

Test Report Number: TRA80348
Report Type: Full Compliance Immunity
Reference Standard: EN 61000-6-1: 2007
Date of Report: 10 April 2008
Product Name: IonCleanse Solo
Model Number: Solo
Serial Number: S01001
Manufacturer: Stargate International, Inc.
Representative: Bob Walker

Approved By:



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Prefatory Notes

It should be noted that the power frequency magnetic field testing was not performed on the UUT as the generic standard specifies that this testing is only "...applicable only to apparatus containing devices susceptible to magnetic fields."
(EN 61000-6-1: 2007, Table 1, p. 11)

1.0 TEST SUMMARY

1.1 Product Description

The unit under test (UUT) was the IonCleanse Solo. The serial number tested was S01001. This product is manufactured by Stargate International, Inc located in Parker, Colorado. It is a detoxifying footbath used to maintain high energy levels, detoxify the body and ensure long-term wellness. The UUT was exercised and monitored throughout testing. Additional product information may be found in the Product Data Sheet, located in Appendix G of this report.

1.2 Immunity Test Standards Used

The standard applied to this product was EN 61000-6-1: 2007, which is the generic standard for industrial locations. The normative references of this standard define the test methods used for the immunity testing. This information is summarized in Tables 1-1.

Table 1-1

Requirement	Specification	Test Method	Performance Criteria
EN 61000-6-1: 2007, Part 6-1: Generic Standard - Immunity For Residential, Commercial & Light Industrial Environments	Electrostatic Discharge	IEC 61000-4-2: 2001-04	(B) Self-Recovering
	Radiated RF Immunity	IEC 61000-4-3: 2006-02	(A) No Degradation
	Electrical Fast Transient/Burst	IEC 61000-4-4: 2004-07	(B) Self-Recovering
	Surge Immunity	IEC 61000-4-5: 2005-11	(B) Self-Recovering
	Conducted RF Immunity	IEC 61000-4-6: 2006-05	(A) No Degradation
	Power Frequency H-field Immunity	IEC 61000-4-8: 2001-03	(A) No Degradation
	Voltage Dips, Interrupts	IEC 61000-4-11: 2004-03	(B) Self-Recovering (C) User-intervention Allowed

1.3 Test Results

The UUT **complied** with all the immunity requirements defined by EN 61000-6-1: 2007. Test results are summarized in Table 1-2.

1.4 Modifications Required for Compliance

No modifications were required for compliance with immunity.

Table 1-2

Specification	Test Method	Test Conditions	Compliance
Electrostatic Discharge	IEC 61000-4-2	± 4 kV Contact / HCP, VCP / ± 8 kV Air (minimum of 500 discharges applied)	Compliant
Radiated RF Immunity	IEC 61000-4-3	80 - 1000 MHz, 3 V/m, 80% 1 kHz AM 1.4 - 2.0 GHz, 3 V/m, 80% 1 kHz AM 2.0 - 270 GHz, 1 V/m, 80% 1 kHz AM	Compliant
EFT/Burst	IEC 61000-4-4	± 0.5 kV I/O, ± 1.0 kV AC mains	Compliant
Surge Immunity	IEC 61000-4-5	± 2 kV common mode, ± 1 kV differential mode, AC mains	Compliant
Conducted RF Immunity	IEC 61000-4-6	150 kHz to 80 MHz, 3 Vrms, 80% 1 kHz AM, power and I/O	Compliant
Power Frequency H-field Immunity	IEC 61000-4-8	3 A/m, 50/60 Hz, 3 axes	Not applicable
Voltage Dips and Interrupts	IEC 61000-4-11	100% reduction for 1/2 cycle 100% reduction for 1 cycle 30% reduction for 25 cycles @ 50 Hz 30% reduction for 30 cycles @ 60 Hz 100% reduction for 250 cycles @ 50 Hz 100% reduction for 300 cycles @ 60 Hz	Compliant

It should be noted that some over-testing was performed to determine whether or not the product would be compliant with more stringent requirements specified in other standards. Over-test levels are documented on the individual test data sheets.

2.0 SCOPE

2.1 Purpose

This report documents the test efforts performed on the IonCleanse Solo to verify compliance to the 2007 version of EN 61000-6-1, EMC, Part 6-1: Generic Standard – Immunity for Residential, Commercial and Light Industrial Environments. This was a formal qualification test and was conducted over the days of 1 through 4 April 2008.

2.2 Test Plan

Testing was performed in accordance with EN 61000-6-1: 2007. The Product Data Sheet defines the critical operational parameters for testing, as well as providing general product information. This is contained in Appendix G of this report.

2.3 Test Parameters

Critical parameters (i.e., parameters which are monitored during testing) for this product are defined by the client. This information was defined by the client in Section 4.0 of the Product Data Sheet, contained in Appendix G of this report.

2.4 Definition of Performance Criterion for the UUT

In general, performance criteria for industrial products are defined as follows:

- Level A:** During testing, normal operation within specification limits.
- Level B:** During testing, temporary degradation or loss of function or performance which is self-recovering (i.e., no user intervention)
- Level C:** During testing, temporary degradation, or loss of function which requires operator intervention or system reset occurs.

Specific performance criteria, as applied to this product, are defined in Section 4.0 of the Product Data Sheet, contained in Appendix G of this report.

3.0 TEST ENVIRONMENT

3.1 Immunity Test Site

The immunity testing was performed at EMCI's test facility in Longmont, Colorado. The radiated field immunity testing was performed in a ferrite lined, shielded enclosure. The enclosure is 10' high x 12' wide x 20' long in size and meets the field uniformity requirements of EN 61000-4-3. The size of the chamber allows 2-meter separation between the antenna and the UUT.

All other immunity testing was performed on a ground plane measuring 3.0 meters by 4.5 meters (13.5 m²) and made of 0.125" thick aluminum. The ground plane extended beyond the UUT by 0.5 meters and all sides, was bonded to the facility ground and configured in accordance with the applicable standards.

4.0 IEC 61000-4-2, Electrostatic Discharge

4.1 Summary of Test Results

Electrostatic discharge (ESD) testing was performed on the UUT in accordance with the test methods specified by IEC 61000-4-2. Contact discharge was performed at levels of ± 2 kV and ± 4 kV at applicable (conductive) test points. Air discharge was performed for non-conductive surfaces of the product at levels of ± 2 kV, ± 4 kV and ± 8 kV. Indirect discharge to the horizontal coupling plane (HCP) and the vertical coupling plane (VCP) were also performed to levels of ± 2 kV and ± 4 kV.

During all testing, the UUT exhibited no malfunctions and operated within specified tolerances and therefore, complies with the requirements of this test.

4.2 Test Setup

The UUT was set up per IEC 61000-4-2 and tested to the levels specified in EN 61000-6-1.

4.3 Special Configurations

N/A

4.4 Performance Criteria

Performance criterion Level B is defined as degradation in performance provided 1) the UUT self-recovers without user-intervention and 2) no data is lost.

4.5 Deviations from Test Procedures

N/a

4.6 Test Data

See APPENDIX A for data sheets, discharge points and test setup pictures.

4.7 Temperature and Humidity

Temperature, relative humidity and barometric pressure are located in the header table for the IEC 61000-4-2 test data sheet.

5.0 IEC 61000-4-3, Radiated RF Immunity

5.1 Summary of Test Results

Radiated RF immunity testing was performed on the UUT in accordance with the test methods specified by IEC 61000-4-3. The UUT was placed on a non-conductive table, 80 cm above the ferrite floor of the completely anechoic-lined chamber. The frequency range for this testing was 80 - 1000 MHz. The UUT was placed 2 meters from the radiating antenna; which was 1.5 meters above the floor of the chamber. Testing was performed in both horizontal and vertical antenna polarizations. The frequency was incremented in 1% steps, with a 3 second dwell time for each test frequency. The UUT was rotated on the table so that all four sides were illuminated in the 3 V/m field. The field was amplitude modulated with a 1 kHz sine wave to a depth of 80%. Performance of the unit was monitored remotely using a video camera.

During all testing, the UUT exhibited no malfunctions and operated within specified tolerances and therefore, complies with the requirements of this test.

5.2 Test Setup

The UUT was set up per IEC 61000-4-3 and tested to the levels specified in EN 61000-6-1.

5.3 Special Configurations

N/A

5.4 Performance Criteria

Performance criterion Level A is defined as no degradation in performance beyond manufacturer's specified tolerances.

5.5 Deviations from Test Procedures

N/a

5.6 Test Data

See APPENDIX B for data sheets and test setup pictures.

5.7 Temperature and Humidity

Temperature, relative humidity and barometric pressure are located in the header table for the IEC 61000-4-3 test data sheet.

6.0 IEC 61000-4-4, Electrical Fast Transient/Burst

6.1 Summary of Test Results

Electrical fast transient/burst immunity testing was performed on the UUT in accordance with the test methods specified by IEC 61000-4-4. The UUT AC power was tested via direct injection at a level of ± 1 kV. External I/O in excess of 3 meters was tested via capacitive coupling clamp to a level of ± 0.5 kV.

During all testing, the UUT exhibited no malfunctions and operated within specified tolerances and therefore, complies with the requirements of this test.

6.2 Test Setup

The UUT was set up per IEC 61000-4-4 and tested to the levels per EN 61000-6-1.

6.3 Special Configurations

N/A

6.4 Performance Criteria

Performance criterion Level B is defined as degradation in performance provided 1) the UUT self-recovers without user-intervention and 2) no data is lost.

6.5 Deviations from Test Procedures

N/a.

6.6 Test Data

See APPENDIX C for data sheet and test setup pictures.

6.7 Temperature and Humidity

Temperature, relative humidity and barometric pressure are located in the header table for the IEC 61000-4-4 test data sheet.

7.0 IEC 61000-4-5, Surge Immunity

7.1 Summary of Test Results

Surge immunity testing was performed on the UUT in accordance with the test methods specified by IEC 61000-4-5. The UUT AC power was tested via direct injection at levels of ± 0.5 kV and ± 1.0 kV for differential mode and at levels of ± 0.5 kV, ± 1.0 kV and ± 2.0 kV for common mode. Surges were injected at 0 degrees, 90 degrees, 180 degrees and 270 degrees of the input ac waveform at a rate of one pulse per minute. Five pulses were injected for each test configuration.

During all testing, the UUT exhibited no malfunctions or degradations in performance and therefore complies with the requirements of the test.

7.2 Test Setup

The UUT was set up per IEC 61000-4-5 and tested to the levels specified in EN 61000-6-1.

7.3 Special Configurations

N/A

7.4 Performance Criteria

Performance criterion Level B is defined as degradation in performance provided 1) the UUT self-recovers without user-intervention and 2) no data is lost.

7.5 Deviations from Test Procedures

N/A

7.6 Test Data

See APPENDIX D for data sheets and test setup pictures.

7.7 Temperature and Humidity

Temperature, relative humidity and barometric pressure are located in the header table for the IEC 61000-4-5 test data sheet.

8.0 IEC 61000-4-6, Conducted RF Immunity

8.1 Summary of Test Results

Conducted RF immunity testing was performed on the UUT in accordance with the test methods specified by IEC 61000-4-6. The UUT was subjected to injected RF signals on its input AC power cable. Injection on the AC leads was performed via a coupling/decoupling network (CDN). Injection on the I/O of the product was performed with an EM clamp. The frequency range for this testing was 150 kHz to 80 MHz. The test frequency was stepped in 1% increments with a three second dwell time for each injection frequency. The injection level used for all testing was 3 Vrms with 1 kHz AM to a depth of 80%.

At no time did the UUT exhibit any malfunctions or degradations in performance; thus, the UUT passed all portions of this test.

8.2 Test Setup

The UUT was set up per IEC 61000-4-6 and tested to the levels specified in EN 61000-6-1.

8.3 Special Configurations

N/A

8.4 Performance Criteria

Performance criterion Level A is defined as no degradation in performance beyond manufacturer's specified tolerances.

8.5 Deviations from Test Procedures

N/A

8.6 Test Data

See APPENDIX E for data sheets and test setup pictures.

8.7 Temperature and Humidity

Temperature, relative humidity and barometric pressure are located in the header table for the IEC 61000-4-6 test data sheet.

9.0 IEC 61000-4-11, Voltage Dips and Interrupts

9.1 Summary of Test Results

Voltage dip and interrupt testing was performed on the UUT in accordance with IEC 61000-4-11. The UUT was subjected to the following voltage fluctuations on its AC power input:

100% reduction for ½ cycle
100% reduction for 1 cycle
30% reduction for 25 cycles @ 50 Hz
30% reduction for 30 cycles @ 60 Hz
100% reduction for 250 cycles @ 50 Hz
100% reduction for 300 cycles @ 60 Hz

These variations in AC line voltage had no effect on the UUT, which passed the requirements of this test.

9.2 Test Setup

The UUT was set up per IEC 61000-4-11 and tested to the levels specified in EN 61000-6-1.

10.3 Special Configurations

N/A

9.4 Performance Criteria

The performance criteria for this test are Levels B and C. Level B is defined as allowing degraded performance provided that the UUT self-recovers without user intervention and no data is lost. Level C is defined as allowing user intervention to regain functionality of the product provided that no permanent damage occurs.

9.5 Deviations from Test Procedures

N/A

9.6 Test Data

See APPENDIX F for data sheets and test setup pictures.

9.7 Temperature and Humidity

Temperature, relative humidity and barometric pressure are located in the header table for the IEC 61000-4-11 test data sheet.

APPENDIX A

Electrostatic Discharge Test Data



Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	Stargate International	Project Number:	A80348
Customer Representative:	Bob Walker	Test Area:	GP #2
Model:	IonCleanse Solo	S/N:	S01001
Standard Referenced:	EN 61000-6-2	Date:	April 4, 2008
Temperature:	19°C	Humidity:	31%
Input Voltage:	230Vac/50Hz	Pressure:	836 mb
Configuration of Unit:	Running positive mode at 70% and Negative mode at 30%		
Test Engineer:	Tom Wittig		

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Test Location	Voltage Level (kV)	Polarity		Number of Pulses	Pulses Per Second	Comments	Criteria Met	Pass / Fail
		+	-					
Indirect Discharge Points - Medical requirements at +/-6kV								
VCP	2, 4, 6	x	x	10	1	Front Side	A	Pass
VCP	2, 4, 6	x	x	10	1	Left Side	A	Pass
VCP	2, 4, 6	x	x	10	1	Right Side	A	Pass
VCP	2, 4	x	x	10	1	Back Side	A	Pass
HCP	2, 4, 6	x	x	10	1	Edge of HCP at Front of UUT	A	Pass
Contact Discharge Points - RED Arrows.								
Figure A2	2, 4	x	x	10	1		A	Pass
Figure A3	2, 4	x	x	10	1		A	Pass
Figure A2	6	x	x	10	1	Medical requirements at +/-6kV At +6kV, contact discharge to the left side screen causes unit to reboot At -6kV, contact discharges causes the display to be scrambled Could not repeat consistently.	N/A	N/A
Figure A3	6	x	x	10	1	Medical requirements at +/-6kV	N/A	N/A
Air Discharge Points - BLUE Arrows.								
Figure A2	2, 4, 8	x	x	10	1	At +/- 8kV, found air discharges at the control buttons	A	Pass
Figure A3	2, 4, 8	x	x	10	1	At +/- 8kV, found air discharges at the power connector	A	Pass



Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	Stargate International
Customer Representative:	Bob Walker
Model:	IonCleanse Solo
Standard Referenced:	EN 61000-6-2

Project Number:	A80348
Test Area:	GP #2
S/N:	S01001
Date:	April 4, 2008

A80348-4-2.doc

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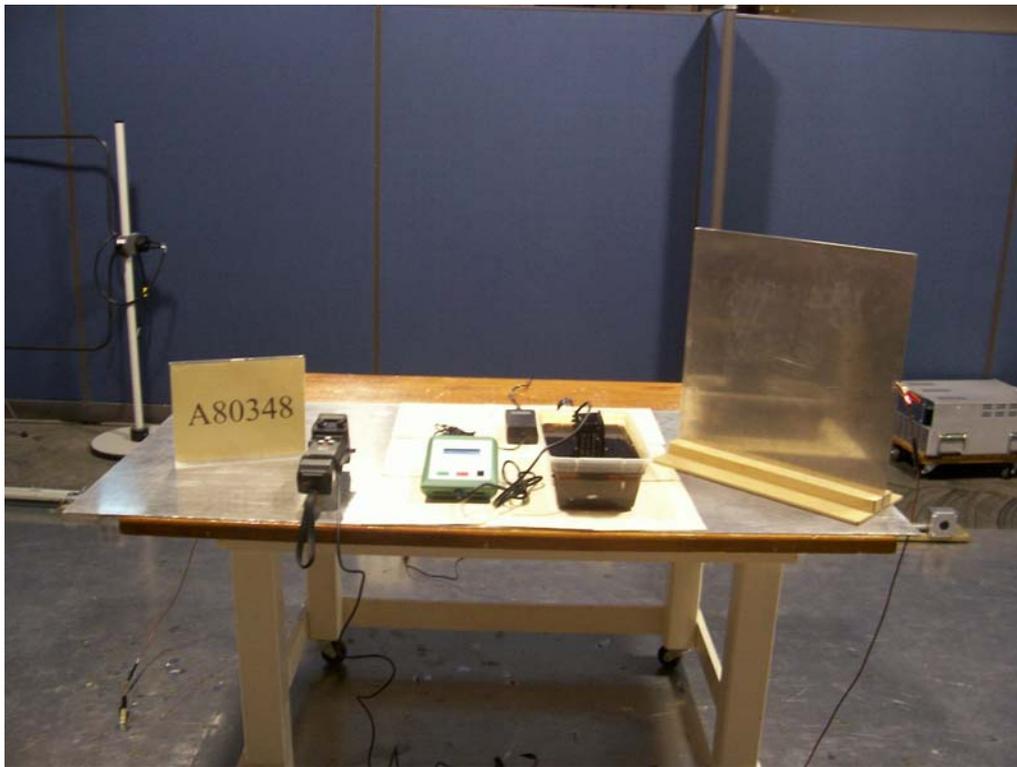


Figure A1. Electrostatic Discharge Test Setup.



Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer: Stargate International
Customer Representative: Bob Walker
Model: IonCleanse Solo
Standard Referenced: EN 61000-6-2

Project Number: A80348
Test Area: GP #2
S/N: S01001
Date: April 4, 2008

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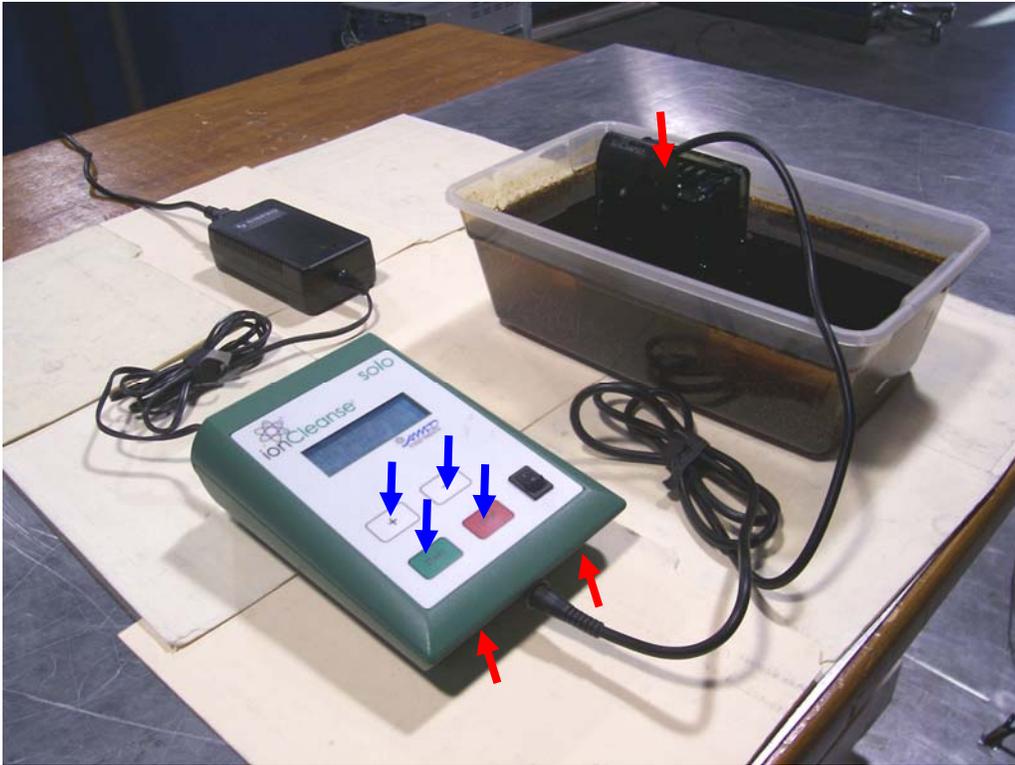


Figure A2. Electrostatic Discharge Test Points.



Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer: Stargate International
Customer Representative: Bob Walker
Model: IonCleanse Solo
Standard Referenced: EN 61000-6-2

Project Number: A80348
Test Area: GP #2
S/N: S01001
Date: April 4, 2008

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Figure A3. Electrostatic Discharge Test Points.



Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	Stargate International	Project Number:	A80348
Customer Representative:	Bob Walker	Test Area:	GP #2
Model:	IonCleanse Solo	S/N:	S01001
Standard Referenced:	EN 61000-6-2	Date:	April 4, 2008

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Test Equipment List

ID Number	Manufacturer	Model #	Serial #	Description	Cal Date	Cal Due
1249	KeyTek	MZ-15/EC	0609258	ESD Gun with TPC-2A SN:0609259	09/20/2007	09/20/2008
1208	Extech	115715	252868	Hygro-Thermometer	03/24/2008	03/24/2009
1214	California Instruments	1251P	10223	AC Power Source	NA	NA

APPENDIX B

Radiated RF Immunity Test Data



Radiated RF Immunity per IEC / EN 61000-4-3

Manufacturer:	Stargate International	Project Number:	A80348
Customer Representative:	Bob Walker	Test Area:	CALC
Model:	IonCleanse Solo	S/N:	S01001
Standard Referenced:	EN 61000-6-2	Date:	April 1, 2008
Temperature:	19°C	Humidity:	31%
Input Voltage:	230Vac/50Hz	Pressure:	842 mb
Configuration of Unit:	Running positive mode at 70% and negative mode at 30%		
Test Engineer:	Tom Wittig		

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Frequency (MHz)	Type	Modulation			Field (V/m)	Polarity (V or H)	Dwell (sec)	Comments	Criteria Met	Pass / Fail
		%	Freq	Form						
80 - 1000	AM	80	1kHz	Sine	3	V	3	Front Side	A	Pass
900	AM	99	200Hz	Square	3	V	10		A	Pass
1000-2000	AM	80	1kHz	Sine	3	V	3	Meets medical requirements	A	Pass
2000-2700	AM	80	1kHz	Sine	3	V	3	Meets medical requirements	A	Pass
80 - 1000	AM	80	1kHz	Sine	3	H	3		A	Pass
900	AM	99	200Hz	Square	3	H	10		A	Pass
1000-2000	AM	80	1kHz	Sine	3	H	3	Meets medical requirements	A	Pass
2000-2700	AM	80	1kHz	Sine	3	H	3		A	Pass
80 - 1000	AM	80	1kHz	Sine	3	V	3	Right Side	A	Pass
900	AM	99	200Hz	Square	3	V	10		A	Pass
1000-2000	AM	80	1kHz	Sine	3	V	3	Meets medical requirements	A	Pass
2000-2700	AM	80	1kHz	Sine	3	V	3	Meets medical requirements	A	Pass
80 - 1000	AM	80	1kHz	Sine	3	H	3		A	Pass
900	AM	99	200Hz	Square	3	H	10		A	Pass
1000-2000	AM	80	1kHz	Sine	3	H	3	Meets medical requirements	A	Pass
2000-2700	AM	80	1kHz	Sine	3	H	3	Meets medical requirements	A	Pass
80 - 1000	AM	80	1kHz	Sine	3	V	3	Back Side	A	Pass
900	AM	99	200Hz	Square	3	V	10		A	Pass
1000-2000	AM	80	1kHz	Sine	3	V	3	Meets medical requirements	A	Pass
2000-2700	AM	80	1kHz	Sine	3	V	3	Meets medical requirements	A	Pass
80 - 1000	AM	80	1kHz	Sine	3	H	3		A	Pass
900	AM	99	200Hz	Square	3	H	10		A	Pass
1000-2000	AM	80	1kHz	Sine	3	H	3	Meets medical requirements	A	Pass
2000-2700	AM	80	1kHz	Sine	3	H	3	Meets medical requirements	A	Pass
80 - 1000	AM	80	1kHz	Sine	3	V	3	Left Side	A	Pass



Radiated RF Immunity per IEC / EN 61000-4-3

Manufacturer:	Stargate International	Project Number:	A80348
Customer Representative:	Bob Walker	Test Area:	CALC
Model:	IonCleanse Solo	S/N:	S01001
Standard Referenced:	EN 61000-6-2	Date:	April 1, 2008
Temperature:	19°C	Humidity:	31%
Input Voltage:	230Vac/50Hz	Pressure:	842 mb
Configuration of Unit:	Running positive mode at 70% and negative mode at 30%		
Test Engineer:	Tom Wittig		

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Frequency (MHz)	Type	Modulation			Field (V/m)	Polarity (V or H)	Dwell (sec)	Comments	Criteria Met	Pass / Fail
		%	Freq	Form						
900	AM	99	200Hz	Square	3	V	10		A	Pass
1000-2000	AM	80	1kHz	Sine	3	V	3	Meets medical requirements	A	Pass
2000-2700	AM	80	1kHz	Sine	3	V	3	Meets medical requirements	A	Pass
80 - 1000	AM	80	1kHz	Sine	3	H	3		A	Pass
900	AM	99	200Hz	Square	3	H	10		A	Pass
1000-2000	AM	80	1kHz	Sine	3	H	3	Meets medical requirements	A	Pass
2000-2700	AM	80	1kHz	Sine	3	H	3	Meets medical requirements	A	Pass



Radiated RF Immunity per IEC / EN 61000-4-3

Manufacturer:	Stargate International	Project Number:	A80348
Customer Representative:	Bob Walker	Test Area:	CALC
Model:	IonCleanse Solo	S/N:	S01001
Standard Referenced:	EN 61000-6-2	Date:	April 1, 2008

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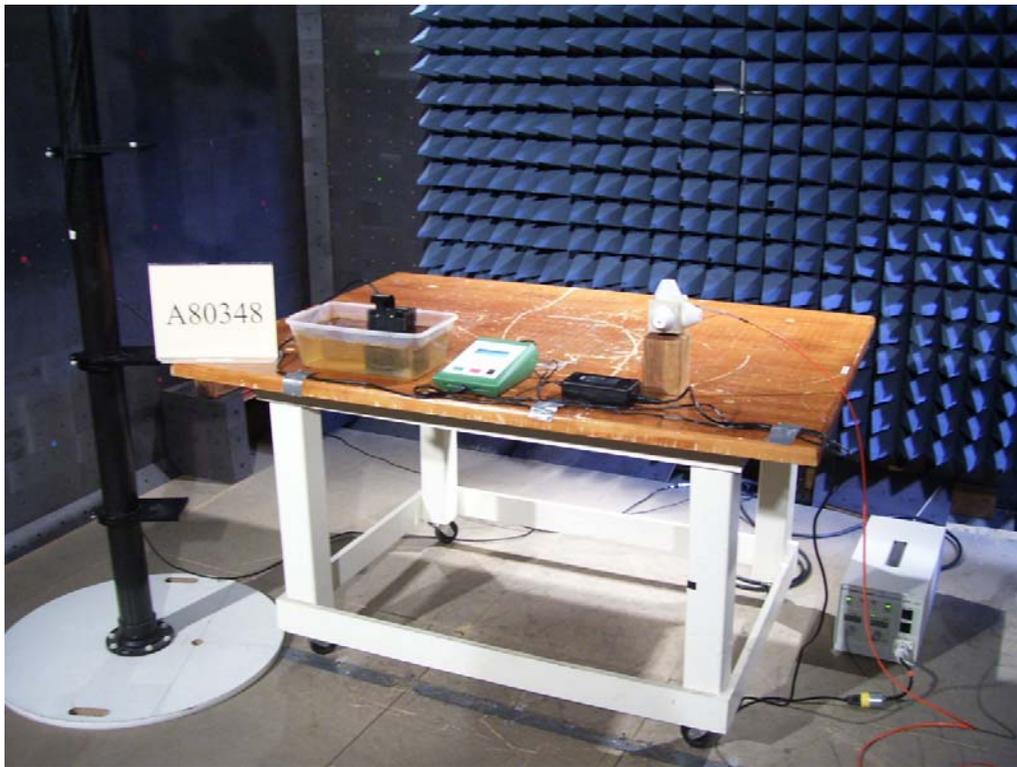


Figure B1. Radiated RF Immunity Test Setup – Front Side.



Radiated RF Immunity per IEC / EN 61000-4-3

Manufacturer: Stargate International
Customer Representative: Bob Walker
Model: IonCleanse Solo
Standard Referenced: EN 61000-6-2

Project Number: A80348
Test Area: CALC
S/N: S01001
Date: April 1, 2008

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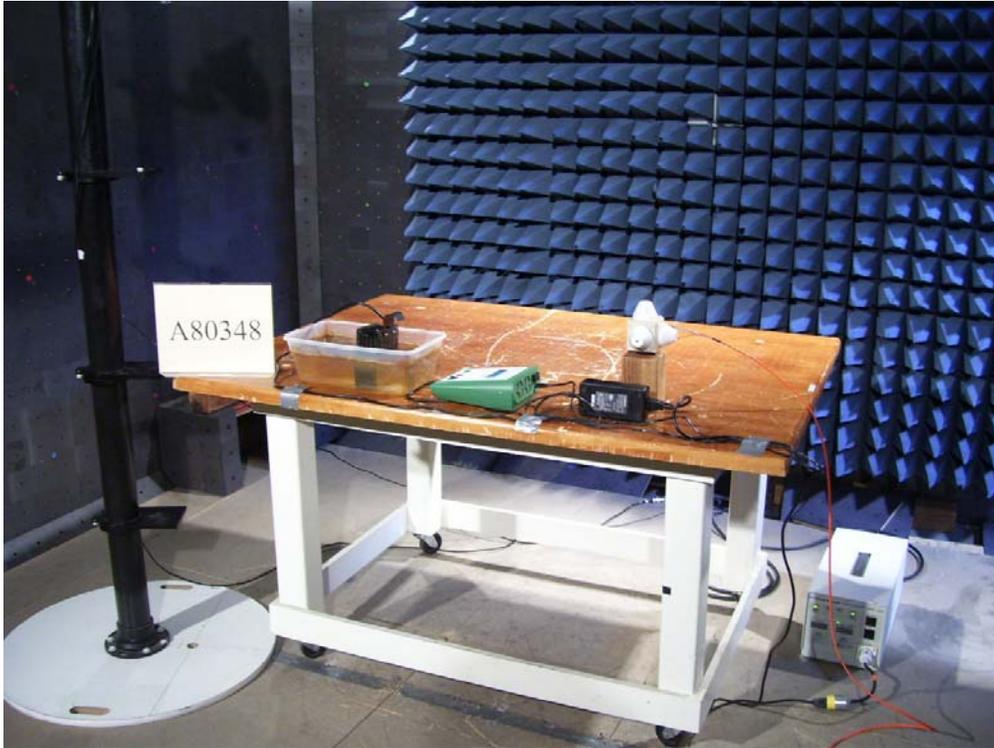


Figure B2. Radiated RF Immunity Test Setup – Right Side.



Radiated RF Immunity per IEC / EN 61000-4-3

Manufacturer: Stargate International
Customer Representative: Bob Walker
Model: IonCleanse Solo
Standard Referenced: EN 61000-6-2

Project Number: A80348
Test Area: CALC
S/N: S01001
Date: April 1, 2008

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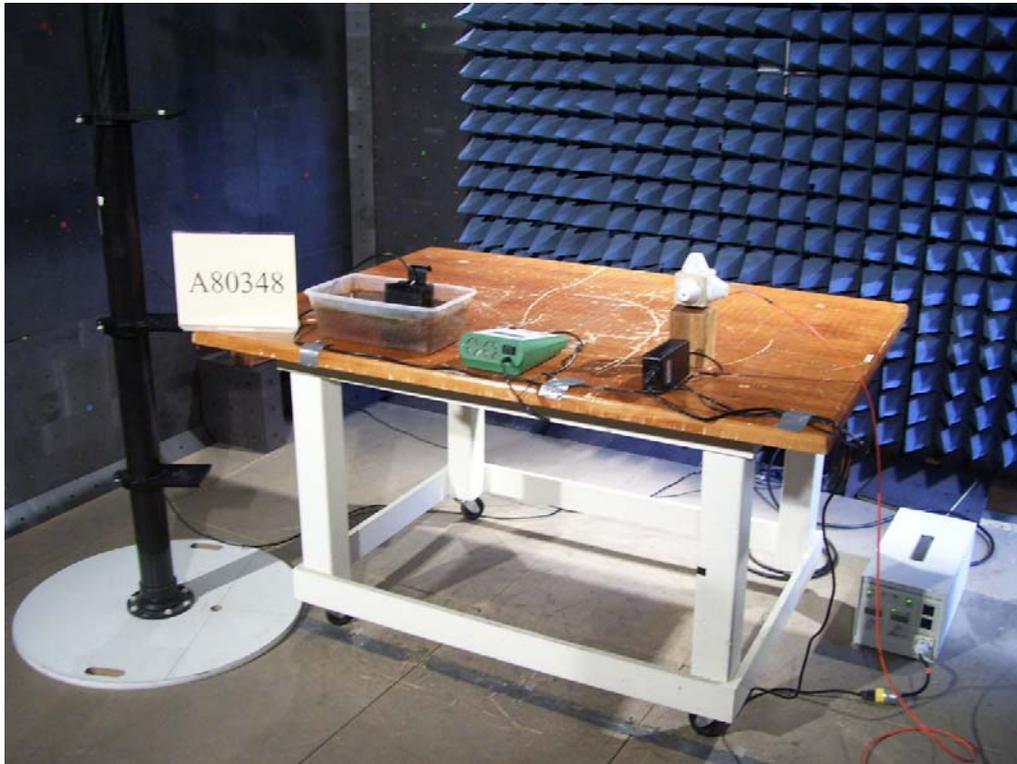


Figure B3. Radiated RF Immunity Test Setup – Back Side.



Radiated RF Immunity per IEC / EN 61000-4-3

Manufacturer: Stargate International
Customer Representative: Bob Walker
Model: IonCleanse Solo
Standard Referenced: EN 61000-6-2

Project Number: A80348
Test Area: CALC
S/N: S01001
Date: April 1, 2008

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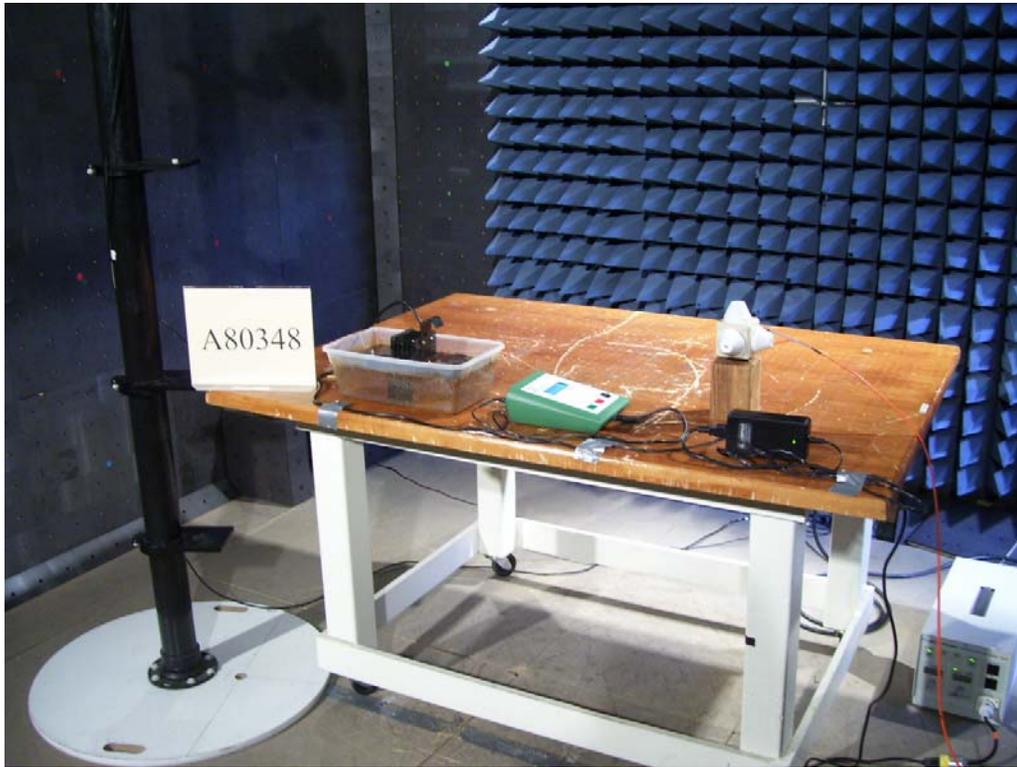


Figure B4. Radiated RF Immunity Test Setup – Left Side.



Radiated RF Immunity per IEC / EN 61000-4-3

Manufacturer:	<u>Stargate International</u>	Project Number:	<u>A80348</u>
Customer Representative:	<u>Bob Walker</u>	Test Area:	<u>CALC</u>
Model:	<u>IonCleanse Solo</u>	S/N:	<u>S01001</u>
Standard Referenced:	<u>EN 61000-6-2</u>	Date:	<u>April 1, 2008</u>

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Test Equipment List

ID Number	Manufacturer	Model #	Serial #	Description	Cal Date	Cal Due
1005	EMCO	3140	1012	Biconilog Antenna	NA	NA
1056	Marconi	2041	119332/001	Signal Generator 10kHz - 2.7GHz	01/30/2008	01/30/2009
1058	Ray Proof	RF Shield Room	6698	Completely Anechoic Lined Chamber	05/22/2007	05/22/2008
1061	Stanford Research Systems	DS345	29373	30 MHz Function Generator	07/24/2007	07/24/2008
1063	Varian	VZL6941 K-1	5713	TWT amplifier, 1-2 GHz, 20 Watts	NA	NA
1181	EMCI	RFS	NA	Release 02 July 2004	NA	NA
1192	Amplifier Research	FP4000	308963	RF Field Probe 10 KHz - 1GHz	01/28/2008	01/28/2009
1250	OPHIR	5127F	1034	RF Power Amplifier 20-1000MHz, 200 Watts	NA	NA
1206	Extech	445715	252866	Hygro-Thermometer	03/06/2007	04/06/2008
1214	California Instruments	1251P	10223	AC Power Source	NA	NA
1027	Eaton	91888-2	522	Horn Antenna	NA	NA
1028	Eaton	91889-2	521	Horn Antenna	NA	NA
1069	Eaton	92341	43475-107	Antenna Mounting Adapter	NA	NA
Rent	Hughes	8020801F000	384	2-4 GHz TWT	NA	NA

APPENDIX C

Electrical Fast Transients/Burst Test Data



Electrical Fast Transient/Burst per IEC / EN 61000-4-4

Manufacturer:	Stargate International	Project Number:	A80348
Customer Representative:	Bob Walker	Test Area:	GP #2
Model:	IonCleanse Solo	S/N:	S01001
Standard Referenced:	EN 61000-6-2	Date:	April 1, 2008
Temperature:	20°C	Humidity:	31%
Input Voltage:	230Vac/50Hz	Pressure:	842 mb
Configuration of Unit:	Running positive mode at 70% and Negative mode at 30%		
Test Engineer:	Tom Wittig		

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Voltage (kV)	Polarity		Time (sec)	Injection Type	L 1	L 2	L 3	N	P E	Comments	Criteria Met	Pass / Fail
	+	-										
1.0	x		60	CDN	x					AC Mains 230VAC/50Hz	A	Pass
1.0		x	60	CDN	x						A	Pass
1.0	x		60	CDN				x			A	Pass
1.0		x	60	CDN				x			A	Pass
1.0	x		60	CDN					x		A	Pass
1.0		x	60	CDN					x		A	Pass
1.0	x		60	CDN	x			x	x		A	Pass
1.0		x	60	CDN	x			x	x		A	Pass
2.0	x		60	CDN	x					AC Mains (Medical Requirements) 120VAC/60Hz	A	Pass
2.0		x	60	CDN	x						A	Pass
2.0	x		60	CDN				x			A	Pass
2.0		x	60	CDN				x			A	Pass
2.0	x		60	CDN					x		A	Pass
2.0		x	60	CDN					x		A	Pass
2.0	x		60	CDN	x			x	x		A	Pass
2.0		x	60	CDN	x			x	x		A	Pass
2.0	x		60	CDN	x					AC Mains (Medical Requirements) 230VAC/50Hz	A	Pass
2.0		x	60	CDN	x						A	Pass
2.0	x		60	CDN				x			A	Pass
2.0		x	60	CDN				x			A	Pass
2.0	x		60	CDN					x		A	Pass
2.0		x	60	CDN					x		A	Pass
2.0	x		60	CDN	x			x	x		A	Pass
2.0		x	60	CDN	x			x	x		A	Pass



Electrical Fast Transient/Burst per IEC / EN 61000-4-4

Manufacturer:	Stargate International
Customer Representative:	Bob Walker
Model:	IonCleanse Solo
Standard Referenced:	EN 61000-6-2

Project Number:	A80348
Test Area:	GP #2
S/N:	S01001
Date:	April 1, 2008

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FR0100



Figure C1. Electrical Fast Transient Test Setup – AC Mains.



Electrical Fast Transient/Burst per IEC / EN 61000-4-4

Manufacturer:	Stargate International	Project Number:	A80348
Customer Representative:	Bob Walker	Test Area:	GP #2
Model:	IonCleanse Solo	S/N:	S01001
Standard Referenced:	EN 61000-6-2	Date:	April 1, 2008

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Test Equipment List

ID Number	Manufacturer	Model #	Serial #	Description	Cal Date	Cal Due
1014	KeyTek	EMC Pro	0203270	Advanced EMC Immunity Tester	10/15/2007	10/15/2008
1184	KeyTek	CEWare32	NA	KeyTek EMCPro Control Software for EFT, Surge, H-F	NA	NA
1206	Extech	445715	252866	Hygro-Thermometer	03/06/2007	04/06/2008
1214	California Instruments	1251P	10223	AC Power Source	NA	NA

APPENDIX D

Surge Immunity Test Data



Surge Immunity per IEC / EN 61000-4-5

Manufacturer:	Stargate International	Project Number:	A80348
Customer Representative:	Bob Walker	Test Area:	GP #2
Model:	IonCleanse Solo	S/N:	S01001
Standard Referenced:	EN 61000-6-2	Date:	April 2, 2008
Temperature:	20°C	Humidity:	31%
Input Voltage:	230Vac/50Hz and 120Vac/60Hz	Pressure:	836 mb
Configuration of Unit:	Running positive mode at 70% and Negative mode at 30%		
Test Engineer:	Tom Wittig		

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Voltage (kV)	Polarity		L 1	L 2	L 3	N	P E	Phase (deg)	Number of Pulses	Delay (sec)	Comments	Criteria Met	Pass / Fail
	+	-											
0.5	x		x			x		0	5	30	Differential Mode	A	Pass
0.5		x	x			x		0	5	30		A	Pass
0.5	x		x			x		90	5	30		A	Pass
0.5		x	x			x		90	5	30		A	Pass
0.5	x		x			x		180	5	30		A	Pass
0.5		x	x			x		180	5	30		A	Pass
0.5	x		x			x		270	5	30		A	Pass
0.5		x	x			x		270	5	30		A	Pass
0.5	x		x			x		0	5	30	Common Mode Line	A	Pass
0.5		x	x			x		0	5	30		A	Pass
0.5	x		x			x		90	5	30		A	Pass
0.5		x	x			x		90	5	30		A	Pass
0.5	x		x			x		180	5	30		A	Pass
0.5		x	x			x		180	5	30		A	Pass
0.5	x		x			x		270	5	30		A	Pass
0.5		x	x			x		270	5	30		A	Pass
0.5	x					x	x	0	5	30	Common Mode Neutral	A	Pass
0.5		x				x	x	0	5	30		A	Pass
0.5	x					x	x	90	5	30		A	Pass
0.5		x				x	x	90	5	30		A	Pass
0.5	x					x	x	180	5	30		A	Pass
0.5		x				x	x	180	5	30		A	Pass
0.5	x					x	x	270	5	30		A	Pass
0.5		x				x	x	270	5	30		A	Pass
1.0	x		x			x		0	5	60	Differential Mode	A	Pass
1.0		x	x			x		0	5	60		A	Pass
1.0	x		x			x		90	5	60		A	Pass
1.0		x	x			x		90	5	60		A	Pass
1.0	x		x			x		180	5	60		A	Pass
1.0		x	x			x		180	5	60		A	Pass
1.0	x		x			x		270	5	60		A	Pass
1.0		x	x			x		270	5	60		A	Pass
1.0	x		x			x		0	5	45	Common Mode Line	A	Pass
1.0		x	x			x		0	5	45		A	Pass



Surge Immunity per IEC / EN 61000-4-5

Manufacturer:	Stargate International	Project Number:	A80348
Customer Representative:	Bob Walker	Test Area:	GP #2
Model:	IonCleanse Solo	S/N:	S01001
Standard Referenced:	EN 61000-6-2	Date:	April 2, 2008
Temperature:	20°C	Humidity:	31%
Input Voltage:	230Vac/50Hz and 120Vac/60Hz	Pressure:	836 mb
Configuration of Unit:	Running positive mode at 70% and Negative mode at 30%		
Test Engineer:	Tom Wittig		

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Voltage (kV)	Polarity		L 1	L 2	L 3	N	P E	Phase (deg)	Number of Pulses	Delay (sec)	Comments	Criteria Met	Pass / Fail
1.0	x		x				x	90	5	45		A	Pass
1.0		x	x				x	90	5	45		A	Pass
1.0	x		x				x	180	5	45		A	Pass
1.0		x	x				x	180	5	45		A	Pass
1.0	x		x				x	270	5	45		A	Pass
1.0		x	x				x	270	5	45		A	Pass
1.0	x					x	x	0	5	45	Common Mode Neutral	A	Pass
1.0		x				x	x	0	5	45		A	Pass
1.0	x					x	x	90	5	45		A	Pass
1.0		x				x	x	90	5	45		A	Pass
1.0	x					x	x	180	5	45		A	Pass
1.0		x				x	x	180	5	45		A	Pass
1.0	x					x	x	270	5	45		A	Pass
1.0		x				x	x	270	5	45		A	Pass
2.0	x		x				x	0	5	60	Common Mode Line	A	Pass
2.0		x	x				x	0	5	60		A	Pass
2.0	x		x				x	90	5	60		A	Pass
2.0		x	x				x	90	5	60		A	Pass
2.0	x		x				x	180	5	60		A	Pass
2.0		x	x				x	180	5	60		A	Pass
2.0	x		x				x	270	5	60		A	Pass
2.0		x	x				x	270	5	60		A	Pass
2.0	x					x	x	0	5	60	Common Mode Neutral	A	Pass
2.0		x				x	x	0	5	60		A	Pass
2.0	x					x	x	90	5	60		A	Pass
2.0		x				x	x	90	5	60		A	Pass
2.0	x					x	x	180	5	60		A	Pass
2.0		x				x	x	180	5	60		A	Pass
2.0	x					x	x	270	5	60		A	Pass
2.0		x				x	x	270	5	60		A	Pass
Medical Requirement 120Vac/60Hz													
0.5	x		x			x		0	5	30	Differential Mode	A	Pass
0.5		x	x			x		0	5	30		A	Pass
0.5	x		x			x		90	5	30		A	Pass
0.5		x	x			x		90	5	30		A	Pass
0.5	x		x			x		270	5	30		A	Pass



Surge Immunity per IEC / EN 61000-4-5

Manufacturer:	Stargate International	Project Number:	A80348
Customer Representative:	Bob Walker	Test Area:	GP #2
Model:	IonCleanse Solo	S/N:	S01001
Standard Referenced:	EN 61000-6-2	Date:	April 2, 2008
Temperature:	20°C	Humidity:	31%
Input Voltage:	230Vac/50Hz and 120Vac/60Hz	Pressure:	836 mb
Configuration of Unit:	Running positive mode at 70% and Negative mode at 30%		
Test Engineer:	Tom Wittig		

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Voltage (kV)	Polarity		L 1	L 2	L 3	N	P E	Phase (deg)	Number of Pulses	Delay (sec)	Comments	Criteria Met	Pass / Fail
0.5		x	x			x		270	5	30		A	Pass
0.5	x		x				x	0	5	30	Common Mode Line	A	Pass
0.5		x	x				x	0	5	30		A	Pass
0.5	x		x				x	90	5	30		A	Pass
0.5		x	x				x	90	5	30		A	Pass
0.5	x		x				x	270	5	30		A	Pass
0.5		x	x				x	270	5	30		A	Pass
0.5	x					x	x	0	5	30	Common Mode Neutral	A	Pass
0.5		x				x	x	0	5	30		A	Pass
0.5	x					x	x	90	5	30		A	Pass
0.5		x				x	x	90	5	30		A	Pass
0.5	x					x	x	270	5	30		A	Pass
0.5		x				x	x	270	5	30		A	Pass
1.0	x		x			x		0	5	60	Differential Mode	A	Pass
1.0		x	x			x		0	5	60		A	Pass
1.0	x		x			x		90	5	60		A	Pass
1.0		x	x			x		90	5	60		A	Pass
1.0	x		x			x		270	5	60		A	Pass
1.0		x	x			x		270	5	60		A	Pass
1.0	x		x				x	0	5	45	Common Mode Line	A	Pass
1.0		x	x				x	0	5	45		A	Pass
1.0	x		x				x	90	5	45		A	Pass
1.0		x	x				x	90	5	45		A	Pass
1.0	x		x				x	270	5	45		A	Pass
1.0		x	x				x	270	5	45		A	Pass
1.0	x					x	x	0	5	45	Common Mode Neutral	A	Pass
1.0		x				x	x	0	5	45		A	Pass
1.0	x					x	x	90	5	45		A	Pass
1.0		x				x	x	90	5	45		A	Pass
1.0	x					x	x	270	5	45		A	Pass
1.0		x				x	x	270	5	45		A	Pass
2.0	x		x				x	0	5	60	Common Mode Line	A	Pass
2.0		x	x				x	0	5	60		A	Pass
2.0	x		x				x	90	5	60		A	Pass



Surge Immunity per IEC / EN 61000-4-5

Manufacturer:	Stargate International	Project Number:	A80348
Customer Representative:	Bob Walker	Test Area:	GP #2
Model:	IonCleanse Solo	S/N:	S01001
Standard Referenced:	EN 61000-6-2	Date:	April 2, 2008
Temperature:	20°C	Humidity:	31%
Input Voltage:	230Vac/50Hz and 120Vac/60Hz	Pressure:	836 mb
Configuration of Unit:	Running positive mode at 70% and Negative mode at 30%		
Test Engineer:	Tom Wittig		

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Voltage (kV)	Polarity		L 1	L 2	L 3	N	P E	Phase (deg)	Number of Pulses	Delay (sec)	Comments	Criteria Met	Pass / Fail
2.0		x	x				x	90	5	60		A	Pass
2.0	x		x				x	270	5	60		A	Pass
2.0		x	x				x	270	5	60		A	Pass
2.0	x					x	x	0	5	60	Common Mode Neutral	A	Pass
2.0		x				x	x	0	5	60		A	Pass
2.0	x					x	x	90	5	60		A	Pass
2.0		x				x	x	90	5	60		A	Pass
2.0	x					x	x	270	5	60		A	Pass
2.0		x				x	x	270	5	60		A	Pass



Surge Immunity per IEC / EN 61000-4-5

Manufacturer:	Stargate International	Project Number:	A80348
Customer Representative:	Bob Walker	Test Area:	GP #2
Model:	IonCleanse Solo	S/N:	S01001
Standard Referenced:	EN 61000-6-2	Date:	April 2, 2008

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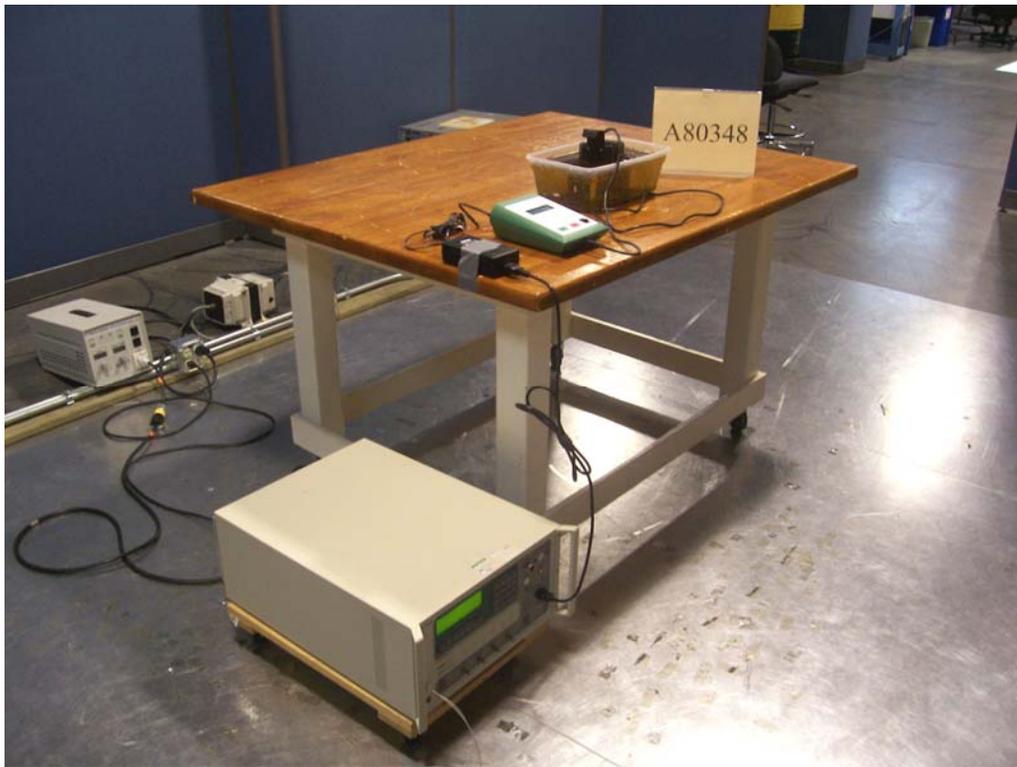


Figure D1. Surge Immunity Test Setup – AC Mains.



Surge Immunity per IEC / EN 61000-4-5

Manufacturer:	Stargate International	Project Number:	A80348
Customer Representative:	Bob Walker	Test Area:	GP #2
Model:	IonCleanse Solo	S/N:	S01001
Standard Referenced:	EN 61000-6-2	Date:	April 2, 2008

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Test Equipment List

ID Number	Manufacturer	Model #	Serial #	Description	Cal Date	Cal Due
1014	KeyTek	EMC Pro	0203270	Advanced EMC Immunity Tester	10/15/2007	10/15/2008
1184	KeyTek	CEWare32	NA	KeyTek EMCPro Control Software for EFT, Surge, H-F	NA	NA
1206	Extech	445715	252866	Hygro-Thermometer	03/06/2007	04/06/2008
1214	California Instruments	1251P	10223	AC Power Source	NA	NA

APPENDIX E

Conducted RF Immunity Test Data



Conducted RF Immunity per IEC / EN 61000-4-6

Manufacturer:	Stargate International	Project Number:	A80348
Customer Representative:	Bob Walker	Test Area:	GP #2
Model:	IonCleanse Solo	S/N:	S01001
Standard Referenced:	EN 61000-6-2	Date:	April 3, 2008
Temperature:	19°C	Humidity:	34%
Input Voltage:	230Vac/50Hz	Pressure:	833 mb
Configuration of Unit:	Running positive mode at 70% and Negative mode at 30%		
Test Engineer:	Tom Wittig		

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Frequency (MHz)	Modulation			Level (Vrms)	Dwell (sec)	Comments	Criteria Met	Pass / Fail
	Type	%	Freq					
0.150 – 80.0	AM	80	1 kHz	3	3	AC Mains using M3 CDN	A	Pass
4.0	AM	80	1 kHz	3	3		A	Pass
0.150 – 80.0	AM	80	1 kHz	3	3	Test Array Cable using EM Clamp	A	Pass
4.0	AM	80	1 kHz	3	3		A	Pass



Conducted RF Immunity per IEC / EN 61000-4-6

Manufacturer:	Stargate International	Project Number:	A80348
Customer Representative:	Bob Walker	Test Area:	GP #2
Model:	IonCleanse Solo	S/N:	S01001
Standard Referenced:	EN 61000-6-2	Date:	April 3, 2008

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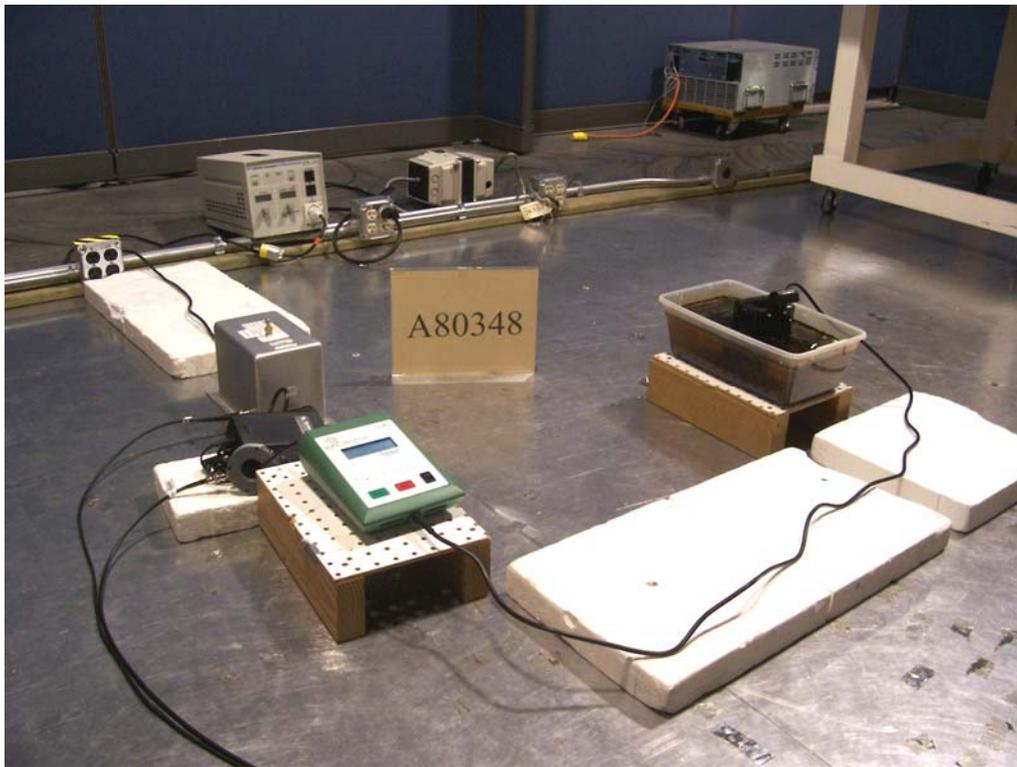


Figure E1. Conducted RF Immunity Test Setup – AC Mains.



Conducted RF Immunity per IEC / EN 61000-4-6

Manufacturer: Stargate International
Customer Representative: Bob Walker
Model: IonCleanse Solo
Standard Referenced: EN 61000-6-2

Project Number: A80348
Test Area: GP #2
S/N: S01001
Date: April 3, 2008

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Figure E2. Conducted RF Immunity Test Setup – I/O Cable.



Conducted RF Immunity per IEC / EN 61000-4-6

Manufacturer: Stargate International
Customer Representative: Bob Walker
Model: IonCleanse Solo
Standard Referenced: EN 61000-6-2

Project Number: A80348
Test Area: GP #2
S/N: S01001
Date: April 3, 2008

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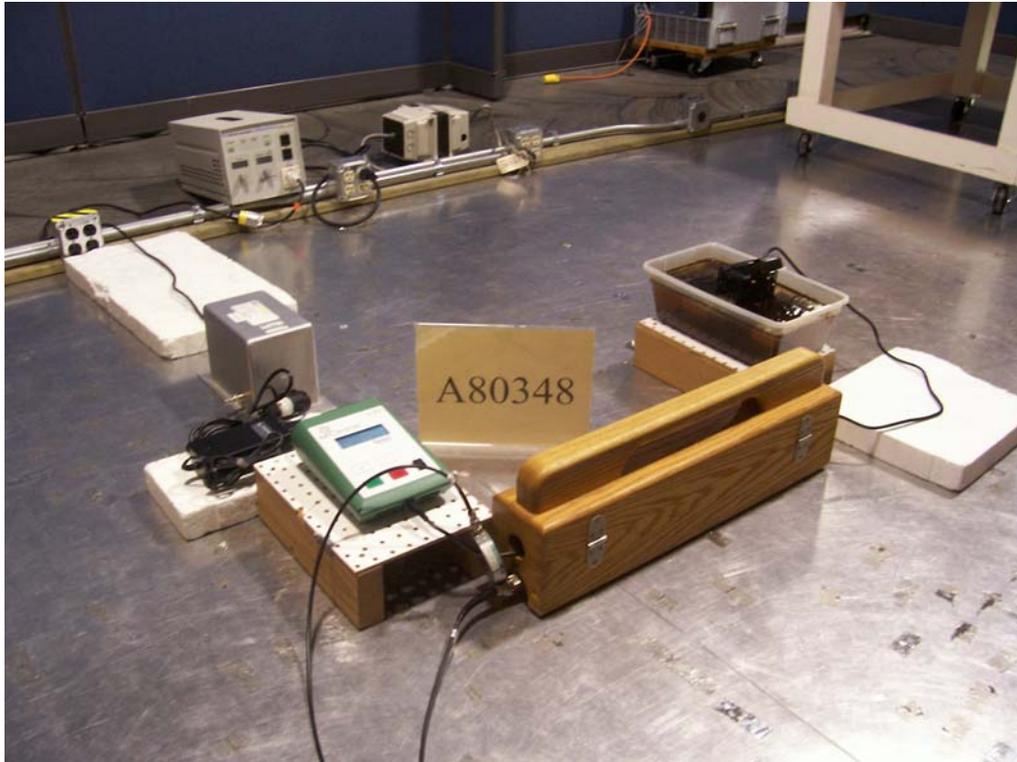


Figure E3. Conducted RF Immunity Test Setup – I/O Cable.



Conducted RF Immunity per IEC / EN 61000-4-6

Manufacturer:	<u>Stargate International</u>	Project Number:	<u>A80348</u>
Customer Representative:	<u>Bob Walker</u>	Test Area:	<u>GP #2</u>
Model:	<u>IonCleanse Solo</u>	S/N:	<u>S01001</u>
Standard Referenced:	<u>EN 61000-6-2</u>	Date:	<u>April 3, 2008</u>

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Test Equipment List

ID Number	Manufacturer	Model #	Serial #	Description	Cal Date	Cal Due
1008	Fischer Custom	F-203I	320	EM Injection Clamp	09/10/2007	09/10/2008
1023	Amplifier Research	75A250	28844	75 Watt Amplifier (10 kHz - 250 MHz)	NA	NA
1036	Fischer Custom	F-33-2	268	Current Probe, 10 kHz - 250 MHz	08/27/2007	08/27/2008
1048	Hewlett Packard	8591E	3916A07553	Spectrum Analyzer, 9 kHz - 1.8 GHz	12/12/2007	12/12/2008
1226	EMCI	EMCI-CDN-M3-16	EMCI011	M3 CDN, 16A, 250 VAC	09/10/2007	09/10/2008
1214	California Instruments	1251P	10223	AC Power Source	NA	NA
1258	Hewlett Packard	8648C	3537A01572	Signal Generator, 100kHz to 3.2GHz	05/14/2007	05/14/2008

APPENDIX F

Voltage Dip and Interrupts Test Data



Voltage Dips and Interrupts per IEC / EN 61000-4-11

Manufacturer:	Stargate International	Project Number:	A80348
Customer Representative:	Bob Walker	Test Area:	GP #2
Model:	IonCleanse Solo	S/N:	S01001
Standard Referenced:	EN 61000-6-2	Date:	April 3, 2008
Temperature:	16°C	Humidity:	35%
Input Voltage:	230Vac/50Hz and 120Vac/60Hz	Pressure:	833mb
Configuration of Unit:	Running positive mode at 70% and Negative mode at 30%		
Test Engineer:	Tom Wittig		

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% Nominal	No. of Cycles	Phase Angle (deg)				Time between dropouts (sec)	Number of tests	Comments	Criteria Met	Pass / Fail
		0	90	180	270					
Testing performed for Medical Requirement										
0%	0.5	x				10	3		A	Pass
0%	0.5		x			10	3		A	Pass
0%	0.5			x		10	3		A	Pass
0%	0.5				x	10	3		A	Pass
40%	5	x				10	3		A	Pass
40%	5		x			10	3		A	Pass
40%	5			x		10	3		A	Pass
40%	5				x	10	3		A	Pass
70%	25	x				10	3		A	Pass
70%	25		x			10	3		A	Pass
70%	25			x		10	3		A	Pass
70%	25				x	10	3		A	Pass
0%	250	x				10	3		C	Pass
0%	250			x		10	3		C	Pass
Testing performed @230Vac/50Hz										
0%	1.5	x				10	3		A	Pass
0%	1.5		x			10	3		A	Pass
0%	1.5			x		10	3		A	Pass
0%	1.5				x	10	3		A	Pass
70%	25	x				10	3		A	Pass
70%	25		x			10	3		A	Pass
70%	25			x		10	3		A	Pass
70%	25				x	10	3		A	Pass
Testing performed @230Vac/60Hz										
0%	300	x				10	3		C	Pass
0%	300			x		10	3		C	Pass
Testing performed @120Vac/60Hz										
0%	0.5	x				10	3		A	Pass
0%	0.5		x			10	3		A	Pass
0%	0.5			x		10	3		A	Pass
0%	0.5				x	10	3		A	Pass



Voltage Dips and Interrupts per IEC / EN 61000-4-11

Manufacturer:	Stargate International	Project Number:	A80348
Customer Representative:	Bob Walker	Test Area:	GP #2
Model:	IonCleanse Solo	S/N:	S01001
Standard Referenced:	EN 61000-6-2	Date:	April 3, 2008
Temperature:	16°C	Humidity:	35%
Input Voltage:	230Vac/50Hz and 120Vac/60Hz	Pressure:	833mb
Configuration of Unit:	Running positive mode at 70% and Negative mode at 30%		
Test Engineer:	Tom Wittig		

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FR0100

% Nominal	No. of Cycles	Phase Angle (deg)				Time between dropouts (sec)	Number of tests	Comments	Criteria Met	Pass / Fail
		0	90	180	270					
40%	5	x				10	3		A	Pass
40%	5		x			10	3		A	Pass
40%	5			x		10	3		A	Pass
40%	5				x	10	3		A	Pass
70%	25	x				10	3		A	Pass
70%	25		x			10	3		A	Pass
70%	25			x		10	3		A	Pass
70%	25				x	10	3		A	Pass
0%	250	x				10	3		C	Pass
0%	250			x		10	3		C	Pass



Voltage Dips and Interrupts per IEC / EN 61000-4-11

Manufacturer:	Stargate International
Customer Representative:	Bob Walker
Model:	IonCleanse Solo
Standard Referenced:	EN 61000-6-2

Project Number:	A80348
Test Area:	GP #2
S/N:	S01001
Date:	April 3, 2008

A80348-4-11.doc

FR0100



Figure F1. Voltage Dips and Interrupts Test Setup.



Voltage Dips and Interrupts per IEC / EN 61000-4-11

Manufacturer:	Stargate International	Project Number:	A80348
Customer Representative:	Bob Walker	Test Area:	GP #2
Model:	IonCleanse Solo	S/N:	S01001
Standard Referenced:	EN 61000-6-2	Date:	April 3, 2008

A80348-4-11.doc FR0100

Test Equipment List

ID Number	Manufacturer	Model #	Serial #	Description	Cal Date	Cal Due
1014	KeyTek	EMC Pro	0203270	Advanced EMC Immunity Tester	10/15/2007	10/15/2008
1182	Tektronics	TDS1002	C043193	60 MHz Digital Oscilloscope	08/02/2007	08/02/2008
1184	KeyTek	CEWare32	NA	KeyTek EMCPro Control Software for EFT, Surge, H-F	NA	NA
1208	Extech	115715	252868	Hygro-Thermometer	03/24/2008	03/24/2009
1214	California Instruments	1251P	10223	AC Power Source	NA	NA

APPENDIX G

Product Data Sheet



1.0 Client Information

Client Information	
Manufacturer Name	Stargate International, Inc.
Address	10235 S Progress Way, # 7
City	Parker
State	Colorado
Zip Code	80134
Client Representative	Bob Walker-Administration /Brian Bell-Engineering
Title	CEO/Engineer
Phone	303-840-8206
Fax	303-840-8320
Email	rwalker@stargateinternational.com Bbell@stargateinternational.com

2.0 Product Information - General

Product Information				
Product Name (as it should appear on test report)	IonCleanse Solo			
Model Number	Solo			
Functional description of product	The IonCleanse Solo is a detoxifying footbath used to maintain high energy levels, detoxify the body and ensure long-term wellness.			
Product type (IT, Medical, Scientific, Industrial, etc.)	Household/Scientific			
Is the product an intentional radiator	No			
Product Dimensions	6"W x 2 7/8" H x 7 7/8" L			
Product Weight	1.5 Lbs.			
Will fork lift be required	No			
Applicable Standards, if known	EN 55011 / EN 55022 / FCC Part 15 / ICES-003, EN 61000-6-1: 2007			
Describe all environment(s) where product will be used	Office Environment (alternative medicine practitioners, practitioners, etc.), Household			
Does product consist of multiple components? (If yes, please describe each system component)	Yes – 1. Power Supply, 2. Control box, 3. Array			
Cycle time > 3 seconds? (If yes, How long?)	Product constantly updates. Max run time of 45 minutes			
Highest internally generated frequency	4 MHz Xtal to 1 Microprocessor			
Product Set-up Time	<5minutes			
Boot up time in the event of an unintentional power down	<1 minute			
Identify all I/O Connections as well as maximum associated cable lengths below				
Model No.	Description	Shielded?	Length	Quantity
Array	Foot bath Array Assembly	NO	6ft	1
MPU50-107	Power supply Switching	NO	6ft	1



3.0 Power

Power Requirements	
Input Voltage Rating as it appears on unit, power supply, or power brick	PS 100-240 VAC 47-63hz Output is 20 VDC @ 2.5 amps
Input Current (specify @ 230 Vac/50 Hz)	1.35 A
Single or Multi-Phase (If multi-phase, specify delta or wye)	Single phase
Is input power connector two-prong (Hot & Neutral) or 3-prong (H, N, Ground)	3 prong
Does UUT have more than 1 power cord? (If yes, explain.)	no

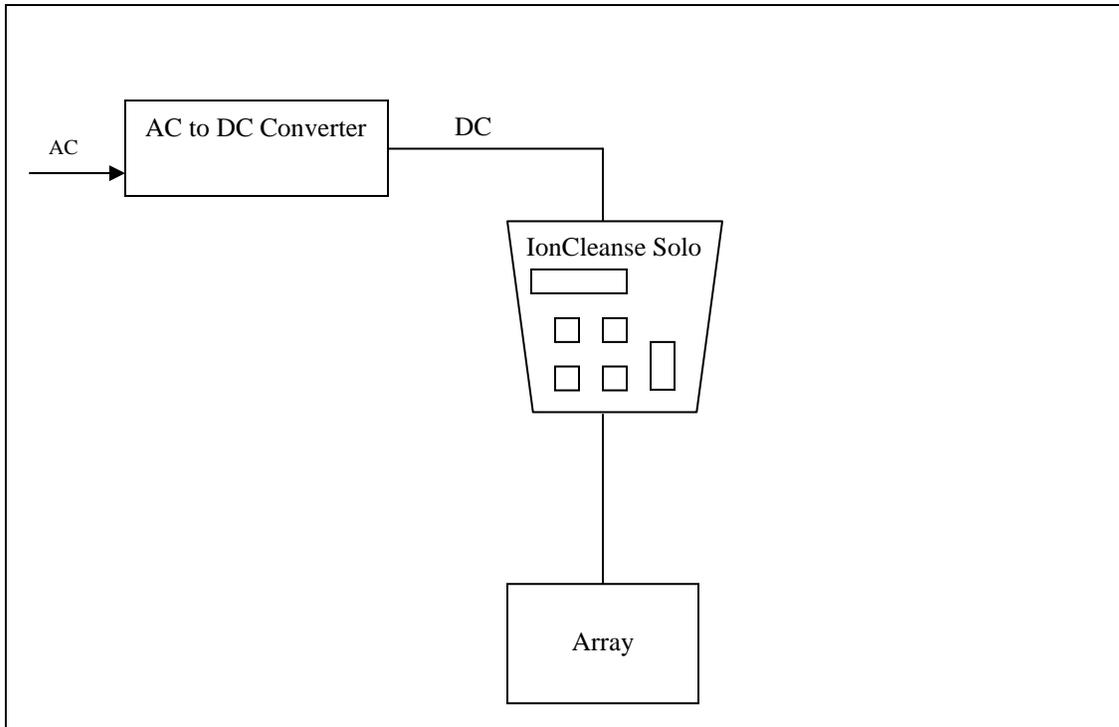
4.0 Unit Under Test (UUT) – Detailed Information

UUT Hardware			
Condition		Production	
Configuration During Test		Normal Operation (70% pos / 30% neg)	
Input Power		100 – 240 Vac	
UUT Components			
Name	Model No.	Serial No.	Description
P/S	MPU50-107	N/A	AC to DC external Power Supply Manufacturer: SinPro Input Rating: 100 – 240 Vac, 47-63 Hz, 1.35 A Output Rating: 16-21 Vdc, 50 W
Control Box	IonCleanse Solo	01001	Footbath controller Input ratings: 20 Vdc, 2.5 A
Array	N/A	N/A	Footbath array for insertion into footbath
I/O Cabling			
See Section 2.0 for details			
UUT Software/Firmware			
Name	Version/Revision	Functionality	
IonCleanse Solo	7A05	IonCleanse Solo firmware for normal operation. Maximum run time of 45 minutes 70% pos / 30% neg	
UUT Operating Conditions			
List all frequencies the product generates/uses		4 MHz	
How will product be exercised during test?		Normal Use (70% pos / 30% neg)	
How will product be monitored during test?		Visually	
What are the product's critical parameters?		No unexpected change in display readings	
Specify tolerance of all critical parameters.		No unexpected change in display readings	

5.0 Support Equipment (SE) – Detailed Information

Support Equipment (SE)				
Name	Model No.	Serial No.	Description	
N/A	N/A	N/A	N/A	
SE I/O Cabling				
Model No.	Description	Shielded?	Length	Quantity
N/A	N/A	N/A	N/A	N/A
SE Software/Firmware				
Name	Version/Revision	Functionality		
N/A	N/A	N/A		

6.0 Block Diagram



(Must be completed prior to testing).

APPENDIX H

EMI Test Log



EMI Test Log

Manufacturer:	<u>Stargate International</u>	Project Number:	<u>A80348</u>
Model:	<u>IonCleanse Solo</u>	S/N:	<u>S01001</u>
Customer Representative:	<u>Bob Walker</u>		
Standard Referenced:	<u>EN55011 / EN55022 / FCC Part 15 / IECS-003</u>		

FR0105

Test	Test Code	Date	Event	Time (hrs)	Result	Initials
RE	1151	March 28, 2008 1700	Test# 1, 30MHz – 1GHz, 8 radials, 4 heights, 3 sec. Dwell, 80dB Ref. Level 230VAC@50Hz	1.0	---	DL
	1151	1800	Test# 2, 30MHz – 1GHz, 8 radials, 4 heights, 3 sec. Dwell, 80dB Ref. Level 120VAC@60Hz – Determined to be worst case voltage	1.0	Pass	DL
CE	2151	1900	Test# 3, 150kHz – 30MHz, 3 sec. Dwell, 80dB Ref. Level 230VAC@50Hz	0.5	Pass	DL
CE	2341	1930	Test# 4, 150kHz – 30MHz, 3 sec. Dwell, 80dB Ref. Level 120VAC@60Hz	0.5	Pass	DL
4-3	4344	0800	Radiated RF Immunity 3V/m, 80 - 1000 MHz, 1% Step, 80% AM, 1kHz sine, 3s dwell 230 VAC / 50 Hz	3.5	Pass	TW
4-3	4390	1130	Radiated RF Immunity (Medical Requirement) Perform testing from 1.0 GHz - 2.0 GHz 3V/m. If product passes, it fulfills generic requirements 230 VAC / 50 Hz	1.0	Pass	TW
4-3	4391	1230	Radiated RF Immunity Radiated RF Immunity 1V/m, 2.0 - 2.7 GHz, 1% Step, 80% AM, 1kHz sine, 3s dwell 230 VAC / 50 Hz	1.0	Pass	TW
4-3	4391	---	Radiated RF Immunity Radiated RF Immunity 3V/m, 1.4 - 2.0 GHz, 1% Step, 80% AM, 1kHz sine, 3s dwell 230 VAC / 50 Hz	0.0	Pass	TW
		1400	Completed RF Immunity	6.0	---	TW
4-4	4401	1400	Electrical Fast Transient / Burst Mains: +/- 1kV, I/O: +/- 500V 230 VAC / 50 Hz	1.0	Pass	TW
4-4	4410	1500	Electrical Fast Transient / Burst (medical requirement) Mains: +/- 2kV, I/O: +/- 500V 120 VAC / 60 Hz	1.0	Pass	TW
4-4	4411		Electrical Fast Transient / Burst (medical requirement) Mains: +/- 2kV, I/O: +/- 500V 230 VAC / 50 Hz	0.5	Pass	TW
4-5	4515	April 2, 2008	Surge Immunity Mains: +/- 2kV CM, +/- 1kV DM, (0, 90, 180, 270) 230 VAC / 50 Hz	5.0	Pass	TW
3-3	3302		AC Short and Long Term Flicker -- 230 VAC / 50 Hz	2.0	Pass	TW



EMI Test Log

Manufacturer:	<u>Stargate International</u>	Project Number:	<u>A80348</u>
Model:	<u>IonCleanse Solo</u>	S/N:	<u>S01001</u>
Customer Representative:	<u>Bob Walker</u>		
Standard Referenced:	<u>EN55011 / EN55022 / FCC Part 15 / IECS-003</u>		

FR0105

Test	Test Code	Date	Event	Time (hrs)	Result	Initials
4-11	4141	April 3, 2008 0800	Voltage Dips and Interruptions (Medical Requirement) 0% nom, 0.5 cycles / 40% nom, 5 cycles / 70% nom, 25 cycles / 0% nom, 250 cycles 230 VAC / 50 Hz	1.0	Pass	TW
4-11	4140	0900	Voltage Dips and Interruptions (Medical Requirement) 0% nom, 0.5 cycles / 40% nom, 5 cycles / 70% nom, 25 cycles / 0% nom, 250 cycles 120 VAC / 60 Hz	0.5	Pass	TW
4-11	4191	0930	Voltage Dips and Interruptions Voltage Dips and Interruptions 0% nom, 1.5 cycles / 70% nom, 25 cycles @ 50 Hz / 70% nom, 30 cycles @ 60 Hz 230 VAC / 50 Hz	1.0	Pass	TW
4-11	4190	1030	Voltage Dips and Interruptions Voltage Dips and Interruptions 0% nom, 250 cycles @ 50 Hz / 0% nom, 300 cycles @ 60 Hz 230 VAC / 50 Hz	0.5	Pass	TW
4-5	4535	1100	Setup and ran Surge Immunity (Medical Requirement) Mains: +/- 2kV CM, +/- 1kV DM, (0, 90, 270) 120 VAC / 60 Hz	4.0	Pass	TW
4-6	4612	1500	Setup and ran Conducted RF Immunity 3Vrms, 0.15 - 80 MHz, 1% Step, 80% AM, 1kHz sine, 3s dwell 230 VAC / 50 Hz AC Power tested	1.0	Pass	TW
4-6	4611	April 4, 2008 0800-0900	Conducted RF Immunity (Medical Requirement) 3Vrms, 0.15 - 80 MHz, 1% Step, 80% AM, 1kHz sine, 3s dwell (test array cable) 230 VAC / 50 Hz	1.0	Pass	TW
4-2	4223	0900-1100	Electrostatic Discharge +/- 2, 4kV Contact, +/-2, 4, 8kV Air 230 VAC / 50 Hz	2.0	Pass	TW
4-2	4290	1100-1130	Electrostatic Discharge (Medical Requirement) +/-6 kV Contact-This is the required level for Medical. Perform after official test and note results 230 VAC / 50 Hz At +6kV, contact discharge to the left side screen causes unit to reboot At -6kV, contact discharges causes the display to be scrambled Could not repeat consistently.	0.5	---	TW

APPENDIX I

Laboratory Accreditation



**Nemko Laboratory
Authorization
Authorization: ELA 215**

EMC Laboratory: EMC Integrity, Inc.
1736 Vista View Drive
Longmont, Colorado 80504
USA

**Scope of
Authorization:** All CENELEC standards [ENs] for EMC that are listed on the
accompanying page, and all of the corresponding CISPR,
IEC and ISO EMC standards that are listed on the
accompanying page.

Nemko has assessed the quality assurance system, the testing facilities, qualifications and testing practices of the relevant parts of the organization. The quality assurance system of the Laboratory has been validated against ISO/IEC 17025 or equivalent. The laboratory also fulfils the conditions described in Nemko Document NLA -10. During the visit by the Nemko representative it was found that the Laboratory is capable of performing tests within the Scope of the Authorisation.

Accordingly, Nemko will normally accept test results from the laboratory on a partial or complete basis for certification of the products.

In order to maintain the Authorisation, the information given in the pertinent NLA-10 must be carefully followed. Nemko is to be promptly notified about any changes in the situation at the Laboratory, which may affect the basis for this Authorisation. The Authorisation may be withdrawn at any time if the conditions are no longer considered to be fulfilled.

The Authorisation is valid through December 31, 2008.

Dallas, Texas, USA.

For and on behalf of Nemko AS:


T.B. Ketterling,

Nemko ELA Co-ordinator

Region: North America



**Nemko Laboratory
Authorization
Authorization: ELA 215**

SCOPE OF AUTHORIZATION

Capability to perform a basic test implies also that any product (family) standard calling up this basic test is also within the scope if mentioned below or not.

Generic & Product –Family Standards		
EN 55011 :1998+A1 :1999 +A2 :2002 CISPR 11:1997 (Modified) + A1:1999 + A2:2002 CISPR 11 Ed. 4.1	EN 55014-1:2000 + A1:2001 + A2:2002 CISPR 14-1:2000 + A1:2001 + A2:2002 CISPR 14-1 Ed. 5.0 EN 55014-2:1997 + A1:2001 CISPR 14-2:1997 + A1:2001 CISPR 14-2 Ed. 1.1	EN 55022: 1998+ A1:2000, +A2:2003 CISPR 22: 2003+ A1:2004 EN55022:2006 CISPR 22:2005 (Modified) CISPR 22 Ed. 5.2
EN 55024: 1998 +A1:2001, +A2:2003 CISPR 24: 1997 +A1:2001, +A2:2002 CISPR 24 Ed. 1.0	EN 61000-6-1 :2007 IEC 61000-6-1 Ed. 2.0 EN 61000-6-1: 2001	EN 61000-6-2:2005 IEC 61000-6-2 Ed. 2.0
EN 61000-6-3 :2007 IEC 61000-6-3 Ed. 2.0 EN 61000-6-3: 2001 + A1 :2004	IEC 61000-6-2 Ed. 2.0 EN 61000-6-2: 2005 IEC 61000-6-2: 2005 EN 61000-6-2: 2001	EN 61326:1997 +A1:1998 + A2:2001 +A3:2003 IEC 61326:1997 + A1:1998 + A2:2000 IEC 61326:2002-02
EN 60601-1-2:2001 IEC 60601-1-2:2001 EN 60601-1-2:2006 IEC 60601-1-2 Ed. 2.1	EN 55103-1:1996 EN 55103-2 :1996	EN 300 386 V.1.3.1 EN 300 386 V.1.3.3
EN 61000-3-3: 1995, +A1:2001 +A2:2005 IEC 61000-3-3: 1994, +A1:2001 +A2:2005	EN 61000-3-2: 2000 +A2 :2005 IEC 61000-3-2: 2000 (Modified) +A1:2001 +A2:2004	BLANK
Basic Standards		
EN 61000-4-2:1995, +A1:1998, +A2:2000 IEC 61000-4-2:1995, +A1:1998, +A2:2000 IEC 61000-4-2 Ed. 1.2	EN 61000-4-3:2002, +A1:2002 IEC 61000-4-3:2002, +A1:2002 EN 61000-4-3 :2006 +A1 :2006 +A2 :2006 IEC 61000-4-3 Ed. 3.0	EN 61000-4-4:1995, +A1:2002, +A2:2002 IEC 61000-4-4:1995, +A1:2000, +A2:2001 EN 61000-4-4:2004 IEC 61000-4-4 Ed. 2.0
EN 61000-4-5:1995, +A1:2001 IEC 61000-4-5:1995, +A1:2000 EN 61000-4-5 :2006 IEC 61000-4-5 Ed. 2.0	EN 61000-4-6:1996, +A1:2001 IEC 61000-4-6:1996, +A1:2000 EN 61000-4-6 : 2006 IEC 61000-4-6 Ed. 2.2	EN 61000-4-8:1994,+A1:2001 IEC 61000-4-8:1994, +A1:2001 IEC 61000-4-8 Ed. 1.1
EN 61000-4-11:2004 IEC 61000-4-11 Ed. 2.0 EN 61000-4-11:1994, +A1:2000 IEC 61000-4-11:1994, +A1:2000	BLANK	BLANK

Dallas, Texas December 7, 2006.

T.B. Ketterling

T.B. Ketterling, Nemko ELA Co-ordinator



**National Voluntary
Laboratory Accreditation Program**



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

EMC Integrity, Inc.
1736 Vista View Drive
Longmont, CO 80504
Mr. Vincent W. Greb
Phone: 303-776-7249 Fax: 303-776-7314
E-Mail: vinceg@emcintegrity.com
URL: <http://www.emcintegrity.com>

**ELECTROMAGNETIC COMPATIBILITY
AND TELECOMMUNICATIONS**

NVLAP LAB CODE 200737-0

NVLAP Code Designation / Description

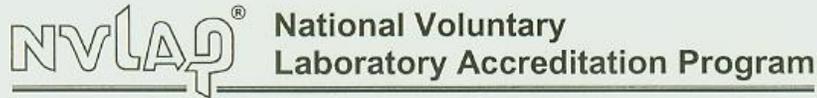
Emissions Test Methods:

12/100063c	IEC 61000-6-3 (1996), EN 61000-6-3 (2001), A1 (2004): Electromagnetic Compatibility (EMC) - Part 6: Generic standards - Section 3: Emission standard for residential, commercial, and light-industrial environments.
12/CIS11f	AS/NZS CISPR 11 (2002): Industrial, scientific and medical (ISM) radio frequency equipment - Electromagnetic disturbance characteristics - Limits and methods of measurement
12/CIS11g	IEC/CISPR 11, Ed. 4.1 (2004-06): Industrial, scientific and medical (ISM) radio-frequency equipment - Electromagnetic disturbance characteristics - Limits and methods of measurements
12/CIS11h	AS/NZS CISPR 11 (2004): Industrial, scientific and medical (ISM) radio frequency equipment - Electromagnetic disturbance characteristics - Limits and methods of measurement
12/CIS11i	IEC/CISPR 11, Ed. 4.1 (2004-06) + A1(2004): Industrial, scientific and medical (ISM) radio frequency equipment - Electromagnetic disturbance characteristics - Limits and methods of measurement

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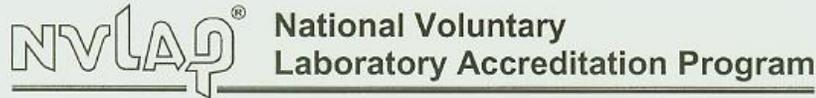
NVLAP LAB CODE 200737-0

<i>NVLAP Code</i>	<i>Designation / Description</i>
12/CIS11j	EN 55011 (1998) + A1(1999), A2(2002): Industrial, scientific and medical (ISM) radio frequency equipment - Electromagnetic disturbance characteristics - Limits and methods of measurement
12/CIS11k	IEC/CISPR 11 (2003), EN 55011 (1998), A2(2002): Limits and Methods of Measurement of Electromagnetic Disturbance Characteristics of Industrial, Scientific, and Medical Radio-Frequency Equipment
12/CIS14b1	AS/NZS CISPR 14-1 (2003): Electromagnetic Compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission
12/CIS14x	IEC/CISPR 14-1, Ed. 4 (2003): Electromagnetic Compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission
12/CIS22	IEC/CISPR 22 (1997) & EN 55022 (1998) + A1(2000): Limits and methods of measurement of radio disturbance characteristics of information technology equipment
12/CIS22a	IEC/CISPR 22 (1993) and EN 55022 (1994): Limits and methods of measurement of radio disturbance characteristics of information technology equipment, Amendment 1 (1995) and Amendment 2 (1996)
12/CIS22a4	IEC/CISPR 22 (1993) & EN 55022 (1994)+A1(1995), A2(1997): Limits and methods of measurement of radio disturbance characteristics of information technology equipment
12/CIS22b	CNS 13438 (1997): Limits and Methods of Measurement of Radio Interference Characteristics of Information Technology Equipment
12/CIS22c	IEC/CISPR 22, Fourth Edition (2003-04) & EN 55022 (1998): Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement
12/CIS22c1	IEC/CISPR 22, Edition 5 (2005) and EN 55022 (1998): Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement

2007-07-01 through 2008-06-30

Effective dates

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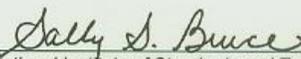
**ELECTROMAGNETIC COMPATIBILITY
AND TELECOMMUNICATIONS**

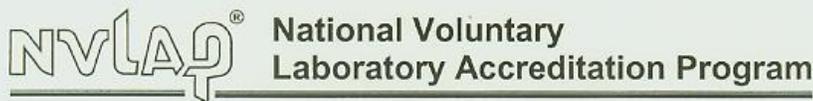
NVLAP LAB CODE 200737-0

<i>NVLAP Code</i>	<i>Designation / Description</i>
12/CIS22c3	IEC/CISPR 22, Edition 5 (2005) + A1(2005): Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement
12/CIS22c4	EN 55022 (1998) + A1(2000) + A2(2003): Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement
12/EM02d	IEC 61000-3-2, Edition 2.2 (2004-11): Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current \leq 16 A per phase)
12/EM03b	IEC 61000-3-3, Edition 1.1(2002-03) & EN 61000-3-3, A1(2001): EMC - Part 3-3: Limits - Limitations of voltage changes, voltage fluctuations and flicker, in public low-voltage supply-systems, for equipment with rated current \leq 16 A per phase and not subject to conditional connections
12/EM03g	IEC 61000-3-3, Edition 1.1 (2003) +A2 (2005): EMC Part 3-3: Limits - Limitations of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current \leq 16 A per phase and not subject to conditional connections
12/F18	FCC OST/MP-5 (1986): FCC Methods of Measurement of Radio Noise Emissions for ISM Equipment (cited in FCC Method 47 CFR Part 18 - Industrial, Scientific, and Medical Equipment)
12/FCC15b	ANSI C63.4 (2003) with FCC Method 47 CFR Part 15, Subpart B: Unintentional Radiators
12/KN22	KN22 with RRL Notice No. 2005-82 (Sept. 29, 2005): RRL Notice No. 2005-82: Technical Requirements for Electromagnetic Interference Annex 8 (KN-22), RRL Notice No. 2005-131: Conformity Assessment Procedures for Electromagnetic Interference
12/T51	AS/NZS CISPR 22 (2002) and AS/NZS 3548 (1997): Electromagnetic Interference - Limits and Methods of Measurement of Information Technology Equipment
12/VCCIa	VCCI: Agreement of Voluntary Control Council for Interference by Information Technology Equipment - Technical Requirements: V-3/2005.04

2007-07-01 through 2008-06-30

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AND TELECOMMUNICATIONS**

NVLAP LAB CODE 200737-0

NVLAP Code Designation / Description

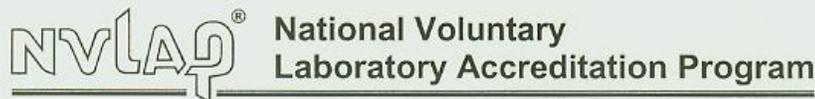
Immunity Test Methods:

12/610006h	IEC 61000-6-1, 2nd edition (2005-03): Electromagnetic compatibility (EMC) - Part 6: Generic standards - Section 1: Immunity for residential, commercial and light-industrial environments
12/610006i	IEC 61000-6-2, Edition 2.0 (2005-01): Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments
12/I01b	IEC 61000-4-2 (2001); EN 61000-4-2 (2001), A2 (2001): Electrostatic Discharge Immunity Test
12/I01c	EN 61000-4-2 +A1(1998) +A2(2001): Electrostatic Discharge Immunity Test
12/I02b	IEC/EN 61000-4-3, Ed. 2.1 (2002), A1 (2002); EN 61000-4-3: Radiated, radio-frequency, electromagnetic field immunity test
12/I02e	EN 61000-4-3 (2002) + A1(2002) + IS1(2004): Radiated, radio-frequency, electromagnetic field immunity test
12/I02f	EN 61000-4-3 (2002) + A1(2002): Radiated, radio-frequency, electromagnetic field immunity test
12/I03c	IEC 61000-4-4, Ed. 2.0 (2004-07): Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test
12/I04b	IEC 61000-4-5 (2001), A1(2000); EN 61000-4-5(2001), A1(2000): Surge Immunity Test
12/I05d	IEC 61000-4-6, Ed. 2.1 (2004); EN 61000-4-6: Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields
12/I05e	EN 61000-4-6 (1996) + A1 (2001) + IS1(2004): Immunity to Conducted Disturbances, Induced by Radio Frequency Fields

2007-07-01 through 2008-06-30

Effective dates

For the National Institute of Standards and Technology



**ELECTROMAGNETIC COMPATIBILITY
AND TELECOMMUNICATIONS**

NVLAP LAB CODE 200737-0

<i>NVLAP Code</i>	<i>Designation / Description</i>
12/I06b	IEC 61000-4-8 (2001), A1(2000); EN 61000-4-8 (2001),A1(2000): Power Frequency Magnetic Field Immunity Test
12/I06c	EN 61000-4-8 (1993) + A1 (2001): Power Frequency Magnetic Field Immunity Test
12/I07c	IEC 61000-4-11, Ed. 2 (2004-03) & EN 61000-4-11: Electromagnetic compatibility (EMC) - Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests
12/I07e	EN 61000-4-11 (1994), A1 (2001): Voltage Dips, Short Interruptions and Voltage Variations Immunity Tests
12/I07f	EN 61000-4-11 (2004): Voltage Dips, Short Interruptions and Voltage Variations Immunity Tests
12/KN11a	KN 61000-4-11 with RRL Notice No. 2005-130 (Dec 27, 2005): Voltage Dips, Short Interruptions and Voltage Variations Immunity Tests
12/KN24	KN24 (December 2005) with RRL Notice No. 2005-83: Information Technology Equipment - immunity characteristics - limits and methods of measurements
12/KN2a	KN 61000-4-2 with RRL Notice No. 2005-130 (Dec. 27, 2005): Electrostatic Discharge Immunity Test
12/KN3a	KN 61000-4-3 with RRL Notice No. 2005-130 (Dec. 27, 2005): Radiated, radio-frequency, electromagnetic field immunity test
12/KN4a	KN 61000-4-4 with RRL Notice No. 2005-130 (Dec. 27, 2005): Electromagnetic compatibility (EMC): Testing and measurement techniques - Electrical Fast Transient/Burst Immun
12/KN5a	KN 61000-4-5 with RRL Notice No. 2005-130 (Dec. 27, 2005): Surge Immunity Test
12/KN6a	KN 61000-4-6 with RRL Notice No. 2005-130 (Dec. 27, 2005): Electromagnetic compatibility (EMC): Testing and measurement techniques - Immunity to conducted disturbances,

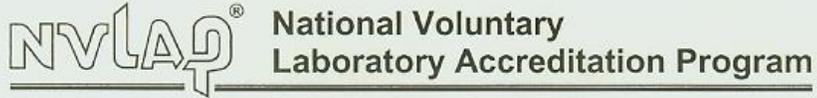
2007-07-01 through 2008-06-30

Effective dates

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For the National Institute of Standards and Technology

NVLAP-01S (REV. 2005-05-19)



ELECTROMAGNETIC COMPATIBILITY
AND TELECOMMUNICATIONS

NVLAP LAB CODE 200737-0

<i>NVLAP Code</i>	<i>Designation / Description</i>
12/KN8a	KN 61000-4-8 with RRL Notice No. 2005-130 (Dec. 27, 2005): Power Frequency Magnetic Field Immunity Test

2007-07-01 through 2008-06-30

Effective dates

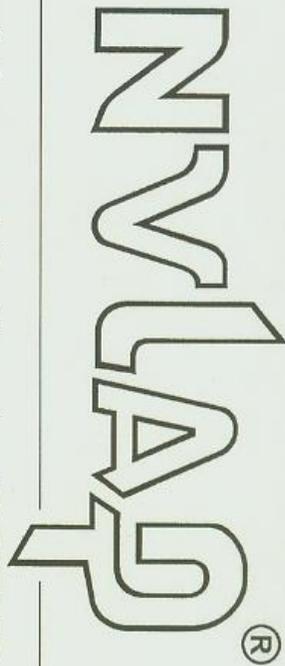
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A handwritten signature in cursive script that reads "Sally S. Bruce".

For the National Institute of Standards and Technology

NVLAP-01S (REV. 2005-05-19)

United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 200737-0

EMC Integrity, Inc.
Longmont, CO

*is accredited by the National Voluntary Laboratory Accreditation Program for specific services,
listed on the Scope of Accreditation, for:*

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

*This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality
management system (refer to joint ISO-LAC-IAF Communiqué dated 18 June 2005).*

2007-07-01 through 2008-06-30

Effective dates



Dolly J. Bures
For the National Institute of Standards and Technology

NVLAP-01C (REV. 2006-09-13)

END OF REPORT