




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

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR231100376403

Page: 1 of 7

RF EXPOSURE EVALUATION REPORT

Application No.: SZCR2311003764ME
Applicant: Shenzhen Cellbri Bio-Innovation Technology Co., Ltd
Address of Applicant: 3A-201,3A-301,3A-401,3A-501 and 3A-601, Building 3, Hengtaiyu Building, Tangwei, Shenzhen, China
Manufacturer: Shenzhen Cellbri Bio-Innovation Technology Co., Ltd
Address of Manufacturer: 3A-201,3A-301,3A-401,3A-501 and 3A-601, Building 3, Hengtaiyu Building, Tangwei, Shenzhen, China
Factory: Shenzhen Cellbri Bio-Innovation Technology Co., Ltd
Address of Factory: 3A-201,3A-301,3A-401,3A-501 and 3A-601, Building 3, Hengtaiyu Building, Tangwei, Shenzhen, China
Equipment Under Test (EUT):
EUT Name: High-precision Automated Fill & Finish system
Model No.: Gentle P-Pac
Trade Mark: 
FCC ID: 2BC4L-PAC
Standard(s) : 47 CFR Part 1.1307,
47 CFR Part 1.1310,
47 CFR Part 2.1091
Date of Receipt: 2023-11-22
Date of Test: 2023-12-01 to 2023-12-27
Date of Issue: 2024-01-04

Evaluation Result:	Pass*
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* In the configuration evaluated, the EUT complied with the standards specified above.

Keny Xu

Keny Xu
EMC Laboratory Manager



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Shenzhen Branch EMC Laboratory

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Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2024-01-04		Original

Authorized for issue by:				
		Edison Li		
		Edison Li/Project Engineer		
		Eric Fu		
		Eric Fu/Reviewer		

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3 General Information

3.1 General Description of E.U.T.

Power supply:	AC 110-240V, 50/60Hz, 1000VA
Cable(s):	AC cable:140cm unshielded
Operation Frequency:	13.56MHz
Modulation Type:	ASK
Number of Channels:	1
Antenna Type:	Loop Antenna



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3.2 Test Location

All tests were performed at:

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

No. 1 Workshop, M-10, Middle section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057

Telephone: +86 (0) 755 2601 2053 Fax: +86 (0) 755 2671 0594

No tests were sub-contracted.

3.3 Test Facility

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

- **A2LA (Certificate No. 3816.01)**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

- **VCCI (Member No. 1937)**

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen EMC laboratory have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

- **FCC –Designation Number: CN1336**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1336. Test Firm Registration Number: 787754.

- **Innovation, Science and Economic Development Canada**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

3.4 Deviation from Standards

None

3.5 Abnormalities from Standard Conditions

None



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4 RF Exposure Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 Limits

According to FCC Part1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in part1.1307(b)

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*(900/f ²)	6
30–300	61.4	0.163	1.0	6
300–1500 .....	.....	.....	f/300	6
1500–100,000 .....	.....	.....	5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f ²)	30
30–300	27.5	0.073	0.2	30
300–1500 .....	.....	.....	f/1500	30
1500–100,000 .....	.....	.....	1.0	30

F= Frequency in MHz

Friis Formula

Friis transmission formula: $P_d = (P_{out} * G) / (4 * \pi * R^2)$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

R = distance between observation point and center of the radiator in cm

P_d is the limit of MPE=824/f V/m . If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

4.1.2 Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.



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4.2 EUT RF Exposure Evaluation

Mode	E-field strength(dBuV/m)	E-field strength(V/m)	E-field strength Limit(V/m)	Verdict
NFC	74.48	0.005297	60.77	Pass

Note: For maximum electric field strength, please refer to report No. SZCR231100376402.

The distancer (4th column) calculated from the Fries transmission formula is far greater than 20 cm separation requirement;

$V/m = 10^{\frac{((dBuV/m) - 120)}{20}}$

--End of the Report--



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