

SOP: Operation of Bio Rad iMark Microplate Absorbance Reader

Approvals

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Date: 09APR14

1. Purpose

1.1. To measure absorbance values for use in determining Human tPA concentration and activity.

2. Scope and Applicability

2.1. The Bio Rad iMark Microplate Absorbance Reader is an eight-channel, vertical path length photometer that measures the absorbance of the contents in the wells of a 96-well microtitration plates. It can perform single or dual wavelength measurements and can report absorbance values to three decimal places.

3. Summary of Method

3.1. Turn on and load 96 well plate into Bio Rad iMark Microplate Absorbance Reader.

3.2. Run protocol.

3.3. Remove 96 well plate and turn off Bio Rad iMark Microplate Absorbance Reader

4. References

4.1. iMark Microplate Absorbance Reader Instruction Manual

5. Precautions

5.1. Be sure to open and close the “Reading Chamber Door” by pressing the “Open/Close” key on the “Keypad”. Attempting to manually open or close the “Reading Chamber Door” can lead to damage.

6. Responsibilities

6.1. It is the responsibility of the course instructor/lab assistant to ensure that this SOP is performed as described and to update the procedure when necessary.

6.2. It is the responsibility of the students/technician to follow the SOP as described and to inform the instructor about any deviations or problems that may occur while performing the procedure.

7. Equipment and Materials

7.1. iMark Microplate Absorbance Reader

7.2. 96 Well Plate

8. Procedure

8.1. Turn on the iMark Microplate Absorbance Reader by holding the “Power Button” until the “LCD” illuminates

8.1.1. The “LCD” will display “Self Diagnosis” followed by “Initializing” Once initialization is complete, a login screen will appear.

8.1.2. The login name will read “Common User” and a prompt for a password will be shown. Enter “00000” and press “Enter” on the “Keypad.”

8.1.3. “Lab Name, Kit Name, Reading Mode, and Measurement Filter” appears on screen (be sure the Measurement Filter is set at 450nm, the filter specific for tPA ELISAs), self-initialization is complete, and the Bio Rad iMark Microplate Absorbance Reader is ready for measurement.

8.2. Open the “Reading Chamber Door” by pressing the “Open/Close” key on the “Keypad”.

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- 8.2.1. Once “Reading Chamber Door” is open, place 96 Well Plate into the “Reading Chamber” being sure to line the 96 Well Plate with the plate holding guides.
 - 8.3. Close the “Reading Chamber Door” by pressing the “Open/Close” key on the “Keypad”.
 - 8.4. Start measurement reading by pressing the “Start/Stop” key on the “Keypad”. The measurement function will begin and all data will be printed indicating the completion of the measurement function.
 - 8.4.1. Remove data printout
 - 8.5. Open the “Reading Chamber Door” by pressing the “Open/Close” key on the “Keypad”.
 - 8.5.1. Once “Reading Chamber Door” is open, remove 96 Well Plate from the “Reading Chamber.”
 - 8.6. Close the “Reading Chamber Door” by pressing the “Open/Close” key on the “Keypad”.
 - 8.7. Turn off the Bio Rad iMark Microplate Absorbance Reader by holding the “Power Button” until the “LCD” reads “Power Off” and “Yes” is highlighted, press “Enter” key. Bio Rad iMark Microplate Absorbance Reader will shut down.
- ### 9. Attachments



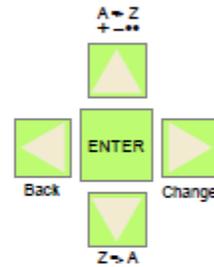
Figure 1. External Features of Bio Rad iMark Microplate Absorbance Reader

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Main	Returns to MAIN SCREEN.
Start/Stop	Initiates plate reading using current active protocol. Stops plate reading and printing.
Paper Feed	Advances paper strip in internal printer.
Print	Prints out the plate data and protocol information.
Edit	Enters the Edit Menu, and sets up the instrument.
Memory Recall	Reads out protocol and plate data.
Open/Close	Opens or closes the reading chamber door.



Up Arrow	Moves the cursor upward. Selects the alphabet or the symbol.
Left Arrow	Returns to the previous screen. Moves the cursor to the left.
Down Arrow	Moves the cursor downward. Selects the alphabet or the symbol.
Right Arrow	Moves the cursor to the right. Changes or selects the value and type.
Enter	Completes or seals a field entry.



Dot/Function	Inputs the dot. Changes the input mode.
Ten Keys	Inputs numbers or well type in plate mapping. 0 / EMP : Empty 5 / QC : QC control 1 / SMP : Sample 6 / CAL : Calibrator 2 / BLK : Blank 7 / CP : Positive Control 3 / STD : Standard 8 / CN : Negative Control 4 / CO : Cutoff control 9 / CW : Weak Positive Control



Figure 2. Keypad Guide for Bio Rad iMark Microplate Absorbance Reader

10. History

<i>Revision Number</i>	<i>Effective Date</i>	<i>Preparer</i>	<i>Description of Change</i>
0	09APR14	Jason McMillan	Initial release