

August 3, 2022

Solidence Surgical Corporation Morris Azad President 2251 San Diego Avenue, Suite B-257 San Fernando, California 91340

Re: K191131

Trade/Device Name: Solidence Multipockets

Regulation Number: 21 CFR 880.6850 Regulation Name: Sterilization Wrap

Regulatory Class: Class II

Product Code: FRG Dated: July 3, 2022 Received: July 7, 2022

#### Dear Morris Azad:

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 <a href="https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfpmn/pmn.cfm">https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfpmn/pmn.cfm</a> 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 <u>Federal Register</u>.

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

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devices or postmarketing safety reporting (21 CFR 4, Subpart B) for combination products (see <a href="https://www.fda.gov/combination-products/guidance-regulatory-information/postmarketing-safety-reporting-combination-products">https://www.fda.gov/combination-products/guidance-regulatory-information/postmarketing-safety-reporting-combination-products</a>); 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 <a href="https://www.fda.gov/medical-devices/medical-device-safety/medical-device-reporting-mdr-how-report-medical-device-problems">https://www.fda.gov/medical-device-problems</a>.

For comprehensive regulatory information about medical devices and radiation-emitting products, including information about labeling regulations, please see Device Advice (<a href="https://www.fda.gov/medical-devices/device-advice-comprehensive-regulatory-assistance">https://www.fda.gov/medical-devices/device-advice-comprehensive-regulatory-assistance</a>) and CDRH Learn (<a href="https://www.fda.gov/training-and-continuing-education/cdrh-learn">https://www.fda.gov/training-and-continuing-education/cdrh-learn</a>). 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 (<a href="https://www.fda.gov/medical-devices/device-advice-comprehensive-regulatory-assistance/contact-us-division-industry-and-consumer-education-dice">https://www.fda.gov/medical-devices/device-advice-comprehensive-regulatory-assistance/contact-us-division-industry-and-consumer-education-dice">https://www.fda.gov/medical-devices/device-advice-comprehensive-regulatory-assistance/contact-us-division-industry-and-consumer-education-dice</a>) for more information or contact DICE by email (<a href="DICE@fda.hhs.gov">DICE@fda.hhs.gov</a>) or phone (1-800-638-2041 or 301-796-7100).

Sincerely,

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** 

# DEPARTMENT OF HEALTH AND HUMAN SERVICES Food and Drug Administration

# Indications for Use

510(k) Number (if known)

Form Approved: OMB No. 0910-0120 Expiration Date: 06/30/2023

Expiration Date: 06/30/2023 See PRA Statement below.

X191131				
Device Name	_			
Solidence Multipockets				
ndications for Use (Describe)				
The Solidence Multipockets is a sterilization pouch intended to provide dentists with an effective method to enclose stainless steel dental burs of up to 0.5 grams intended for sterilization in steam autoclaves. The validated gravity steam				
sterilization cycle parameters are 10 minutes at 275°F (135°C), 30 minutes drying time, with a maximum weight of 18				
grams, with no more than one bur in each pocket. The sterilization pockets maintain the sterility of the enclosed devices for one year post sterilization.				
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 K191131

## **DATE PREPARED** Aug 1, 2022

## **MANUFACTURER AND 510(k) OWNER**

Solidence Surgical Corporation

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## REPRESENTATIVE/CONSULTANT

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#### **DEVICE INFORMATION**

Proprietary Name/Trade Name: Solidence Multipockets
Common Name: Wrap, Sterilization
Regulation Number: 21 CFR 880.6850

Class: II
Product Code: FRG

## PREDICATE DEVICE IDENTIFICATION

Proprietary Name/Trade Name: BH Sterilization Pouch

510(k) Number: 172280 Product Code: FRG

Manufactured by: BH Medical Products Co., Ltd.

No.90 Shenjiang Villagers' group, Zhangjiacunwei, Xilin Street,

Zhonglou District, Changzhou City, Jiangsu Province,

People's Republic of China

## **DEVICE DESCRIPTION**

The Solidence Multipockets is a single use sterilization pouch that features 36 pockets, designed to be used by dentists to enclose small medical devices intended for sterilization in steam autoclaves. The design of the Solidence Multipockets allows the dentists to sterilize 36 dental burs individually, using one sterilization pouch. Each pocket can then be opened independently, without compromising the sterility of the items contained in the other pockets of the sterilization pouch.

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## **INDICATIONS FOR USE**

The Solidence Multipockets is a sterilization pouch intended to provide dentists with an effective method to enclose stainless steel dental burs of up to 0.5 grams intended for sterilization in steam autoclaves. The validated gravity steam sterilization cycle parameters are 10 minutes at 275°F (135°C), 30 minutes drying time, with a maximum weight of 18 grams, with no more than one bur in each pocket. The sterilization pockets maintain the sterility of the enclosed devices for one year post sterilization.

#### **COMPARISON OF TECHNOLOGICAL CHARACTERISTICS**

**Table 1** – Substantial Equivalence Summary

	Predicate Device	Subject Device	Comparison
	BH Medical Products Co., Ltd.	Solidence Surgical Corp.	-
	BH Sterilization Pouch	Solidence Multipockets	
	K172280	K191131	
Product Code	FRG	FRG	Same
Indications For	The BH sterilization pouch is intended to	The Solidence Multipockets is a	Different
Use	provide dentists with an effective	sterilization pouch intended to provide	
	method to enclose devices intended for	dentists with an effective method to	
	sterilization in steam autoclaves. The	enclose stainless steel dental burs of	
	recommended pre- vacuum steam	up to 0.5 grams intended for	
	sterilization cycle parameters are 4	sterilization in steam autoclaves. The	
	minutes at 132°C (270°F). The	validated gravity steam sterilization	
	sterilization pouch maintains the	cycle parameters are 10 minutes at	
	enclosed devices up until 180 days post	275°F (135°C), 30 minutes drying time,	
	sterilization. Lastly, the pouch's external	with a maximum weight of 18 grams,	
	chemical ink indicators are designed to	with no more than one bur in each	
	indicate to the user that the pouch has	pocket. The sterilization pockets	
	undergone a steam sterilization process.	maintain the sterility of the enclosed	
	Only one instrument can be sterilized in	devices for one year post sterilization.	
	one pouch and only instruments that are		
	be metal, hinged, or knurled can be		
	sterilized in the pouch.		
Material	Medical Grade Paper, laminate film,	Polymeric laminate film (RPA-202 and	Different
Composition	polyurethane adhesive, Steam Process Indicator Print Ink	RPA-204)	
Sterilization	Pre-vacuum steam sterilization:	Gravity steam sterilization:	Different
Parameters	4 minutes at 132°C (270°F).	10 minutes at 275°F (135°C), 30	
	,	minutes drying time	
Process Indicator	Yes	No No	Different
Design	The pouches are made from a medical	The Solidence Multipockets is	Different
	grade paper and plastic film that is heat		
	sealed on three sides. The fourth side	film that are heat sealed together to	
	has an adhesive strip that is used to	form 36 pockets. The design of the	
	seal the paper to the film prior to	Solidence Multipockets allows the	
	sterilization of the enclosed medical	dentist to sterilize 36 items	
	device. The medical grade paper	individually, using one sterilization	
	conforms to recognized material	sheet. Each pocket can then be	
	standards and can be steam sterilized.	opened independently, without	

	The process indicator ink printed on the medical paper will exhibit a color change after the pouch is exposed to	compromising the sterility of the items enclosed in the other pockets of the sterilization sheet.	
	steam sterilization.	of the stermzation sheet.	
Usage Single use		Single use	Same
Configurations /	Single pouch configuration:	Multiple pockets on one sheet.	Different
Dimensions	#990613: 110 mm x 300 mm	Sheet dimensions: 265 mm x 308 mm	
	#990616: 90 mm x 230 mm	Pockets dimensions: 25 mm x 40 mm	
	#990617: 135 mm x 260 mm		
	#990618: 190 mm x 330 mm		
Shelf Life	2 years	5 years	Different
Maintenance of	180 days	1 year	Different
Sterility			
Biocompatibility	Under the conditions of the testing,	Under the conditions of the testing,	Same
	noncytotoxic	non-cytotoxic	

## **SUMMARY OF NON-CLINICAL TESTING**

The following tests were performed to demonstrate safety based on current industry standards:

Test	Purpose	Acceptance Criteria	Result
Sterilization efficacy	Demonstrate	No growth	Pass
half cycle sterilization	adequate sterilization		
	performance		
Full cycle sterilization	Demonstrate	No growth	Pass
	adequate sterilant		
	penetration		
Drying time	Demonstrate	The mass of the device	Pass
	adequate drying	after sterilization shall	
	performance	not be increased more	
		than 3%.	
ASTM 10993-5	Demonstrate pouch	Under the conditions of	Pass
	contact during	the testing,	
	sterilization will not	non-cytotoxic	
	produce a cytotoxic		
	effect in sterilized		
	devices		
ASTM F88 Seal	Demonstrate	Seal strength greater	Pass
Strength	adequate sealing	than 0.57 lbf/in	
	performance		
ASTM F1929 Dye	Demonstrate	No channels detected	Pass
Penetration	adequate resistance		
	to seal leakage		

Sterilant penetration per ISO 11138-1 Sterilization of health care products - Biological indicators - Part 1: General requirements

Package integrity and maintenance of package integrity per ASTM F88 Standard Test Method for Seal Strength of Flexible Barrier Materials and ASTM F1929 Standard Test Method for Detecting Seal Leaks in Porous Medical Packaging by Dye Penetration

Accelerated aging per ASTM F1980 Standard Guide for Accelerated Aging of Sterile Barrier Systems for Medical Devices

Biocompatibility per ISO 10993-1 *Biological evaluation of medical devices – Part 1:*Evaluation and testing within a risk management process

#### **SUMMARY OF CLINICAL TESTING**

No clinical testing was used in support of this submission.

## **CONCLUSION**

The conclusions drawn from the non-clinical testing demonstrate that the subject device, Solidence MultiPockets (K191131), is as safe, as effective, and performs as well as or better than the legally marketed predicate (K1712280).

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