

Standard Operating Procedure
Instrument

TITLE: Operation of Bio-Tek Model ELx50 Automated Strip Washer when used for Immunoassay Protocols

DEPARTMENT: Immunoassay

APPLICATION: The Bio-Tek Strip Washer is used to remove sample interferences and excess reagents during immunoassay testing protocols.

REFERENCES: Bio-Tek Model ELx50 Automated Strip Washer Operator's Guide.

PROCEDURE SUMMARY:

The strip washer is readied for operation and primed with the appropriate wash solution. Microtitration strips are placed into the washer and prewashed. After antibody and sample have been incubated in strip wells, the strip washer is used to wash the wells free of interferences. Another wash step follows the addition and incubation of the samples with the tracer compound. This wash removes excess tracer. Strip washer is rinsed with deionized water after use to prevent clogging of the dispensing and aspirating ports.

APPROVED BY: _____

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Date

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Annual Review

Date:					
Initials:					

APPARATUS AND MATERIALS:

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

Strip Washer: Bio-Tek Model Elx50 Automated Strip Washer
Plastic bottles: Bottles for wash solution, deionized water and waste collection.
Strip frame: Strip frame for holding Anti-Mouse IgG microtitration strips

REAGENTS:

Wash solution: Wash concentrate is diluted 25 fold with deionized water.
Deionized water:

STRIP WASHER PREPARATION:

- 1.) Turn on power switch. Wait for Self-Test to be completed.
- 2.) Press the "RUN" key followed by the "PRIME" key.
- 3.) By pressing the "OPTIONS" key move to Prime Program: 02, Name: "New Buffer Prime". Press the "ENTER" key. Be sure tubing is connected to "Wash Bottle" and stopper containing tubing is in the "Waste Container".
- 4.) Press the "START" key. Watch to see that solution is being delivered from each delivery tube and that tray into which the wash solution is delivered is syphoned dry at the end of the prime sequence. If any problems are noticed, review trouble shooting section in strip washer manual. When the prime program is complete, press the "ENTER" key.
- 5.) Press the "MAIN MENU" key.

STRIP PREWASH:

- 1.) Press the "RUN" key and then the "WASH" key. Use the "OPTIONS" key to move to Wash Program: 05, Name: 1A. Press the "ENTER" key.
- 2.) Enter the number of strips to be washed (i.e. 01) and press the "ENTER" key.
- 3.) Place the strip frame containing the strips to be used in the immunoassay in the strip washer. Be sure the strip frame is positioned properly and press the "START" key. Watch to see that the wells are syphoned, filled with wash solution and syphoned again.
- 4.) When the prewash is completed remove the strip frame and press the "ENTER" key.

3 WASHES PROCEDURE:

- 1.) Use the "OPTIONS" key to move to Wash Program: 06, Name: 3A and press the "ENTER" key.

- 2.) Enter the number of strips to be washed followed by pressing the "ENTER" key.
- 3.) Place the strip frame in the strip washer and press the "START" key. This should start a sequence of syphoning, filling and syphoning each well in the strip frame. The filling and syphoning process should be repeated two more times.
- 4.) When the wash program has finished, press the "ENTER" key and remove the strip frame.

SYSTEM CLEANING AND SHUT DOWN:

It is extremely important to rinse the strip washer with deionized water at the end of each day's use.

- 1.) Press the "MAIN MENU" key followed by the "MAINT" key.
- 2.) Select Maint Program: 01, Name: Day_Rinse and press the "ENTER" key.
- 3.) Connect the "Deionized Water Rinse Bottle" to the tubing and press the "START" key.
- 4.) When the maintenance program is completed, press the "ENTER" key.
- 5.) Turn the power switch to the off position.

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.