



Food and Drug Administration
10903 New Hampshire Avenue
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Esaote S.p.A.
% Kelli Anderson, M.S.,
Regulatory Affairs Consultant
Navigant Consulting, Inc.
9001 Wesleyan Road, Suite 200
INDIANAPOLIS IN 46268

September 8, 2015

Re: K151668
Trade/Device Name: S-Scan
Regulation Number: 21 CFR 892.1000
Regulation Name: Magnetic resonance diagnostic device
Regulatory Class: II
Product Code: LNH
Dated: June 24, 2015
Received: June 25, 2015

Dear Ms. Anderson:

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 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 contact the Division of Industry and Consumer Education 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>. 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

<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 Industry and Consumer Education 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,

 For

Robert Ochs, Ph.D.
Director
Division of Radiological Health
Office of In Vitro Diagnostics
and Radiological Health
Center for Devices and Radiological Health

Enclosure

Indications for Use

510(k) Number (if known)

K151668

Device Name

S-Scan

Indications for Use (Describe)

S-scan is a Magnetic Resonance (MR) system that produces transversal, sagittal, coronal and oblique cross-section images of the limbs, joints and spinal column. It is intended for imaging portions of the upper limb, including the hand, wrist, forearm, elbow, arm and shoulder, imaging portions of the lower limb, including the foot, ankle, calf, knee, thigh and hip, imaging the temporomandibular joint and imaging the cervical, the thoracic and the lumbosacral sections as portions of the spinal column.

S-scan images correspond to the spatial distribution of protons (hydrogen nuclei) that determine magnetic resonance properties and are dependent on the MR parameters, including spinlattice relaxation time (T1), spin-spin relaxation time (T2), nuclei density, flow velocity and "chemical shift". When interpreted by a medical expert trained in use of MR equipment, the images can provide diagnostically useful information.

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)

PLEASE DO NOT WRITE BELOW THIS LINE – CONTINUE ON A SEPARATE PAGE IF NEEDED.

FOR FDA USE ONLY

Concurrence of Center for Devices and Radiological Health (CDRH) (Signature)

This section applies only to requirements of the Paperwork Reduction Act of 1995.

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Traditional 510(k) Summary

The following 510(k) summary has been prepared pursuant to requirements specified in 21CFR 807.92.

Submitter Information

Esaote S.p.A.
Via Siffredi 58
Genova, Italy 16153

Contact Person: Allison Scott
P: 317.228.8719
F: 317.228.8701
allison.scott@navigant.com

Date: August 27, 2015

Trade Name: S-Scan

Common Name: System, Nuclear Magnetic Resonance Imaging

Classification Name(s): Magnetic Resonance Diagnostic Device

Classification Number: 90LNH

Predicate Device(s)

Trade Name	Common Name	Class	Product Code	Owner	510(k)
S-Scan	System, Nuclear Magnetic Resonance Imaging;	Class II	LNH	Esaote S.P.A.	K131996
G-Scan	System, Nuclear Magnetic Resonance Imaging	Class II	LNH	Esaote S.P.A.	K142421

Device Description

The changes performed to S-scan, with respect to the cleared version – S-scan K131996 – are due to the improvement of the system performance. These modifications, which do not alter the fundamental scientific technology of the device, are the following and all have been cleared with G-scan Brio via K142421:

1. A new Bilateral TMJ Coil
2. Introduction of the thoracic spine section examination
3. A new software version including the following features:
 - Customization of Image Enhancement
 - Overlay sending to PACS
 - Isotropic 3D acquisition

Intended Use

S-scan is a Magnetic Resonance (MR) system that produces transversal, sagittal, coronal and oblique cross-section images of the limbs, joints and spinal column. It is intended for imaging portions of the upper limb, including the hand, wrist, forearm, elbow, arm and shoulder, imaging portions of the lower limb, including the foot, ankle, calf, knee, thigh and hip, imaging the temporomandibular joint and imaging the cervical, the thoracic and the lumbosacral sections as portions of the spinal column. S-scan images correspond to the spatial distribution of protons (hydrogen nuclei) that determine magnetic resonance properties and are dependent on the MR parameters, including spinlattice relaxation time (T1), spin-spin relaxation time (T2), nuclei density, flow velocity and “chemical shift”. When interpreted by a medical expert trained in use of MR equipment, the images can provide diagnostically useful information.

The indications for use statement has been updated to add the thoracic imaging capability.

Technological Characteristics

The changes to the S-scan system, reflected in this Traditional 510(k), do not alter the fundamental scientific technology of the S-scan system, the predicate device, cleared via K131996.

Summary of Non-Clinical Tests

The devices have been evaluated for biocompatibility, electrical, electromagnetic, and mechanical safety, and have been found to conform to the following medical device safety standards.

- IEC 60601-1
- IEC 60601-1-2
- IEC 60601-1-6
- IEC 6060 1-2-33

510(k) Submission

S-Scan

Esaote, S.p.A.

- IEC62304
- IEC62366
- ISO10993-1
- NEMA MS-1 - Determination of Signal-to-Noise Ratio (SNR) in Diagnostic Magnetic Resonance Imaging
- NEMA MS-3 - Determination of Image Uniformity in Diagnostic Magnetic Resonance Images

Summary of Clinical Tests

No clinical tests were performed.

Conclusion

The image quality performance of the modified S-scan equipment has been cleared via Gscan Brio K142421. G-scan Brio and S-scan devices have the same magnet, the same RF and gradient coils, the same MRI sequences contained into the same software and similar electronics. The rotation movement of the G-scan Brio does not impact in any way the image quality, because a hydraulic mechanism rotates both the magnetic system and the patient table from horizontal to vertical position and therefore, during the MR examination, the electromagnetic configuration of the system remains the same.

The changes proposed to the S-scan System are substantially equivalent to the legally marketed devices and conform to applicable medical device safety and performance standards.