



May 17, 2023

Hartalega NGC SDN. BHD.  
Nurul Aisyah Kong  
General Manager-Quality Assurance  
No. 1, Persiaran Tanjung  
Kawasan Perindustrian Tanjung  
Sepang, Selangor Darul Ehsan 43900  
Malaysia

Re: K223437

Trade/Device Name: Biodegradable Nitrile Powder Free Examination Glove Tested for Use with  
Chemotherapy Drugs and Fentanyl Citrate (Fusion Colour)

Regulation Number: 21 CFR 880.6250

Regulation Name: Non-Powdered Patient Examination Glove

Regulatory Class: Class I, reserved

Product Code: LZA, LZC, QDO, OPJ

Dated: March 15, 2023

Received: March 20, 2023

Dear Nurul Aisyah Kong:

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,

  
**Bifeng Qian -S**

Bifeng Qian, M.D., Ph.D.

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)  
K223437

Device Name

Biodegradable Nitrile Powder Free Examination Glove Tested for Use with Chemotherapy Drugs and Fentanyl Citrate (Fusion Colour)

Indications for Use (Describe)

Biodegradable Nitrile Powder Free Examination Glove Tested for Use with Chemotherapy Drugs and Fentanyl Citrate (Fusion Colour) is a non-sterile disposable device intended for medical purpose that is worn on the examiner's hand to prevent contamination between patient and examiner. It is also tested to be used against Chemotherapy Drugs and Fentanyl Citrate.

These gloves were tested for use with chemotherapy drugs as per ASTM D6978-05 (Reapproved 2019) Standard Practice for Assessment of Resistance of Medical Gloves to Permeation by Chemotherapy Drugs.

Chemotherapy Drug and Concentration

Minimum Breakthrough Detection Time in Minutes

5-Azacytidine (25.0 mg/ml)	> 240
Carboplatin (10.0 mg/ml)	> 240
Carmustine (3.3 mg/ml)	12.1
Cisplatin (1.0 mg/ml)	> 240
Cyclophosphamide (Cytosan) (20.0 mg/ml)	> 240
Dacarbazine (10.0 mg/ml)	> 240
Doxetacel (10.0 mg/ml)	> 240
Doxorubicin HCl (2.0 mg/ml)	> 240
Epirubicin (2.0 mg/ml)	> 240
Etoposide (20.0 mg/ml)	> 240
Fluorouracil (50.0 mg/ml)	> 240
Gemcitabine (38.0 mg/ml)	> 240
Ifosfamide (50.0 mg/ml)	> 240
Irinotecan (20.0 mg/ml)	> 240
Methotrexate (25.0 mg/ml)	> 240
Mitomycin C (0.5 mg/ml)	> 240
Mitoxantrone (2.0 mg/ml)	> 240
Oxaliplatin (5.0 mg/ml)	> 240
Paclitaxel (6.0 mg/ml)	> 240
Thiotepa (10.0 mg/ml)	37.8
Vincristine Sulfate (1.0 mg/ml)	> 240
Oncovin (1.0 mg/ml)	> 240
Vinorelbine (10.0mg/ml)	> 240

Fentanyl Citrate and Concentration

Minimum Breakthrough Detection Time in Minutes

Fentanyl Citrate Injection (100mcg/2ml) >240

Caution: Please note that Carmustine and Thiotepa have extremely low permeation times of 12.1 minutes and 37.8 minutes.

Warning: Do not use with Carmustine.

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)

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**CONTINUE ON A SEPARATE PAGE IF NEEDED.**

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## **510(k) SUMMARY**

**K223437**

### **BIODEGRADABLE NITRILE POWDER FREE EXAMINATION GLOVE TESTED FOR USE WITH CHEMOTHERAPY DRUGS AND FENTANYL CITRATE (FUSION COLOUR)**

(The information contained herein is being provided in accordance with the requirements of 21 CFR 807.92)

#### **SUBMISSION APPLICANT**

Date Prepared : May 15, 2023  
Name : Hartalega NGC Sdn. Bhd.  
Address : No. 1, Persiaran Tanjung,  
Kawasan Perindustrian Tanjung,  
Sepang, Selangor Darul Ehsan, 43900  
Malaysia  
Establishment Registration Number : 3011200663

#### **SUBMISSION CORRESPONDENT AND/OR PREPARER**

Contact Name : Nurul Aisyah Kong  
Contact Title : General Manager – Quality Assurance  
Phone Number : (603) 3280 3888  
Fax Number : (603) 3271 0135  
Contact Email : wkkong@hartalega.com.my

#### **DEVICE IDENTIFICATION**

Common Name of the Device : Non-Powdered Patient Examination Glove  
Trade Name (Proprietary Name) : Biodegradable Nitrile Powder Free Examination Glove Tested for  
Use with Chemotherapy Drugs and Fentanyl Citrate  
(Fusion Colour)  
Device Class : 1  
Product Code : LZA, LZC, QDO, OPJ  
Regulation Number : 21 CFR 880.6250  
Reason for 510(k) Submission : New device

## PREDICATE DEVICE INFORMATION

510(k) Number	Tradename	Product Code
K200581	Biodegradable Nitrile Powder Free Examination Glove Tested for Use with Chemotherapy Drugs and Fentanyl Citrate (Blue)	LZA, LZC, QDO

Regulation Name : Non-Powdered Patient Examination Glove  
Trade Name (Proprietary Name) : Biodegradable Nitrile Powder Free Examination Glove Tested for Use with Chemotherapy Drugs and Fentanyl Citrate (Fusion Colour)  
Device Class : 1  
Product Code : LZA, LZC, QDO, OPJ  
Regulation Number : 21 CFR 880.6250

### DESCRIPTION OF THE DEVICE:

Biodegradable Nitrile Powder Free Examination Glove Tested for Use with Chemotherapy Drugs and Fentanyl Citrate (Fusion Colour) is a disposable single-use, non-sterile, fusion-colored and powder-free examination glove made from nitrile latex.

### INDICATIONS FOR USE:

Biodegradable Nitrile Powder Free Examination Glove Tested for Use with Chemotherapy Drugs and Fentanyl Citrate (Fusion Colour) is a non-sterile disposable device intended for medical purpose that is worn on the examiner's hand to prevent contamination between patient and examiner. It is also tested to be used against Chemotherapy Drugs and Fentanyl Citrate.

The gloves were tested for use with chemotherapy drugs as per ASTM D6978-05 (Reapproved 2019) Standard Practice for Assessment of Resistance of Medical Gloves to Permeation by Chemotherapy Drugs.

<b>Chemotherapy Drug and Concentration</b>	<b>Minimum Breakthrough Detection Time in Minutes</b>
5- Azacytidine, 25.0 mg/ml	> 240
Carboplatin, 10.0 mg/ml	> 240
Carmustine (3.3 mg/ml)	12.1
Cisplatin (1.0 mg/ml)	> 240
Cyclophosphamide (20.0 mg/ml)	> 240
Dacarbazine (10.0 mg/ml)	> 240
Docetaxel, 10.0 mg/ml	> 240
Doxorubicin HCL (2.0 mg/ml)	> 240
Epirubicin, 2.0 mg/ml	> 240
Etoposide (20.0 mg/ml)	> 240
Fluorouracil (50.0 mg/ml)	> 240
Gemcitabine, 38.0 mg/ml	> 240
Ifosfamide, 50.0 mg/ml	> 240
Irinotecan, 20.0 mg/ml	> 240
Methotrexate (25.0 mg/ml)	> 240
Mitomycin C (0.5 mg/ml)	> 240
Mitoxantrone, 2.0 mg/ml	> 240
Oxaliplatin, 2.0 mg/ml	> 240
Paclitaxel (6.0 mg/ml)	> 240
Thiotepa (10.0 mg/ml)	37.8
Vincristine Sulfate (1.0 mg/ml)	> 240
Oncovin (1.0 mg/ml)	> 240
Vinorelbine, 10.0 mg/ml	> 240
Fentanyl Citrate, 100.0 mcg/2ml	> 240

**Caution:** Please note that Carmustine and Thiotepa have extremely low permeation times of 12.1 minutes and 37.8 minutes.

**Warning:** Do not use with Carmustine.

**TECHNOLOGICAL CHARACTERISTICS COMPARISON TABLE:**

<b>Characteristics and Parameters</b>	<b>Subject Device</b>	<b>Predicate Device (K200581)</b>	<b>Discussion</b>
<b>Trade Name</b>	Biodegradable Nitrile Powder Free Examination Glove Tested for Use with Chemotherapy Drugs and Fentanyl Citrate (Fusion Colour)	Biodegradable Nitrile Powder Free Examination Glove Tested for Use with Chemotherapy Drugs and Fentanyl Citrate (Blue)	-
<b>Applicant</b>	Hartalega NGC Sdn. Bhd.	Hartalega NGC Sdn. Bhd.	Same
<b>Product Code</b>	LZA, LZC, QDO, OPJ	LZA, LZC, QDO	Similar
<b>Classification</b>	1	1	Same
<b>Regulation Number</b>	21 CFR 880.6250	21 CFR 880.6250	Same
<b>Regulation Name</b>	Non-Powdered Patient Examination Glove	Non-Powdered Patient Examination Glove	Same
<b>Indications for Use</b>	<p>A non-sterile disposable device intended for medical purpose that is worn on the examiner's hand to prevent contamination between patient and examiner. It is also tested to be used against Chemotherapy Drugs and Fentanyl Citrate.</p> <p>The gloves were tested for use with chemotherapy drugs as per ASTM D6978-05 (Reapproved 2019) Standard Practice for Assessment of Resistance of Medical Gloves to Permeation by Chemotherapy Drugs.</p>	<p>A non-sterile disposable device intended for medical purpose that is worn on the examiner's hand to prevent contamination between patient and examiner. It is also tested to be used against Chemotherapy Drugs and Fentanyl Citrate.</p> <p>The gloves were tested for use with chemotherapy drugs as per ASTM D6978-05 (Reapproved 2013) Standard Practice for Assessment of Resistance of Medical Gloves to Permeation by Chemotherapy Drugs.</p>	Similar



Characteristics and Parameters	Subject Device		Predicate Device (K200581)		Discussion
	Chemotherapy Drug and Concentration	Minimum Breakthrough Detection Time in Minutes	Chemotherapy Drug Concentration	Minimum Breakthrough Detection Time in Minutes	
Test Chemotherapy Drugs	5-Azacytidine, 25.0mg/ml	> 240	5-Azacytidine, 25.0mg/ml	> 240	Similar
	Carboplatin, 10.0 mg/ml	> 240	Carboplatin, 10.0 mg/ml	> 240	
	Carmustine (3.3 mg/ml)	12.1	Carmustine (3.3 mg/ml)	21.4	
	Cisplatin (1.0 mg/ml)	> 240	Cisplatin (1.0 mg/ml)	> 240	
	Cyclophosphamide (20.0 mg/ml)	> 240	Cyclophosphamide (20.0 mg/ml)	> 240	
	Dacarbazine (10.0 mg/ml)	> 240	Dacarbazine (10.0 mg/ml)	> 240	
	Docetaxel, 10.0 mg/ml	> 240	Docetaxel, 10.0 mg/ml	> 240	
	Doxorubicin HCL (2.0 mg/ml)	> 240	Doxorubicin HCL (2.0 mg/ml)	> 240	
	Epirubicin HCL, 2.0 mg/ml	> 240	Epirubicin HCL, 2.0 mg/ml	> 240	
	Etoposide (20.0 mg/ml)	> 240	Etoposide (20.0 mg/ml)	> 240	
	Fluorouracil (50.0 mg/ml)	> 240	Fluorouracil (50.0 mg/ml)	> 240	
	Gemcitabine, 38.0 mg/ml	> 240	Gemcitabine, 38.0 mg/ml	> 240	
	Ifosfamide, 50.0 mg/ml	> 240	Ifosfamide, 50.0 mg/ml	> 240	
	Irinotecan, 20.0 mg/ml	> 240	Irinotecan, 20.0 mg/ml	> 240	
	Methotrexate (25.0 mg/ml)	> 240	Methotrexate (25.0 mg/ml)	> 240	
	Methotrexate (25.0 mg/ml)	> 240	Methotrexate (25.0 mg/ml)	> 240	
	Mitomycin C (0.5 mg/ml)	> 240	Mitomycin C (0.5 mg/ml)	> 240	
	Mitoxantrone, 2.0 mg/ml	> 240	Mitoxantrone, 2.0 mg/ml	> 240	
	Oxaliplatin, 5.0 mg/ml	> 240	Oxaliplatin, 5.0 mg/ml	> 240	
	Paclitaxel (6.0 mg/ml)	> 240	Paclitaxel (6.0 mg/ml)	> 240	
	Thiotepa (10.0 mg/ml)	37.8	Thiotepa (10.0 mg/ml)	67.2	
	Vincristine Sulfate (1.0 mg/ml)	> 240	Vincristine Sulfate (1.0 mg/ml)	> 240	
	Oncovin (1.0 mg/ml)	> 240	Oncovin (1.0 mg/ml)	> 240	
	Vinorelbine, 10.0 mg/ml	> 240	Vinorelbine, 10.0 mg/ml	> 240	
	Fentanyl Citrate, 100.0 mcg/2ml	> 240	Fentanyl Citrate, 100.0 mcg/2ml	> 240	

<b>Characteristics and Parameters</b>	<b>Subject Device</b>	<b>Predicate Device (K200581)</b>	<b>Discussion</b>
<b>Color</b>	Fusion Colour	Blue	Different
<b>Design</b>	<ul style="list-style-type: none"> <li>• Single Use</li> <li>• Non-sterile</li> <li>• Powder-Free</li> <li>• Ambidextrous</li> </ul>	<ul style="list-style-type: none"> <li>• Single Use</li> <li>• Non-sterile</li> <li>• Powder-Free</li> <li>• Ambidextrous</li> </ul>	Similar
<b>Sterility</b>	Non-sterile	Non-sterile	Same
<b>Freedom from holes</b>	Meets ASTM D5151-19: AQL 1.5	Meets ASTM D5151-06(2015): AQL 1.5	Similar
<b>Length</b>	Meets ASTM D6319-19: XS: $\geq 220$ mm S: $\geq 220$ mm M: $\geq 230$ mm L: $\geq 230$ mm XL: $\geq 230$ mm	Meets ASTM D6319-10(2015): $\geq 230$ mm	Similar

<b>Characteristics and Parameters</b>	<b>Subject Device</b>	<b>Predicate Device (K200581)</b>	<b>Discussion</b>
<b>Width</b>	Meets ASTM D6319-19: XS: 60 - 80 mm S: 70 - 90 mm M: 85 - 105 mm L: 100 - 120 mm XL: 110 - 130 mm	Meets ASTM D6319-10(2015): XS: 60 - 80 mm S: 70 - 90 mm M: 85 - 105 mm L: 100 - 120 mm XL: 110 - 130 mm	Similar
<b>Thickness</b>	Meets ASTM D6319-19: Palm Thickness: $\geq 0.05$ mm Finger Thickness: $\geq 0.05$ mm	Meets ASTM D6319-10(2015): Palm Thickness: $\geq 0.05$ mm Finger Thickness: $\geq 0.05$ mm	Similar
<b>Physical Properties</b>	Meets ASTM D6319-19: Tensile Strength Before Aging: $\geq 14$ MPa Tensile Strength After Aging: $\geq 14$ MPa Ultimate Elongation Before Aging: $\geq 500$ % Ultimate Elongation After Aging: $\geq 400$ %	Meets ASTM D6319-10(2015): Tensile Strength Before Aging: $\geq 14$ MPa Tensile Strength After Aging: $\geq 14$ MPa Ultimate Elongation Before Aging: $\geq 500$ % Ultimate Elongation After Aging: $\geq 400$ %	Similar
<b>Powder residual</b>	Meets ASTM D6124-06 (2017): Residual Powder: $\leq 2$ mg per glove	Meets ASTM D6124-06 (2017): Residual Powder: $\leq 2$ mg per glove	Similar
<b>In vitro Cytotoxicity ISO 10993-5</b>	The neat extract was found to be cytotoxic	NA	Different
<b>Dermal Sensitization ISO 10993-10</b>	Under the conditions of the study, the device is not a sensitizer	Under the conditions of the study, the device is not a sensitizer	Similar

<b>Characteristics and Parameters</b>	<b>Subject Device</b>	<b>Predicate Device (K200581)</b>	<b>Discussion</b>
<b>Acute Systemic Toxicity Test ISO 10993-11</b>	Under the conditions of this study, the device showed no evidence of acute systemic toxicity	Under the conditions of this study, the device showed no evidence of acute systemic toxicity	Similar
<b>Primary Skin Irritation ISO 10993-23</b>	Under the conditions of the study, the device is not an irritant	Under the conditions of the study, the device is not an irritant	Similar
<b>Shelf-Life Expiry ASTM D7160-16</b>	3 years	3 years	Identical

## SUMMARY OF NON-CLINICAL TESTING:

Provided are the test methodology used to demonstrate whether the subject device met the acceptance criteria in each respective standard.

- Biodegradability is not a medical claim and therefore was not reviewed by FDA.
- **ASTM D6319-19** Standard Specification for Nitrile Examination Gloves for Medical Application
- **ASTM D5151-19** Standard Test Method for Detection of Holes in Medical Gloves
- **ASTM D6124-06** (Reapproved 2017) Standard Test Method for Residual Powder on Medical Gloves
- **ASTM D6978-05** (Reapproved 2019) Standard Practice for Assessment of Resistance of Medical Gloves to Permeation by Chemotherapy Drugs
- **ISO 10993-5** Biological evaluation of medical devices – Part 5: Tests for in vitro cytotoxicity
- **ISO 10993-10** Biological evaluation of medical devices - Part 10: Tests for skin sensitization
- **ISO 10993-11** Biological evaluation of medical devices - Part 11: Tests for systemic toxicity
- **ISO 10993-23** Biological evaluation of medical devices - Part 23: Tests for irritation
- **ASTM D7160-16** Standard Practice for Determination of Expiration Dating for Medical Gloves

### Physical Characteristics

Test Methodology/ Standards	Acceptance Criteria of the Standards		Result Summary			
<b>Dimensions</b>  ASTM D6319-19 Standard Specification for Nitrile Examination Gloves for Medical Application	<b>Size</b>	<b>Length (mm)</b>	<b>Width (mm)</b>	Meets ASTM D6319-19 requirements for length, and width. Similar to predicate device.		
		XS	Min 220	70 ± 10	<b>Size</b>	<b>Average Length (mm)</b>
	S	Min 220	80 ± 10	<b>XS</b>	240	76
	M	Min 230	95 ± 10	<b>S</b>	242	86
	L	Min 230	110 ± 10	<b>M</b>	239	97
	XL	Min 230	120 ± 10	<b>L</b>	246	107
			<b>XL</b>	245	114	
<b>Dimensions</b>  ASTM D6319-19 Standard Specification for Nitrile Examination Gloves for Medical Application	<b>Thickness (mm)</b>		Meets ASTM D6319-19 requirements for thickness. Similar to predicate device			
	Palm	Minimum 0.05	<b>Size</b>	<b>Average Palm Thickness (mm)</b>	<b>Average Finger Thickness (mm)</b>	
	Finger	Minimum 0.05	<b>XS</b>	0.05	0.08	
			<b>S</b>	0.05	0.08	
			<b>M</b>	0.06	0.08	
			<b>L</b>	0.06	0.08	
		<b>XL</b>	0.06	0.08		

<p><b>Physical Properties</b></p> <p>ASTM D6319-19 Standard Specification for Nitrile Examination Gloves for Medical Application</p>	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Before Aging</th> <th>After Aging</th> </tr> </thead> <tbody> <tr> <td>Tensile Strength</td> <td>Min 14 MPa</td> <td>Min 14 MPa</td> </tr> <tr> <td>Ultimate Elongation</td> <td>Min 500%</td> <td>Min 400%</td> </tr> </tbody> </table>	Parameter	Before Aging	After Aging	Tensile Strength	Min 14 MPa	Min 14 MPa	Ultimate Elongation	Min 500%	Min 400%	<p>Meets ASTM D6319-19 requirements for tensile strength and elongation at break before and after accelerated aging. Similar to predicate device.</p> <p><b>Before Age</b> <b>Tensile Strength (MPa)</b> Average 35 <b>Elongation at Break (%)</b> Average 565</p> <p><b>After Age</b> <b>Tensile Strength (MPa)</b> Average 36 <b>Elongation at Break (%)</b> Average 469</p>
Parameter	Before Aging	After Aging									
Tensile Strength	Min 14 MPa	Min 14 MPa									
Ultimate Elongation	Min 500%	Min 400%									
<p><b>Freedom from holes</b></p> <p>ASTM D5151-19 Standard Test Method for Detection of Holes in Medical Gloves</p> <p>ASTM D6319-19 Standard Specification for Nitrile Examination Gloves for Medical Application</p>	<p>AQL 2.5</p>	<p>Meets ASTM D6319-19 and ASTM D5151-19 requirements of AQL 2.5. Similar to predicate device.</p> <p>Inspection Level G1 AQL Level 1.5</p> <p>Although pass at AQL 1.5 quality level, it complies with ASTM D6319-19 and ASTM D5151-19 requirements of AQL 2.5</p>									
<p><b>Powder residual</b></p> <p>ASTM D6124-06(2017) Standard Test Method for Residual Powder on Medical Gloves</p> <p>ASTM D6319-19 Standard Specification for Nitrile Examination Gloves for Medical Application</p>	<p>Powder Free; ≤ 2 mg per glove</p>	<p>Meets ASTM D6319-19 and ASTM D6124-06 (2017) requirements for Powder Free; ≤ 2 mg per glove. Similar to predicate device.</p> <p>Average 0.14 mg/glove</p>									

<b>Chemotherapy Drugs Permeation</b>  ASTM D6978-05(2019) Standard Practice for Assessment of Resistance of Medical Gloves to Permeation by Chemotherapy Drugs	Under the conditions of the study, the permeation is acceptable.																																																		
		<table border="1"> <thead> <tr> <th>Chemotherapy Drug and Concentration</th> <th>Minimum Breakthrough Detection Time in Minutes</th> </tr> </thead> <tbody> <tr><td>5- Azacytidine, 25.0 mg/ml</td><td>&gt; 240</td></tr> <tr><td>Carboplatin, 10.0 mg/ml</td><td>&gt; 240</td></tr> <tr><td>Carmustine (3.3 mg/ml)</td><td>12.1</td></tr> <tr><td>Cisplatin (1.0 mg/ml)</td><td>&gt; 240</td></tr> <tr><td>Cyclophosphamide (20.0 mg/ml)</td><td>&gt; 240</td></tr> <tr><td>Dacarbazine (10.0 mg/ml)</td><td>&gt; 240</td></tr> <tr><td>Docetaxel, 10.0 mg/ml</td><td>&gt; 240</td></tr> <tr><td>Doxorubicin HCL (2.0 mg/ml)</td><td>&gt; 240</td></tr> <tr><td>Epirubicin HCL, 2.0 mg/ml</td><td>&gt; 240</td></tr> <tr><td>Etoposide (20.0 mg/ml)</td><td>&gt; 240</td></tr> <tr><td>Fluorouracil (50.0 mg/ml)</td><td>&gt; 240</td></tr> <tr><td>Gemcitabine, 38.0 mg/ml</td><td>&gt; 240</td></tr> <tr><td>Ifosfamide, 50.0 mg/ml</td><td>&gt; 240</td></tr> <tr><td>Irinotecan, 20.0 mg/ml</td><td>&gt; 240</td></tr> <tr><td>Methotrexate (25.0 mg/ml)</td><td>&gt; 240</td></tr> <tr><td>Mitomycin C (0.5 mg/ml)</td><td>&gt; 240</td></tr> <tr><td>Mitoxantrone, 2.0 mg/ml</td><td>&gt; 240</td></tr> <tr><td>Oxaliplatin, 5.0 mg/ml</td><td>&gt; 240</td></tr> <tr><td>Paclitaxel (6.0 mg/ml)</td><td>&gt; 240</td></tr> <tr><td>Thiotepa (10.0 mg/ml)</td><td>37.8</td></tr> <tr><td>Vincristine Sulfate (1.0 mg/ml)</td><td>&gt; 240</td></tr> <tr><td>Oncovin (1.0 mg/ml)</td><td>&gt; 240</td></tr> <tr><td>Vinorelbine, 10.0 mg/ml</td><td>&gt; 240</td></tr> <tr><td>Fentanyl Citrate, 100.0 mcg/2ml</td><td>&gt; 240</td></tr> </tbody> </table>	Chemotherapy Drug and Concentration	Minimum Breakthrough Detection Time in Minutes	5- Azacytidine, 25.0 mg/ml	> 240	Carboplatin, 10.0 mg/ml	> 240	Carmustine (3.3 mg/ml)	12.1	Cisplatin (1.0 mg/ml)	> 240	Cyclophosphamide (20.0 mg/ml)	> 240	Dacarbazine (10.0 mg/ml)	> 240	Docetaxel, 10.0 mg/ml	> 240	Doxorubicin HCL (2.0 mg/ml)	> 240	Epirubicin HCL, 2.0 mg/ml	> 240	Etoposide (20.0 mg/ml)	> 240	Fluorouracil (50.0 mg/ml)	> 240	Gemcitabine, 38.0 mg/ml	> 240	Ifosfamide, 50.0 mg/ml	> 240	Irinotecan, 20.0 mg/ml	> 240	Methotrexate (25.0 mg/ml)	> 240	Mitomycin C (0.5 mg/ml)	> 240	Mitoxantrone, 2.0 mg/ml	> 240	Oxaliplatin, 5.0 mg/ml	> 240	Paclitaxel (6.0 mg/ml)	> 240	Thiotepa (10.0 mg/ml)	37.8	Vincristine Sulfate (1.0 mg/ml)	> 240	Oncovin (1.0 mg/ml)	> 240	Vinorelbine, 10.0 mg/ml	> 240	Fentanyl Citrate, 100.0 mcg/2ml
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**Biocompatibility**

Test Methodology/ Standards	Acceptance Criteria of the Standards	Result Summary
<b>In Vitro Cytotoxicity</b>  ISO 10993-5:2009 Biological evaluation of medical devices — Part 5: Tests for in vitro cytotoxicity	Under the conditions of the study, the device is not cytotoxic	Under the conditions of the study, the device to be found have cytotoxic effect
<b>Dermal Sensitization</b>  ISO 10993-10:2021 Biological evaluation of medical devices — Part 10: Tests for skin sensitization	Under the conditions of the study, the device is not a sensitizer	Under the conditions of the study, the device is not a sensitizer.

<p><b>Primary Skin Irritation</b></p> <p>ISO 10993-23:2021 Biological evaluation of medical devices — Part 10: Tests for irritation and skin sensitization</p>	<p>Under the conditions of the study, the device is not an irritant</p>	<p>Under the conditions of the study, the device is not an irritant.</p>
<p><b>Acute Systemic Toxicity</b></p> <p>ISO 10993-11:2017 Biological evaluation of medical devices — Part 11: Tests for systemic toxicity</p>	<p>Under the conditions of the study, the device does not pose a toxicity concern</p>	<p>Under the conditions of the study, there was no signs of toxicity.</p>

**CLINICAL PERFORMANCE DATA:**

Not applicable. There was no clinical data required to support the subject device as the indication for use is equivalent to the predicate devices.

**CONCLUSION:**

The conclusion drawn from the non-clinical tests demonstrates that the subject device herein mentioned is as safe, effective, and performs as well as or better than the legally marketed predicate device (K200581).