

Setup Guide on the Molecular Devices Analyst[®] Multimode Reader

LanthaScreen[®] Terbium Assay Setup Guide on the Molecular Devices Analyst[®] Multimode Reader

NOTE: The Molecular Devices Analyst[®] Multimode Reader was tested for compatibility with Invitrogen's LanthaScreen[®] Terbium-based TR-FRET Assay. The following document is intended to demonstrate setup of this instrument. For more detailed information and technical support of Invitrogen assays please call 1-800-955-6288, select option "3", then extension 40266. For more detailed information and technical support of Molecular Devices instruments or software, please call 1-800-635-5577 or by e-mail at info@moldev.com.

A. Recommended Optics

Invitrogen part number	wavelength (nm)	diameter (mm)
Excitation Filter (PV00225)	340/30 (or similar)	25
Emission Filter 1 (PV00325)	495/10	25
Emission Filter 2 (PV00325)	520/25	25
Dichroic Mirror *contact Molecular Devices	380 or 400	

B. Instrument Setup

1. Make certain plate reader is turned on, and open the CriterionHost software



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- 2. Choose Method/New.
- 3. On the drop down menu, choose, Time Resolved Fluorescence. Type in the name of the Method (i.e. LanthaScreen[®] Donor). Click OK.

lew Method				
Method type:				
Time Resolved Fluorescence	-			
Method name:				
LanthaScreen Donor			_	
		OK		Cancel

4. The Define and Edit Window appears. Note that the TRF tab is selected as default. Set up the window as it appears in the screenshot below. See the Appendix for plate and filter information.

Define and Edit Methods	×
Absorbance Epi-Absorbance Fi Luminescence Multi-Method	luorescence Intensity Fluor. Polarization Focused Luminescence TRF
Method Name: LanthaScreen Donor Optics Top C Bottom Lamp: Flash	Filters Excitation: 5 330-80nm Emission: 6 490-10nm
Plate Format: Corning 384 Round Low 💌 Select wells Z Height C Middle of well C Bottom of well	Timing ? Flashes per well: 25 Integration time: 200 μs Interval between Flashes: 1 x 10ms Delay after flash: 100 μs
Raw Data Units: Counts	Attenuator Mode: 💷
	OK Cancel <u>Apply</u>



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5. Click on the Advanced button and set up the window as it appears in the screenshot below:

Advanced TRF Setup	×	
	PMT Setup © Digital © Smartflead © Smartflead + Sensitivity Min Max 0 1 2 3 4 Maximum Counts: 156 K	
Plate agitation Shaking Time: 0 sec.	Kinetic timing Delay before first read: 0 sec. Delay between reads: 0 sec.	
Low Medium High Plate settling time: 25 ms	Number of reads: 1	

5. Repeat steps 2-4 to create another TRF Method called LanthaScreen[®] Acceptor. Set up the window as it appears in the screenshot below:

fine and Edit Methods	
Absorbance Epi-Absorbance Luminescence Multi-Method	Fluorescence Intensity Fluor. Polarizat Focused Luminescence TRF
Method Name: LanthaScreen Acceptor	✓ Advanced
Optics © Top O Bottom Lamp: Flash	Filters Excitation: 5 330-80nm Emission: 3 520-10nm
Plate Format: Corning 384 Round Low 💌	Timing 2
Select wells	Integration time: 200 µs
C Middle of well C Bottom of well	Flashes: Ποτη κ Toms Delay after flash: Π00 μs
Raw Data Units: Counts 💌	Attenuator Mode: Out
	OK Cancel <u>A</u> p

6. Click on the Advanced button and set up the window the same as in LanthaScreen[®] Acceptor. Click OK.



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7. Return to the main window (Click OK in the Define and Edit window) and create a Multi-Method by choosing Method, New. Choose Multi-Method from the drop down menu and give your Multi-Method a name. Click OK.

ew Method	×
Method type:	
Multi-Method	•
Method name:	
LanthaScreen	
	OK Cancel

8. The Define and Edit window appears. Set up the window as it appears in the screenshot below:

Define and Edit Meth	ods		×
Absorbance Luminescence	Epi-Absorbance Multi-Method	Fluorescence Intensity Focused Luminescence	Fluor. Polarization
Name: LanthaSc	reen	-	Advanced
Mode	Method		
🚹 TRF 💌 La	anthaScreen Acceptor		
	anthaScreen Donor		Select wells
Plate Format: Corr	ning 384 Round Low 💌	Method switching O By Well O By	y Plate
- Reporting			
🔽 Raw data			
C Subtracter	d data	Raw Data Units: Counts	▼
🛄 Ratio 📘	/ 2	Order: Raw Data	
Multiplier >	: 1	Hatto 172	-
			_
		OK Cano	cel <u>A</u> pply

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9. Click on the "Select wells" button to select the wells to be read. The example below shows one half of a 384 well plate to be read. Click OK.



- 10. Click OK in the Define and Edit window.
- 11. The plate layout window appears. You can enter a comment here describing your assay. This will appear on the final data page along with all the other parameters for assay set up.



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- 12. You can switch between Plate view and Report view by clicking on the appropriate icons. These choices are also available in the View menu.
- 13. Click "Read."

14. When reading is completed, you can use the Report view to see it. Save the data by using the "Save" icon. Depending on the software, you may