



December 28, 2021

Phu Duc Huy Production Trading Services Corporation  
% Manoj Zacharias  
US Agent  
Liberty Management Group Limited  
75 Executive Drive, Suite 114  
Aurora, Illinois 60504, USA

Re: K213016

Trade/Device Name: ATM® Glove Powder free Nitrile Examination gloves  
Regulation Number: 21 CFR 880.6250  
Regulation Name: Non-Powdered Patient Examination Glove  
Regulatory Class: Class I, reserved  
Product Code: LZA  
Dated: August 10, 2021  
Received: September 20, 2021

Dear Manoj Zacharias:

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](mailto:DICE@fda.hhs.gov)) or phone (1-800-638-2041 or 301-796-7100).

Sincerely,

For Clarence W. Murray, III, PhD  
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

## Indications for Use

510(k) Number (if known)  
K213016

Device Name

ATM® Glove Powder free Nitrile Examination Gloves

Indications for Use (Describe)

A Powder free Nitrile Examination Gloves is a disposable device intended for medical purpose that is worn on the examiner's hand to prevent contamination between patient and examiner.

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.

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## 510(k) SUMMARY (K213016)

[AS REQUIRED BY 21CFR807.92]

### I. SUBMITTER

**510(k) Owner's Name** PHU DUC HUY PRODUCTION TRADING SERVICES CORPORATION

**Address** Hamlet 8, Luong Hoa Commune, Ben Luc District, Long An, 82000, Vietnam.

**Contact person** Tran Xuan Kiem

**Designation** CEO

**Contact Number** 84-91-3134359

**Contact Email** Daingan6868jsc@Gmail.Com

**Date of Summary Prepared** 08/18/2021

### II. DEVICE

**Device Name** ATM® Glove Powder free Nitrile Examination gloves

**Device Common Name** Powder free Nitrile Examination glove

**Device Classification name** Non-powdered patient examination glove

**Regulation Number** 21 CFR 880.6250

**Class** I

**Product Code** LZA

### III. PREDICATE DEVICE

**Predicate Device Name** JR MEDIC Blue Nitrile Examination Gloves Powder Free  
**510(k) Number** K192333  
**Regulation Number** 21 CFR 880.6250  
**Class** I  
**Product Code** LZA

### IV. DEVICE DESCRIPTION

ATM® Glove Powder free Nitrile Examination gloves is a Class I device bearing the product code LZA (21CFR 880.6250). They meet all the current specifications listed under the ASTM D6319 -19 Standard Specification for Nitrile Examination Gloves for Medical Application. They are made from acrylonitrile-butadiene copolymer dispersion. These gloves are blue in color having Finger Texture, Ambidextrous and are powder free. The product is non-sterile.

### V. INTENDED USE

A Powder free Nitrile Examination gloves is a disposable device intended for medical purpose that is worn on the examiner’s hand to prevent contamination between patient and examiner.

### VI. COMPARISON OF TECHNOLOGICAL CHARACTERISTICS WITH THE PREDICATE DEVICE

**Table 1: General Comparison**

Sl. No	Features compared	Proposed Device	Predicate Device	Result
<b>General Information</b>				
1.	510(k) Number	K213016	K192333	-
2.	Manufacturer	PHU DUC HUY PRODUCTION TRADING SERVICES CORPORATION	JR Engineering & Medical Technologies (M) SDN.BHD	-
3.	Classification	I	I	Same
4.	Regulation number	21 CFR 880.6250	21 CFR 880.6250	Same
5.	Product Code	LZA	LZA	Same
6.	Indication For Use	ATM® Glove Powder free Nitrile Examination gloves is a disposable device intended for medical purpose that is worn on the examiner’s hand to prevent contamination between patient and examiner.	JR MEDIC Blue Nitrile Examination Gloves Powder Free is disposable devices intended for medical purpose that are worn on the examiner’s hand to prevent contamination between patient and examiner.	Same

Sl. No	Features compared	Proposed Device	Predicate Device	Result	
7.	Material	Nitrile	Nitrile	Same	
8.	Color	Blue	Blue	Same	
9.	Texture	Finger Texture	Finger texture	Same	
10.	Ambidextrous	Yes	Data Not available	-	
11.	Size	S, M, L, XL	XS, S, M, L, XL	Different	
12.	OTC Use	Yes	Yes	Same	
13.	Reusability	Single use	Single use	Same	
14.	Sterility	Non- sterile	Non- sterile	Same	
15.	Dimensions	Length Min 230 m Width Min 95±10 Mm (for medium size)	Length Min 230 m Width Min 95±10 Mm (for medium size)	Same	
16.	Thickness	Palm min 0.05 mm Finger min 0.05 mm	Palm min 0.05 mm Finger min 0.05 mm	Same	
17.	Physical Properties	<u>Before Aging</u> Tensile Strength min 14 Mpa Ultimate Elongation Min 500% <u>After Aging</u> Tensile Strength min 14 Mpa Ultimate Elongation Min 400%	<u>Before Aging</u> Tensile Strength min 14 Mpa Ultimate Elongation Min 500% <u>After Aging</u> Tensile Strength min 14 Mpa Ultimate Elongation Min 400%	Same	
18.	Detection of Holes	Passes AQL 2.5	Passes AQL 1.5	Similar	
19.	Powder Free Residue	≤2 mg/glove	≤2 mg/glove	Same	
20.	Biocompatibility Study	In vitro Cytotoxicity	Under the conditions of the study Non-Cytotoxic to L-929 cells	Under the conditions of the study, cytotoxic.	Different
		Skin Sensitization	Under the conditions of the study not a sensitizer	Under the conditions of the study not a sensitizer	Same
		Skin Irritation	Under the condition of study not an irritant	Under the condition of study not an irritant	Same
		Acute systemic toxicity	Under the condition of study, the device extracts do not pose a systemic toxicity.	Under the condition of study, the device extracts do not pose a systemic toxicity.	Same
		Material mediated pyrogenicity	Under the conditions of the study, the device did not demonstrate a material mediated Pyrogenicity response.	Under the conditions of the study, the device did not demonstrate a material mediated Pyrogenicity response.	Same

There are no significant differences between the two products and are identical in terms of intended use, materials, design, manufacturing methods. Both devices met the performance standards.

## VII. PERFORMANCE DATA

### A. Non- Clinical Data

#### Performance Tests

ATM® Glove Powder free Nitrile Examination gloves is subjected to the following performance tests according to the requirements of Guidance for Industry and FDA Staff - Medical Glove Guidance Manual and found to be safe and efficient with respect to its intended use:

- Dimension
- Physical property
- Barrier property tests- Detection of Holes in Medical Gloves
- Powder Free Residue

**Table 2: Performance Testing Summary**

SI No.	Tests	Proposed Device actual Data			Acceptance Criteria			Result	
1.	<p style="text-align: center;"><b><u>Dimension</u></b></p> <p style="text-align: center;"><b>Length, Width and Thickness</b></p> <p>ASTM D6319-19 Standard Specification for Nitrile Examination Gloves for Medical Application</p>	<b>Size</b>	<b>Length</b>	<b>Width</b>	<b>Size</b>	<b>Length</b>	<b>Width</b>	Pass	
		S	245 mm	85 mm	S	230mm min	80mm ±10		
		M	247 mm	94 mm	M		95mm ±10		
		L	247 mm	106 mm	L		110mm ±10		
		XL	244 mm	112 mm	XL		120mm ±10		
		<b>Thickness</b>			<b>Thickness</b>				
		<b>Size</b>	<b>Palm</b>	<b>Finger</b>	<b>Size</b>	<b>Palm</b>	<b>Finger</b>		
		S	0.07 mm	0.11 mm	S	0.05 mm min	0.05 mm min		
		M	0.07 mm	0.12 mm	M				
		L	0.06 mm	0.11 mm	L				
XL	0.07 mm	0.11 mm	XL						
2.	<p style="text-align: center;"><b><u>Physical property</u></b></p> <p style="text-align: center;"><b>Tensile strength and Ultimate Elongation</b></p> <p>ASTM D6319-19 Standard Specification for Nitrile Examination Gloves for Medical Application</p>	<b>Tensile strength</b>			<b>Tensile strength</b>			Pass	
		<b>Size</b>	<b>Before Aging</b>	<b>After Aging</b>	<b>Size</b>	<b>Before Aging</b>	<b>After Aging</b>		
		S	19.9Mpa	18.9Mpa	S	14Mpa Min for all sizes	14Mpa Min for all sizes		
		M	25.6Mpa	27.7Mpa	M				
		L	21.0Mpa	20.5Mpa	L				
		XL	23.1Mpa	22.4Mpa	XL				
		<b>Ultimate Elongation</b>			<b>Ultimate Elongation</b>				
		<b>Size</b>	<b>Before Aging</b>	<b>After Aging</b>	<b>Size</b>	<b>Before Aging</b>	<b>After Aging</b>		
		S	518%	472%	S	500% Min for all sizes	400%Min for all sizes		
		M	517%	452%	M				
L	558%	547%	L						
XL	529%	509%	XL						

SI No.	Tests	Proposed Device actual Data		Acceptance Criteria		Result
3.	<b><u>Barrier property tests</u></b> <b><u>Detection of Holes in Medical Gloves</u></b>  ASTM D6319-19 /ASTM D5151-19 Standard Test Method for Detection of Holes in Medical Gloves	S	Passes AQL 2.5	AQL 2.5		Pass
M		Passes AQL 2.5				
L		Passes AQL 2.5				
XL		Passes AQL 2.5				
4.	<b><u>Powder Free Residue</u></b>  ASTM D6124-06 (Reapproved 2017) Standard Test Method for Residual Powder on Medical Gloves	<b>Size</b>	<b>Residual powder content</b>	<b>Size</b>	<b>Residual powder content</b>	Pass
S		0.36 mg/glove	S	≤2 Mg/Glove Max		
M		0.16 mg/glove	M			
L		0.10 mg/glove	L			
XL		0.40 mg/glove	XL			

## B. Biocompatibility

The materials used in the ATM® Glove Powder free Nitrile Examination gloves are biocompatible based on the biocompatibility tests mentioned in the Guidance for Industry and FDA Staff - Medical Glove Guidance Manual:

- In vitro Cytotoxicity
- Skin Sensitization
- Skin Irritation
- Acute Systemic Toxicity
- Material-Mediated Pyrogenicity

These tests are performed according to ISO 10993-1:2018, Biological Evaluation of Medical Devices - Part 1, Evaluation and Testing within a Risk Management Process.

**Table 3: Biocompatibility Test Summary**

SI. No	Test Performed	Standard	Proposed Device	Result
1.	In Vitro Cytotoxicity	ISO 10993-5:2009	Under the conditions of the study, Non-cytotoxic to L-929 cells.	Pass
2.	Skin Sensitization	ISO 10993-10:2010	Under the conditions of the study not a sensitizer	Pass
3.	Skin Irritation	ISO 10993-10:2010	Under the condition of study not an irritant	Pass



4.	Acute Systemic Toxicity	ISO 10993-11:2017	Under the condition of study, the device extracts do not pose a systemic toxicity concern	Pass
5.	Material-Mediated Pyrogenicity	ISO 10993-11:2017 USP 43 <151> Pyrogen Test, 2020.	Under the conditions of the study, the device did not demonstrate a material mediated pyrogenicity response.	Pass

**C. Clinical Test Data**

Clinical study was not conducted as clinical data is not needed for ATM® Glove Powder free Nitrile Examination glove.

**VIII. CONCLUSION**

The conclusion drawn from the non-clinical tests demonstrate that the subject device, ATM® Glove Powder free Nitrile Examination gloves are as safe, as effective and perform as well as or better than legally marketed predicated device in K192333.