



Cultistir

Magnetic stirrer for cell culture

Operating instructions

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I. Safety precautions

General

Throughout the manual, the following symbol will be used to indicate general precautionary measures:



Indication: information the correct use of Cultistir



Danger: Warning that, if safety precautions are not observed, injury to personnel may result.



Warning: Warning that, if safety precautions are not observed, damage may result to the instruments. Please read all documentation.

Installation: Location and conditions

Cultistir is intended for use in indoor laboratory.



Ambient conditions for Cultistir see chapter Technical data



Warning: Always locate Controller outside of incubator.



DO NOT leave unpowered Cultistir device in the incubator for more than a month.



Avoid exposing Controller and power supply to direct sunlight or high humidity.

Transport



Always grip Base plate of Cultistir when transporting.

II. Condition of use

Applications

Cultistir is a spinning system comprising for stirring units for the gentle cultivation of cells and the preparation of cell products in bioreactor. Cultistir is suitable for use with cell suspension and cell aggregate formation (e.g. organoids or embryoid body of stem cell) and immobilized adherent cells (e.g. micro carriers).

Product combinations

Cultistir is designed for using with ABLE single-use bioreactor of 5mL (Product No. BWV-S005A), 30mL (Product No. BWV-S03A), 100mL (Product No. BWV-S10A).



Cultistir is not designed for using of any other culture vessel or bioreactor, spinner flask.

Application not for the intended use

Cultistir is **explicitly NOT intended** for the applications:



Stirring of flammable or corrosive liquids

At danger atmosphere of explosion

Stirring of volatile liquid in a closed vessel

Dangers involved when safety precautions are not observed

Cultistir is safe to use. Some danger may exist if the instruments are used by untrained personnel. Any person given the task of operating Cultistir must first read the operating and safety instructions and understand them fully or be thoroughly trained by a superior in the use of the instruments before operating the instrument.

Safety at work

Independent of any safety precautions listed here, all other relevant safety aspects (e.g. regulations of each country or authority, rules of a company) must be observed.

Safety aspects for the user company

The supervisors of operating personnel must have read and understood all the safety precautions involved and must ensure that these are adhered to. They must also ensure that operating personnel also understand and observe all safety rules. Prior to

operating Cultistir, the supervisor must ensure that no other dangers exist, especially if other instruments and systems are also being used.

Changes in configuration/design by user

No changes may be made to Cultistir. Any alteration made releases ABLE corporation from any liability for damage caused.

Power requirements

Checking the power supply

Check the power supply at the location and ensure that it complies with that of the instrument.



Warning: Using the wrong power supply may damage electronic components in the instrument.

Connecting to the power supply

Connect Cultistir to the power supply using the power cable provided.



Danger: The instrument may not be used if insufficient protection is provided as this may expose personnel to the danger of electrical current injury.



NB: When connecting or disconnecting Motor from Controller the latter must always first be switched off otherwise the electronics may be damaged.

Pollution degree

Pollution degree of this device is 2.

III. Technical data

Item name	Controller and motor
Product No.	DW-1013
Controller	
Dimensions (W × D × H)	132 × 150 × 41 mm
Weight (gross)	0.6kg
Power cable length	2m
Speed Range (Resolution)	5-120 rpm (1rpm)
Power source	AC100-240V±10%/50-60Hz/10VA
Operating condition	15-45°C/max., 80% RH
Altitude of the installation site	Use below 2000 m above sea level
Storage condition	-10-50°C/max., 95% RH
Motor	
Dimensions (W × D × H)	58 × 90 × 84 mm
Weight (gross)	0.7kg
Motor cable length	2m
Speed Range	5-120 rpm
Power source	DC 12V
Operating condition	15-45°C/max., 99% RH/max., 10% CO ₂
Altitude of the installation site	Use below 2000 m above sea level
Storage condition	-10-50°C/max., 95% RH

Item name	6ch. Base plate for 5mL
Product No.	BWS-S005N0S-6A
Dimensions (W × D × H)	120 × 230 × 35 mm
Weight (gross)	1.0 kg
Speed Range	5-120 rpm
Stirring position	6
Applicable products	BWV-S005A
Power source	–
Operating condition	15-45°C/max., 99% RH/max., 10% CO ₂
Altitude of the installation site	Use below 2000 m above sea level
Storage condition	-10-50°C/max., 95% RH

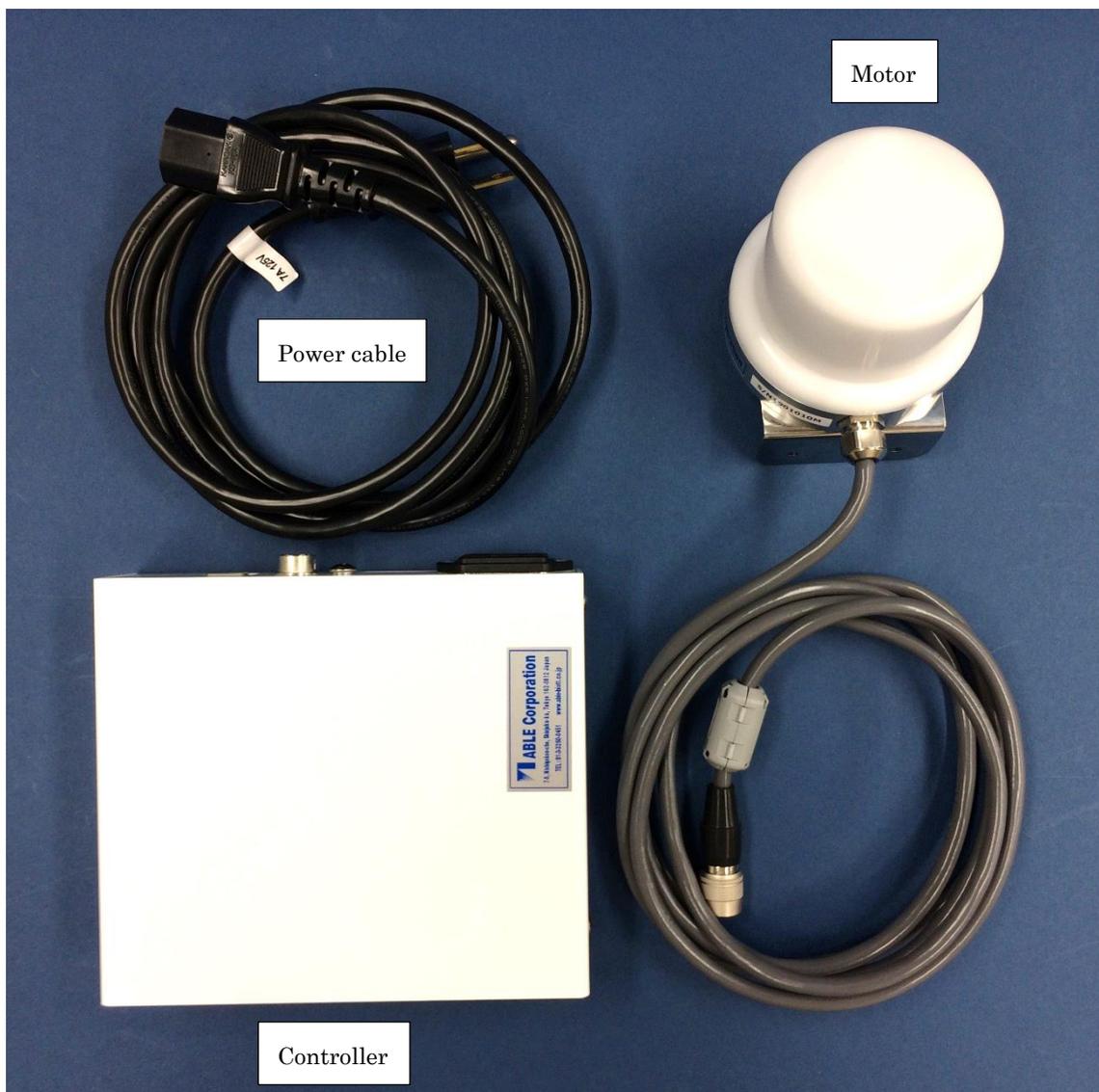
Item name	6ch. Base plate for 30/100mL
Product No.	BWS-S03N0S-6B
Dimensions (W × D × H)	153 × 267 × 33 mm
Weight (gross)	1.8kg
Speed Range	5-120 rpm
Stirring position	6
Applicable products	BWV-S03A, BWV-S10A
Power source	-
Operating condition	15-45°C/max., 99% RH/max., 10% CO ₂
Altitude of the installation site	Use below 2000 m above sea level
Storage condition	-10-50°C/max., 95% RH

IV. Equipment provided

1. Controller and motor

Controller and motor (product No. DW-1013) comprises:

Controller	1
Motor	1
Power cable	1
Operating instructions	1



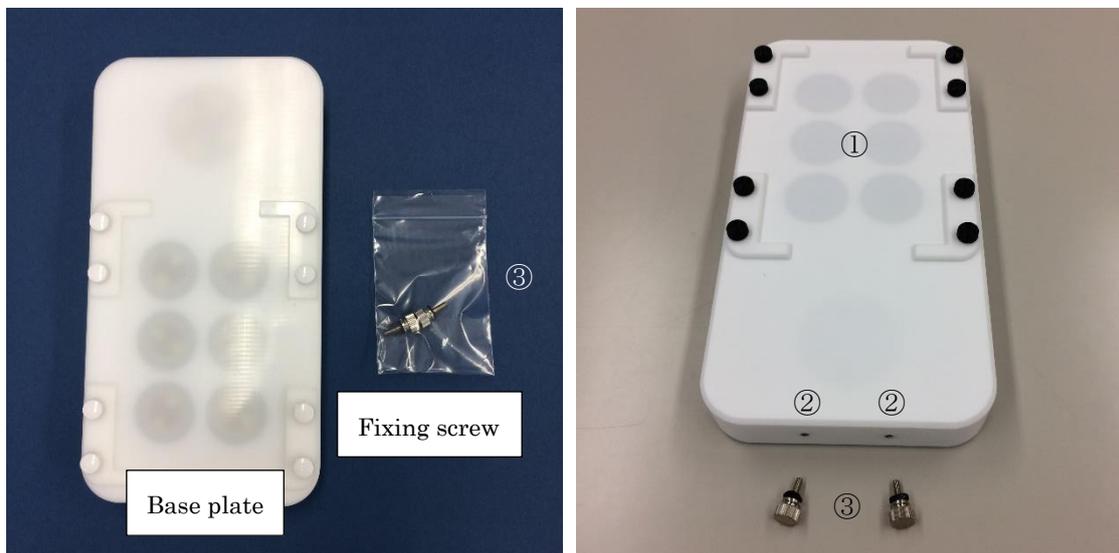


- | | |
|-----------------------------|---|
| ① Power switch: | Switches the instrument on/off |
| ② Stirring button: | Switches stirring on/off |
| ③ ▽/△: | Up down keys change stirring speed values (rpm)
By keeping keys, values are displayed in rapid |
| ④ Display: | Shows the speed set for stirring |
| ⑤ Rear port: | Connects with motor cable of motor box |
| ⑥ Power cable port: | Connects with power cable |
| ⑦ Motor case: | Motor inside |
| ⑧ Base plate mounting port: | Fixing Motor on base plate |
| ⑨ Motor cable: | Connect with rear port of Controller |
| ⑩ Release ring: | Use for disconnecting the motor cable connector |

2. Base plate

6ch. Base plate for 5mL (Product No. BWS-S005N0S-6A) comprises:

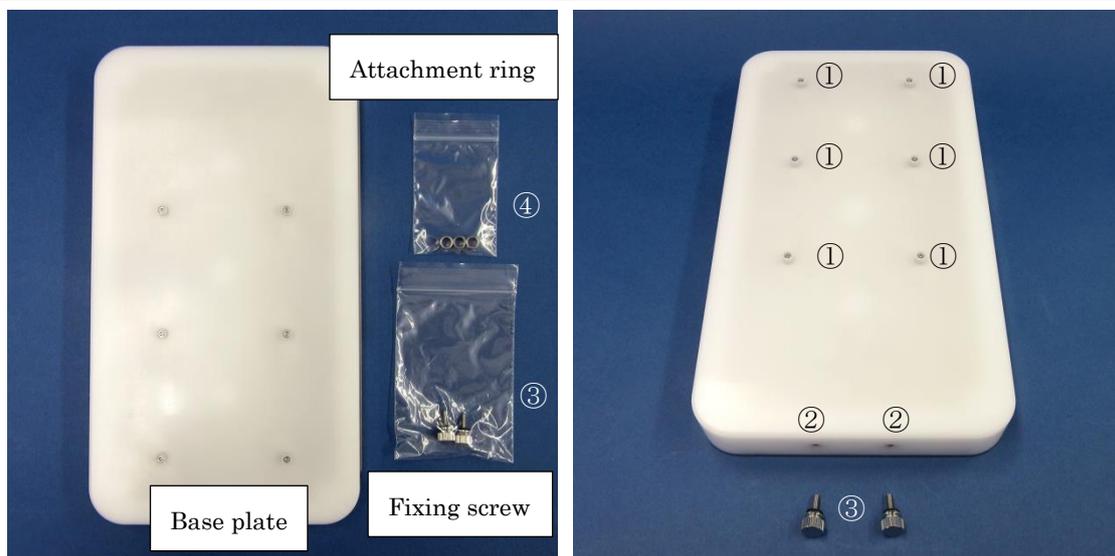
6ch. Base plate for 5mL	1
Fixing screw	2



- ① Reactor set position: 6 position of magnetic drive
- ② Motor mounting port: Fixing Motor on Base plate
- ③ Fixing screw: Fixing Motor and Base plate

6ch. Base plate for 30/100mL (Product No. BWS-S03N0S-6B) comprises:

6ch. Base plate for 30/100mL	1
Fixing screw	2
Attachment ring	3

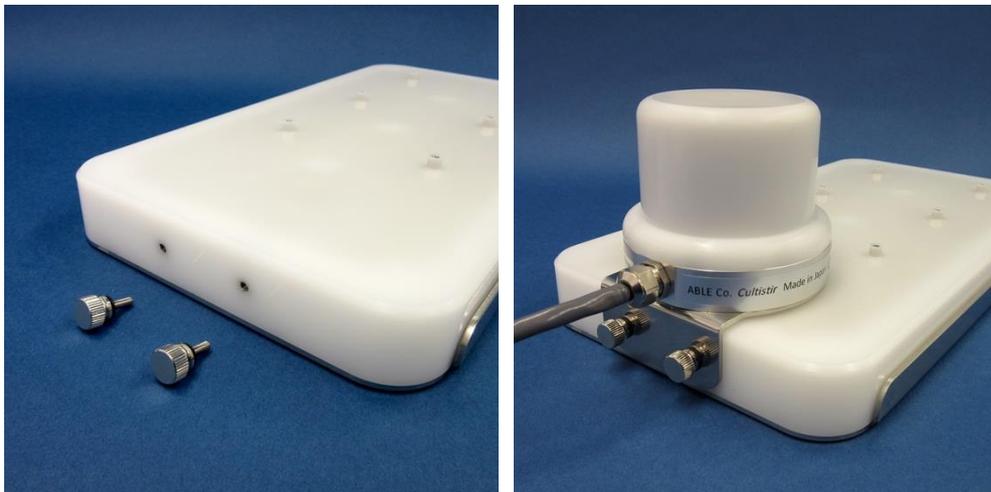


- ① Reactor set pin: 6 pins of magnetic drive
- ② Motor mounting port: Fixing Motor on Base plate
- ③ Fixing screw: Fixing Motor and Base plate
- ④ Attachment ring: Attachment adaptor for 100mL reactor

V. Installation

1. Assemble

Fix Motor and Base plate with fixing screws.



Controller and Motor is compatible with two types Base plate:

6ch. Base plate for 5mL (Product No. BWS-S005N0S-6A)

6ch. Base plate for 30/100mL (Product No. BWS-S03N0S-6B)



NB: When assembling Motor and Base plate or changing a device, must be power off.



NB: Tighten the fixing screw by hand. DO NOT use tools.



NB: Always grip Base plate when transporting. DO NOT grip Motor.

2. Installation space

Base plate and Motor: W150 × D300 × H150 mm (inside the incubator)

Controller: W140×D150×H40 mm (It can be installed on the side panel)



The controller has a magnet sheet on the bottom of the case, so it can be mounted onto the side panel of the incubator.

3. Putting device into operation

- ① After cleaning of assembled Base plate and Motor, place into incubator.
- ② Put motor cable outside from the utility port of incubator.
- ③ Connect power cable to the power cable port of Controller. Connect motor cable to the rear port of controller. Align the notch of the port and motor cable connector and push until it clicks. (DO NOT twist connector and cable)
- ④ Connect the power cable to the power supply.



When operating the assembled motor and base plate side by side with the controller on a table, install at least 30 cm apart.



NEVER use acetone, acid or alkali water for cleaning.



NB: In setting up Cultistir, please observe the conditions for location and setting up as outlined in section I .

4. Disconnect the cables

- ① Disconnect motor cable from rear port of the Controller. Pull the release ring of the connector of motor cable. (DO NOT pull the cable)
- ② Disconnect the power cable.

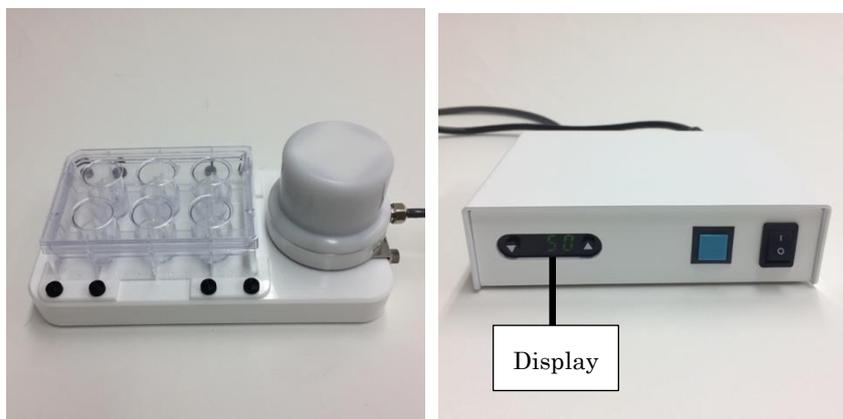


NB: When disconnecting motor cable and power cable from Controller the latter must always first be switched off otherwise the electronics may be damaged.

VI. Operation

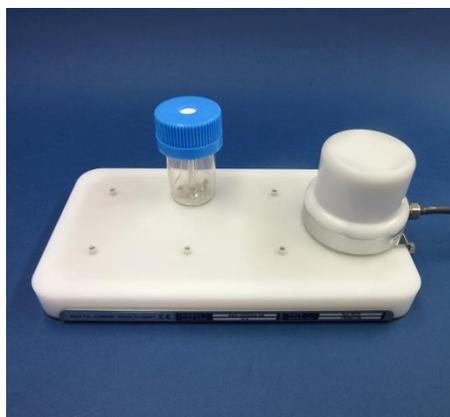
1. Starting (for 5mL)

- ① Switch the power switch to ON position.
- ② Stirring speed is displayed on the display. Set the stirring speed with the Δ /up and ∇ /down keys. During the setting, speed indicator on the display panel blinks.
- ③ Place the bioreactor on base plate.
- ④ Press the stirring (blue) button, a blip sounds, and the rotation starts.
- ⑤ Stirring speed can be changed during operation.



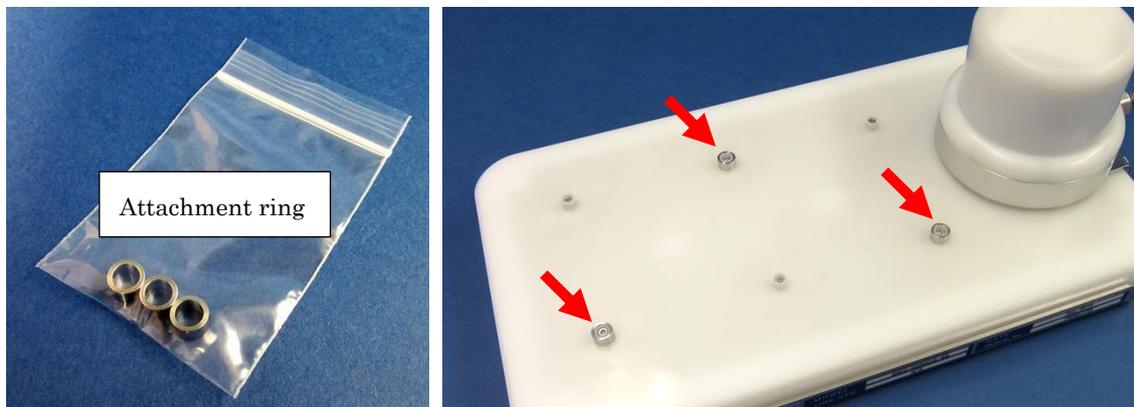
2. Starting (for 30mL)

- ① Switch the power switch to ON position.
- ② Stirring speed is displayed on the display. Set the stirring speed with the Δ /up and ∇ /down keys. During the setting, speed indicator on the display panel blinks.
- ③ Place the bioreactor on set pin (6 position) of base plate.
- ④ Press the stirring (blue) button, a blip sounds, and the rotation starts.
- ⑤ Stirring speed can be changed during operation.

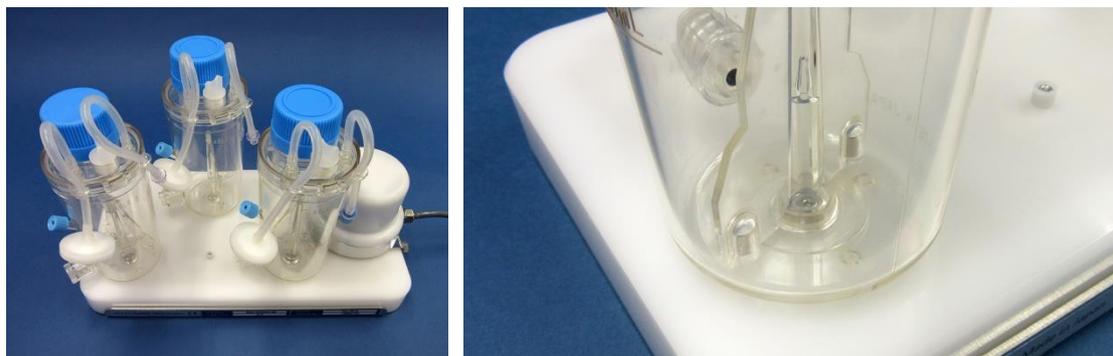


3. Starting (for 100mL)

- ① Place the attachment ring on small pins on Base plate surface (3 position that are not adjacent).



- ② Switch the power switch to ON position.
- ③ Stirring speed is displayed on the display. Set the stirring speed with the Δ /up and ∇ /down keys. During the setting, speed indicator on the display panel blinks.
- ④ Place the 100mL bioreactor on set pins (3 position) of base plate.



- ⑤ Press the stirring (blue) button, a blip sounds, and the rotation starts.
- ⑥ Stirring speed can be changed during operation.

4. Stopping

- ① Press the stirring (blue) button, the rotation stops.
- ② If you do not operate for more than a month, Cultistir device must be taken out from the incubator. Turn off the power to remove the device from the incubator.



DO NOT leave unpowered Cultistir device in the incubator for more than a month.

VII. Trouble shooting

This product is maintenance-free. There are no periodic replacement parts. When any of the following conditions appears, please contact our service.

- ① If the motor stops due to a failure, the controller issues a continuous beep sound.
- ② In spite of switched ON the stirring button, stirring does not start.
- ③ The stirring speed of the controller is displayed but the impellor of the bioreactor does not rotate.
- ④ It is awkward rotation of the impellor of the bioreactor.
- ⑤ Display does not turn on while the power switch is ON.

VIII. Cleaning

Cleaning work

To clean the instruments, use a cloth moistened with customary cleansing agents like soapy water, 70 % ethanol solution. **DO NOT** spray directly on the instrument but use a cloth and wipe dry directly after cleaning.



Always switch off the instrument and disconnect it from power supply when carrying out cleaning work.



NEVER use acetone, acid or alkali water for cleaning.

IX. Guarantee

All instruments are guaranteed for 1 year.

X. Manufacturer and service contacts

Manufacturer:

ABLE Corporation

Tokyo, Japan

<http://able-biott.co.jp/en/>

Customer service:

Please contact your local distributor of ABLE products. To find out name and address of your local distributor go to ABLE web site and inquire us.

<http://able-biott.co.jp/en/contact/>



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EU Declaration of Conformity

We **ABLE Corporation 7-9, Nishigoken-cho, Shinjyuku-ku, Tokyo, 162-0812, Japan** declares under our sole responsibility that the product described below in compliance with the following directive

Hereby declares that the product described below:

Product Name: CULTISTIR (カルチスター)

Model Name: **DW-1013, BWS-S005N0S-6A, BWS-S03N0S-6B**

Complies with the provisions of the following EU Directives;

- EMC Directive 2014/30/EU
- Low Voltage Directive 2014/35/EU
- RoHS Directive 2011/65/EU

Based on the following harmonized standards applied.

- EMC Directive : EN 61326-1:2013
- Low Voltage Directive: EN61010-1:2010
- RoHS Directive : EN 50581 : 2012
- EN ISO 12100:2010

Done at Tokyo Japan,

Name : Haruo Ushiyama

Position : President

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Signature :

Technical Document File No. : S-1475-Index-Technical-File

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