

JUN 23 1999

K991746

APPENDIX H

510(k) SUMMARY
SUMMARY OF THE SAFETY AND EFFECTIVENESS FOR
ROYAL SHIELD POWDER FREE LATEX EXAMINATION GLOVES
WITH PINEAPPLE SCENT AND PROTEIN CONTENT LABELING

Contact person : Ong Lay Mau

This summary of safety and effectiveness information is being submitted in accordance with the requirements of SMDA 1990.

Device Information:

Trade Name - ROYAL SHIELD POWDER FREE LATEX EXAM GLOVES

Common Name - Exam gloves

Classification Name - Patient examination glove (per 21 CFR 880.6250)

Classification Information - Class I latex patient examination glove 80LYY, powder free and meeting all the requirements of ASTM-D3578-95 Standard Specification for Latex Examination Gloves for Medical Application.

Device Description:

Class I latex patient examination gloves 80LYY, powder free and meeting all the requirements of ASTM-D3578-95 Standard Specification for Latex Examination Gloves for Medical Application.

Intended Use of Device:

A medical glove to be worn on the hand of the health care and similar personnel to prevent contamination between health care personnel and patient.

Technological Characteristics of Device:

1. Dimension

DIMENSION	ASTM D3578-95	ROYAL SHIELD
X-Small	70 mm +/- 10 mm	70 - 75 mm
Small	80 mm +/- 10mm	80 - 85 mm
Medium	95 mm +/- 10mm	90 - 97 mm
Large	111mm +/- 10mm	105 - 111 mm
Length	230 mm minimum for all sizes	242mm
Thickness - Finger Palm	0.08mm min 0.08mm min	0.08 mm min 0.08 mm min

2. Physical Properties (ASTM-D3578-95 Standard Specification for Latex Exam Gloves)

	TENSILE STRENGTH		ULTIMATE ELONGATION	
	ASTM-D3578-95	SHIELD's	ASTM-D3578-95	SHIELD's
Before Aging	14.0 Mpa min	21.0 Mpa	700 %	800%
After Aging 22 hrs @100C	14.0 Mpa min	16.0 Mpa	500%	750%

3. Water Tight Test

Using the FDA specified 1,000 ml water leak test, 80 pieces of each size of the gloves were tested and our results are as given below:

BATCH #	SIZE	SAMPLE SIZE	LEAK STATUS	NUMBER LEAKED
9903031019	X-Small	200	Yes	2
9903222024	Small	200	Yes	2
9904011027	Medium	200	Yes	1
9903162023	Large	200	Yes	4

The above figures are within the FDA/ ASTM requirements for latex exam gloves of 4.0% AQL.

4. Biocompatibility

The test results below show that the gloves meet FDA biocompatibility requirements:

BIOCOMPATIBILITY TESTS	RESULTS
Primary Dermal Irritation Test	Not a primary irritant
Skin Sensitization Study	Not a sensitiser

5. Total Residual Powder Content & Presence of Cornstarch

TESTS	FDA INTERNAL REQUIREMENT	SHIELD's
Residual Powder Content per ASTM D 6124-97	2 mg/glove max	Range: 1.5-1.9mg/glove Mean : 1.7 mg/glove
Presence of Cornstarch	Negative	Negative

6. Residual Protein Level

TESTS	FDA ALLOWABLE LEVEL	CLAIMED LEVEL
ASTM D 5712-95	< 50 µg/g	< 50 µg/g Range: 27-33 Mean: 30

Conclusion:-

The data presented indicate that the Royal Shield Powder Free latex examination glove with Pineapple scent

1. meets/exceeds ASTM- D3578-95 Standard Specifications For Latex Examination Glove,
2. meets FDA pinhole requirements,
3. meets SHIELD's labeling claim of its being a powder free glove.
4. meets the protein labeling claim level at <50 µg/g

12.0 DUSTING OR DONNING POWDER

Contents for items 9.0 to 12.0 are similar to those contained in our previous submission and granted a 510(k) # K 953496 attached as APPENDIX C.

13.0 'POWDER-FREE GLOVES'

APPENDIX D-1 shows the Process Flow Chart, with the addition of a scenting step. There is also an optional step of lightly chlorinating the gloves during the washing stage as depicted in APPENDIX D-2, as well as a slight change of the polymer coating materials to the ones given as per APPENDICES D-3 AND D-4. All the rest of the process is as per previous submission.

15.0 WATER SOLUBLE PROTEIN LEVEL OF GLOVES WITH A PROTEIN LABELING CLAIM:

As per 510(k) # K953496 except that the sampling frequency is now at once a week per machine. APPENDIX E-1 show the consistency of the protein level while APPENDIX E-2 shows that scenting the glove does not change the protein content of the resultant glove at all.

17.0 COLOR or FLAVOR ADDITIVE

No color additive is used except for the titanium dioxide used in the basic formulation.

The Pineapple scent used is 258212 Pineapple Flavor, nature-identical, artificial.

Please refer to:-

APPENDIX -F Product Specification & MSDS

18.0 GLOVE BIOCOMPATIBILITY

We enclose the bio-compatibility data as per APPENDIX-G .

(a) Primary Dermal Irritation Test - Study # T99-0008-2

Result : Negative

Conclusion : Glove is considered not a primary dermal irritant.

(b) Skin Sensitization Study (BUEHLER) Study - Study # T99-0008-2 by CPTC

Result : negative

Conclusion : Glove is considered not a sensitiser.

19.0 Shelf Life Expiration Data:

For this particular version of gloves, there is as yet insufficient data to indicate an expiration date for the gloves.

21.0 SMDA 510 (K) REQUIREMENT

APPENDIX-H gives a summary of the safety and effectiveness information upon which the substantial equivalence determination is based.



Food and Drug Administration
9200 Corporate Boulevard
Rockville MD 20850

JUN 23 1999

Shield Gloves Manufacturer (M) Sdn. Bhd.
c/o Mr. E.J. Smith
Smith Associates
P.O. Box 4341
Crofton, MD 21114

Re: K991746
Trade Name: Royal Shield™ Powder Free Pineapple
Scented Latex Examination Gloves with
Protein Content Labeling Claim (50 micrograms or
less)
Regulatory Class: I
Product Code: LYY
Dated: May 10, 1999
Received: May 21, 1999

Dear Mr. Smith:

We have reviewed your Section 510(k) notification of intent to market the device referenced above and we have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to 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). You may, therefore, market the device, subject to the general controls provisions of the Act. 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.

If your device is classified (see above) into either class II (Special Controls) or class III (Pre-market Approval), it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 895. A substantially equivalent determination assumes compliance with the Good Manufacturing Practice for Medical Devices: General (GMP) regulation (21 CFR Part 820) and that, through periodic GMP inspections, the Food and Drug Administration (FDA) will verify such assumptions. Failure to comply with the GMP regulation may result in regulatory action.

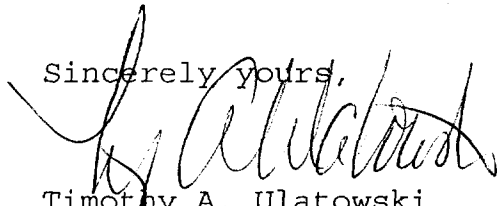
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In addition, FDA may publish further announcements concerning your device in the Federal Register. Please note: this response to your premarket notification submission does not affect any obligation you might have under sections 531 through 542 of the Act for devices under the Electronic Product Radiation Control provisions, or other Federal laws or regulations.

This letter will allow you to begin marketing your device as described in your 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801 and additionally 809.10 for in vitro diagnostic devices), please contact the Office of Compliance at (301) 594-4692. Additionally, for questions on the promotion and advertising of your device, please contact the Office of Compliance at (301) 594-4639. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR 807.97). Other general information on your responsibilities under the Act may be obtained from the Division of Small Manufacturers Assistance at its toll-free number (800) 638-2041 or (301) 443-6597 or at its internet address "<http://www.fda.gov/cdrh/dsmamain.html>".

Sincerely yours,



Timothy A. Ulatowski
Director
Division of Dental, Infection Control,
and General Hospital Devices
Office of Device Evaluation
Center for Devices and
Radiological Health

Enclosure

INDICATIONS FOR USE STATEMENT

Applicant: Shield Gloves Manufacturer (M) Sdn Bhd.

510K Number:

Device Name: Royal Shield Powder Free Latex Examination Gloves

Indications For Use :

Pineapple Scented

with Protein Content Labeling Claim (50 micrograms or less)

This is a medical glove to be worn on the hand of health care and similar personnel to prevent contamination between health care personnel and the patient.

.....
Concurrence of CDRH Office of Device Evaluation (ODE)

Prescription Use
Per 21 CFR 801.109

OR

Over-The-Counter. *X*.....

Chin S. Lim

(Division Sign-Off)
Division of Dental, Infection Control,
and General Hospital Devices

510(k) Number *1-991746*