

Edited : December 1999
Revised : July 2002
November 2006

Shaking Incubator

Covers Model SI-100 / SI-100R



Related Products

Model #	Descriptions	Dimensions	Electrical Requirements
SI-200	Shaking Incubator	750x720x400	110 VAC, 60Hz or 220VAC, 50/60Hz
SI-200R	Shaking Incubator	750x720x400	110 VAC, 60Hz or 220VAC, 50/60Hz

1.1. Tables of Contents

1.1. Tables of Contents.....	2
1.2. Getting Started.....	2
1.3. Product Overview.....	3
1.4. Product Specifications.....	3
1.5. Parts and Functions.....	4
1.6. Operating.....	7
1.7. Warning.....	10
1.8. Trouble Shooting.....	10
1.9. Setting Parameter	11
1.10. Limit Warranty	15

1.2. Getting Started

Thank you very much for purchasing Daihan Labtech LSI Shaking Incubator.

Your Shaking Incubator has been designed with function, reliability, and safety in mind. It is your responsibility to install it in conformance with local electrical codes. For safe operation, please pay attention to the alert symbols through the manual.

This manual contains important operating and safety information. You must carefully read and understand the contents of this manual prior to the use of this equipment.



Warning

Warning alert you to a possibility of personal injury



Caution

Caution alert you to a possibility of damage to the equipment.



Note

Notes alert you to pertinent facts and conditions.



HOT

Hot

Hot sign alert you possibility of burning injury by hot surface, steam or air of the instrument



Explosive

Explosive alerts you to possibility of explosion by high pressure.

1.3. Product Overview



HumanLab SI-Series shaking incubator provides a precisely controlled system for shaking a variety of different sample containers at a constant temperature. The unit is ideal for tissue culture, bacterial incubation, enzyme reactions, fermentation, tissue section processing, dialysis, extractions and diffusions.

Precision Digital PID-A controller provides accurate and uniform temperature control of $\pm 0.5^{\circ}\text{C}$ uniformity and $\pm 0.2^{\circ}\text{C}$ accuracy within temperature range from ambient to 60°C . The shaking speed can be controlled from 20 to 300 rpm.

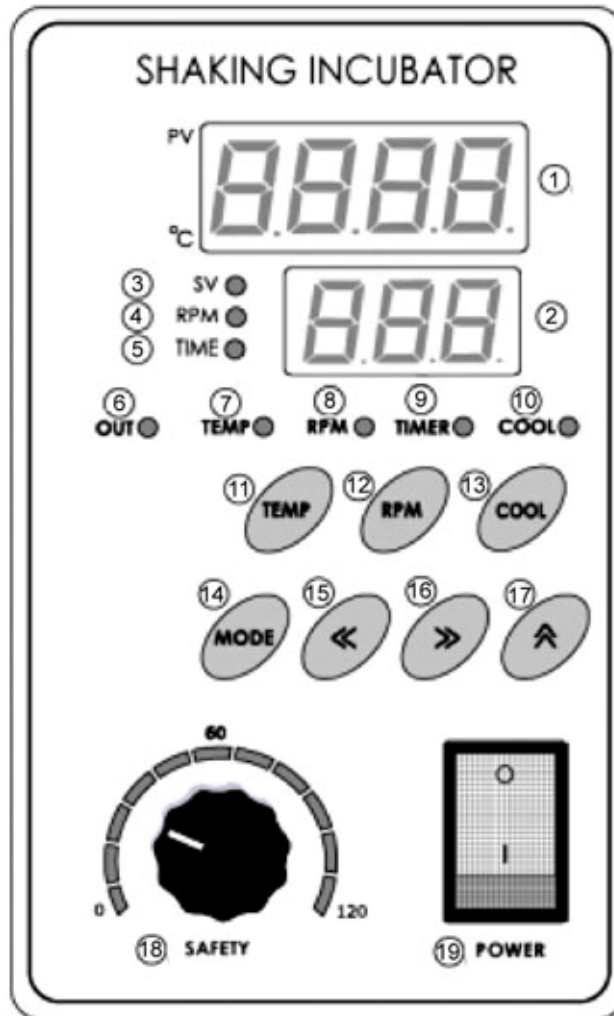
The main controller equipped with timer function for your convenience.

1.4. Product Specifications

Model		SI-100	SI-100R
Dimensions (W x D x H mm)	Chamber	530 x 560 x 380	
	Overall	590 x 880 x 825	
Compressor		None	1/4 HP
Temperature	Range	Ambient + 5°C to 60°C	10°C to 60°C
	Accuracy	$\pm 0.2^{\circ}\text{C}$ at 37°C	$\pm 0.2^{\circ}\text{C}$ at 37°C
	Uniformity	$\pm 0.5^{\circ}\text{C}$ at 37°C	$\pm 0.5^{\circ}\text{C}$ at 37°C
Controller		Digital PID Controller	
Display		LED 4 Digit Display	
Timer		99hr 59 min / continuous	
Shaking	Speed	20 to 300 rpm	
	Stroke	20mm Orbital Motion	
Material	Inner	Stainless Steel	
	Outer	Powder Coated Steel	
	Door	Transparent Acrylic Door	
Safety		Over Temp. Cut-Off, Over Current Breaker	
Electric Supply		110V, 60 Hz or 220V, 50/60Hz	

Order No.	Descriptions
FH-0103	Flask Holder 100 ml 32 EA
FH-0203	Flask Holder 250 ml 23 EA
FH-0503	Flask Holder 500 ml 16 EA
FH-1003	Flask Holder 1000 ml 9 EA
SR-1450	Spring Rack 475 x 475 mm

1.5. Parts and Functions



(CONTROL PANEL)



✕ PV Digital LED Display

Displays actual temperature of the chamber during operation




✕ SV Digital LED Display


Displays operating RPM and actual RPM during operation.

Press DSP button to show operating Temperature, RPM and Time alternatively.


 **SV Lamp**

Glows when the  SV Digital LED Displays operating temperature

 **RPM Lamp**

Glows when the  SV Digital LED Displays operating RPM or actual RPM

 **TIME Lamp**

Glows when the  SV Digital LED Displays user set time or remaining time



OUT Lamp

Glows when heater is on. The lamp on and off during heater is controlled by main controller



TEMP Lamp

Glows when temperature control is activated



RPM Lamp

Glows when shaking control is activated



TIMER Lamp

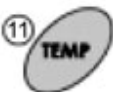
Glows when the timer is activated



COOL Lamp

Glows when the cooling is activated.

Cooling is ***not available*** for model SI-100 Shaking Incubator.



TEMP Button

Press to activate temperature control. On/Off switch



RPM Button

Press to activate shaking. On/Off switch



COOL Button

Press to activate cooling compressor. Compressor starts only when the temperature is set below 35 °C. On/Off switch. ***Not available*** for Model SI-100 Shaking Incubator



MODE Button

Press to set operating temperature, RPM and timer values you want to operate



Left SHIFT Button

Press to move toward left digit to change the operating values



Right SHIFT Button

Press to move toward right digit to change the operating values



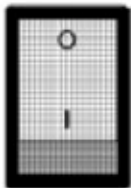
INC Button

Press to increase the operating value in the current digit



SAFETY

Over temperature protection. SAFETY breaks electrical supply to heater to protect instrument from over heating. Set temperature about 10 % higher than the operating temperature.



POWER SWITCH

POWER SWITCH




Main power On/Off switch

1.6. Operating







■ Before Operation

- 1) The main voltage must correspond to the voltage given on the name-plate.
- 2) Place the Shaking Incubator on the flat and level surface. If the ground is not flat and rigid, the shaking speed is unstable and the body will tremble.







■ Getting Started

- 1) Place Flask or Tubes on the spring rack or flask holder firmly and symmetrically
- 2) Turn the circuit breaker on located in the side of the incubator door. Turn the  **POWER** switch on.
The  **PV Digital LED** displays current temperature of the incubator and the  **SV Digital LED** displays operating temperature.

■ How to Set Temperature

- 1) Press  **SET** to change your operating temperature.  **PV Digital LED** displays *TEMP* (TEMP) and  **SV Digital LED** displays current operating temperature. The last digit of the temperature shown on the SV window is prompt and waiting for user input.
- 2) Press  **INC CHANGE Button** to increase the value. To decrease the value, press the button continuously. Zero (0) comes after nine (9).
- 3) Press  **SHIFT Button** to move toward left or right digit to change value.
You can set operating temperature from 10°C to 60°C
- 4) Press  **SET** button three times to finish your operating temperature setting

■ How to Set RPM

- 1) Press  **SET** button twice to change shaking speed.
 **PV Digital LED** displays *TACH* (TACH) and  **SV Digital LED** displays current shaking speed in rpm. The last digit of the rpm shown on the SV window is prompt and waiting for user input.
- 2) Press  **INC Button** to increase the value. To decrease the value, press the button continuously.
Zero (0) comes after nine (9).
- 3) Press  **SHIFT Button** to move toward left or right digit to change value. You can set shaking speed from 20 to 300 rpm
- 4) Press  **SET** button twice to finish your operating temperature setting

5) Error Message

Err0 : If the motor could not start within 15 seconds, the error message shown on the controller.

Press any button to escape from error message and press DISP button to show rpm on SV display panel







Press RPM button to start up.

Sometimes the shaking platform could not start within 15 seconds if the load on the platform is too heavy or un balanced.


To escape from the error message, please press RPM button.

Open the door and force shaking platform to move two or three rotation. Press RPM button to start shaking.


■ How to Set Timer

- 1) Press  **SET** button three times to set timer
 **PV Digital LED** displays *Time* (TIME) and  **SV Digital LED** displays current time in hours and minutes. 00.00 is factory default. The last digit of the time shown on the SV window is prompt and waiting for user input.
- 2) Press  **INC Button** to increase the value. To decrease the value, press the button continuously. Zero (0) comes after nine (9).
- 3) Press  **SHIFT Button** to move toward left or right digit to change value. You can set timer up to 59 hour 99 minutes
- 4) Press  **SET** button to finish your timer setting


■ Over Temperature Protection

- 1) User must set the over temperature protection before operation.  **SAFETY** dial located in the main control to protect heaters from over temperature for your safety.
- 2) Set temperature about 10 to 20 % higher than the operating (user set) temperature. If the temperature of the SAFETY is lower than your operating temperature, the heater would not turn on.

■ How to Start Temperature Control

- 1) Press  **TEMP Button** to start temperature control. To turn the temperature control off, press button again.
- 2) Operating temperature is lower than ambient temperature, press COOL button to activate cooler.


■ How to Start Shaking Speed Control


Press  **RPM Button** to start shaking. To turn the shaking off, press button again.

■ How to Start Timer


Refer How to Set Timer section.

Timer will start automatically by pressing SET button.

 **SV Digital LED** displays remaining time during operation if the timer activated by user.

The controller beeps 30 seconds before stop and displays End on the  **SV Digital LED Display**

■ Temperature Control

Press  **TEMP Button** to start temperature control.

To turn the temperature control off, press button again.

■ Temperature Control & Timer

- 1) SET temperature to operate
- 2) SET RPM at 000
- 3) SET timer at time you want to operate
- 4) Press TEMP and RPM button to start

5) Time is over, the temperature control stops.

(If N3=0 at MODE1)

Time is over, chamber keeps the operating temperature

(if N3=1 at MODE1)

■ **Shaking Control**

- 1) SET shaking speed to operate
- 2) SET time at 00.00
- 3) Press RPM button to start

■ **Shaking Control & Timer**

- 1) SET shaking speed to operate
- 2) SET timer at time you want to operate
- 3) Press RPM button to start shaking and timer
- 4) Time is over, controller beeps 30 seconds (factory default) and stop shaking

■ **Temperature & Shaking Control**

– **continuous operation**

- 1) SET temperature to operate
- 2) SET shaking speed to operate
- 3) SET timer at 00.00 for continuous operation
- 4) Press TEMP and RPM button to start shaking and temperature control

■ **Temperature & Shaking Control with timer – to keep operating temperature after shaking stops**

SET N3=1 at MODE1 parameter

- 1) SET temperature to operate
- 2) SET shaking speed to operate
- 3) SET timer at 00.00 for continuous operation
- 4) Press TEMP and RPM button to start shaking and temperature control
- 5) After timer is over, shaking stops but temperature keeps operating temperature

■ **Temperature & Shaking Control with timer – to turn off temperature and shaking**

SET N3=0 at MODE1 parameter

- 1) SET temperature to operate
- 2) SET shaking speed to operate
- 3) SET timer at 00.00 for continuous operation
- 4) Press TEMP and RPM button to start shaking and temperature control
- 5) After timer is over, shaking and temperature control stops

■ How to Change Shaking Platform

To replace shaking platform take off four screws on the existing platform with screw driver. Remove platform from the chamber and replace platform on the right position.

Fix new platform by tightening four screws.

1.7. Warning

Be sure the main voltage is correspond to the voltage given on the name-plate

Place the Shaking Incubator on the flat and level surface

Place flasks or tubes in the holder symmetrically.

Protect controller from solvent or liquid.

1.8. Trouble Shooting

Trouble	Check First	Trouble Shooting
Power Failure	Check Electric Supply	Plug firmly into the electric supply
	Check fuse	Replace fuse
Temperature Control Failure	Check set values	Change set values
	Check Over Temperature Protection Value	Set protection temperature 10% higher than the usual operating temperature

Error Message	Cause	Solution
uuuu	If PV is higher than T-Lt value	Turn off power and call service engineer
nnnn	If PV is lower than -99.9 °C	Turn off power and call service engineer
Err0	Check shaking starts within 15 seconds.	Press RPM button to stop the message Open door Push shaking platform to move two to three revolution Close Door Press RPM button again.
Err1	If maximum RPM is higher than r-Lt value + 30 rpm	Turn off power and call service engineer

Contact sales representative or customer service department

1.9. Setting Parameters

■ Important Parameter List

- 1) To set parameters,
- 2) Get back to normal display mode
- 3) Press and hold SET Button for 5 seconds.
- 4) LED displays "bEEP" and waiting for user input.
- 5) Press SHIFT and INC Button to change values.
- 6) Press SET Button to go next parameter.
- 7) To escape from Parameter mode to normal display mode, press and hold SET Button for 6 seconds.

Parameter Symbol	Parameter Descriptions	Setting Range and Descriptions	Factory Default	User Set Value
BEEP	BEEP ON TIME	0 ~ 99 SEC	30	
	Time duration of beep after timer is over. (in seconds) If the value is set at 0, beep continuously. Press any button to stop beep.			
Adj	Temperature Adjustment	- 99.9 ~ 299.9	0	
	Compensate temperature difference. If the actual temperature measured by standard thermometer is different from temperature which controller read, user can compensate temperature difference by Adj function Ex) Actual temp = 100.0 Displayed temp = 99.9 Set Adj at 0.1 Actual temp = 99.5 Displayed temp = 100.0 Set Adj at - 0.5			
COOL	COOLER ON TEMP.	- 99.9 ~ T-Lt value	25	DO NOT CHANGE
	SET Temp. > Cool value -> Cooler relay off SET Temp. < Cool value -> Cooler relay on		<i>No Function for Model SI-100</i>	
ALH	ALARM LIMIT HIGH	00.0 ~ 99.9	2	DO NOT CHANGE
LL	ALARM LIMIT LOW	00.0 ~ 99.9	3	DO NOT CHANGE
USLP	Speed increments per second	1 ~ 59 RPM	16	DO NOT CHANGE
HYS	HYSTERESIS		0.1	DO NOT CHANGE

Frpm	Fix rpm speed display		3	
	Fix display of RPM within a range. Control rpm drift			
Dloc	LOCK PASSWORD	0000, 1111	0000	
	Protect set values and parameters from unauthorized change			
	N3	N2	N1	N0
	Available value to set	0 or 1	0 or 1	0 or 1
	Where	N3 : KEY LOCK	1 : LOCK	0 : UNLOCK
		N2 : RESERVED	1 :	0 :
		N1 : PARAMETER DATA LOCK	1 : LOCK	0 : UNLOCK
		N0 : SET VALUE DATA LOCK	1 : LOCK	0 : UNLOCK
	N3 (KEY LOCK) : Protect pressing button.			
	N1 (PARAMETER DATA LOCK) : Protect parameter values stored in the controller			
	N0 (SET VALUE DATA LOCK) : Protect user set values such as temperature and time			

■ Factory Parameter List

- 1) To set factory parameters,
- 2) Get back to normal display mode
- 3) Press and hold SET Button for 30 seconds.
- 4) LED displays "PASS" and waiting for user input.
- 5) Press SHIFT and INC Button to change values.
- 6) Press MODE Button to go next parameter.
- 7) To escape from Parameter mode to normal display mode, press and hold MODE Button for 6 seconds.

Parameter Symbol	Name of Parameter	Setting Range and Descriptions	Factory Default	User Set Value
PASS	Password to enter Factory Parameter Setting Mode	7777	7777	DO NOT CHANGE
T-Lt	Maximum temperature limit to set	-99.9 ~ 299.9 °C	60	DO NOT CHANGE
	Maximum temperature available to set. If T-Lt value set at 61 °C, user cannot input operating temperature higher than 60 °C			
r-Lt	Maximum speed limit to set	0 ~ 1500 RPM	300	DO NOT CHANGE
	Maximum temperature available to set. If r-Lt value set at 300, user cannot input operating rpm higher than 299			
GEar	Gear Rate	1.0 ~ 60.0	4.5	DO NOT CHANGE
Prd	Period (Output Interval)	1 ~ 99 sec.	5	DO NOT CHANGE
P	Proportion	0 ~ 6999	AUTO-TUNED	DO NOT CHANGE
A	Anti-Integral	0 ~ 6999	AUTO-TUNED	DO NOT CHANGE
I	Integral	0 ~ 6999	AUTO-TUNED	DO NOT CHANGE
D	Differential	0 ~ 6999	AUTO-TUNED	DO NOT CHANGE

Mode1	OPERATING MODE CONTROL		0111	
	<p>Available value to set N3 N2 N1 N0 0 or 1 0 or 1 0 or 1 or 2 0 or 1</p> <p>Where N3 : TEMP. & TIMER 1 : KEEP OPERATING TEMP. AFTER TIMER 0 : STOP TEMP. CONTROL</p> <p>N2 : MOTOR STOP 1 : GRADUALLY STOP 0 : STOP IMMEDIATELY</p> <p>N1 : TIME SCALE 1 : HH :MM (00.00 ~ 99 hours 59 min) 0 : MM:SS (00.00 ~ 99 min 59 sec)</p> <p>N0 : POWER ON RESTORE 1 : ON 0 : OFF (During operation, if the electrical supply is turn out and get back again, restore the last operating condition and resume operating when POWER ON RESTORE function is ON)</p>			
Mode2	OPERATING MODE CONTROL		1000	
	<p>Available value to set N3 N2 N1 N0 0 or 1 0 or 1 0 or 1 0 or 1</p> <p>Where N3 : DECIMAL PLACE DISPLAY 1 : YES (0.1°C) 0 : NO (1°C) N2 : ALARM HIGH DATA TYPE 1 : ABSOLUTE 1 : RELATIVE N1 : ALARM LOW DATA TYPE 1 : ABSOLUTE 0 : RELATIVE N0 : HEATER OUTPUT CONTROL WHEN DOOR OPEN 1 : HEATER ON 0 : HEATER OFF</p>			
Mode3	OPERATING MODE CONTROL		0010	
	<p>Available value to set N3 N2 N1 N0 0 or 1 0 or 1 0 or 1 0 or 1</p> <p>Where N3 : RESERVED N2 : RESERVED N1 : ALH 1 : START RELAY OFF 0 : START RELAY ON N0 : RESERVED</p>			
Cton	Defrost cycle time in minutes		<i>No Function for ModelSI-100</i>	
	Start defrost after running at the set value			
CtoF	Defrost duration time in minutes		<i>No Function for ModelSI-100</i>	
	Defrost during the time			
Cdly	Delay time of compressor start		<i>No Function for Model SI-100</i>	
DrAn	Fix drift of temperature display within the set value		0.3	
	Temperature drifts during operation owing to several reasons. To elimiate temperature drift, set DrAn value to fix temperature within the value			
dton	Fix drift of temperature display within the set value during defrost		15	
	Temperature increase during defrost cycle if user operate incubator lower than ambient temperature. Temperature display fixed within the the dton value in minutes			



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Factory : 217-8, Choe-dong, Hanam-si, Gyeonggi-do, 465220, Korea

Inspection Sheet / SI-Series

Model # : SI-100 R Serial # : _____ Client : _____
 Date & Time: _____ Amb. Temp. : _____ Electricity : 110 / 220V
 Frequency 50 / 60Hz Refrigerant R - 134a Inspector _____

Appearance and Hardware

Item	Method	Result	Remarks
Outer Cabinet	Naked eye examination		
Powder Coating	Naked eye examination		
Chamber	Naked eye examination		
Shaking Platform	Load 10 kg on each shelve		
Control panel key switch tight	Press each button and check function		
Door open/close	Open and close door to check lock		

Assembly

Item	Method	Result	Remarks
Gasket tight	Naked eye examination		
Termination of each electrical connection	Compare with circuit diagram		
Electrical grounding	Compare with circuit diagram		
Electrical insulation	Check with Mega Tester Insulation should be less than 2Mohm		

Operation

Item	Method	Result	Remarks
Unusual vibration during run	Naked eye examination		
Unusual fan noise or vibration during run	Naked eye examination		
Check refrigerant leakage	Check by gas leakage tester		
Circuit breaker function	Check cut-off s/w		
Main P/S	Naked eye examination		
Check electrical supply during run			
Auto-tuning	Check parameters		

Operation Performance

Item	Method	Result	Remarks										
Operating Temperature	Temperature Range : 10 °C ~ 60 °C												
Temperature Accuracy	<table border="1"><thead><tr><th>SV</th><th>PV Display</th></tr></thead><tbody><tr><td>10 °C</td><td>10 °C</td></tr><tr><td>25 °C</td><td>25 °C</td></tr><tr><td>34 °C</td><td>34 °C</td></tr><tr><td>37 °C</td><td>37 °C</td></tr></tbody></table>	SV	PV Display	10 °C	10 °C	25 °C	25 °C	34 °C	34 °C	37 °C	37 °C		
	SV	PV Display											
	10 °C	10 °C											
	25 °C	25 °C											
	34 °C	34 °C											
37 °C	37 °C												
Shaking Speed Accuracy	<table border="1"><thead><tr><th>SV</th><th>PV Display</th></tr></thead><tbody><tr><td>20 RPM</td><td>20</td></tr><tr><td>100 RPM</td><td>100</td></tr><tr><td>200 RPM</td><td>200</td></tr><tr><td>300 RPM</td><td>300</td></tr></tbody></table>	SV	PV Display	20 RPM	20	100 RPM	100	200 RPM	200	300 RPM	300		
	SV	PV Display											
	20 RPM	20											
	100 RPM	100											
	200 RPM	200											
300 RPM	300												

Limited Warranty

Descriptions	Shaking Incubator
Model	SI-100 / SI-100R
Serial No.	
Warranty Period	12 Months after purchase
Date of Purchase	Feb.2007
Purchase From	

WARRANTY COVERAGE

HumanLab's warranty obligations for the products are limited to the terms set forth below:

HumanLab Instrument Co. ("HumanLab") warrants the product against defects in materials and workmanship for a period of one (1) year from the date of original purchase ("Warranty Period"), providing that the unit is operated according to the instruction in the operating manual.

The guarantee comprises removal of all damages that arises during the guarantee period and that are proven to be due to faulty material or poor workmanship.

If a defect arises and a valid claim is received by HumanLab within the Warranty Period, at its option, HumanLab will (1) repair the product at no charge, using new or refurbished replacement parts, (2) exchange the product with a product that is new or which has been manufactured from new or serviceable used parts and is at least functionally equivalent to the original product.

If a defect arises and a valid claim is received by HumanLab after the first one hundred and eighty (180) days of the Warranty Period, a shipping and handling charge will apply to any repair or exchange of the product undertaken by HumanLab.

HumanLab warrants replacement products or parts provided under this warranty against defects in materials and workmanship from the date of the replacement or repair for ninety (90) days or for the remaining portion of the original product's warranty, whichever provides longer coverage for you. When a product or part is exchanged, any replacement item becomes your property and the replaced item becomes HumanLab's property. When a refund is given, your product becomes Humanlab's property.

EXCLUSIONS AND LIMITATIONS

This Limited Warranty applies only to the product manufactured by or for HumanLab that can be identified by Name Plate.

HumanLab is not liable for any damage to or loss of any products or material stored or tested in the instruments or programs, data, or other information stored on any media contained within the product, or any non-HumanLab product or part not covered by this warranty. Recovery or reinstallation of programs, data or other information is not covered under this Limited Warranty.

This warranty does not apply: (a) to damage caused by accident, abuse, misuse, misapplication, or non-HumanLab products; (b) to damage caused by service performed by anyone other than HumanLab; (c) to a product or a part that has been modified without the written permission of HumanLab; or (d) if any HumanLab serial number has been removed or defaced; or (e) if the unit is not used according to its purpose; or (f) no original spare parts are used.

TO THE MAXIMUM EXTENT PERMITTED BY LAW, THIS WARRANTY AND THE REMEDIES SET FORTH ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, REMEDIES AND CONDITIONS, WHETHER ORAL OR WRITTEN, EXPRESS OR IMPLIED. LABTECH SPECIFICALLY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IF LABTECH CANNOT LAWFULLY DISCLAIM OR EXCLUDE IMPLIED WARRANTIES UNDER APPLICABLE LAW, THEN TO THE EXTENT POSSIBLE ANY CLAIMS UNDER SUCH IMPLIED WARRANTIES SHALL EXPIRE ON EXPIRATION OF THE WARRANTY PERIOD. No HumanLab reseller, agent, or employee is authorized to make any modification, extension, or addition to this warranty.

TO THE MAXIMUM EXTENT PERMITTED BY LAW, HUMANLAB IS NOT RESPONSIBLE FOR DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF WARRANTY OR CONDITION, OR UNDER ANY OTHER LEGAL THEORY, INCLUDING ANY COSTS OF RECOVERING OR REPRODUCING ANY PRODUCT OR MATERIAL STORED OR TESTED IN THE INSTRUMENTS, PROGRAM OR DATA STORED IN OR USED WITH THE LABTECH PRODUCT, AND ANY FAILURE TO MAINTAIN THE CONFIDENTIALITY OF DATA STORED ON THE PRODUCT. HUMANLAB SPECIFICALLY DOES NOT REPRESENT THAT IT WILL BE ABLE TO REPAIR ANY PRODUCT UNDER THIS WARRANTY OR MAKE A PRODUCT EXCHANGE WITHOUT RISK TO OR LOSS OF MATERIAL, PROGRAMS OR DATA.

FOR CONSUMERS WHO HAVE THE BENEFIT OF CONSUMER PROTECTION LAWS OR REGULATIONS IN THEIR COUNTRY OF PURCHASE OR, IF DIFFERENT, THEIR COUNTRY OF RESIDENCE, THE BENEFITS CONFERRED BY THIS WARRANTY ARE IN ADDITION TO ALL RIGHTS AND REMEDIES CONVEYED BY SUCH CONSUMER PROTECTION LAWS AND REGULATIONS. TO THE EXTENT THAT LIABILITY UNDER SUCH CONSUMER PROTECTION LAWS AND REGULATIONS MAY BE LIMITED, HUMANLAB'S LIABILITY IS LIMITED, AT ITS SOLE OPTION TO REPLACEMENT OR REPAIR OF THE PRODUCT OR SUPPLY OF THE REPAIR SERVICE AGAIN.

Note: Before you deliver your product for warranty service it is your responsibility to remove all products or materials stored in the instrument.

Before returning a defective unit, please contact local representative or Human Lab Support Center at sales@humansci.co.kr

HumanLab will issue RGA number for authorized return ;

If we agree to the unit being returned, arrange for careful packing and send the unit to

HUMANLAB INSTRUMENT CO.

B-401,JAEUN BLDG,#417-33,YOUNGHWADONG,JANGAN-GU,

SUWON-SI,440-821,KOREA

TEL : +82-31-256-3403

FAX : +82-31-256-3404

Email : sales@humansci.co.kr

Please remember to describe the kind of fault you found and state your complete address.