Standard Operating Procedure
Instrument

TITLE: Operation of Wallac (Hybrizyme) 1420 Victor 2 Multilabel Counter for Immunoassay Protocols

DEPARTMENT: Immunoassay

APPLICATION: The Wallac Multilabel Counter is used for incubating and making time-resolved fluorescence readings of immunoassay samples.

REFERENCES: Wallac 1420 Victor 2 Instrument Manual and User Manual

PROCEDURE SUMMARY:

The mulitlabel counter is used to shake the microtitration strips during incubation of samples with antibody and tracer. After the Enhancement Solution is added, another incubation period is followed by irradiation of the samples with ultra-violet light and measurement of the fluorescence produced. The fluorescence readings are compared to a calibration curve and concentrations of analyte are calculated.

APPROVED BY: _____
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Annual Review

Date:					
Initials:					

APPARATUS AND MATERIALS:

Note: Equivalent apparatus and materials to those listed may be used.

Multilabel Counter:	Wallac (Hybrizyme)1420 Victor 2
Data System:	Minimum Requirements of system include: Windows 95, Intel Pentium Processor, 16 MB RAM, 30 MB free hard disk space, CD-ROM Drive, Super VGA Drive, Wallac Instrument Interface Board and printer

READYING FOR USE:

The Multilabel Counter should be left on continuously.

1.) Turn the power switch for the computer, monitor and printer on. The Wallac software will load and the Wallac 1420 Manager screen will be displayed on the monitor.

2.) Click on “TOOLS” in the menu bar and select the “START WIZARD” from the options displayed.

3.) Click on the “NEXT” button. This will bring up a list of protocols available on the instrument.

4.) Click on the “+” to the left of the folder for the type of analysis (i.e. PCBs) to be done. This will cause a list of choices to be displayed under the analysis type selected.

SHAKE PROCEDURES:

1.) Click on the appropriate length shake procedure required and then click the “NEXT” button.

2.) On the diagram of the plate displayed on the monitor screen, click on the location of the first empty well. While holding the mouse button down, drag to the bottom right corner of the plate diagram. Release the mouse button. Click on “EMPTY”. The wells containing samples should be displayed with a blue dot in the well and the empty wells will be gray like the plate background color.

3.) Click the “NEXT” button. Any comments you want to have included with the results can be entered on this screen. If you have no comments to enter, or after having entered comments, click on the “NEXT” button.

4.) Place the strip frame into the instrument and click the “FINISH” button.

5.) When shake procedure is completed, remove the plate from the instrument.

READING THE PLATE:

1.) Click on “TOOLS” in the menu bar and then select the “START WIZARD”.

2.) Click the “NEXT” button and then select the correct protocol (i.e. PCBQUANT 1PPM 1248) for reading the sample fluorescence.

3.) Click the “NEXT” button and select the empty wells on the diagram of the monitor screen (see step #2 of Shake Procedures) and click “EMPTY”.

4.) Click the “NEXT” button and enter any comments you would like printed with the results.

5.) Click the “NEXT” button. Insert the strip frame into the instrument and press the “FINISH” button. The instrument will proceed to shake the strips and make fluorescence readings for each indicated well. The fluorescence readings can be monitored by clicking the “LIVE DISPLAY” tab.

6.) When the readings have been completed, a new screen will appear on the monitor. Click the “ENABLE MACROS” button. A password request will appear on the monitor. Click the “READ ONLY” button. Another question about linking to information in another workbook appears. In response to this question, click the “YES” button.

7.) The monitor now displays an Excel spreadsheet with the analysis results. To label each of the samples, click in the blank area below the fluorescence readings and enter the sample I.D.

8.) Save the Excel spreadsheet containing the results of the analysis by clicking on “FILE” in the menu bar. Click the “SAVE AS” option and enter a name for the spreadsheet in the “FILE NAME” box.

9.) To print the results, click the printer icon.

10.) To save the results to a floppy disk complete the following steps:
- a.) Insert floppy disk into disk drive.
- b.) Close the Excel spreadsheet and the Wallac 1420 Manager. Answer “YES” to the question about exiting the Wallac 1420 Workstation.
- c.) Double click the “MY COMPUTER” icon followed by double clicking the icon for the “C” drive.
- d.) Open the “MY DOCUMENTS” folder by double clicking it.
- e.) Find the Excel spreadsheet that you want to save to a floppy disk. Click on it. Hold the mouse button down and drag it to the icon for the “A” drive. Release the mouse button. The spreadsheet will be copied to the floppy disk.
- f.) Close the “MY DOCUMENTS”, “C DRIVE” and “MY COMPUTER” windows by clicking in the close box in the upper right corner of each window.
- g.) Remove the floppy disk from the computer.

SHUT DOWN:
The Multilabel Counter should be left on continuously.

1.) Click the Windows “START” button in the lower left corner of screen. Click the “SHUT DOWN” icon. Answer “YES” to the “SHUT DOWN THE COMPUTER?” question.

2.) Set the power buttons on the computer, monitor and printer to off.

POLLUTION PREVENTION and WASTE MANAGEMENT:

Pollution prevention encompasses any technique that reduces or eliminates the quantity or toxicity of waste at the point of generation. Laboratory staff should order and prepare only those

quantities of reagents that will be used prior to the expiration date. Other appropriate measures to minimize waste generation should be brought to the attention of laboratory management. All laboratory waste shall be handled as directed by the Laboratory Waste Management Plan and Hazardous Waste Contingency Plan.

SAFETY:

The toxicity or carcinogenicity of each reagent used in this method has not been fully established. Each chemical should be regarded as a potential health hazard and exposure should be as low as reasonably achievable. Laboratory staff should observe all safety procedures as outlined in the Laboratory Health and Safety Manual. Staff should consult Materials Safety Data Sheets (MSDS) for information on specific chemicals.