

ADDENDUM A
ATOMLAB 500
DOSE CALIBRATOR

THE <MO-99 BREAKTHRU> BUTTON

086-330



BIODEX

Biodex Medical Systems, Inc.

20 Ramsay Road, Shirley, New York, 11967-4704, Tel: 800-224-6339 (Int'l 631-924-9000), Fax: 631-924-9241, Email: info@biodex.com, www.biodex.com

NOTE: This addendum replaces pages 3-3 through 3-5 in the *Atomlab 500 Dose Calibrator Operation and Service Manual, FN#: 10-096 Rev A, 2/11.*

THE DOSE CALIBRATOR PROGRAM

From the Home screen, touch <Dose Calibrator> to access the Dose Calibrator screen. At this screen the system operates as a dose calibrator. A list of isotopes is displayed along with time, date, measured activity and activity units. The measured activity is the real time activity being measured in the chamber for the first (most left) isotope displayed.

The Dose Calibrator screen activity reading defaults to the last selected isotope, or to Tc-99m if no isotope has been previously selected. The system selects the most recently used units of measure (mCi or Becquerels,) or defaults to mCi if units have not been previously selected.

In addition to counting isotopes, the Dose Calibrator screen allows the user to <Zero Background>, <Select Detector> if multiple chambers are connected, <Select Isotope>, perform <Future Dose> calculation, or <Print Labels> for the current activity in the chamber. There are two types of labels that print.

Counting an Isotope
(See Figures 3.3 and 3.4.)



Figure 3.3. The Dose Calibrator screen with List 1 Button Isotopes displayed.

To Measure An Isotope:

1. Touch the appropriate <Isotope> key. This tells the detector which dial value to use in the calculations.
2. Place the isotope in the chamber. The activity level is immediately displayed.
3. Touch <Print Labels> to print out an activity label, or <Home> to return to the system Home screen.

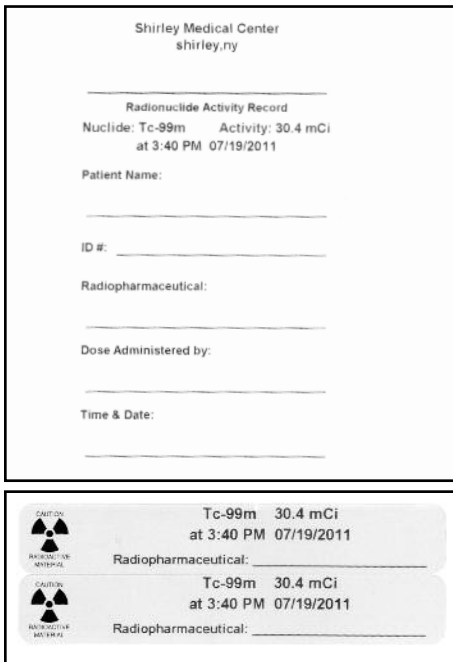


Figure 3.4. A Measure screen label.

THE <MO-99 BREAKTHRU> BUTTON

Select the < Mo-99> button as the isotope. The <Mo-99 BrkThru> button will display the Moly BreakThru Reading screen. This button allows performance of a Mo-99 Breakthrough procedure as follows.

1. Select <Mo-99 BrkThru>, the Moly BreakThru Reading screen is displayed.
2. Place the empty Moly Shield into the detector and press <Zero Background>. The Zero Background screen is now displayed.
3. Press <Zero Background> to begin a background count lasting up to 100 seconds.
4. Press <Back> to advance to the Zero Background results screen.
5. Press <Back> to return to the Moly BreakThru Reading screen.

NOTE: You must perform a Mo-99 Background count using the empty Moly shield before counting the Moly Breakthrough.

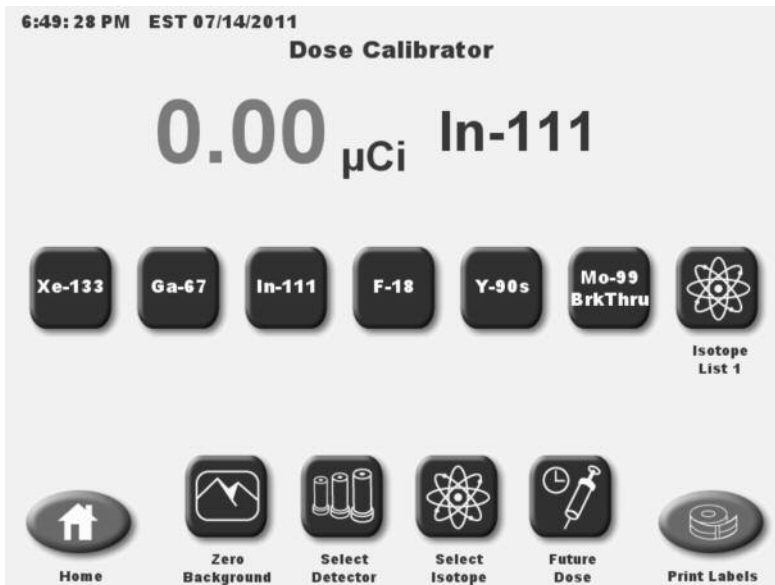


Figure 3.5A: The Dose Calibrator screen with List 2 isotopes and Mo-99 button displayed.

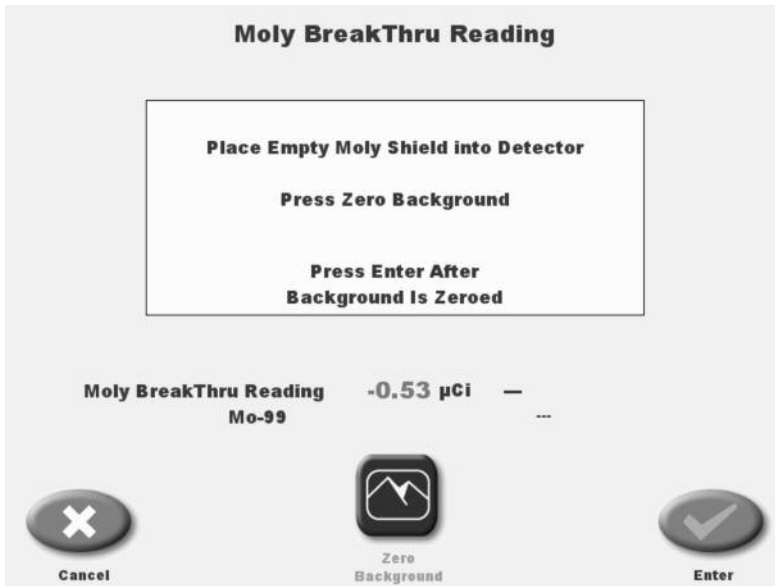


Figure 3.5B: The Moly BreakThru Reading screen when placing the empty Moly Shield into the chamber to zero background.

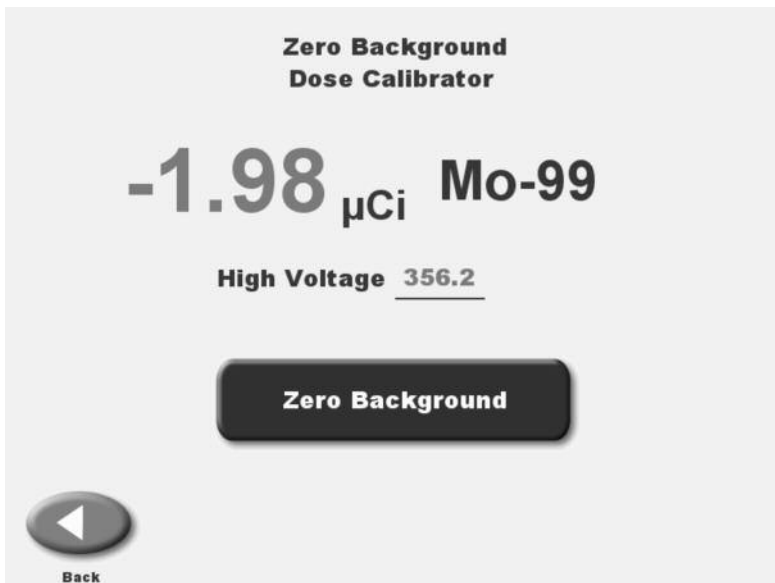


Figure 3.5C: The Zero Background screen.

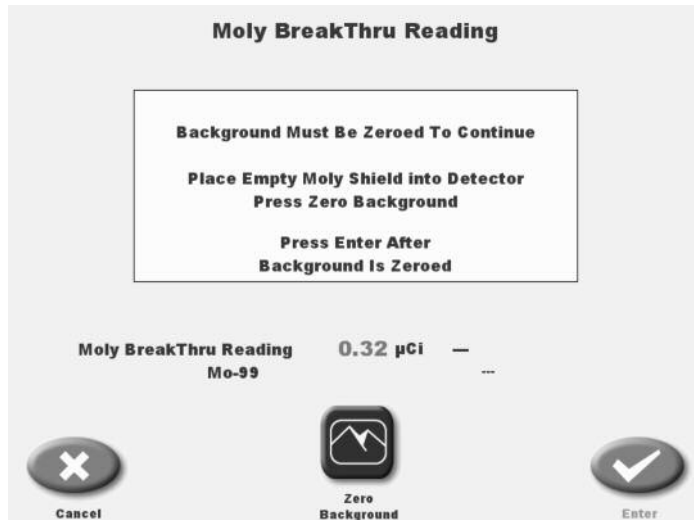


Figure 3.5D: The Moly BreakThru Reading screen with Moly Breakthrough Background Activity displayed.

6. Press <Enter> to display the screen for counting Moly BreakThru.
7. Place the vial or syringe of Tc-99m into the Moly Shield and place it into the chamber.
8. Press <Record Reading>. The system will prompt you to wait 30 seconds for the activity reading.
9. Press <Enter> to return to the Main Counting screen.

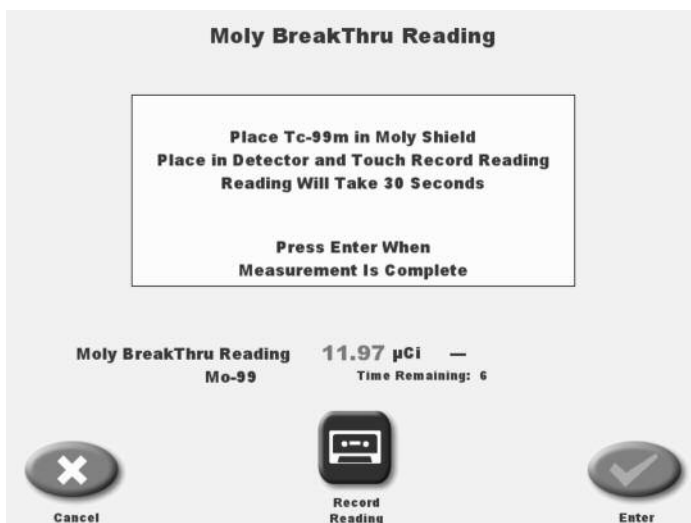


Figure 3.5E: The Moly BreakThru reading screen with Moly Breakthrough Reading Activity displayed.

CHANGING THE SELECTED ISOTOPE

The selected isotope can be changed at any time with the activity for the new isotope displayed within one second. There are two button lists from which isotopes can be selected. These buttons offer quick access to commonly used isotopes: Xe-133, Ga-67, In-111, F-18, Y-90 and Mo-99. Select <Isotope List #> to toggle between buttons on List 2 and List 1 at any time to display the Other Button isotopes: TC-99m, TI-201, I-123, I-131, Cs-137 and Co-57.

The Routine Isotopes List, which displays up to 19 routine isotopes, is accessed by touching <Select Isotope>. Scroll down the Routine Isotope List to access the Custom Isotopes List and full Alphabetical Isotopes List.

ISOTOPE RESPONSE TIME

The Atomlab 500 normally settles within three seconds as long as the minimum threshold level is exceeded. When you first lower the source into the well, the activity value quickly jumps to the final value. For a few seconds the value may fluctuate, but then the value settles down to a small variation. As soon as the source is removed from the Chamber Well, the Activity Display will drop down to a near zero value.

NOTE: *Both the Chamber Well Liner and Sample Holder should be periodically checked for contamination as described later in this chapter (the more your dose calibrator is in use, the greater the frequency of contamination checks required).*



Certified Quality Management System

BIODEX

Biodex Medical Systems, Inc.

20 Ramsay Road, Shirley, New York, 11967-4704, Tel: 800-224-6339 (Int'l 631-924-9000), Fax: 631-924-9241, Email: info@biodex.com, www.biodex.com