Traditional 510(k) enSpire<sup>™</sup> Discectomy System

# 510(k) Summary

This summary of 510(k) safety and effectiveness information is submitted in accordance with the requirements of SMDA 1990 and 21 CFR 807.92.

# A. Name, Address, Phone and Fax Number of Applicant

Spine View, Inc.

48810 Kato Road, Suite 100E

Fremont, CA 94538

Phone: (510) 623-1931

Fax: (510) 490-1753

#### B. Contact Person

Mbithi Muthini Director Quality and Regulatory (510) 743-5090 mmuthini@spineview.com

Alternate Contact:
Diana DeGregorio
Lincé Consulting
Regulatory Affairs Consultant
(925) 980-8047
dianadegregorio@comcast.net

## C. Date Prepared

April 7, 2011

#### D. Device Name

Trade Name:

enSpire<sup>™</sup> Discectomy System

Common Name:

Arthroscope & Accessory

Classification Name:

Arthroscope & Accessories (21 CFR §888.1100, Product

Code HRX)

#### E. Predicate Devices

The enSpire™ Discectomy System is substantially equivalent to the Spine View enSpire™ Debrider System cleared under K090278 on April 15, 2009.

Klloggz

# F. Device Description

The enSpire™ Discectomy System is a single-use discectomy device that is designed to cut and grind intervertebral disc material. An auger mechanism retrieves the excised debris and ejects it into a collection chamber.

The enSpire™ Discectomy System is supplied as a sterile, single patient use, disposable device.

#### G. Intended Use

The enSpire™ Discectomy System is intended for use in cutting, grinding and aspirating intervertebral disc material during discectomy procedures in the cervical, thoracic and lumbar spine.

# H. Technological Comparison

The enSpire™ Discectomy System has similar features as compared to the predicate devices in the table below.

Feature	Spine View, Inc.	Spine View, Inc.
	Spine View ENSPIRE™ Debrider System	enSpire™ Discectomy System
	K090278	K110992
Indications for Use	The Spine View. ENSPIRE™ Debrider is intended for use in cutting, grinding and aspirating intervertebral disc material during discectomy procedures in the cervical, thoracic and lumbar spine.	The enSpire™ Discectomy System is intended for use in cutting, grinding and aspirating intervertebral disc material during discectomy procedures in the cervical, thoracic and lumbar spine.
Product Code	HRX	HRX
	Arthroscope, 21CFR888.1100, Class II, (Debrider)	Arthroscope, 21CFR888.1100, Class II, (Debrider)
	NBH, Class I exempt (Introducer Cannula with Stylet)	NBH, Class I exempt (Introducer Cannula with Stylet)
Principal Operator	Physician	Physician
Use Location	Operating Room or Medical Suite	Operating Room or Medical Suite
Operating Principal	Percutaneous, endoscopic or open surgical Discectomy system with standard surgical accessories	Percutaneous, endoscopic or open surgical Discectomy system with standard surgical accessories
Functions of Included	Dilatation	Dilatation
Devices	Access	Access
	Excision	Excision
	Aspiration	Aspiration
Mechanics of Action	Percutaneous, endoscopic or open surgical Discectomy System with standard surgical accessories	Percutaneous, endoscopic or open surgical Discectomy System with standard surgical accessories
Target Anatomy	Intervertebral procedure	Intervertebral procedure
Design Features	Auger housed in a tube, with retractable cutting assembly (spiral	Auger housed in a tube, with retractable rotating cutting assembly (spiral wire or





Feature	Spine View, Inc.	Spine View, Inc.
	Spine View ENSPIRE™ Debrider System	enSpire™ Discectomy System
	K090278	K110992
	wire) on the distal end. It is driven by a battery-powered motor that is housed in a plastic handle at the proximal end of the device.  Cut debris can pass up the tube and	curette style cutter) on the distal end. It is driven by a battery-powered motor that is housed in a plastic handle at the proximal end of the device.  Cut debris can pass up the tube and into
	into the collection chamber located at the end of the auger. It is inserted into the surgical site either directly, via an introducer cannula or Arthroscope.  Working Shaft straight.	the collection chamber located at the end of the auger. It is inserted into the surgical site either directly, via an introducer cannula or Arthroscope.  Working shaft: straight, curved or articulating.
Tip Materials	Stainless Steel and Solder	PEEK, Aramid Fiber, Polyimide, Stainless Steel, and Tungsten
Sterile Packaging	The ENSPIRE™ Debrider System is placed onto a polyethylene card and sealed in a Tyvek/Mylar pouch. That pouch is placed into a whiteboard unit carton.	The enSpire™ Discectomy System is placed into a thermo formed tray with a thermoformed insert lid, and sealed with a Tyvek tray lid. The sealed tray is then placed in a labeled chip board shelf carton.
Sterilization Method	Electron Beam	Gamma
Biocompatible for Intended Use	Yes	Yes
Single use	Yes	Yes
Configuration	Straight	Straight, Curved, Articulating
Handle Design	Hand-held rotary device, in-line grip	Hand-held rotary device, in-line grip or pistol-grip
Profile	0.046" OD working shaft with tip 0.27" OD deployed, 0.052" OD unexpanded.	0.046-0.165" OD working shaft with tip 0.28-0.40" OD deployed, 0.058-0.22" OD unexpanded
Working Length	8 - 11" working length	2 - 22" working length
Energy Type	Mechanical	Mechanical
Power	Battery, 9V	Battery, 9V or 18V
Meets Applicable IEC60601-1 testing	Yes	Yes
User visualization/guidance	Direct visualization, fluoroscopic imaging or other imaging modalities.	Direct visualization, fluoroscopic imaging or other imaging modalities.

The technological characteristics and principals of operation of the enSpire™ Discectomy System are substantially equivalent to the named predicate device.

# I. Summary of Non-Clinical Data

The enSpire™ Discectomy System performance characteristics were evaluated in the following in-vitro bench studies:

- Tissue Removal
- Cannula Compatibility
- Enable Switch Durability
- Deployment & Retraction
- Working Shaft Length
- Device Durability
- Travel Limiter Attachment
- Travel Limiter
- Tensile Strength
- Articulation Function
- Articulation Angle
- Visualization
- Peak Temperature during Operation
- Tissue Volume/Material Removal
- No Breach of Annulus or Endplates

- Electromagnetic Compatibility and Electrical Safety
- · Packaging Testing
- · Shipping Testing
- · Sterility Testing
- · Shelf Life Testing
- Biocompatibility:
  - o Cytotoxicity
  - Sensitization
  - Irritation
  - Systemic Toxicity

Results of the pre-clinical testing demonstrate that the materials chosen, the manufacturing process, and design of the enSpire™ Discectomy System meet the established specifications necessary for consistent performance during its intended use. In addition, the testing demonstrates the enSpire™ Discectomy System is substantially equivalent to the named predicate.

## J. Summary of Data

The enSpire™ Discectomy System has been carefully compared to a legally marketed device with respect to intended use and technological characteristics. In addition, non-clinical testing was conducted to validate the performance of the device and ensure the enSpire™ Discectomy System performs as intended and meets the design specifications. The non-clinical performance testing and comparison to the predicate device demonstrate that the enSpire™ Discectomy System is substantially equivalent to the predicate device and does not raise new issues of safety or effectiveness.



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

OCT 2 1 2011

Spine View, Inc. % Mr. Mbithi Muthini Director, Quality and Regulatory 48810 Kato Road, Suite 100E Fremont, California 94538

Re: K110992

Trade/Device Name: enSpire <sup>™</sup> Discectomy System

Regulation Number: 21 CFR 888.1100

Regulation Name: Arthroscope

Regulatory Class: Class II

Product Code: HRX

Dated: September 20, 2011 Received: September 22, 2011

## Dear Mr. Muthini:

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 <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

# Page 2 - Mr. Mbithi Muthini

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 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 <a href="http://www.fda.gov/AboutFDA/CentersOffices/CDRH/CDRHOffices/ucm115809.htm">http://www.fda.gov/AboutFDA/CentersOffices/CDRH/CDRHOffices/ucm115809.htm</a> 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 <a href="http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm">http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm</a>.

Sincerely yours,

for Mark N. Melkerson

Director

Division of Surgical, Orthopedic and Restorative Devices Office of Device Evaluation Center for Devices and Radiological Health

Enclosure

# **Indications for Use Statement**

510(k) Number (if known): K K 110992	
Device Name: enSpire™ Discectomy System	
Indications for Use:	
The enSpire™ Discectomy System is intended for use intervertebral disc material during discectomy proced lumbar spine.	_ · · · · · · · · · · · · · · · · · · ·
,	
Prescription Use X OR (per 21 CFR 801.109)	Over-The-Counter Use
PLEASE DO NOT WRITE BELOW THIS LINE - CONTINU	E ON ANOTHER PAGE IF NEEDED
Concurrence of CDRH, Office of Device	Evaluation (ODE)
	Merif R Ozden for Mkm (Division Sign-Off) Division of Surgical, Orthopedic, and Restorative Devices  510(k) Number K 110992