

FAST AND VERSATILE ELISA & ABSORBANCE ANALYSIS

The Apollo Microplate Absorbance Reader



BERTHOLD

SPEED. APPLICATION-VERSATILITY. INTUITIVE OPERATION.

Reliable ELISA & absorbance analysis in just 6 seconds

The Apollo Absorbance Reader is an intuitive and reliable filter-based microplate reader that can be used for a wide variety of research and routine applications. The system has been designed to help you accelerate your research combining fast measurement of 96-well plates in just 6 seconds with intuitive 7-inch colour touchscreen stand-alone operation.



FEATURES FOR MORE APPLICATION FLEXIBILITY.

- **Flexible 8-position filter wheel:** The optical filter wheel of the Apollo is equipped with 4 pre-installed filters at 405, 450, 492 and 630 nm. There are 4 additional slots available to meet your assay-specific requirements. Additional filters from 340 – 750 nm are easy to install and can be ordered as needed.
- **Optional printer:** Documentation of the results in a paper format is enabled via an optional thermal printer.
- **Expand your application reach further:** The system is equipped with a built-in shaker with speed selection as standard. The I-model with incubator reaches incubation temperatures up to 50 °C to enable your temperature-sensitive assays.

Apollo benefits at a glance

- **Wide variety of applications:** With its wavelength range from 340 to 750 nm it is ideal for ELISA, cytotoxicity assays, protein colorimetric assays, nucleic acid quantification (DISCHE assay), endotoxin assays and more.
- **Fast measurement:** Read your samples in just 6 seconds (fast mode).
- **Intuitive operation:** 7" colour touchscreen and preprogrammed protocols simplify operation of the system.
- **Trust your data:** Accuracy of $\pm 1\%$ or ± 0.005 OD (0-3 OD) whichever is greater (@405 nm)
- **Large dynamic range:** The system's dynamic range of 4.0 OD is large enough to cover any assay's requirements.

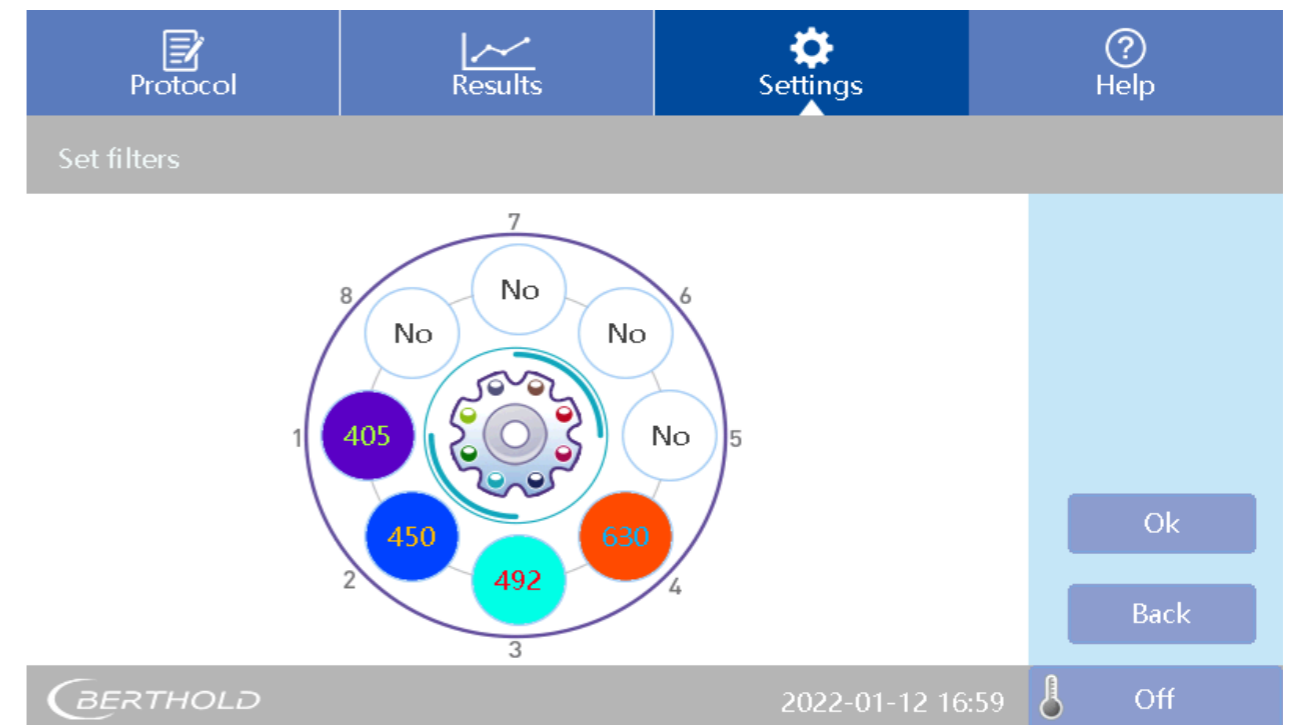


Figure 1: There are 4 free slots available on the 8-position filter wheel, allowing you to customise your instrument to your needs.

RESULTS YOU CAN TRUST

- **Designed to perform:** Precise mechanics and high-quality optics guarantee excellent repeatability of measurements. With an accuracy of „± 1 % or ± 0.005 OD (0-3 OD) whichever is greater (@405 nm) the system delivers results you can trust.
- **Validation tools:** We provide an Absorbance Test Plate to help you check and confirm the performance of your reader over time (Figure 2).

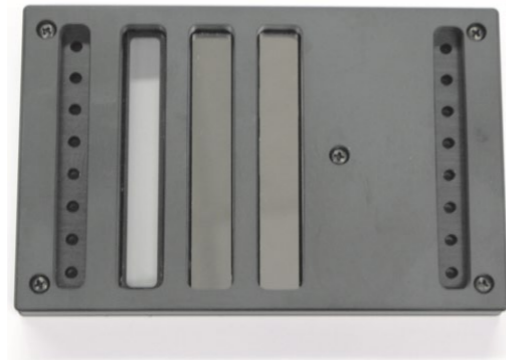


Figure 2: Our Absorbance Test Plate enables you to test the optical and mechanical performance of your system.

INTUITIVE STAND-ALONE OPERATION

The intuitive 7" colour touchscreen operation enables you to quickly set up your plate and analyse your samples without the need for a separate computer (figure 4).

The laborious up/down arrow keypads operation of other instruments has been replaced by modern tap and drag operation for quick programming and simple operation.

You can see your data right on the screen or simply transfer your results at a single touch to a USB flash drive. Advanced data handling capabilities of the onboard software include curve fitting, kinetics and cut-off analysis.



Figure 3: USB flash drive for convenient data export.



Intuitive PC-free operation

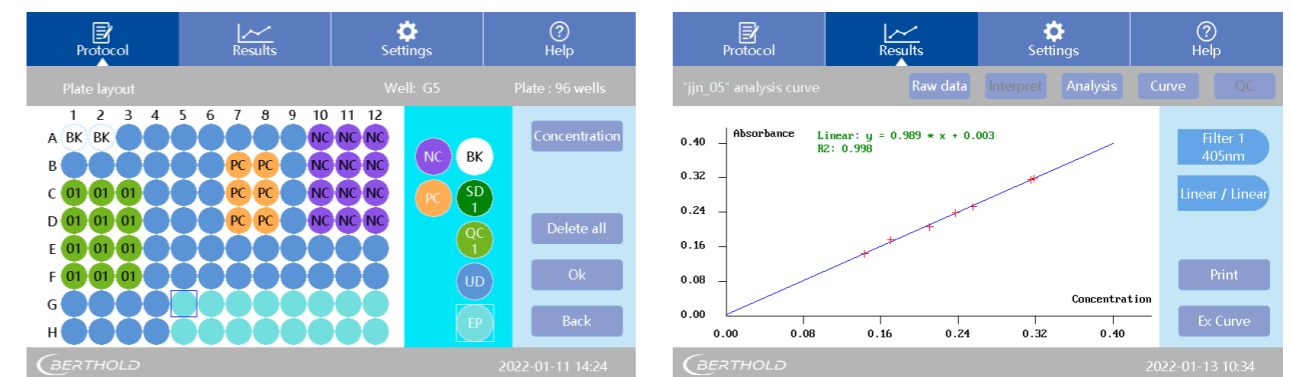


Figure 4: Intuitive touchscreen operation and a wide variety of preprogrammed protocols simplify operation of the system.

COUNT ON OUR SUPPORT

Support

For more than 70 years, Berthold Technologies has been providing customers with life science system solutions. We understand that your applications are as individual as you are. Our dedicated technical specialists can work with you in partnership to overcome the unique challenges your application brings.

Contact our team to discuss

- Your assay or experiment design
- Data analysis questions
- Troubleshooting

Service

Berthold Expert Services provide a team of dedicated and factory-trained engineers and experts to optimize your productivity.

We and our local partners are always at your disposal.

Berthold Expert Services

- Maintenance & repair services
- IQ / OQ / PQ services
- Calibration certification & more

ORDERING INFORMATION

Product		
LB 917 Apollo Microplate Absorbance Reader	73664-10	525 nm filter for Apollo 73726
LB 917 Apollo-I Microplate Absorbance Reader with incubator	73664-20	532 nm filter for Apollo 73728
Options for Apollo		540 nm filter for Apollo 73729
USB Thermal Printer (incl. 1 roll of paper)	73695	546 nm filter for Apollo 73730
USB Thermal Printer Paper, single roll	73696	560 nm filter for Apollo 73731
Absorbance Test Plate	50895-10	570 nm filter for Apollo 73732
Filters for Apollo		578 nm filter for Apollo 73733
340 nm filter for Apollo	73715	590 nm filter for Apollo 73734
380 nm filter for Apollo	73716	595 nm filter for Apollo 73735
405 nm filter for Apollo	73717	600 nm filter for Apollo 73736
415 nm filter for Apollo	73718	620 nm filter for Apollo 73737
420 nm filter for Apollo	73719	630 nm filter for Apollo 73738
430 nm filter for Apollo	73720	650 nm filter for Apollo 73739
450 nm filter for Apollo	73721	663 nm filter for Apollo 73740
470 nm filter for Apollo	73722	680 nm filter for Apollo 73741
492 nm filter for Apollo	73723	690 nm filter for Apollo 73742
510 nm filter for Apollo	73724	700 nm filter for Apollo 73743
520 nm filter for Apollo	73725	750 nm filter for Apollo 73744

HOW TO REACH US

Go to www.berthold.com/contact-bio/ to find your local support or technical support team or write us an e-mail to bio@berthold.com.

For product FAQs, technical information, tips & tricks, go to www.berthold.com/knowledge-bio/.



TECHNICAL SPECIFICATIONS

System	
Light Source	Quartz Halogen Lamp
Detector	Photo diode, 8 channel + 1 reference channel
Wavelength range	340 – 750 nm
Dynamic range	0 – 4.0 OD
Accuracy	± 1 % or ± 0.005 OD (0-3 OD) whichever is greater (@ 405 nm) ± 2 % (3-4 OD) (@ 405 nm)
Precision	≤ 0.2 % CV (@ 0-3 OD) (@ 405 nm) ≤ 1 % CV (@ 3-4 OD) (@ 405 nm)
Microplate types	96-well
Reading speed	Single wavelength < 15 s / 96 well (6 s in fast mode) Double wavelength < 28 s / 96 well (11s in fast mode)
Shaking	3 shaking modes: slow, medium and fast
Filter wheel capacity	8
Filters supplied	405/450/492/630 nm

Temperature control	from RT +4 °C to 50 °C (Apollo-I version only)
Printer	External USB Thermal Printer (optional)
User interface	7-inch touchscreen (800 x 480 dots)
Connectivity	3 USB ports, for PC, printer and thumb-drive
Software	Onboard software
General	
Dimensions	295 x 440 x 225 mm (W x D x H)
Weight	10.0 kg (Apollo-I version) 11.0 kg
Power	100 – 240 VAC ±10%, 50 / 60 Hz
Certifications	CE, RoHS compliant

TRANSFORMING SCIENCE INTO SOLUTIONS



Berthold Technologies is a global technology leader in life sciences. Our extensive range of analytical system solutions made in Germany has been trusted by scientists since 1949. These range from small standalone readers, such as microvolume spectrophotometer and luminometers to various dedicated and multimode readers, microplate washers, microplate workstations, RIA and ELISA automation products to high-end imaging systems, HPLC radio detectors and gamma-counters. It is our mission to create a healthier world, a safer environment and more efficient manufacturing processes.

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