October 23, 2024

Weifang Mingliang Electronics CO., LTD.
% Ray Wang
General Manager
Beijing Believe-Med Technology Service Co., Ltd.
Rm.912, Building #15, XiYueHui, No.5, YiHe North Rd.
FangShan District
Beijing, 102401
China

Re: K242183
Trade/Device Name: Fractional CO2 Laser Therapy System (EXFU CO2)
Regulation Number: 21 CFR 878.4810
Regulation Name: Laser Surgical Instrument For Use In General And Plastic Surgery And In Dermatology
Regulatory Class: Class II
Product Code: GEX, ONG
Dated: July 25, 2024
Received: July 25, 2024

Dear Ray Wang:

We have reviewed your section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (the Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. Although this letter refers to your product as a device, please be aware that some cleared products may instead be combination products. The 510(k) Premarket Notification Database available at https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfpmn/pmn.cfm identifies combination product submissions. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you, however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Additional information about changes that may require a new premarket notification are provided in the FDA guidance documents entitled "Deciding When to Submit a 510(k) for a Change to an Existing Device" (https://www.fda.gov/media/99812/download) and "Deciding When to Submit a 510(k) for a Software Change to an Existing Device" (https://www.fda.gov/media/99785/download).

Your device is also subject to, among other requirements, the Quality System (QS) regulation (21 CFR Part 820), which includes, but is not limited to, 21 CFR 820.30, Design controls; 21 CFR 820.90, Nonconforming product; and 21 CFR 820.100, Corrective and preventive action. Please note that regardless of whether a change requires premarket review, the QS regulation requires device manufacturers to review and approve changes to device design and production (21 CFR 820.30 and 21 CFR 820.70) and document changes and approvals in the device master record (21 CFR 820.181).

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); medical device reporting (reporting of medical device-related adverse events) (21 CFR Part 803) for devices or postmarketing safety reporting (21 CFR Part 4, Subpart B) for combination products (see https://www.fda.gov/combination-products/guidance-regulatory-information/postmarketing-safety-reporting-combination-products); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820) for devices or current good manufacturing practices (21 CFR Part 4, Subpart A) for combination products; and, if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR Parts 1000-1050.

All medical devices, including Class I and unclassified devices and combination product device constituent parts are required to be in compliance with the final Unique Device Identification System rule ("UDI Rule"). The UDI Rule requires, among other things, that a device bear a unique device identifier (UDI) on its label and package (21 CFR 801.20(a)) unless an exception or alternative applies (21 CFR 801.20(b)) and that the dates on the device label be formatted in accordance with 21 CFR 801.18. The UDI Rule (21 CFR 830.300(a) and 830.320(b)) also requires that certain information be submitted to the Global Unique Device Identification Database (GUDID) (21 CFR Part 830 Subpart E). For additional information on these requirements, please see the UDI System webpage at https://www.fda.gov/medical-devices/device-advice-comprehensive-regulatory-assistance/unique-device-identification-system-udi-system.

Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to https://www.fda.gov/medical-devices/medical-device-safety/medical-device-reporting-mdr-how-report-medical-device-problems.

For comprehensive regulatory information about medical devices and radiation-emitting products, including information about labeling regulations, please see Device Advice (https://www.fda.gov/medical-devices/device-advice-comprehensive-regulatory-assistance) and CDRH Learn (https://www.fda.gov/training-and-continuing-education/cdrh-learn). Additionally, you may contact the Division of Industry and Consumer Education (DICE) to ask a question about a specific regulatory topic. See the DICE website (https://www.fda.gov/medical-devices/device-advice-comprehensive-regulatory-assistance/contact-us-division-industry-and-consumer-education-dice) for more information or contact DICE by email (DICE@fda.hhs.gov) or phone (1-800-638-2041 or 301-796-7100).

Sincerely,

TANISHA L. HITHE -S

Digitally signed by TANISHA L. HITHE -S
Date: 2024.10.23 14:03:24 -04'00'

Tanisha Hithe
Assistant Director
DHT4A: Division of General Surgery Devices
OHT4: Office of Surgical and Infection Control Devices
Office of Product Evaluation and Quality
Center for Devices and Radiological Health

Enclosure

DEPARTMENT OF HEALTH AND HUMAN SERVICES
Food and Drug Administration

Indications for Use

Form Approved: OMB No. 0910-0120
Expiration Date: 07/31/2026
See PRA Statement below.

510(k) Number *(if known)*
K242183

Device Name
Fractional CO2 Laser Therapy System (EXFU CO2)

Indications for Use *(Describe)*
Fractional mode is indicated only for ablative skin resurfacing.
Non-fractional mode is indicated for incision, excision, ablation, vaporization and coagulation of body soft tissues including intraoral tissues, in medical specialties including aesthetic (dermatology and plastic surgery), otorhinolaryngology (ENT), gynecology, neurosurgery, dental and oral surgery and genitourinary surgery.

Type of Use *(Select one or both, as applicable)*

☒ Prescription Use (Part 21 CFR 801 Subpart D) ☐ Over-The-Counter Use (21 CFR 801 Subpart C)

CONTINUE ON A SEPARATE PAGE IF NEEDED.

This section applies only to requirements of the Paperwork Reduction Act of 1995.

DO NOT SEND YOUR COMPLETED FORM TO THE PRA STAFF EMAIL ADDRESS BELOW.

The burden time for this collection of information is estimated to average 79 hours per response, including the time to review instructions, search existing data sources, gather and maintain the data needed and complete and review the collection of information. Send comments regarding this burden estimate or any other aspect of this information collection, including suggestions for reducing this burden, to:

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"An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB number."

510(k) Summary

The assigned 510(k) Number: K242183

510(k) Summary

This 510(k) Summary of 510(k) safety and effectiveness information is being submitted in accordance with requirements of Title 21, CFR Section 807.92.

1. Date of Preparation: 10/18/2024

2. Sponsor Identification

Weifang Mingliang Electronics CO., LTD.
1-301, Building 15, Phase 1, Yuandu Huizhi Industrial Complex, No.3999, Taixiang Street, Weifang Economic Development Zone, 261000, Shandong, P.R. China
Contact Person: Alisa Lv
Position: Deputy Director of Support Center
Tel: +86-15966114613
Email: 15966114613@139.com

3. Designated Submission Correspondent

Beijing Believe-Med Technology Service Co., Ltd.
Rm.912, Building #15, XiYueHui, No.5, YiHe North Rd., FangShan District, Beijing, China, 102401
Contact Person: Ray Wang
Position: General Manager
Tel: +86-18910677558
Fax: +86-10-56335780
Email: information@believe-med.com

4. Identification of Proposed Device

Trade Name: Fractional CO2 Laser Therapy System (EXFU CO2)
Common Name: Powered Laser Surgical Instrument

Regulatory Information
Classification Name: Powered Laser Surgical Instrument
Classification: II
Product Code: GEX; ONG
Regulation Number: 21 CFR 878.4810
Regulation Name: Laser surgical instrument for use in general and plastic surgery and in

dermatology.
Regulation Medical Specialty: General & Plastic Surgery
Review Panel: General & Plastic Surgery

Indication For Use Statement:

Fractional mode is indicated only for ablative skin resurfacing.

Non-fractional mode is indicated for incision, excision, ablation, vaporization and coagulation of body soft tissues including intraoral tissues, in medical specialties including aesthetic (dermatology and plastic surgery), otorhinolaryngology (ENT), gynecology, neurosurgery, dental and oral surgery and genitourinary surgery.

5. Device Description

The Fractional CO2 Laser Therapy System has two operational modes: fractional mode and non-fractional mode.

The Fractional CO2 Laser Therapy System has 6 modules: Control Display Panel Module, Main Control program Module, Articulated arm Module, Fan Cooling Module, Laser Module and Foot switch module.

6. Identification of Predicate Device(s)

Predicate Device
510(k) Number: K172096
Product Name: Ilooda Fraxis CO2 Laser
Manufacturer: Ilooda Co. LTD

7. Non-Clinical Test Conclusion

Non-clinical testing was conducted to verify that the proposed device met design specifications. The test results demonstrated that the proposed device conforms to the following performance standards:

- ISO 10993-5: 2009 Biological evaluation of medical devices - Part 5: Tests for in vitro cytotoxicity
- ISO 10993-10: 2021 Biological evaluation of medical devices - Part 10: Tests for skin sensitization
- ISO 10993-23: 2021 Biological evaluation of medical devices - Part 23: Tests for irritation
- IEC 60601-1: 2020 Medical electrical equipment - Part 1: General requirements for basic safety and essential performance
- IEC 60601-1-2: 2020 Medical electrical equipment - Part 1-2: General requirements for

basic safety and essential performance - Collateral Standard: Electromagnetic disturbances - Requirements and tests

- IEC 60601-2-22: 2019 Medical electrical equipment - Part 2-22: Particular requirements for basic safety and essential performance of surgical, cosmetic, therapeutic and diagnostic laser equipment
- IEC 60825-1: 2014 Safety of laser products - Part 1: Equipment classification, and requirements

8. Clinical Test Conclusion

No clinical study is included in this submission.

9. Substantially Equivalent (SE) Comparison

Table 1 Comparison

Item	Proposed Device (K242183)	Predicate Device (K172096)	Remark
Indications for Use	Fractional mode is indicated only for ablative skin resurfacing. Non-fractional mode is indicated for incision, excision, ablation, vaporization and coagulation of body soft tissues including intraoral tissues, in medical specialties including aesthetic (dermatology and plastic surgery), otorhinolaryngology (ENT), gynecology, neurosurgery, dental and oral surgery and genitourinary surgery.	- CO2 LASER Part: Fractional mode is indicated only for ablative skin resurfacing. Non-fractional mode is indicated for incision, excision, ablation, vaporization and coagulation of body soft tissues including intraoral tissues, in medical specialties including aesthetic (dermatology and plastic surgery), otorhinolaryngology (ENT), gynecology, neurosurgery, dental and oral surgery and genitourinary surgery.	SAME
Product Code	GEX, ONG	GEX, ONG	SAME
Regulation No.	21 CFR 878.4810	21 CFR 878.4810	SAME
Laser Type	CO2	CO2	SAME
Laser wavelength	10.6μm	10.6μm	SAME
Maximum Output power	30W	30W	SAME
Pulse Duration	20μs – 5000μs	20-5,000μs	SAME
Fractional Pulse energy	Max 150mJ	Max 150mJ	SAME
Repetition rate	1,000Hz	1,000Hz	SAME
Scan area	20x20mm	20x20mm	SAME
Spot size	100-200μm Non-fractional: Max 1.3mm	100-200μm Non-fractional: Max 1.3mm	SAME
Number of microbeams per surface area (fractional)	Max 289 spot/cm^2	Max 289 spot/cm^2	SAME

510(k) Summary

Energy per microbeam (fractional)	150mJ	150mJ	SAME
Total power per surfaced area (fractional)	Max 30W	Max 30W	SAME
Treatment Time	10-15 min	10-15 min	SAME
Pulse rate (nonfractional)	1Hz – 1,000Hz	1Hz – 1,000Hz	SAME
Pulse width (nonfractional)	20μs – 5000μs	20μs – 5000μs	SAME
Operational mode	Fractional mode, normal mode (CW, Pulse, Single Pulse)	Fractional mode, normal mode (CW, Pulse, Single Pulse)	SAME
Aiming beam	Diode laser(Red), Max 3mW	Diode laser(Red), Max 4mW	Different 1
Cooling	Air cooling	Air cooling	SAME
User Interface	LCD touch screen	LCD touch screen	SAME
Optical guide	Articulated arm	Articulated arm	SAME
Electrical Requirements	110-240V, 50/60Hz	100-240VAC, 50-60 Hz	Different 2

Analysis 1:
The output intensity of the output device's red laser aiming beam is less that that of the predicate device. The intensity however, is adequate in order to provide feedback regarding the beam's location to the device user.

Analysis 2:
The proposed device's input voltage range of 110 – 240 V, 50/60 Hz is different from the input voltage range of the predicate device. This 510(k)'s documentation however, included a test report per the IEC 60601-1 performance standard, and from the testing results the device is considered to conform to the requirements.

10. Substantially Equivalent (SE) Conclusion

The conclusions drawn from the nonclinical tests demonstrate that the device is as safe, as effective, and performs as well as or better than the legally marketed device (K172096).