

**510(k) Summary of Safety and Effectiveness**  
**Prepared in accordance with 21 CFR Part 807.92**

AUG 30 2007

**Section a):**

1. Submitter: Aloka Co., Ltd., 10 Fairfield Boulevard, Wallingford, CT 06492
- Contact Person: Richard J. Cehovsky, RA/QA Coordinator,  
Tel: (203)269-5088 Ext. 346, Fax: 203-269-6075
- Date Prepared: 07/11/2007
2. Device Name: Aloka SSD-Alpha 7 Diagnostic Ultrasound System  
Ultrasonic Pulsed Doppler Imaging System, 21 CFR 892.1550 , 90 IYN  
Diagnostic Ultrasound Transducer, 21 CFR 892.1570, 90 ITX  
Ultrasonic Pulsed Echo Imaging System., 21 CFR 892.1560, 90 IYO
3. Marketed Device: Aloka SSD-Alpha 10 Diagnostic Ultrasound System K043196, (90-IYN, ITX,IYO)  
( A device currently in commercial distribution)
4. Device Description: The Aloka SSD-Alpha 7 Diagnostic Ultrasound System is a full feature imaging and analysis system. It consist of a mobile console that provides acquisition, processing and display capability. The user interface includes a computer keyboard, specialized controls and a video display. This configuration will provide user enhancements and expanded use.
5. Indications for Use: The device is intended for use by a qualified physician for ultrasound evaluation of Fetal, Abdominal (including renal and GYN), Pediatric, Small Organ (breast, testes, thyroid), Neonatal /Adult Cephalic, Cardiac (adult and pediatric), Peripheral Vascular, Musculo- skeletal Conventional, Urology (including prostate), Transesophageal, Transrectal, Transvaginal and Intraoperative (abdominal, thoracic & vascular). The device is not indicated for ophthalmic applications.
6. Comparison w/ Predicate Device:  
The Aloka SSD-Alpha 7 is technically comparable and substantially equivalent to The current Aloka Alpha 10-(K043196). It has the same technological characteristics, key safety and effectiveness features, physical design, construction, materials and has the same intended uses and basic operating modes as the predicate device.
- Section b):**
1. Non-clinical Tests: The device and its transducers have been evaluated for acoustic output, biocompatibility, cleaning & disinfection effectiveness, electromagnetic compatibility, as well as electrical and mechanical safety, and have been found to conform with applicable medical device safety standards.
2. Clinical Tests: None Required.
3. Conclusion: Intended uses and other key features are consistent with traditional clinical practices, FDA guidelines and established methods of patient examination. The design, development and quality process of the manufacturer conforms with 21 CFR 820, ISO 9001:2000 and ISO13485 quality systems. The device conforms to applicable medical device safety standards and compliance is verified through independent evaluation with ongoing factory surveillance. Diagnostic ultrasound has accumulated a long history of safe and effectiveness performance. Therefore, it is the opinion of Aloka Co., Ltd. that the Aloka SSD-Alpha 7 Diagnostic Ultrasound System and its transducers is substantially equivalent with respect to safety and effectiveness to its predicate and other currently cleared Aloka systems.



Food and Drug Administration  
9200 Corporate Boulevard  
Rockville MD 20850

Aloka Co., Ltd.  
% Mr. Tamas Borsai  
Division Manager, Medical Division  
TUV Rheinland of North America  
12 Commerce Road  
NEWTOWN CT 06470

AUG 30 2007

Re: K072285

Trade/Device Name: Aloka SSD-Alpha 7 Ultrasound System  
Regulation Number: 21 CFR 892.1550  
Regulation Name: Ultrasonic pulsed doppler imaging system  
Regulatory Class: II  
Product Code: IYO, ITX, and IYN  
Dated: August 13, 2007  
Received: August 16, 2007

Dear Mr. Borsai:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and we 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). 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.

This determination of substantial equivalence applies to the following transducers intended for use with the Aloka SSD-Alpha 7 Ultrasound System, as described in your premarket notification:

Transducer Model Number

UST-675P  
ASU-1010  
UST-52101  
UST-5293-5

UST-5412  
UST-9118  
UST-9120  
UST-9130

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to such 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); 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.

This determination of substantial equivalence is granted on the condition that prior to shipping the first device, you submit a postclearance special report. This report should contain complete information, including acoustic output measurements based on production line devices, requested in Appendix G, (enclosed) of the Center's September 30, 1997 "Information for Manufacturers Seeking Marketing Clearance of Diagnostic Ultrasound Systems and Transducers." If the special report is incomplete or contains unacceptable values (e.g., acoustic output greater than approved levels), then the 510(k) clearance may not apply to the production units which as a result may be considered adulterated or misbranded.

The special report should reference the manufacturer's 510(k) number. It should be clearly and prominently marked "ADD-TO-FILE" and should be submitted in duplicate to:

Food and Drug Administration  
Center for Devices and Radiological Health  
Document Mail Center (HFZ-401)  
9200 Corporate Boulevard  
Rockville, Maryland 20850

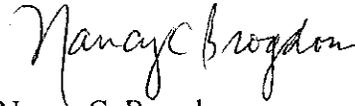
This letter will allow you to begin marketing your device as described in your premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus permits your device to proceed to market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Office of Compliance at (240) 276-0120. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). 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 (240) 276-3150 or at its Internet address <http://www.fda.gov/cdrh/industry/support/index.html>

Page 3 - Mr. Borsai

If you have any questions regarding the content of this letter, please contact Paul Hardy at (240) 276-3666.

Sincerely yours,

A handwritten signature in cursive script that reads "Nancy C. Brogdon".

Nancy C. Brogdon  
Director, Division of Reproductive,  
Abdominal and Radiological Devices  
Office of Device Evaluation  
Center for Devices and Radiological Health

Enclosure(s)

4.3.1

**Diagnostic Ultrasound Indications for Use Form  
SSD-Alpha 7**

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

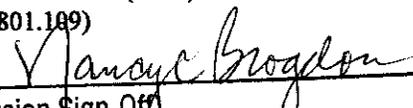
Clinical Application	Modes of operation									
	A	B	M	PWD	CWD	Color Doppler	Amplitude Doppler	Color Velocity Imaging	Combined (specify)	Other (specify)
Ophthalmic										
Fetal		N	N	N		N	N		See Below	
Abdominal		N	N	N		N	N		See Below	
Intraoperative (specify)		N	N	N		N	N		See Below	
Intraoperative Neurological										
Pediatric										
Small Organ (specify)		N	N	N		N	N		See Below	
Neonatal Cephalic		N	N	N		N	N		See Below	
Adult Cephalic										
Cardiac		N	N	N	N	N	N		See Below	
Transesophageal										
Transrectal		N	N	N		N	N		See Below	
Transvaginal		N	N	N		N	N		See Below	
Transurethral										
Intravascular										
Peripheral Vascular		N	N	N		N	N		See Below	
Laparoscopic										
Musculo-skeletal Conventional		N	N	N		N	N		See Below	
Musculo-skeletal Superficial										
Other: Gynecological		N	N	N		N	N		See Below	

N= new indication; P= previously cleared by FDA; E= added under Appendix A

Additional Comments: Mixed mode operation includes B/M, B/PWD, M/CD, B/CD/PWD, B/CWD, B/CD/CWD  
 Applications: Small Parts-breast, testes & thyroid, abdominal, gynecological, fetal, neonatal, cardiac.  
 Intra-operative- Liver, pancreas & gall bladder

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

Concurrence of CDRH, Office of Device Evaluation (ODE)  
 Prescription Use (Per 21 CFR 801.109)

  
 \_\_\_\_\_  
 (Division Sign-Off)  
 Division of Reproductive, Abdominal and  
 Radiological Devices  
 510(k) Number 2072285

**Diagnostic Ultrasound Indications for Use Form**  
UST- 675P

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

Clinical Application	Modes of operation									
	A	B	M	PWD	CWD	Color Doppler	Amplitude Doppler	Color Velocity Imaging	Combined (specify)	Other (specify)
Ophthalmic										
Fetal										
Abdominal										
Intraoperative (specify)										
Intraoperative Neurological										
Pediatric										
Small Organ (specify)										
Neonatal Cephalic										
Adult Cephalic										
Cardiac										
Transesophageal										
Transrectal		P	P	P		P	P		See Below	
Transvaginal		P	P	P		P	P		See Below	
Transurethral										
Intravascular										
Peripheral Vascular										
Laparoscopic										
Musculo-skeletal Conventional										
Musculo-skeletal Superficial										
Other										

N= new indication; P= previously cleared by FDA; E= added under Appendix E

Additional Comments: Mixed mode operation includes B/M, B/PWD, M/CD, B/CD/PWD

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

Concurrence of CDRH, Office of Device Evaluation (ODE)

Prescription Use (Per 21 CFR 801.109)

  
 (Division Sign-Off)  
 Division of Reproductive, Abdominal and  
 Radiological Devices  
 510(k) Number           K072285

**Diagnostic Ultrasound Indications for Use Form**  
ASU-1010

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

Clinical Application	Modes of operation									
	A	B	M	PWD	CWD	Color Doppler	Amplitude Doppler	Color Velocity Imaging	Combined (specify)	Other (specify)
Ophthalmic										
Fetal		P	P	P		P	P		See Below	
Abdominal		P	P	P		P	P		See Below	
Intraoperative (specify)										
Intraoperative Neurological										
Pediatric										
Small Organ (specify)										
Neonatal Cephalic										
Adult Cephalic										
Cardiac										
Transesophageal										
Transrectal										
Transvaginal										
Transurethral										
Intravascular										
Peripheral Vascular										
Laparoscopic										
Musculo-skeletal Conventional										
Musculo-skeletal Superficial										
Other: Gynecological		P	P	P		P	P		See Below	

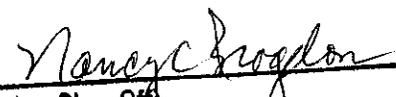
N= new indication; P= previously cleared by FDA; E= added under Appendix E

Additional Comments: Mixed mode operation includes B/M, B/PWD, M/CD, B/CD/PWD

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

Concurrence of CDRH, Office of Device Evaluation (ODE)

Prescription Use (Per 21 CFR 801.109)

  
 (Division Sign-Off)  
 Division of Reproductive, Abdominal and  
 Radiological Devices  
 510(k) Number       K072285

**Diagnostic Ultrasound Indications for Use Form**  
UST- 52101

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

Clinical Application	Modes of operation									
	A	B	M	PWD	CWD	Color Doppler	Amplitude Doppler	Color Velocity Imaging	Combined (specify)	Other (specify)
Ophthalmic										
Fetal										
Abdominal										
Intraoperative (specify)										
Intraoperative Neurological										
Pediatric										
Small Organ (specify)										
Neonatal Cephalic										
Adult Cephalic										
Cardiac		P	P	P	P	P	P		See Below	
Transesophageal										
Transrectal										
Transvaginal										
Transurethral										
Intravascular										
Peripheral Vascular										
Laparoscopic										
Musculo-skeletal Conventional										
Musculo-skeletal Superficial										
Other										

N= new indication; P= previously cleared by FDA; E= added under Appendix E

Additional Comments: Mixed mode operation includes B/M, B/PWD, M/CD, B/CD/PWD, B/CWD, B/CD/CWD.

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Concurrence of CDRH, Office of Device Evaluation (ODE)  
Prescription Use (Per 21 CFR 801.109)

  
 (Division Sign-Off)  
 Division of Reproductive, Abdominal and  
 Radiological Devices  
 510(k) Number       K072285

**Diagnostic Ultrasound Indications for Use Form**  
UST-5293-5

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

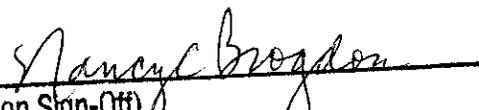
Clinical Application	Modes of operation									
	A	B	M	PWD	CWD	Color Doppler	Amplitude Doppler	Color Velocity Imaging	Combined (specify)	Other (specify)
Ophthalmic										
Fetal										
Abdominal										
Intraoperative (specify)										
Intraoperative Neurological										
Pediatric										
Small Organ (specify)										
Neonatal Cephalic										
Adult Cephalic										
Cardiac		P	P	P	P	P	P		See Below	
Transesophageal										
Transrectal										
Transvaginal										
Transurethral										
Intravascular										
Peripheral Vascular										
Laparoscopic										
Musculo-skeletal Conventional										
Musculo-skeletal Superficial										
Other										

N= new indication; P= previously cleared by FDA; E= added under Appendix E

Additional Comments: Mixed mode operation includes B/M, B/PWD, M/CD, B/CD/PWD, B/CWD, B/CD/CWD

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Concurrence of CDRH, Office of Device Evaluation (ODE)  
Prescription Use (Per 21 CFR 801.109)

  
 (Division Sign-Off)  
 Division of Reproductive, Abdominal and  
 Radiological Devices  
 510(k) Number       K072285

**Diagnostic Ultrasound Indications for Use Form**  
UST-5412

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

Clinical Application	Modes of operation									
	A	B	M	PWD	CWD	Color Doppler	Amplitude Doppler	Color Velocity Imaging	Combined (specify)	Other (specify)
Ophthalmic										
Fetal										
Abdominal										
Intraoperative (specify)										
Intraoperative Neurological										
Pediatric										
Small Organ (specify)		P	P	P		P	P		See Below	
Neonatal Cephalic										
Adult Cephalic										
Cardiac										
Transesophageal										
Transrectal										
Transvaginal										
Transurethral										
Intravascular										
Peripheral Vascular		P	P	P		P	P		See Below	
Laparoscopic										
Musculo-skeletal Conventional		P	P	P		P	P		See Below	
Musculo-skeletal Superficial										
Other										

N= new indication; P= previously cleared by FDA; E= added under Appendix E

Additional Comments: Mixed mode operation includes B/M, B/PWD, M/CD, B/CD/PWD

Applications: Small Parts- Breast, testes & thyroid

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

Concurrence of CDRH, Office of Device Evaluation (ODE)

Prescription Use (Per 21 CFR 801.109)

  
 (Division Sign-Off)  
 Division of Reproductive, Abdominal and  
 Radiological Devices  
 510(k) Number       K072285

**Diagnostic Ultrasound Indications for Use Form  
UST- 9118**

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

Clinical Application	Modes of operation									
	A	B	M	PWD	CWD	Color Doppler	Amplitude Doppler	Color Velocity Imaging	Combined (specify)	Other (specify)
Ophthalmic										
Fetal		P	P	P		P	P		See Below	
Abdominal										
Intraoperative (specify)										
Intraoperative Neurological										
Pediatric										
Small Organ (specify)										
Neonatal Cephalic										
Adult Cephalic										
Cardiac										
Transesophageal										
Transrectal										
Transvaginal-		P	P	P		P	P		See Below	
Transurethral										
Intravascular										
Peripheral Vascular										
Laparoscopic										
Musculo-skeletal Conventional										
Musculo-skeletal Superficial										
Other: Gynecological		P	P	P		P	P		See Below	

N= new indication; P= previously cleared by FDA; E= added under Appendix E

Additional Comments: Mixed mode operation includes B/M, B/PWD, M/CD, B/CD/PWD

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Concurrence of CDRH, Office of Device Evaluation (ODE)

Prescription Use (Per 21 CFR 801.109)

  
 (Division Sign-Off)  
 Division of Reproductive, Abdominal and  
 Radiological Devices  
 510(k) Number       K072285

**Diagnostic Ultrasound Indications for Use Form**

UST-9120

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

Clinical Application	Modes of operation									
	A	B	M	PWD	CWD	Color Doppler	Amplitude Doppler	Color Velocity Imaging	Combined (specify)	Other (specify)
Ophthalmic										
Fetal										
Abdominal										
Intraoperative (specify)		P	P	P		P	P		See Below	
Intraoperative Neurological										
Pediatric										
Small Organ (specify)										
Neonatal Cephalic		P	P	P		P	P		See Below	
Adult Cephalic										
Cardiac										
Transesophageal										
Transrectal										
Transvaginal										
Transurethral										
Intravascular										
Peripheral Vascular										
Laparoscopic										
Musculo-skeletal Conventional										
Musculo-skeletal Superficial										
Other										

N= new indication; P= previously cleared by FDA; E= added under Appendix E

Additional Comments: Mixed mode operation includes B/M, B/PWD, M/CD, B/CD/PWD

Application: Intra-operative- Liver, pancreas, & gall bladder

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

Concurrence of CDRH, Office of Device Evaluation (ODE)

Prescription Use (Per 21 CFR 801.109)

*Nancy Brogdon*  
 (Division Sign-Off)  
 Division of Reproductive, Abdominal and  
 Radiological Devices  
 510(k) Number       K072285

**Diagnostic Ultrasound Indications for Use Form**  
UST- 9130

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

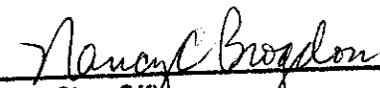
Clinical Application	Modes of operation									
	A	B	M	PWD	CWD	Color Doppler	Amplitude Doppler	Color Velocity Imaging	Combined (specify)	Other (specify)
Ophthalmic										
Fetal		P	P	P		P	P		See Below	
Abdominal		P	P	P		P	P		See Below	
Intraoperative (specify)										
Intraoperative Neurological										
Pediatric										
Small Organ (specify)										
Neonatal Cephalic										
Adult Cephalic										
Cardiac										
Transesophageal										
Transrectal										
Transvaginal										
Transurethral										
Intravascular										
Peripheral Vascular										
Laparoscopic										
Musculo-skeletal Conventional										
Musculo-skeletal Superficial										
Other: Gynecological		P	P	P		P	P		See Below	

N= new indication; P= previously cleared by FDA; E= added under Appendix E

Additional Comments: Mixed mode operation includes B/M, B/PWD, M/CD, B/CD/PWD

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

Concurrence of CDRH, Office of Device Evaluation (ODE)  
Prescription Use (Per 21 CFR 801.109)

  
 \_\_\_\_\_  
 (Division Sign-Off)  
 Division of Reproductive, Abdominal and  
 Radiological Devices  
 510(k) Number       K072285

K072285

### Indications for Use

**510(K) Number (if known):**

**Device Name:** Aloka SSD-Alpha 7

**Indications For Use:**

The device is intended for use by a qualified physician for ultrasound evaluation of Fetal, Abdominal (including renal and GYN), Pediatric, Small Organ (breast, testes, thyroid), Neonatal /Adult Cephalic, Cardiac (adult and pediatric), Peripheral Vascular, Musculo-skeletal Conventional, Urology (including prostate), Transesophageal, Transrectal, Transvaginal and Intraoperative (abdominal, thoracic & vascular).

The Aloka SSD-Alpha 7 is not indicated for ophthalmic applications.

**Prescription Use**  **AND/OR** **Over-The Counter Use**   
(Part 21 CFR 801 Subpart D)

(21 CFR 801 Subpart C)

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**Concurrence of CDRH, Office of Device Evaluation (ODE)**

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Nancy C Brogdon  
(Division Sign-Off)  
Division of Reproductive, Abdominal and  
Radiological Devices  
510(k) Number K072285