



# PCR (UV) CHAMBER

Model

## PCR204/214

### Instruction Manual

- May 2015 (R) -

- Thank you for purchasing PCR (UV) Chamber, PCR-204/214 of Yamato Scientific.
- To use this unit properly, read this "Instruction Manual" thoroughly before using the unit. Keep this instruction manual around this unit for reference at any time.



**WARNING:**

Carefully read and thoroughly understand the important warning items described in this manual before using this unit.

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## General Information

This chamber has been designed to aid in improving the accuracy of your P.C.R.\* results and general tissue culture procedures. The chance for airborne contamination during D.N.A. sequencing is greatly reduced.

This is a “still air enclosure” which contains both fluorescent and U.V. Germicidal lamps. The U.V. lamp is rated at 254 nm and will effectively kill all micro-organisms that come in direct contact with the U.V. rays. **For best results, the U.V. lamp should be turned on fifteen (15) minutes prior to use and fifteen (15) minutes after use.** Use the automatic timer for this.

The front viewing sash is .375” (9.5 mm) thick acrylic plastic and is effective protection against 32P labeled compounds. It affords protection against Beta rays, but not Gamma rays. **The viewing sash is rated for approximately 2,050 hours of operational durability.** If necessary, a replacement sash may be ordered (Catalog #825-UVC/FS). Changeover is accomplished by removing six (6) screws in the front sash.

**The main body of the unit is not attached to the white base to enable the user to install large pieces of equipment.** The base also includes a formed in place “dam” to allow easy cleanup of possible spills.

Access to the interior of the chamber is gained by opening the corner doors. If not needed, these doors may also be removed by raising them off the black plastic hinges. **If a door is opened or removed, electronic sensors turn off power to the U.V. system.** This is a safety feature to prevent accidental U.V. burns.

Electrical power requirements are:

Domestic U.S and North America @ 115-120V

International models @ 220-240V

A timer and two (2) amp circuit breaker is included on all models.

Two (2) bright white plastic shelves are included, **one of which has cut outs for pipettor storage.**

*\*P.C.R. is covered by U.S. patents owned by Hoffmann-LaRoche, Inc.*

## Daily Operation and Maintenance

1. Place materials to be used inside the chamber.
2. Install the two shelves to suit your needs. Make sure the shelves are correctly aligned in the slots provided. Note that one shelf has cut outs for Pipettor storage.
3. Shut the corner doors.
4. Turn on the U.V. lamp fifteen (15) minutes prior to use. **After this period, turn off the U.V. light.** Your chamber is ready for use.
5. Upon completion of your project, remove your materials and close the corner doors. Reactivate the U.V. lamp for a minimum fifteen (15) minutes to insure sterility of the interior.

For daily Maintenance, refer to the following pages.

### TO REPLACE THE BULBS (U.V. & L.E.D.s)

**Make sure the unit is unplugged from your power source**

#### U.V. BULB

Replacement of the U.V. bulb is accomplished by removing the top white housing (remove the side black knobs) and gently rotate the burned out bulb.

Install the new bulb by reversing the above procedure.

#### L.E.D. LIGHT STRIP

Remove top as above and unplug the LED Light Strip. Remove the bad strip. Install the new LED Light Bulb Strip and gently plug in the power plug.

Replace the white top housing and gently tighten the black knobs.

Most components consist of “thermoplastics”, stainless steel, and aluminum. Like any piece of fine laboratory equipment, care should be taken to avoid dropping, mishandling, and misapplication. To sterilize our chamber, we recommend a sterilant disinfectant such as “**ABQ**” product manufactured by Alcide Corporation 206-882-2555 or “**CLIDOX-S**” manufactured by Pharmacal Labs, 203- 729-5237.

### **THERMOPLASTIC COMPONENTS**

#### **A. CLEANERS**

Cleaning thermoplastics is best accomplished with soap or detergent and water solutions. In cases where residues left by these agents is undesirable, special cleaning solvents may be used. Soaps and detergents (except those of the abrasive type), will not harm plastics, but several common solvents will.

**In general, aromatic and chlorinated hydrocarbons will attack most plastic surfaces. This applies to all of the plastics used in these products.**

Examples of these products include (but are not limited to), acetone, ether, gasoline, lacquer thinner, methyl-ethyl-keytone, methylene chloride, and toluene.

**Thermoplastics have a limited resistance to alcohol (all types) but their use is not recommended.**

Dilution of alcohol with water will minimize damage, but the exposure time should be kept to a minimum. Prolonged contact of plastics to alcohol will cause the plastic to “craze”. (This is a fine cracking close to the exposed surface.) Crazing severely reduces the optical qualities and strength of the plastic.

#### **Some Recommended Cleaners Include:**

Brilliance Cleaner, an anti-static liquid cleaner.

Polly-Kleen, an anti-static cleaner for Styrene's.

Rez-N-Kleen, anti-static cleaner which also removes tape residues.

Mask-Off, a cleaner which removes paper and tape residues.

20/20 Cleaner, an Anti-Static liquid cleaner.

#### **B. POLISHES**

While the above cleaning solutions have some polishing capabilities, they will not remove scratches from plastics. This can only be done with automotive type waxes or the finer grades of rubbing and polishing compounds. These products should be specifically for acrylic enamels and lacquer base paint.

### **C. SCRATCH REMOVERS**

Deep scratches should first be sanded with fine grit (400 or finer) wet sandpaper. Steel Wool (OOOO Finest Grade) is also very helpful. Use the polishing materials (rubbing compounds), mentioned above for the final stage.

### **STAINLESS STEEL COMPONENTS**

Stainless Steel is resistant to all solvents and detergents. Polishing can be accomplished by using fine grades of Steel Wool and/or #707 Scotch Brite Pads (3-M Corp.). For the final stage, use a polishing spray like "Stainless Steel Magic."

### **ALUMINUM COMPONENTS**

Again, solvents or detergents may be used for cleaning aluminum. If the aluminum becomes tarnished, it may be rubbed with any of the many commercial polishes available.

**Anodized aluminum parts should not be polished as it will  
remove the protective coating.**

### **A FINAL WORD OF CAUTION**

*Thermoplastic materials like acrylic, polystyrene, Noryl, A.B.S., etc., will be attacked by aromatic hydrocarbons. Use of them will cause crazing, discoloration, and/or cracking. In some cases, joints will separate.*

**Please try to avoid using the following:**

- 1. Methyl Ethyl Keytone**
- 2. Acetone**
- 3. Methylene Chloride**
- 4. Bleach**
- 5. Ether**

*In all cases, try to avoid the use of abrasives to clean your equipment.*

### **Yamato Warranty Policy**

Yamato Scientific America warrants, from the date of shipment from Yamato warehouse, for a period of one (1) year. All products, parts and materials shall be free of defects in material and workmanship under normal use consistent with the product instructions. This product warranty does not apply to products purchased from unauthorized resellers/distributors.

Yamato reserves the right to inspect the product under claim before having an obligation to repair or replace the defective unit covered by this warranty. All costs of shipping to Yamato for inspection shall be borne solely by the purchaser. Products repaired or replaced under the terms of the warranty may be refurbished or new product will be provided at the discretion of Yamato.

### **Warranty Conditions**

This warranty does not apply to equipment or parts which fail because of abuse, accident, alteration, misuse, erosion, improper installation, or improper replacement of a repaired item.

Consumables such as gloves, bulbs, or filters are not covered under this warranty.

The buyer assumes all risks for results obtained from these products, whether used alone or in combination with other items. It is expressly understood that we are not responsible and will not be held liable for damage and/or injury caused using our products.

### **Product Return Policy**

If you are not satisfied with your purchase and wish to make a return, contact our customer service to inquire about a Return of Merchandise Authorization Number (RMA). Merchandise returned without an RMA number will not be accepted and will be returned to the sender. Return requests must be made within 15 days of the customer's receipt of the merchandise.

All returns must be unused and in unopened original packaging and include all items and manuals originally shipped.

The purchaser is responsible for the shipping cost of return shipment. Insurance on the return shipment is required. Damage or loss of merchandise during shipping is the responsibility of the sender. Returned shipments that arrive damaged will be returned back to the sender, and credit will not be rendered.

All returned products, parts and materials are subject to a 25% restocking fee. Shipping and handling cost are non-refundable. All retrofitted, customized and special order item sales are final and non-returnable.

### **In Case of Request for Repair**

If the failure occurs, stop the operation, turn OFF the power switch, and unplug the power plug. Please contact the sales agency that this unit was purchased, or the Yamato Scientific's sales office.

#### **< Check the following items before contact >**

- ◆ Model Name of Product
- ◆ Production Number
- ◆ Purchase Date
- ◆ About Trouble (as detailed as possible)

## **Responsibility**

Please follow instructions in this document when using this unit. Yamato Scientific has no responsibility for accidents or breakdown of device due to failure to comply. Never conduct what this document forbids as unexpected accidents or breakdown may result.

**Instruction Manual for PCR (UV) Chamber**  
**Model PCR204/214**  
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