



SpectraMax i3x Injector Cartridge with SmartInject Technology

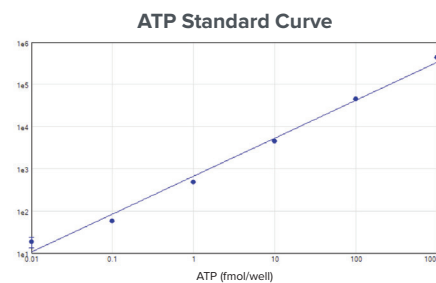
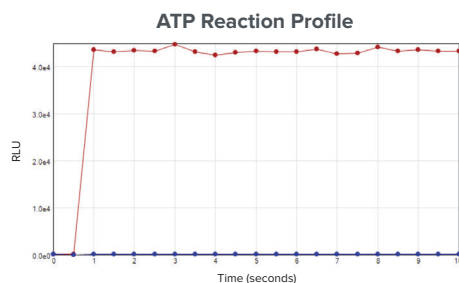
Dual injector cartridges for the SpectraMax® i3x Multi-Mode Microplate Detection Platform allows you to expand your research capabilities to include fast flash based applications, including dual luciferase and ATP assays.

BENEFITS

- SmartInject Technology
- Bubble detection
- Overflow protection
- Onboard touchscreen
- Low dead volume
- DLR Certified

Capture Flash Assays with Ease

Expand your lab's capabilities to include flash applications such as dual luciferase and ATP assays with the SpectraMax i3x injector module with SmartInject™ Technology ensuring equal mixing across the plate for high-precision experiments. Engineered for high performance, the dual injector cartridge includes safeguard features including bubble detection and overflow protection to save precious reagents and maximize performance for those critical experiments in your lab.



The SpectraMax i3x Injector Cartridge allows you to capture ATP reactions as quickly as they occur, reaching maximum signal in under two seconds after the addition of luciferin/ luciferase reagent. Take advantage of increased sensitivity using fast flash assays to get the most accurate data from your experiments.



Download Application Note

High-sensitivity ATP quantitation using SpectraMax Injector Cartridge with SmartInject™ Technology

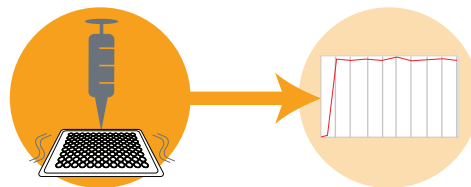
moleculardevices.com/ATPappnote



Engineered for Maximum Performance

SmartInject™ Technology

SmartInject Technology provides simultaneous injection and mixing to ensure complete reagent incorporation and rapid development of luminescent signal, which are crucial for optimal assay sensitivity with minimal well-to-well variation.



Overflow Protection

Overflow sensor detects changes when a liquid bridge occurs between the tip of the injector and the optics, helping to prevent any reagent spillage within the instrument.



Bubble Detection

Patent pending sensor technology detects changes in conductance when a bubble is present within the tubing. This bubble sensor protects your assay accuracy by not dispensing if a bubble is detected.

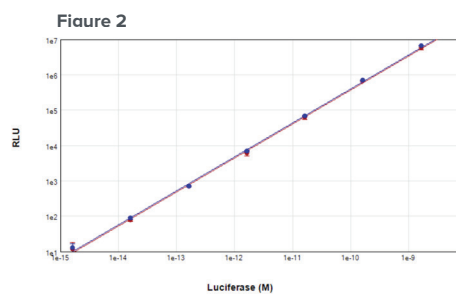
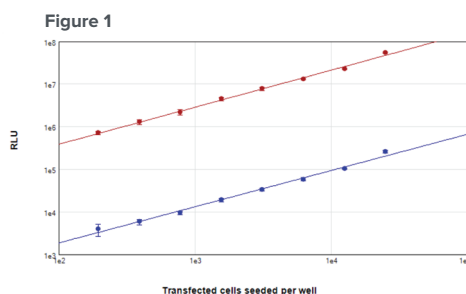


The SpectraMax Injector Cartridge with SmartInject™ Technology, has passed the validation criteria from Promega Corporation™ and has been certified as **DLReady™**.

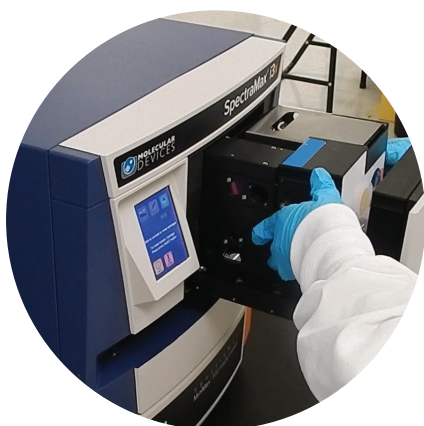
Promega's Dual-Luciferase® Reporter (DLR) Assay System allows users to measure both firefly and Renilla luciferase activity in a single microplate well, with firefly acting as the experimental reporter and Renilla the control. The DLR assay requires delivery of two separate reagents containing the different substrates, each followed by a luminescence read. This assay workflow is easily performed using the SpectraMax i3x Multi-Mode Microplate Reader with SpectraMax Injector Cartridge.

Figure 1. Cells transfected with both firefly and Renilla luciferases were seeded at densities from 195 to 25,000 cells per well and assayed using the Dual-Luciferase Reporter Assay. Signal for firefly (red plot) and Renilla luciferases vs. cell number are displayed.

Figure 2. Dual-Luciferase Reporter Assay with purified firefly (red plot) and Renilla (blue plot) luciferases. Detection is linear over a range of 6 decades.



Engineered for Maximum Performance



Light tight compartment to reduce interference



Removable reagent drawer for easy cleaning and sterilization



Easy-to-use touchscreen for priming, washing and rinsing



Bubble Detection maintains assay injection accuracy



Reverse Prime option for low dead volume down to 10 µL



Drag-and-drop simplicity with Acquisition Plan Editor



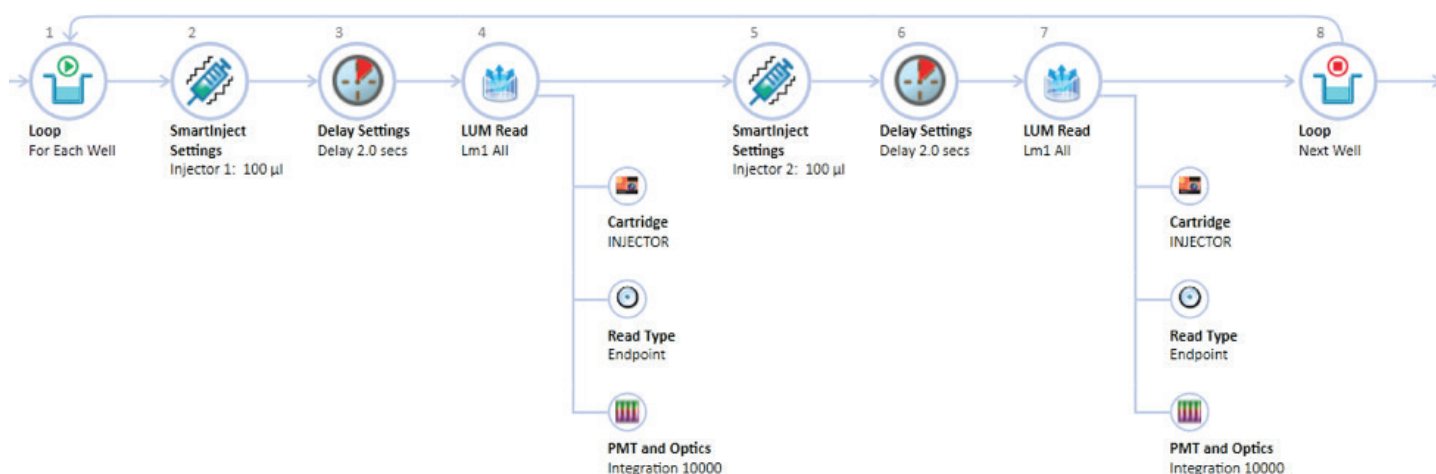
SmartInject™ Technology ensures rapid signal development



Overflow Protection prevents spillage within the instrument

Drag-and-drop Ease of Use

The revolutionary Acquisition Plan Editor allows you to easily configure a protocol to meet your assay's strict requirements. Use the drag-and-drop graphical workflow interface to adjust every step of your experiment or choose from a large library of preconfigured assay protocols to save time.



Key applications

- Flash Luminescence for dual luciferase and ATP assays
- Fluorescence intensity for calcium and GPCR assays
- Injectors for Cell based assays



SpectraMax Injector Cartridge Specifications

ITEM	DESCRIPTION
Part number	SpectraMax Injector Cartridge: 0200-7029
Microplate formats	6, 12, 24, 48, 96, and 384-well microplates
Read modes	Luminescence (LUM), top read. You can also use the injectors in the cartridge along with the built-in Monochromator in the SpectraMax i3x Instrument for Fluorescence Intensity (FL), bottom read.
Number of slots	2 slots, including the rear-most slot number 3 that is dedicated for the Injector Cartridge
Wavelength range (LUM)	Visible to 650 nm
Detection limit, optimized	20 amol ATP ("Flash" luminescence using Promega Enliten)
Detection limit, guaranteed	50 amol ATP (<=> 250 fM @ 0.2mL/well, "Flash" luminescence using Promega Enliten) 3 fmol ATP (<=> 15 pM @ 0.2mL/well, "Glow" luminescence using PerkinElmer ATPlite 1step)
Linear dynamic range	5 logs in a single microplate read
Injectors	2
Dispense volume	1 µL increments from 1 µL to the maximum volume of the well, based on the selected microplate type
Dispense accuracy	±5% at 100 µL
Dispense precision	≤ 2% cv at 100 µL
Dispense speed	100 µL per second
Dead volume	Injector Tubing: 250 µL < 10 µL with Reverse Prime function
Minimum delay between injection and LUM (top) read	Injector 1: 0.3 seconds after injection ends Injector 2: 0.3 seconds after injection ends
Minimum delay between injection and FL (bottom) read	Injector 1: 0.0 seconds when injection starts Injector 2: 0.3 seconds after injection ends



Ordering Information

Item	Part Number
SpectraMax Injector Cartridge	0200-0729
Bottle Holder	5044162
Waste Plate	5044163
Tubing	5044164
Adaptor	5044165

For more information on the SpectraMax Injector Cartridge, please visit www.moleculardevices.com/injectors

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