# Sirius L Single Tube Luminometer

Compact High Performance



Berthold
DETECTION SYSTEMS

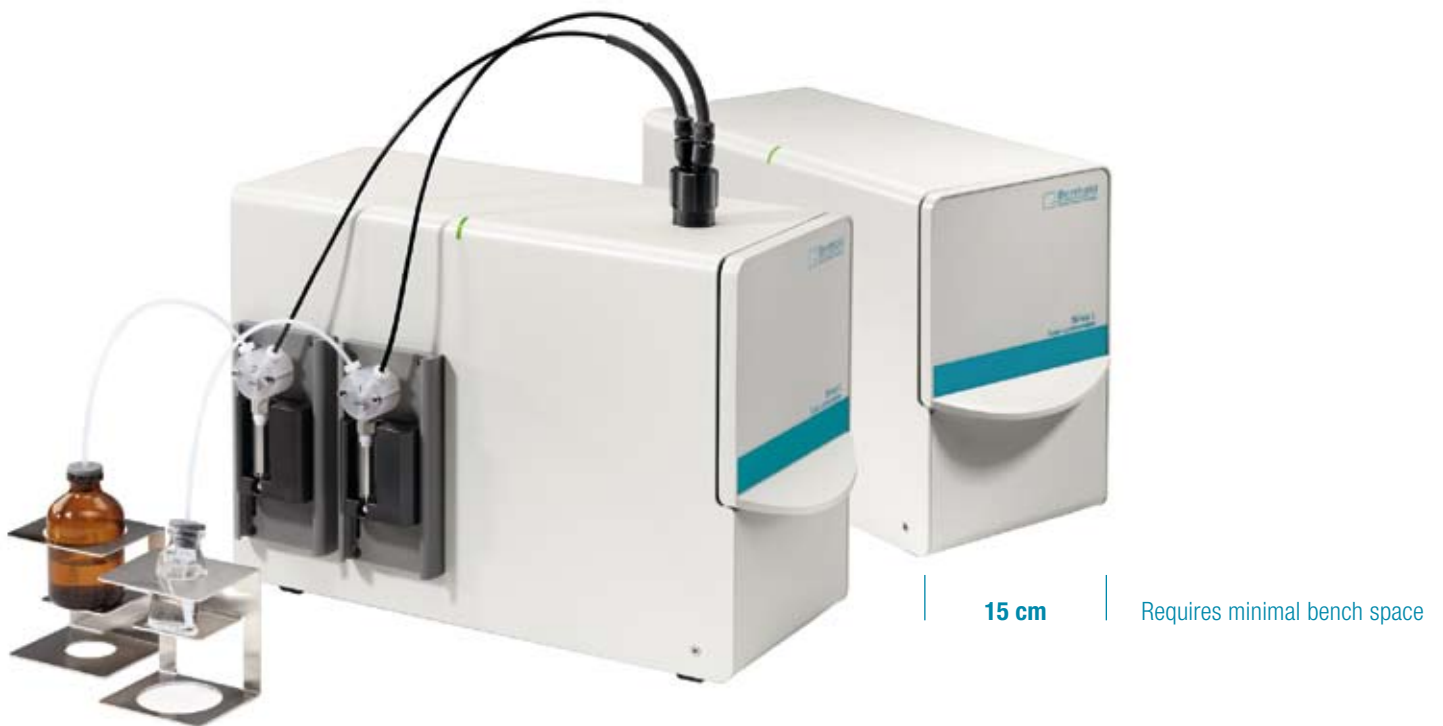# The Sirius L is a compact high performance tube luminometer with unique features:

The sample versatility is unmatched.
The Quickstart capabilities provide results on the fly.
The intuitive and powerful PC software sets the standard:
Windows®7 compatible, self-detecting USB-port.

**Sirius L in Flash configuration (left) and Glow configuration (right)**



**15 cm** | Requires minimal bench space

## Wide Range of Applications

The Sirius L is the perfect choice for all luminescent flash and glow applications performed in single sample format, for example:

· Reporter gene assays, including dual-reporter assays
· Rapid detection of mycoplasma contamination in cell cultures: Lonza MycoAlert®
· ATP assays
· Cell proliferation, cytotoxicity and biomass assays
· Apoptosis assays
· Cellular luminescence/reactive oxygen species
· Environmental toxicity and mutagenicity assays

## Supersensitive Detector

The Sirius L detects less than 0.5 zmol of firefly luciferase. Light collection is maximized through both the proximity of the sample to the detector and the use of optimized light reflectors surrounding the sample vial.

## Quickstart Capabilities

Closing of the sample drawer automatically initiates the measurement with no need to press any key. The automatic light shutter protects the detector from ambient light, making the instrument ready to measure from the moment the door is closed.
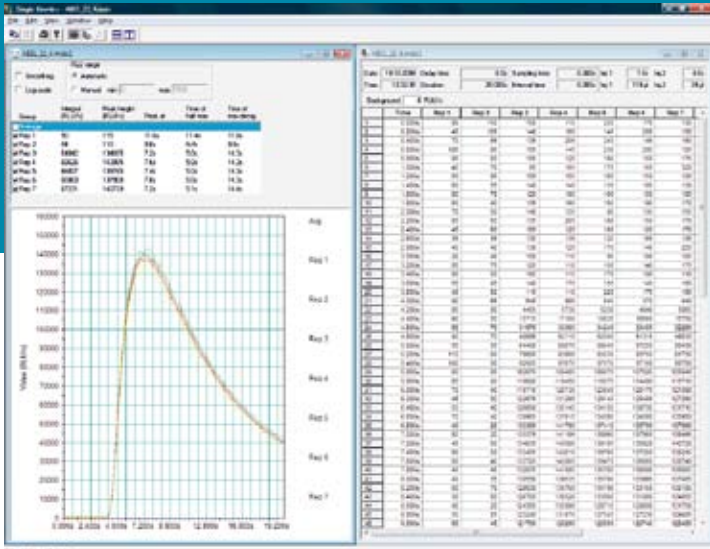
## Sample Formats

The sample chamber is designed for performance and flexibility. Accomodation of a variety of vial types: From 35 mm petri dishes to microfuge format to 20 ml vials, there is virtually no limit.
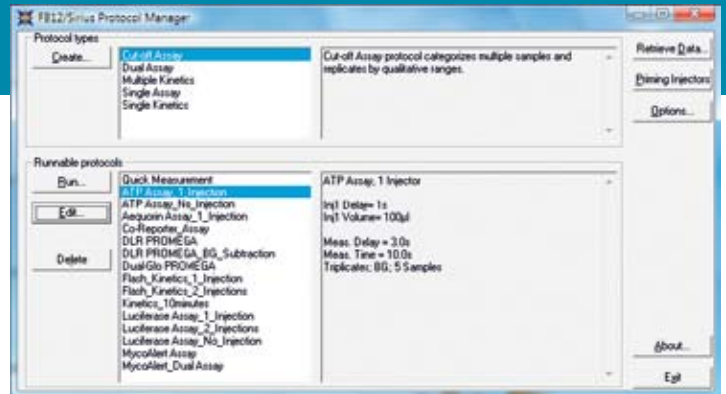
## Various Injector Options

The instrument is available with up to two syringe-type automatic reagent injectors. The injection volume ranges from 20–500 µl. Ready-to go sample holders for precise injection are available for 1.5 ml and 2.5 ml microfuge tubes, as well as for 55 mm and 75 mm, 12 mm diameter tubes (standard format for most luminescence assays).

# Sirius L Software Intuitive, Fast and Easy to Use



Available protocols for every application. Kinetic evaluation, data table (right), curve parameters and graphic presentation (left)



Sirius L software: Protocol Manager

## Powerful Software

The PC Software is easy to set up and run. The instrument is detected automatically via USB or RS-232 connection. The Sirius L basic software package includes the Protocol Manager and Quick Measurement.

Five additional protocol types are available:
Single Assay, Dual Assay, Single Kinetics, Multiple Kinetics and Cut-off Assay. The operator may define new protocols of all types. Highly flexible graphical presentation of kinetic data is supported.

## Sirius L – A Reliable Benchtop Companion

Sirius L does not require calibration. The detector system will remain stable and reliable for the lifetime of the instrument.

Tools are available should your lab require regular formal validation of instrument performance:
The Luminescence TestTube provides stable light output within the measurement range. The format is that of a 12 x 75 mm sample vial. Our 3Q procedures provide guidelines for periodic maintenance, as well as several types of checklists, schedules and logbooks.

Sirius L allows automatic injection into many different sample vials



Sirius L supports both USB and RS-232 data port.

# Sirius L Technical Data

## Luminometer

| | |
|---|---|
| **Sample Format** | Tubes up to 12 mm diameter and 75 mm length, microfuge tubes 1.5 ml and 2 ml, 35 mm culture dishes, liquid scintillation vials up to 20 ml. Injection operation with tubes 12 mm x 75 or 55 mm and microfuge tubes of 1.5 and 2 ml volume. |
| **Detector** | Photomultiplier tube with bialkali cathode, effective spectral range 300–630 nm, operated in photon counting mode. |
| **Measurement Chamber** | Retractable drawer with interchangeable reflectors and sample adapter. |
| **Sensitivity** | Less than 0.5 zmol firefly luciferase, 1 amol ATP in a HS ATP assay. |
| **Dynamic Range** | 6 decades. |
| **Interfaces** | RS 232 or USB interface for PC connection. |
| **Injector** | 0, 1, 2 (upgrade possible). |
| **Injection Volume** | 20–500 µl adjustable in steps of 1µl . |
| **Tubing** | Chemically inert PTFE tubing and connections (PTFE or KEL-F). |
| **Dimensions** | W 349 mm, D 150 mm, H 241 mm (without injection tubings). |
| **Weight** | approx. 3.6 kg (5.4 kg with 2 injectors). |
| **Power Requirements** | Desktop power supply and power cord. 100–240 V AC, 24 V/2.5 A DC. |
| **Environment** | Storage 0–40° C up to 80% humidity (@30°C), non condensing. Operation 10–35°C up to 70% humidity. |

## PC Software

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|---|---|
| **PC Software** | Microsoft Windows® application for control, measurement and evaluation. |
| **Required Hardware** | Microsoft Windows® compatible PC, Pentium like processor, RS 232 or USB port. |
| **Operating System** | Windows® 2000, XP, Vista, Windows® 7. |
| **Additional Software** | Microsoft Excel™ 2000 or higher (optional). |
| **Standard Configuration** | Protocol Manager, Quick Measurement. |
| **Additionally Available** | Single Assay, Dual Assay, Single Kinetics, Multiple Kinetics, Cut-off Assay. |

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