ltd.
Address of Factory:	No. 9 Changyang Road, West Taihu Science Technology Industrial Park, Changzhou, China

Equipment Under Test (EUT):

EUT Name:	Endodontic Obturation Devices
Model No.:	eHeater
Trade mark:	BOMEDENT
Standard(s) :	FCC Rules 47 CFR §2.1093 KDB447498 D01 General RF Exposure Guidance v06
Date of Receipt:	2021-01-15
Date of Test:	2021-01-20 to 2021-03-02
Date of Issue:	2021-03-04
Test Result:	**Pass***

* In the configuration tested, the EUT complied with the standards specified above.

Parlam Zhan
E&E Section Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

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Revision Record			
Version	**Description**	**Date**	**Remark**
00	Original	2021-03-04	/

Authorized for issue by:				
		Bill Wu		
		Bill Wu / Project Engineer		
		Parlam Zhan		
		Parlam Zhan / Reviewer		

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3 General Information

3.1 General Description of E.U.T.

Power supply:	DC 3.6V 2600mAh rechargeable battery

3.2 General Description of E.U.T.

Antenna Gain:	0.5dBi (provided by Manufacturer)
Antenna Type:	Chip Antenna
Bluetooth Version:	V5.0 LE
Data Rate:	1Mbps
Channel Spacing:	2MHz
Modulation Type:	GFSK
Number of Channels:	40
Operation Frequency:	2402MHz to 2480MHz

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3.3 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch

588 West Jindu Road, Xinqiao, Songjiang, 201612 Shanghai, China.

Tel: +86 21 6191 5666

Fax: +86 21 6191 5678

3.4 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **CNAS (No. CNAS L0599)**
CNAS has accredited SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

- **A2LA (Certificate No. 6332.01)**
SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. is accredited by the American Association for Laboratory Accreditation(A2LA).

- **FCC (Designation Number: CN1301)**
SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been recognized by Federal Communications Commission (FCC) as an accredited testing laboratory.

- **ISED (CAB Identifier: CN0020)**
SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. EMC Laboratory has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory.

- **VCCI (Member No.: 3061)**
The 3m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-13868, C-14336, T-12221, G-10830 respectively.

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4 Test Standards and Limits

4.1 FCC Radiofrequency radiation exposure limits:

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

[(max power of channel)/(min test separation distance)]*[√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm, and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm according to 4.1 f) is applied to determine SAR test exclusion.

The practical use condition for this device is as a handheld accessories. So the applicable limit is 10-g extremity SAR

For 2.4G band device, the limit of worse case is $P_{max} \leq 7.5*D_{min})/\sqrt{f} = 7.5*5/\sqrt{2.480} = 23.81mW$

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5 Measurement and Calculation

5.1 Maximum transmit power

The Power Data is based on the RF Test Report SHEM210100054101

Test Mode	Test Channel	Ant	Power [dBm]	Power [mW]
BLE	2402	Ant1	-8.74	0.134
BLE	2440	Ant1	-9.00	0.126
BLE	2480	Ant1	-11.09	0.078

5.2 MPE Calculation

The Max Conducted Peak Output Power is 0.134mW, The best case gain of the antenna is 0.5dBi.

According to the formula. calculate the Conducted Peak Output test result:

The Max Conducted Power= 0.134mW <23.81mW

So the device is exclusion from SAR test.;

--End of the Report--

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