

May 14, 2022

B.Braun Medical Inc.Tracy LarishSr. Regulatory Affairs Specialist901 Marcon Blvd.Allentown, Pennsylvania 18109

Re: K220626

Trade/Device Name: Introcan Safety IV Catheter Regulation Number: 21 CFR 880.5200 Regulation Name: Intravascular catheter Regulatory Class: Class II Product Code: FOZ Dated: April 13, 2022 Received: April 14, 2022

Dear Tracy Larish:

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 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 <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 <u>https://www.fda.gov/medical-devices/medical-device-safety/medical-device-reporting-mdr-how-report-medical-device-problems</u>.

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

Sincerely,

Payal Patel
Assistant Director
DHT3C: Division of Drug Delivery and General Hospital Devices, and Human Factors
OHT3: Office of GastroRenal, ObGyn, General Hospital and Urology Devices
Office of Product Evaluation and Quality
Center for Devices and Radiological Health

Enclosure

# Indications for Use

510(k) Number *(if known)* K220626

Device Name Introcan Safety® IV Catheter

#### Indications for Use (Describe)

Introcan Safety® IV Catheter is a passive anti-needle stick device to provide venous or arterial access for the infusion of fluids, drugs, and/or blood components, or to facilitate the placement of Vascular Access devices such as guidewires, indwelling central venous catheters, peripherally inserted central catheters, and midline catheters into the vascular system. The catheters may be used with power injectors at a maximum pressure of 325 psi with a luer lock connection only.

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 - K220626

#### **SUBMITTER INFORMATION:**

B. Braun Medical Inc.
901 Marcon Boulevard
Allentown, PA 18109-9341
610-266-0500, ext. 2966
Tracy Larish, Sr. Regulatory Affairs Specialist
(484) 375-9064
tracy.larish@bbraunusa.com
March 2, 2022

#### **DEVICE NAME:**

Device Trade Name:	Introcan Safety® IV Catheter
Common Name:	Catheter, Intravascular, Therapeutic, Short-Term Less
	Than 30 Days
Classification Name:	Intravascular Catheter, 21 CFR §880.5200: Class II,
	Product code FOZ

#### **PREDICATE DEVICES:**

• K020785 Introcan Safety® IV Catheter, B. Braun Medical, Inc.

# **DEVICE DESCRIPTION**

The Introcan Safety<sup>®</sup> IV Catheter is a passive needle stick prevention device used for arterial and venous access for the infusion of fluids, drugs and/or blood components or to facilitate the placement of Vascular Access devices such as guidewires, indwelling central venous catheters, peripherally inserted central catheters, and midline catheters into the vascular system. The catheters may be used with power injectors for which the maximum pressure setting is 325 psi. The Introcan Safety IV Catheter is available in 14 - 24 gauge sizes, and both winged and non-winged versions and consists of an over-the-needle, peripheral intravascular catheter made of radiopaque polyurethane, and a passive safety needle-shielding mechanism.

The passive safety needle-shielding mechanism of the Introcan Safety® IV Catheter is located inside the catheter hub. Upon withdrawal of the needle, the safety shield engages as the needle passes through the catheter hub and deploys automatically to shield the needle tip. The safety shield protects during disposal, aiding in the prevention of needlestick injuries. Once the safety shield engages and shields the needle tip, the user is unable to re-insert the needle which aids in the prevention of catheter shearing.

This device may be used for any patient population with consideration given to adequacy of vascular anatomy and appropriateness for the solution being infused and duration of therapy. The catheters may be used with power injectors with a maximum pressure setting is 325 psi with a luer lock connection only.

# **INTENDED USE:**

The Introcan Safety® IV Catheter is for short term use to sample blood, monitor blood pressure or administer fluids and blood intravascularly or to facilitate the placement of Vascular Access devices such as guidewires, indwelling central venous catheters, peripherally inserted central catheters, and midline catheters into the vascular system.

## **INDICATIONS FOR USE:**

Introcan Safety® IV Catheter is a passive anti-needle stick device to provide venous or arterial access for the infusion of fluids, drugs, and/or blood components, or to facilitate the placement of Vascular Access devices such as guidewires, indwelling central venous catheters, peripherally inserted central catheters, and midline catheters into the vascular system. The catheters may be used with power injectors at a maximum pressure of 325 psi with a luer lock connection only.

# **TECHNOLOGICAL CHARACTERISTICS:**

The proposed Introcan Safety® IV Catheter is substantially equivalent to the predicate Introcan Safety® IV Catheters in terms of indications for use, intended use, general design, functional performance and materials of construction. The materials of the final sterilized device are identical to the currently marketed Introcan Safety® IV Catheter in formulation, processing, and sterilization, and no other chemicals have been added. The Introcan Safety device includes the identical design as the predicate and does not raise any new issues of safety and effectiveness.

The difference between the proposed and predicate Introcan Safety® IV Catheter device do not impact substantial equivalence and are listed below:

- Power injection capabilities were tested to higher pressure injections rates to meet 325psi for all gauge sizes
- Combined the indications for use of the same device to allow one 510(k) to cover the full product offering.
- Instructions for Use revised to update the power injection capabilities, align with the rest of the Introcan product family and utilize an e-IFU.

	Proposed Device	Reference Device(K021094)	Predicate Device(K020785)	Comparison
	Introcan Safety® IV Catheter	Introcan Safety® IV Catheter	Introcan Safety® IV	
			Catheter	
		The Introcan Safety <sup>™</sup> IV Catheter is		Difference:
Use:	passive anti-needle stick device to	a passive anti-needle stick device to	devices for venous or arterial	Allsizes to
	provide venous or arterial access	provide venous or arterial access for	access for the infusion of	max pressure
	for the infusion of fluids, drugs,	the infusion of fluids, drugs, and/or	fluids, drugs, and/or blood	injection of
			components. 14 - 22 gauge	325psi.
	facilitate the placement of	the placement of Vascular Access	catheters may be used with	Combines
			power injectors for which the	indications
			maximum pressure setting is	for use and
	venous catheters, peripherally	peripherally inserted central	300 psi.	adds with a
	inserted central catheters, and	catheters, and midline catheters into	-	luer lock
	midline catheters into the vascular	the vascular system.		connection
	system. The catheters may be used			only to align
	with power injectors at a			the Introcan
	maximum pressure of 325 psi			product
	with a luer lock connection only.			family

	Proposed Device Introcan Safety® IV Catheter	Reference Device(K021094) Introcan Safety® IV Catheter	Predicate Device(K020785) Introcan Safety® IV Catheter	Comparison
Configuration	Single Lumen, Tapered Tip	Single Lumen, Tapered Tip	Single Lumen, Tapered Tip	Same
Material Composition	Catheter Tube: Polyurethane/FEP Catheter Hub: Polypropylene [Needle: Stainless steel [Needle Hub: MABS Safety Clip: Stainless steel	Catheter Tube: Polyurethane or FEP Catheter Hub: Polypropylene Needle: Stainless steel Needle Hub: MABS Safety Clip: Stainless steel	Catheter Hub: Polypropylene Needle: Stainless steel [Needle Hub: MABS Safety Clip: Stainless steel	Same
Catheter Gauge Sizes	14ga-24ga	14ga-24ga	14ga-24ga	Same
Catheter length	9/16" (14mm)=2 ½" (64mm)	9/16" (14mm)=2 ½" (64mm)	9/16" (14mm)-2 ½" (64mm)	-
Gravity Flow Rate	$14ga x 45mm (1^{3}/4")$ $345mL/min$ $14ga x 50mm (2")$ $345 mL/min$ $16ga x 32mm(1^{1/4})$ $215 mL/min$ $16ga x 32mm(1^{1/4})$ $215 mL/min$ $16ga x 32mm(1^{1/4})$ $215 mL/min$ $18ga x 32 mm (1^{1/4})$ $105 mL/min$ $18ga x 32 mm (1^{1/4})$ $105 mL/min$ $18ga x 32 mm (1^{1/4})$ $105 mL/min$ $18ga x 45 mm (1^{3/4})$ $95 mL/min$ $18ga x 50 mm (2")$ $95 mL/min$ $18ga x 64 mm (2^{1/2})$ $85 mL/min$ $20ga x 25 mm (1")$ $65 mL/min$ $20ga x 32 mm (1^{1/4"})$ $60 mL/min$ $20ga x 45mm (1^{3/4"})$ $57 mL/min$ $20ga x 50 mm (2")$ $55 mL/min$ $20ga x 64 mm (2^{1/2"})$ $51 mL/min$ $22ga x 25 mm (1")$ $51 mL/min$ $22ga x 45mm (1^{3/4"})$ $26 mL/min$ $22ga x 64mm (2^{1/2"})$ $24 mL/min$ $24ga x 19 mm(^{3/4"})$ $20 mL/min$ $24ga x 32 mm (1^{1/4"})$ $17 mL/min$	$14ga \times 32mm (1^{14^m})$ 350 mL/min $14ga \times 45mm (1^{3/4"})$ 345mL/min $14ga \times 50mm (2")$ 345 mL/min $16ga \times 32mm (1^{1/4"})$ 215 mL/min $16ga \times 32mm (2")$ 210 mL/min $16ga \times 32mm (1^{1/4"})$ 105 mL/min $16ga \times 32mm (1^{1/4"})$ 105 mL/min $18ga \times 32 mm (1^{1/4"})$ 105 mL/min $18ga \times 32 mm (1^{3/4"})$ 100 mL/min $18ga \times 45 mm (2")$ 95 mL/min $18ga \times 50 mm (2")$ 95 mL/min $20ga \times 50 mm (2")$ 95 mL/min $20ga \times 25 mm (1")$ 65 mL/min $20ga \times 32 mm (1^{1/4"})$ 60 mL/min $20ga \times 45mm (1^{3/4"})$ 57 mL/min $20ga \times 50 mm (2")$ 55 mL/min $20ga \times 64 mm (2^{1/2"})$ 51 mL/min $20ga \times 64 mm (2^{1/2"})$ 51 mL/min $22ga \times 45mm (1^{3/4"})$ 26 mL/min $22ga \times 64mm (2^{1/2"})$ 24 mL/min $24ga \times 14mm (^{916"})$ 26 mL/min $24ga \times 19 mm(^{3/4"})$ 17 mL/min         Flow rate as indicated on labeling.       Flow rate was not included in         original submission       16 mL/min <td>4ga x 32mm (<math>1^{1/4"}</math>)       350 mL/min         14ga x 45mm (<math>1^{3/4"}</math>)       345mL/min         14ga x 50mm (<math>2"</math>)       345 mL/min         16ga x 32mm (<math>1^{1/4"}</math>)       215 mL/min         16ga x 32mm (<math>2"</math>)       210 mL/min         18ga x 32mm (<math>1^{1/4"}</math>)       215 mL/min         18ga x 32mm (<math>1^{1/4"}</math>)       100 mL/min         18ga x 45 mm (<math>1^{3/4"}</math>)       100 mL/min         18ga x 50 mm (<math>2"</math>)       95 mL/min         18ga x 64 mm (<math>2/2"</math>)       85 mL/min         20ga x 25 mm (<math>1"</math>)       66 mL/min         20ga x 32 mm (<math>1^{1/4"}</math>)       60 mL/min         20ga x 32 mm (<math>1^{1/4"}</math>)       57 mL/min         20ga x 45mm (<math>1^{-3/4"}</math>)       57 mL/min         20ga x 50 mm (<math>2"</math>)       55 mL/min         20ga x 64 mm (<math>2^{1/2"}</math>)       51 mL/min         20ga x 64 mm (<math>2^{1/2"}</math>)       51 mL/min         22ga x 45mm (<math>1^{3/4"}</math>)       26 mL/min         22ga x 45mm (<math>1^{3/4"}</math>)       26 mL/min         24ga x 14mm (<math>^{916"}</math>)       26 mL/min         24ga x 19 mm(<math>3/4"</math>)       2 mL/min         24ga x 19 mm(<math>3/4"</math>)       2 mL/min         24ga x 32 mm (<math>1^{1/4"}</math>)       17 mL/min         Flow rate as indicated on       11abeling. Flow rate was not         includ</td> <td></td>	4ga x 32mm ( $1^{1/4"}$ )       350 mL/min         14ga x 45mm ( $1^{3/4"}$ )       345mL/min         14ga x 50mm ( $2"$ )       345 mL/min         16ga x 32mm ( $1^{1/4"}$ )       215 mL/min         16ga x 32mm ( $2"$ )       210 mL/min         18ga x 32mm ( $1^{1/4"}$ )       215 mL/min         18ga x 32mm ( $1^{1/4"}$ )       100 mL/min         18ga x 45 mm ( $1^{3/4"}$ )       100 mL/min         18ga x 50 mm ( $2"$ )       95 mL/min         18ga x 64 mm ( $2/2"$ )       85 mL/min         20ga x 25 mm ( $1"$ )       66 mL/min         20ga x 32 mm ( $1^{1/4"}$ )       60 mL/min         20ga x 32 mm ( $1^{1/4"}$ )       57 mL/min         20ga x 45mm ( $1^{-3/4"}$ )       57 mL/min         20ga x 50 mm ( $2"$ )       55 mL/min         20ga x 64 mm ( $2^{1/2"}$ )       51 mL/min         20ga x 64 mm ( $2^{1/2"}$ )       51 mL/min         22ga x 45mm ( $1^{3/4"}$ )       26 mL/min         22ga x 45mm ( $1^{3/4"}$ )       26 mL/min         24ga x 14mm ( $^{916"}$ )       26 mL/min         24ga x 19 mm( $3/4"$ )       2 mL/min         24ga x 19 mm( $3/4"$ )       2 mL/min         24ga x 32 mm ( $1^{1/4"}$ )       17 mL/min         Flow rate as indicated on       11abeling. Flow rate was not         includ	
	Gy thylene Oxide	Gyhylene Oxide	Ethylene Oxide	Same
Shelf-Life Power Injection	5 year 14ga-24ga may be used with r qwer injectors at a maximum r ressure of 325 psi	5 year None claimed	5 year 14-22g may be used with" r ower injectors at a maximum r ressure of 300 psi	Same Bench testing performed which demonstrated that the differences do not raise additional questions of safety and effectiveness

# NONCLINICAL TESTING

Bench testing performed on Introcan Safety® IV Catheters supports substantial equivalence of the proposed device. No clinical testing was performed as this device does not require clinical studies to demonstrate substantial equivalence with the predicate device. The following testing has been completed for the proposed devices:

- Power Injection test for flowrate and device pressure per ISO 10555-1 Section 4.10 AnnexG
- Test for burst pressure under static conditions per ISO 10555-1 Section 4.10 Annex F
   B Braun Medical Inc.

# **CONCLUSION:**

Results of the testing conducted on the proposed devices demonstrate that the Introcan Safety® IV Catheters are substantially equivalent to the predicate device and are as safe and effective as the predicate device.