March 23, 2022

Hubei Huaqiang High-Tech 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: K212726
Trade/Device Name: Disposable Medical Surgical Mask
Regulation Number: 21 CFR 878.4040
Regulation Name: Surgical Apparel
Regulatory Class: Class II
Product Code: FXX
Dated: March 8, 2022
Received: March 11, 2022

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 (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 located 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.

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 803) for devices or postmarketing safety reporting (21 CFR 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 4, Subpart A) for combination products; and, if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR Part 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,

Bifeng Qian, M.D., Ph.D.
Acting Assistant Director
DHT4B: Division of Infection Control
and Plastic 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: 06/30/2023
See PRA Statement below.

510(k) Number *(if known)*

K212726

Device Name
Disposable Medical Surgical Mask

Indications for Use *(Describe)*

The Disposable Medical Surgical Mask is intended to be worn to protect both the patient and healthcare personnel from the transfer of microorganisms, body fluids, and particulate material. The Disposable Medical Surgical Mask is intended for use in infection control practices to reduce the potential exposure to blood and body fluids. This is a single-use, disposable device(s), provided sterile.

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.

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510(k) Summary K212726

This 510(k) Summary of 510(k) safety and effectiveness information is being submitted in accordance with requirements of SMDA 1990 and Title 21, CFR Section 807.92.

1. Date of Preparation: 2022/03/23

2. Sponsor Identification

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3. Designated Submission Correspondent

Mr. Ray Wang

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4. Identification of Proposed Device

Trade Name: Disposable Medical Surgical Mask
Common Name: Mask, Surgical

Regulatory Information
Classification Name: Mask, Surgical
Classification: II
Product Code: FXX
Regulation Number: 878.4040
Review Panel: General Hospital

Indication for use Statement:

The Disposable Medical Surgical Mask is intended to be worn to protect both the patient and healthcare personnel from the transfer of microorganisms, body fluids, and particulate material. The Disposable Medical Surgical Mask is intended for use in infection control practices to reduce the potential exposure to blood and body fluids. This is a single-use, disposable device(s), provided sterile.

Device Description

The Disposable Medical Surgical Mask is intended to be worn to protect both the patient and healthcare personnel from the transfer of microorganisms, body fluids, and particulate material. The Disposable Medical Surgical Mask is intended for use in infection control practices to reduce the potential exposure to blood and body fluids. This is a single-use, disposable device(s), provided sterile.

The proposed device(s) are Blue color, and Flat Pleated type mask(s), utilizing Ear Loops to secure to the users head and a pliable Nose Piece for fitting the facemask around the nose.

The proposed device(s) are manufactured with three layers, the inner and outer layers are made of polypropylene spunbond fabric, and the middle layer is made of polypropylene melt-blown fabric.

The Medical Surgical Masks-Sterile is held in place over the users' mouth and nose by two elastic ear loops affixed to the facemask. The elastic ear loops are made with nylon or spandex.

The nose piece contained in the proposed device(s) is contained within the layers of the facemask to allow the user to fit the facemask around their nose, which is made of polypropylene and metal wire.

The proposed device(s) are sold sterile and are intended to be single-use, disposable devices.

5. Identification of Predicate Device(s)

510(k) number: K202904
Device Name: Surgical Face Mask
Manufacturer: Jiangxi Feilikang Medical Technology Co., Ltd.

6. Technological Characteristics Comparison

Table 1 General Comparison

ITEM	Proposed Device K212726	Predicate Device K202904	Remark
	ASTM F2100 Level 2	ASTM F2100 Level 2	

Intended Use / Indication for Use		The Disposable Medical Surgical Mask is intended to be worn to protect both the patient and healthcare personnel from the transfer of microorganisms, body fluids, and particulate material. The Disposable Medical Surgical Mask is intended for use in infection control practices to reduce the potential exposure to blood and body fluids. This is a single-use, disposable device(s), provided sterile.	Surgical Face Mask is intended for single use by operating room personnel and other general healthcare workers to protect both patients and healthcare workers against transfer of microorganisms, blood and body fluids, and particulate materials.	Similar
Basic Design		Ear Loops, Flat Pleated, 3 layers	Ear Loop, Flat-pleated, 3 layers	SAME
Materials	Outer Facing Layer	polypropylene spunbond fabric	Polypropylene Non-Woven Fabric	Differences addressed by performance and biocompatibility testing
	Middle Layer	polypropylene melt-blown fabric	Polypropylene Melt-Blown Fabric	
	Inner Facing Layer	polypropylene spunbond fabric	Polypropylene Non-Woven Fabric	
	Nose Piece	polypropylene and metal wire	Polypropylene and Iron Wire	
	Ear Loops	nylon or spandex	Nylon and Spandex	
Color		Blue	Blue	SAME
Dimension (Length)		17.5± 5% cm	17.5 cm	SAME
Dimension (Width)		9.5 ± 5%cm	9.5 cm	
OTC use		Yes	Yes	SAME
Single Use		Yes	Yes	SAME
Sterile		Sterile	Sterile	SAME
Sterilization method		EO	EO	SAME
Sterilization residues		EtO and ECH residues meet the requirements of ISO 10993-7	EtO and ECH residues meet the requirements of ISO 10993-7	SAME
Shelf Life		2 years	Unknown	Difference addressed by Shelf-Life validation
Packaging Configuration and materials		10 pcs/bag Medical dialysis paper (Tyvek) and PP (polyethylene and polypropylene) film.	Unknown	SAME

Table 2 Performance Characteristic Comparison

ITEM	Proposed Device K212726	Predicate Device K202904	ASTM F2100 Requirements	Remark
ASTM F2100 Level	Level 2	Level 2	Level 2	SAME
Fluid Resistance Performance ASTM F1862	120 mmHg	120 mmHg	120 mmHg	Both meet requirements. No new issues of
Particulate Filtration	≥98%	Average 98.74% at	≥ 98%	

Efficiency ASTM F2299		0.1μm		safety or effectiveness
Bacterial Filtration Efficiency ASTM F2101	≥99%	Average 99.65%	≥ 98%	
Differential Pressure (Delta P) EN 14683-2019 +AC:2019 Annex C	< 5.8mmH2O/cm^2	Average 4.6mmH2O/cm^2	< 6.0 mmH2O/cm2	
Flammability 16 CFR 1610	Class 1	Class 1	Class 1	SAME

Table 3 Biocompatibility Comparison

ITEM	Proposed Device K212726	Predicate Device K202904	Remark
Cytotoxicity	No Cytotoxicity	No Cytotoxicity	SAME
Irritation	No Irritation	No Irritation	SAME
Sensitization	No Sensitization	No Sensitization	SAME

7. Non-Clinical Test Conclusion

The test results demonstrated that the proposed device complies with the following standards:

- ISO 11135-2014 Sterilization of health-care products – Ethylene oxide – Requirements for the development, validation and routine control of a sterilization process for medical devices
- ISO 10993-5: 2009 Biological Evaluation Of Medical Devices – Part 5: Tests For In Vitro Cytotoxicity
- ISO 10993-7: 2008 Biological evaluation of medical devices – Part 7: Ethylene oxide sterilization residuals
- ISO 10993-10: 2010 Biological Evaluation Of Medical Devices – Part 10: Tests For Irritation And Skin Sensitization.
- ASTM F2100-19, Standard Specification For Performance Of Materials Used In Medical Face Masks.
- ASTM F1862-17, Standard Test Method For Resistance Of Medical Face Masks To Penetration By Synthetic Blood (Horizontal Projection Of Fixed Volume At A Known Velocity)
- EN 14683-2019+AC:2019 Annex C，Medical face masks – Requirements and test methods;
- ASTM F2101-19, Standard Test Method For Evaluating The Bacterial Filtration Efficiency (Bfe) Of Medical Face Mask Materials, Using A Biological Aerosol Of Staphylococcus Aureus;
- ASTM F2299-03, Stand test method for determining the initial efficiency of materials used in medical face masks to penetration by particulates using latex spheres;

- 16 CFR 1610, Standard for the Flammability of clothing textiles;

Test Method	Purpose	Acceptance Criteria	Results
ASTM F1862	Resistance to penetration by synthetic blood	120 mm Hg	120 mm Hg
ASTM F2299	Sub-micron particulate filtration efficiency at 0.1 micron	≥ 98%	≥ 98%
ASTM F2101	Bacterial Filtration Efficiency	≥ 98%	≥ 99%
EN 14683 Annex C	Differential Pressure	< 6.0 mm H_2O/cm^2	< 5.7mmH2O/cm^2
16 CFR 1610	Flammability	Class 1	Class 1
ISO 10993-10	Irritation	No irritation effect	Under the conditions of the study, no irritation effect
	Sensitization	No sensitization effect	Under the conditions of the study, no sensitization effect
ISO 10993-5	Cytotoxicity	No cytotoxicity effect	Under the conditions of the study, no cytotoxicity effect
ISO 10993-7	EtO and ECH Residual	The average daily dose of EO to patient shall not exceed 4 mg; The average daily dose of ECH to patient shall not exceed 9 mg;	EO average daily dose (mg/d) < 0.006; ECH average daily dose (mg/d) < 0.03
ASTM F1980	Shelf-Life Validation	Meet the requirements of Level 2 barrier performance at the end of shelf-life claimed	Meet the requirements of Level 2 barrier performance after 2 years accelerated aging. The aging temperature is 60℃ and the aging time is 56 days.

8. Clinical Test Conclusion

No clinical study is included in this submission.

9. Conclusion

The conclusions drawn from the nonclinical tests demonstrate that the subject device, K212726, Disposable Medical Surgical Mask, is as safe, as effective, and performs as well as or better than the legally marketed device, K202904, Surgical Face Mask by Jiangxi Felikang Medical Technology Log., Ltd.