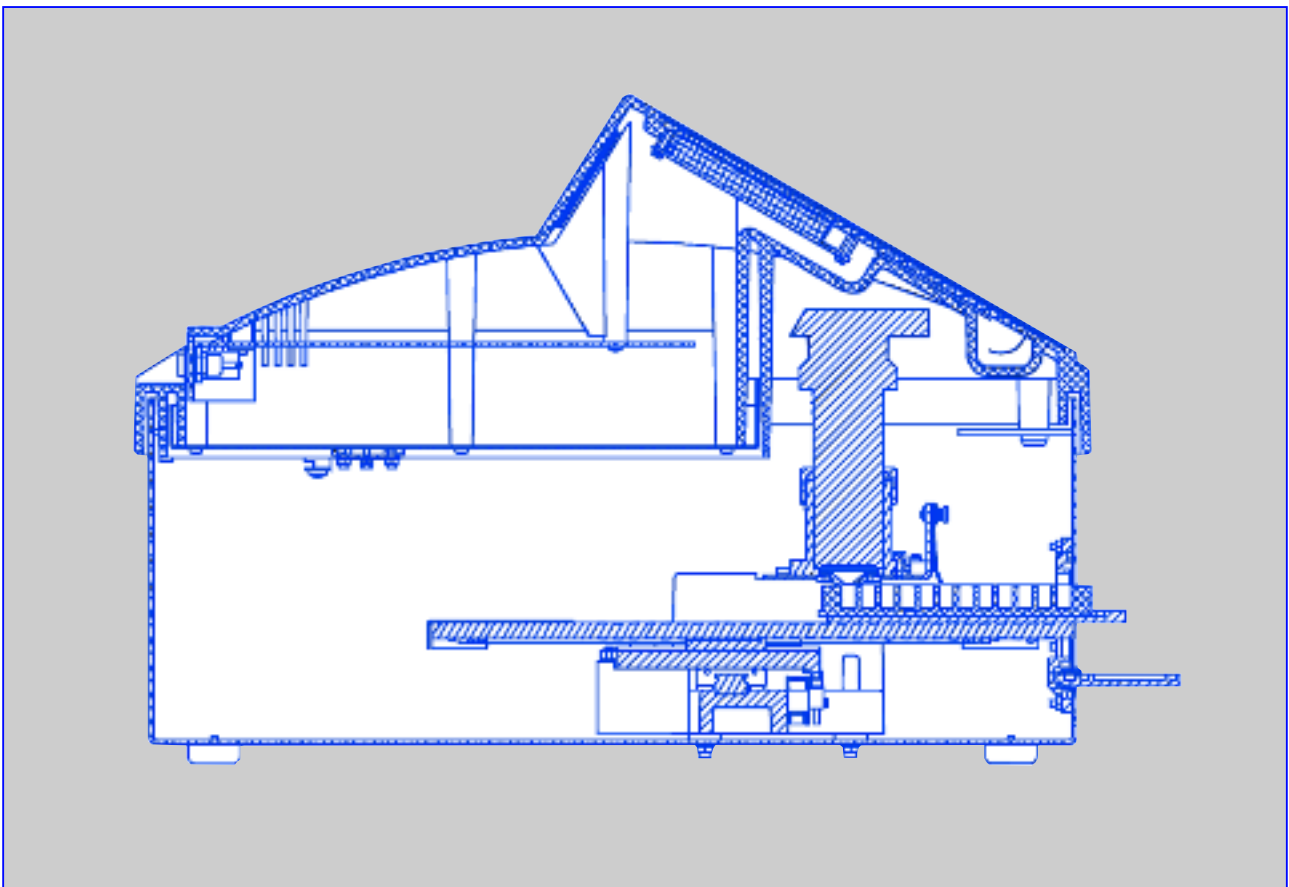


CentroLIA



The Microplate Luminometer for Luminescence Immunoassay

From the people who have built
thousands of luminometers
for Clinical Diagnostic applications.

CentroLIA The Microplate Luminometer for Luminescence Immunoassays

The Essence

Over the past two decades RIA has, to a great extent, been replaced by none-radiometric assays such as ELISA, FIA and LIA. ELISA assays have been a popular choice for immunoassays, because of their relatively low cost and open instrument platforms.

In recent years, luminescent substrates for horseradish peroxidase and phosphatases have been developed with the potential to replace chromogenic substrates directly, resulting in substantial gains in sensitivity, speed and dynamic range.

There was just one element missing so far: a luminometer specifically designed for immunoassays, developed and manufactured by a leading instrument company, bringing out the best possible performance for your assays, with world-wide service capabilities, and, last but not least, at reasonable cost.

This challenge is now met with the CentroLIA, designed and manufactured by BERTHOLD TECHNOLOGIES, the company that has successfully built thousands of luminometers for use in diagnostics and research.

Instrument Concept

Detector sensitivity and stability are the result of BERTHOLD TECHNOLOGIES experience with thousands of photon counters. True photon counting has the benefit that no user parameters need to be set, ensuring the same conditions are used for every measurement during the instrument's life time. The fast photon counting circuitry provides a dynamic range in excess of six orders of magnitude, which complements the concentration range of the latest assays.

A patented design of the optical system achieves absolute minimization of cross-talk (down to 10^{-6} , depending on the type of microplate).

96 well plates, 384 well plates, 8 well and 12 well strip plates can be measured.

Inside the instrument a precision x-y-table ensures exact positioning of the wells with respect to the detector.

The Kit Manufacturers' Perspective

The CentroLIA is distinguished by its exceptionally high sensitivity, thereby allowing clinically significant detection limits with low reagent concentrations.

A wide selection of high-quality standardization procedures ensures optimum accuracy and precision in the measurement of assays.

BERTHOLD TECHNOLOGIES world-wide customer service network is available for OEM-partners and users alike so, in the unlikely event of something going wrong, support is available.

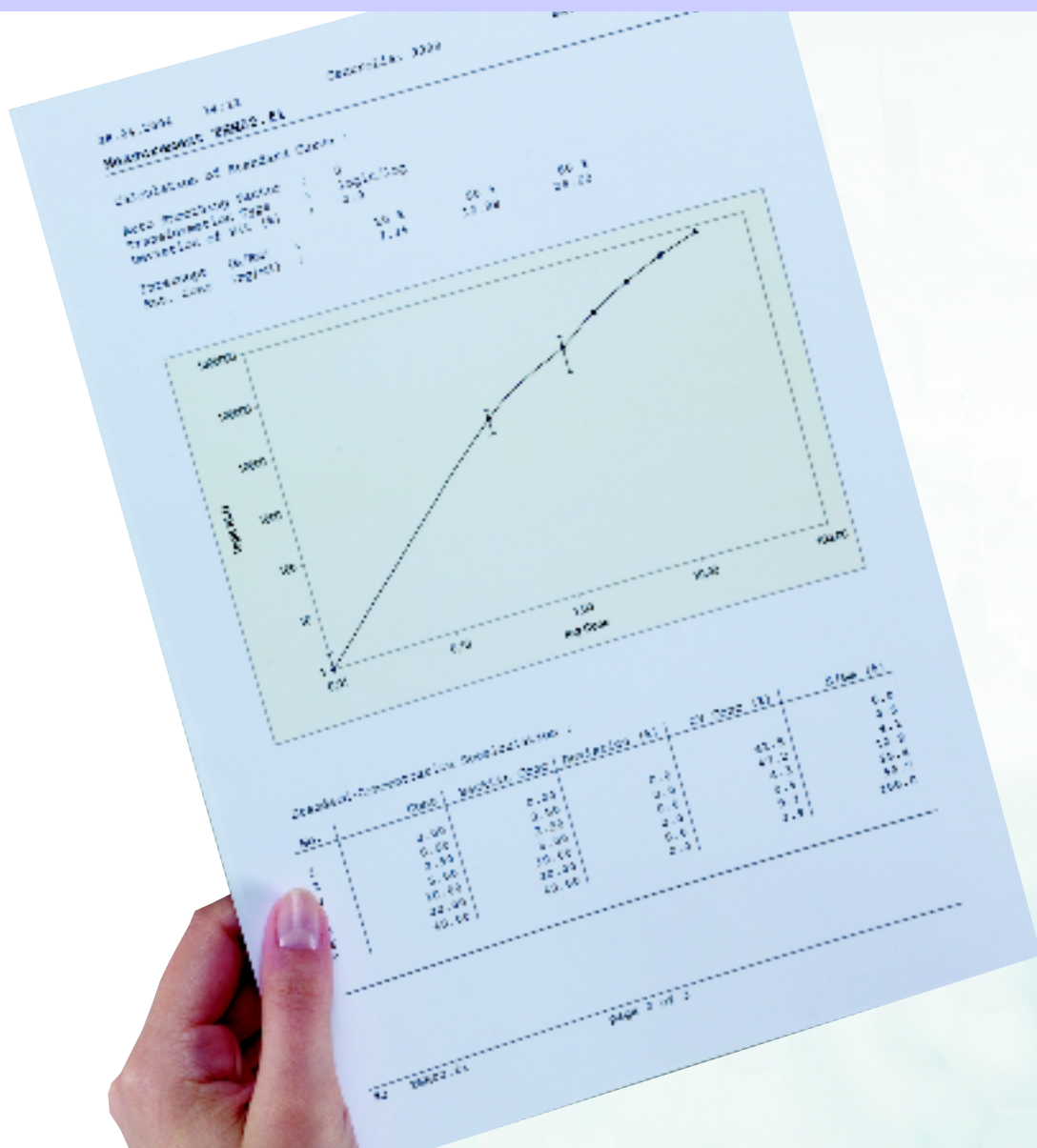


Simple, Intuitive Menus

A large display helps guide the user through all the instrument set up parameters and assay definitions. The user just follows the screen menus and enters the required parameters for the specific assays. The use of softkeys with an interactive text display of their associated function makes the CentroLIA an extremely user-friendly, easy-to-use, instrument.

Once the parameters for an assay have been defined the protocols are stored in the instrument memory.

During routine operation, the user selects the required protocol from the "PROTOCOL MANAGEMENT" menu, then simply load the plate and press "MEASUREMENT".



The Software has been designed with the routine clinical laboratory in mind and offers protocols for all types of immunoassays.

Up to 50 different protocols

can be stored. Protocol types are Immunometric (ILMA), Competitive (LIA), Cut-off and Raw Data. Protocols may be entered via PC or manually

Automatic Performance Test

with optional test plate

Two point calibration

using Stored Curve or Master Curve

Flexible definition

of wells to be measured

Sequence selection

for column or row strip assays

Multiple assays

per plate

Full support

of kit lot numbers

detect and identify



Storage of assay results

allowing off-line reevaluation

Robot integration,

due to software compatibility and hardware accessibility

PC connection

for data output to Laboratory Information Management Systems

Shaking

3 modes, variable amplitude and speed

Sophisticated curve-fitting

mathematics including logit-log or log-log transformation followed by curve-fit algorithm based on third-order spline functions with optimized automatic or manual smoothing

The curve fitting

provides full standardization allowing multiple replicates of Standards, Totals, Bo's and NSB'

Storage of standard curves

is also possible by manual data entry (Master curve), or measurement of a reference curve, or simply storing the last curve used

LB 961 CentroLIA

Specifications and ordering information

Plate formats	96 well opaque microplates and strip plates 384 well opaque microplates with outer dimensions 85,48 x 127,76 x 14 mm (W x L x H)
Operation Modes	Measurement time 0.1 to 200 sec Measurement by row or column Delay (up to 600 sec) Shaking (3 modes, variable amplitude and speed)
Detection Unit	Low-noise photomultiplier tube in single-photon counting mode
Sensitivity	< 0.001 mIU/L (TSH)
Crosstalk	Low crosstalk through crosstalk Reduction design < 10 ⁻⁵
Dynamic Range	> 6 orders of magnitude
Temperature Range	Storage 0° - 40°C Operation 15° - 35°C
Power Supply	24 V, 1.25 A External Autoranging mains adaptor
Dimensions	330 x 430 x 270 mm (W x D x H)
Weight	17 kg
Regulations	EN61000-3-2; EN61000-3-3 EN61010-1, EN61326-1, EN61326
Humidity	10 - 85% none condensing

Interfaces	USB or RS232, 9 pin
Printer	External via Parallel Port
Internal microprocessor for data reduction	
Graphic display	240 x 128 pixel
Alphanumeric keypad QWERTY type	

Software

Provides output of raw data, immunometric assays (ILMA), competitive assays (LIA) and cutoff Immunometric and competitive protocols allow full standardization and curve storage, Master Curve, Reference Standard curve and use of last measured curve

Full standardisation allows 3 to 10 standards with up to 10 replicates, NSB's and Totals

Curve fitting options include log/log and logit/log transformations and 3rd order smoothed spline with high resolution printout

Master Curve allows input of "universal" standard curve provided by the kit manufacturer and measurement of calibrators

Reference Standard Curve is similar to Master Curve but allows the user to measure and store their own curves

The software supports Kit Pot numbers and operates in accordance to GLP

Up to 50 protocols can be stored

Multiple assays per plate can be measured

Ordering Information	Order Ref
CentroLIA Microplate Luminometer	LB 961

