

**510(k) Summary of Safety and Effectiveness**

**SUBMITTER:** Surgical Devices, a global business unit  
of Tyco Healthcare Group LP (d/b/a Covidien)  
60 Middletown Avenue  
North Haven, CT 06473

MAY 10 2010

**CONTACT PERSON:** Jennifer Brennan  
Manager, Regulatory Affairs  
Tel. No.: (203) 492-5346

**DATE PREPARED:** April 13, 2010

**TRADE/PROPRIETARY NAME:** V-Loc™ 90 Absorbable Wound Closure Device

**COMMON/USUAL NAME:** Synthetic Absorbable Suture

**CLASSIFICATION NAME:** Absorbable poly(glycolide/l-lactide) surgical suture

**PREDICATE DEVICE(S):** V-loc™ 180 Absorbable Wound Closure Device (K091087)  
Syneture™ Biosyn™ Synthetic Absorbable Suture (K000037)  
Quill™ Self-Retaining System (SRS) comprised of MONODERM™ (K072028)

**DEVICE DESCRIPTION:** The V-Loc™ 90 Absorbable Wound Closure Device is a suture prepared from a synthetic polyester (Glycomer™ 631) composed of glycolide, dioxanone and trimethylene carbonate. Each device has unidirectional barbs along the axis of the monofilament.

The V-Loc™ 90 Absorbable Wound Closure Device will be offered both Undyed (clear) and Dyed with D&C Violet No. 2 at a level not exceeding 0.2% by weight of the suture in sizes U.S.P. (EP) 4-0 (Metric 2.0) 3-0 (Metric 3), 2-0 (Metric 3.5) and 0 (Metric 4). They will be supplied in pre-cut lengths affixed to various needle types.

**INDICATIONS:** V-Loc™ 90 Absorbable Wound Closure Devices are indicated for soft tissue approximation where use of an absorbable suture is appropriate.

**TECHNOLOGICAL CHARACTERISTICS:** V-Loc™ 90 Absorbable Wound Closure Device is substantially equivalent to the predicate devices with regards to use in soft tissue approximation.

**MATERIALS:** All components of the V-Loc™ 90 Absorbable Wound Closure Device are comprised of materials that are in compliance with ISO standard 10993-1.

**PERFORMANCE DATA:** Performance testing was conducted to verify that the V-Loc™ 90 Absorbable Wound Closure Device is safe and effective and performs as intended. The following is a description of tests performed and associated conclusions:

- o In-vitro performance evaluation (bench testing)
  - Needle Attachment meets USP/EP specification.
  - Diameter (non-barbed suture) – Maximum Overage of USP/EP specification as stated in the Instructions for Use.
  - Tensile Strength (T=0, T=1 and T=2 straight pull evaluation)– Pass
  - Barb Holding Strength (T=0, T=1, and T=2 simulated barb holding of felt medium) - Pass
- o In-vivo performance evaluation
  - Product safety and efficacy in porcine model. Chronic 21 day study with biomechanical testing at T=0, T=3, T=10, and T=21 days to

compare the pull force of the sutured incision of the control (predicate – Quill™ SRS MONODERM and Biosyn™ suture) devices and test device. Results: No statistical differences in strength between the barbed control (Quill™ SRS MONODERM) and test devices. The non-barbed control (Biosyn™) was stronger than both the barbed control and test device at time points T=0 and T=3 days. No statistical differences in strength were observed between the non-barbed control and barbed devices at T=10 and T=21 days.

- Strength Loss evaluation in the rat model. Comparison of the degradation over 2 weeks of the non-barbed control (Biosyn™ suture) and the test device. The degradation of the V-loc™ 90 met the label claim of the Biosyn™ suture at T= 2 weeks, 75% of USP minimum knot pull specification. The additional data obtained at T=1 week was used to establish a strength loss specification of 90% USP minimum knot pull.



MAY 10 2010

Food and Drug Administration  
10903 New Hampshire Avenue  
Document Control Room - WO66-G609  
Silver Spring, MD 20993-0002

Surgical Devices, d/b/a Covidien  
% Ms. Jennifer Brennan  
Manager, Regulatory Affairs  
60 Middletown Avenue  
North Haven, Connecticut 06473

Re: K100257

Trade/Device Name: v-Loc™ 90 Absorbable Wound Closure Device  
Regulation Number: 21 CFR 878.4493  
Regulation Name: Absorbable poly(glycolide/L- lactide) surgical suture  
Product Code: GAM  
Dated: April 6, 2010  
Received: April 15, 2010

Dear Ms. Brennan:

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. 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); good manufacturing practice requirements as set

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forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please go to <http://www.fda.gov/AboutFDA/CentersOffices/CDRH/CDRHOffices/ucm115809.htm> for the Center for Devices and Radiological Health's (CDRH's) Office of Compliance. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to <http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm> for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address <http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm>.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Mark N. Melkerson", with a long horizontal flourish extending to the right.

Mark N. Melkerson  
Director  
Division of Surgical, Orthopedic  
and Restorative Devices  
Office of Device Evaluation  
Center for Devices and  
Radiological Health

Enclosure

K100257

### Indications For Use

510(k) Number (if known): \_\_\_\_\_

Device Name: V-Loc™ 90 Absorbable Wound Closure Device

Indications For Use:

V-Loc™ 90 Absorbable Wound Closure Device is indicated for soft tissue approximation where use of an absorbable suture is appropriate.

Prescription Use   X   AND/OR Over-The-Counter Use \_\_\_\_\_  
(Part 21 CFR 801 Subpart D) (21 CFR 801 Subpart C)

(PLEASE DO NOT WRITE BELOW THIS LINE - CONTINUE ON ANOTHER PAGE IF NEEDED)

Concurrence of CDRH, Office of Device Evaluation (ODE)

David Krone for MUM  
(Division Sign-Off)  
Division of Surgical, Orthopedic,  
and Restorative Devices

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