


How to Sell an EZ Read 400 Plate Reader


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- Finding your target: understanding main applications of the EZ Read 400
 - Selling points: EZ Read 400 Microplate Reader
 - More than a white box: ADAP 2.0 Software
 - Who you are selling against: Competition
 - Q & A
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What is the EZ Read 400?

The Facts:

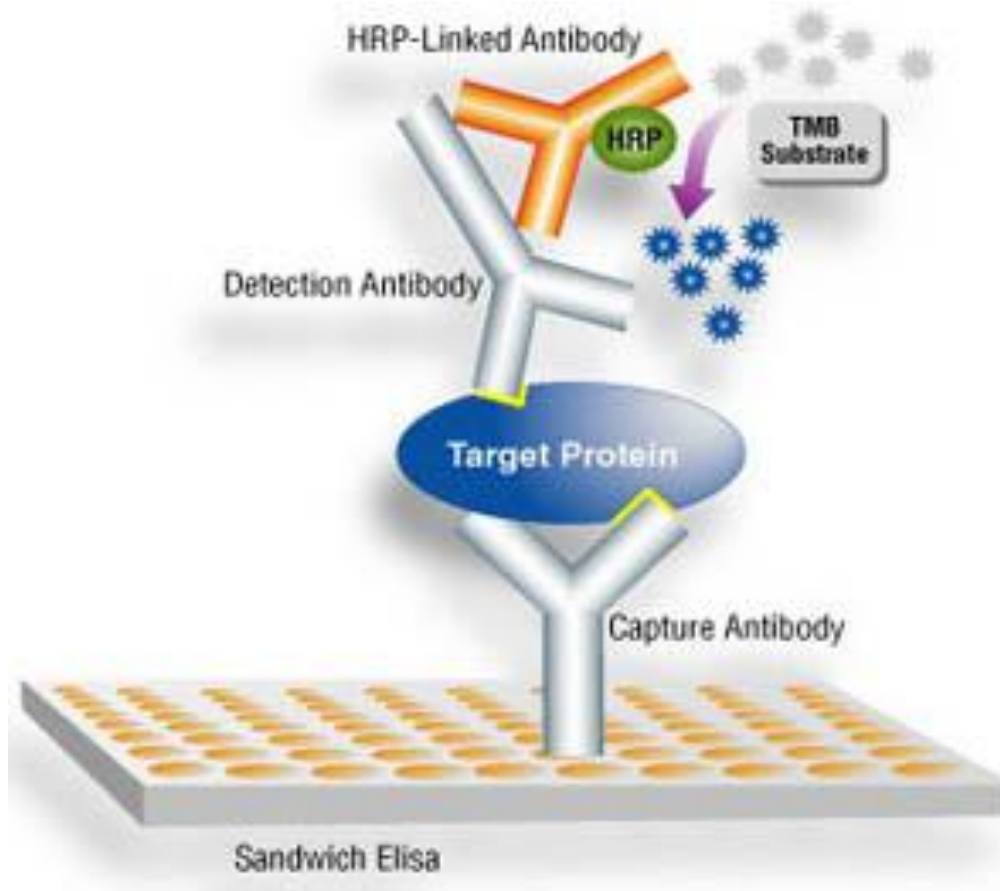
- The EZ Read 400 microplate reader is the newest plate reader offering from Biochrom.
 - It is a robust reader which can measure 96-well plates using a filter-based system.
 - There are three models with unique filter sets within the visible range (400-750 nm) specific for specific applications.
 - It is remotely operated using ADAP 2.0 Basic Software.
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Main Applications of the EZ Read 400

Applications for life science laboratories:

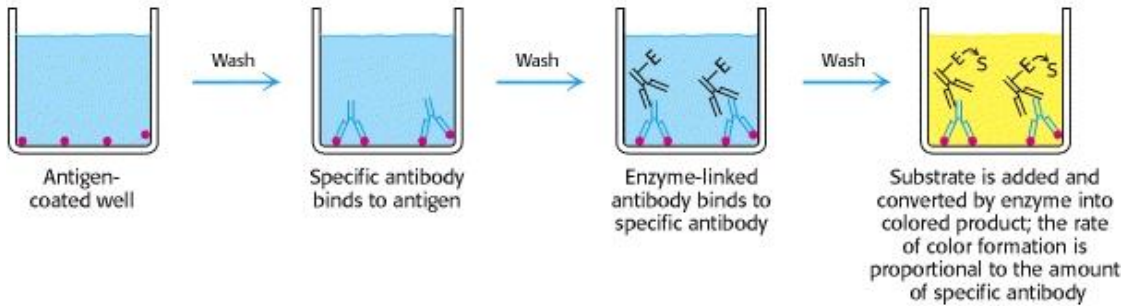
- ELISA (Enzyme Linked Immunoassay)
- Total Protein Assays
- Cell Proliferation Assays

ELISA: Enzyme Linked Immuno abSorbant Assay

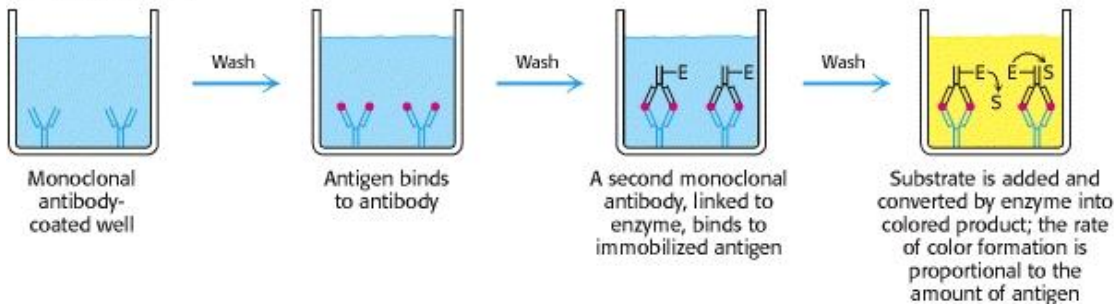


- Most common type of assay (test) used with microplate readers
- ELISA assays are used in diagnosis and research.
- Used to quantify and qualify the amount of antigen or reagent

(A) Indirect ELISA



(B) Sandwich ELISA



- ELISA assays are the most common application of an absorbance reader
- Different types of ELISA: direct, indirect, competitive
- Analysis requires either categorization of samples or 4-parameter standard curve.

Manufacturers of ELISA Kits

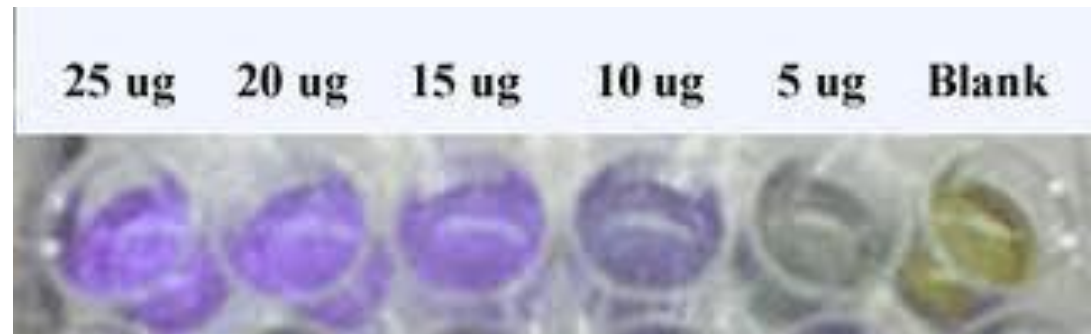


- MP Diagnostics
- Merck
- AbCam
- IDEXX (veterinarian diagnostics)
- R & D Systems
- BioRad

Protein Assays

Protein assays – binding of a dye to specific amino acids present in proteins

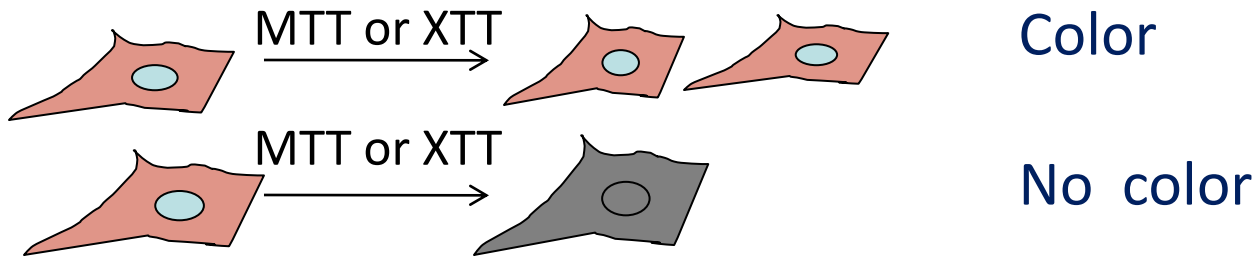
- ✓ Bradford
- ✓ BCA
- ✓ Pierce 660 nm
- ✓ Lowry
- ✓ Total Protein Assay



Determines the amount of total protein in a sample not a specific protein's concentration.

Analysis usually requires fitting a linear regression curve to the data

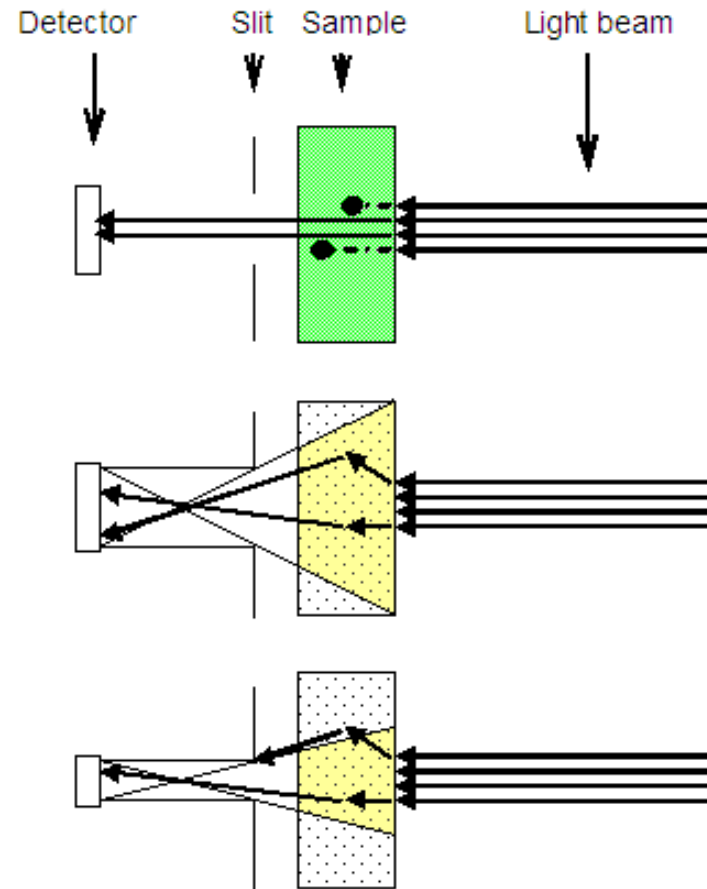
Cell Proliferation Assays



- Incubate cells with a tetrazolium salt (MTT, XTT).
- Live cells will turn salt into colored formazan solution; dead cells will not. Dye production, and thus absorbance, is proportional to number of cells.
- MTT is measured at 570 nm; XTT is measured at 492 nm
- Used to quantify cell growth, cytotoxicity and apoptosis

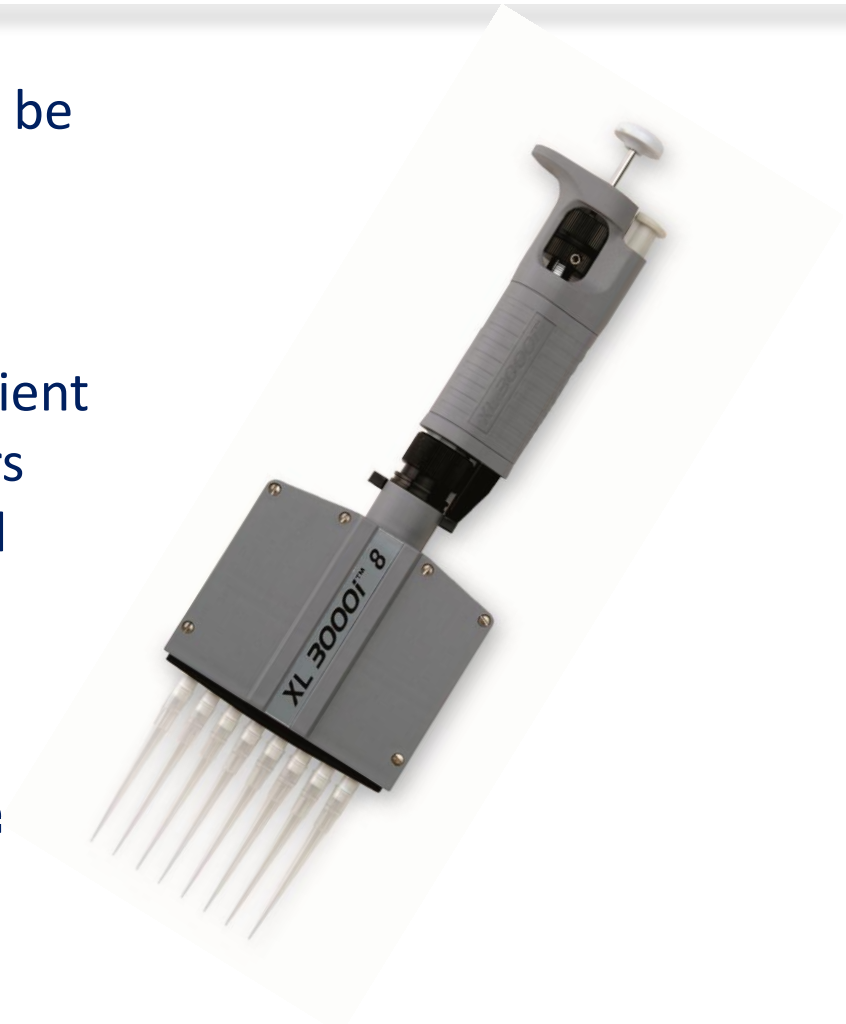
Cell Density Measurements

- ✓ Light Scatter is used to assess the growth of liquid cultures of cells: mammalian, yeast, bacteria.
- ✓ Absorbance at around 600 nm can indicate the growth phase of the culture or with a standard curve indicate the number of cells.



Liquid Handling Validation

- ✓ Liquid handling equipment can be validated and calibrated using absorbance readers.
- ✓ Gravimetric tests are not sufficient for multichannel liquid handlers 96-well or 384-well heads used with liquid handling robots or multichannel pipettes.
- ✓ Absorbance values of wells can be used to calculate the volume dispensed by the pipette.



Critical Parameters for Microplate Assays

What's critical for successful microplate assays:

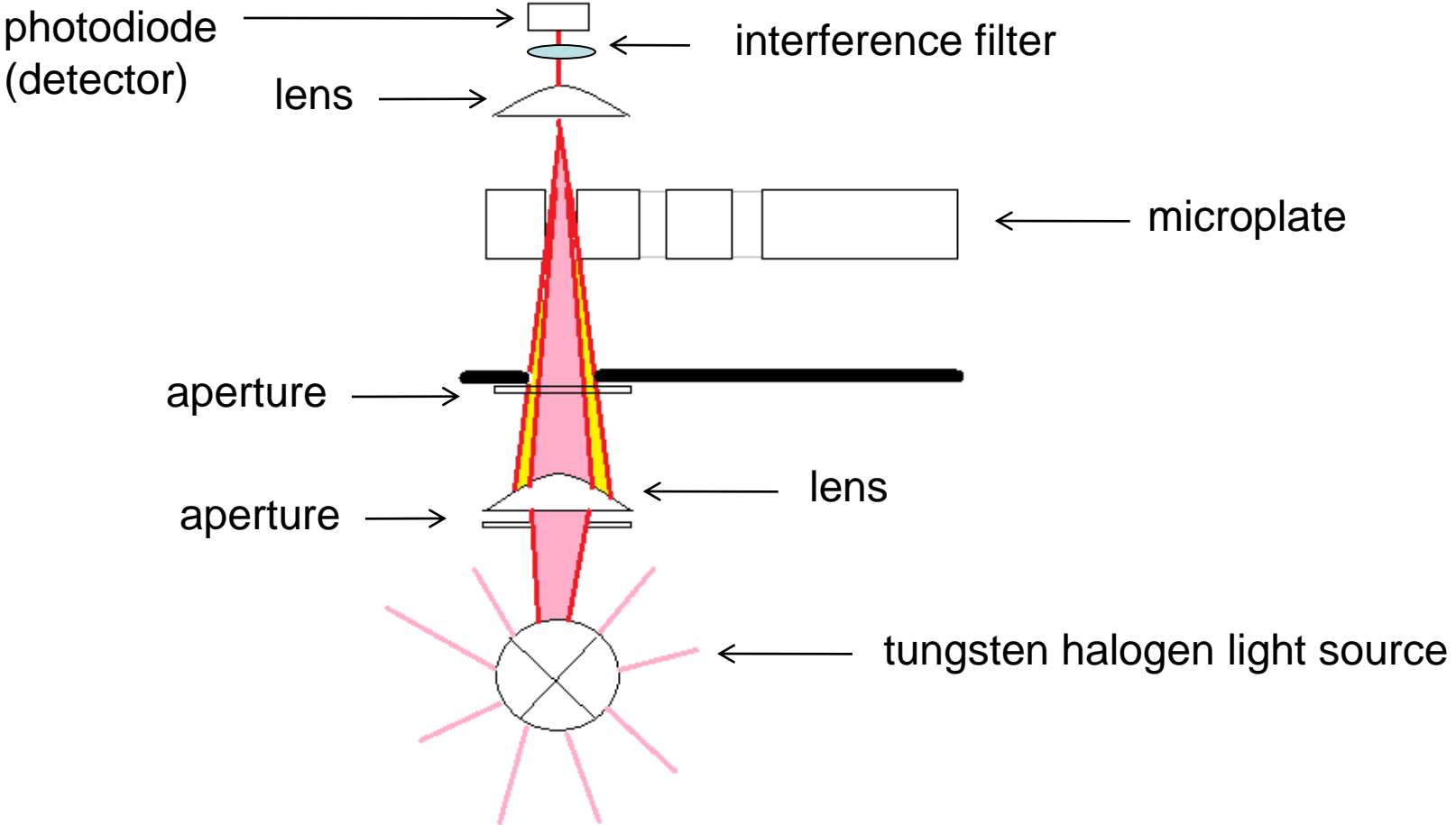
- High quality 96-well plates-virgin polystyrene
- Even meniscus-detergents or special hydrophilic plate coatings
- Clean bottom surface
- Appropriate controls
- Correct filters for assays
- Robust and reliable reader: EZ READ 400!

Key Features

- Updated, ergonomic design
- PC-control via USB A to B cable
- PC-control using updated ADAP 2.0 Software
- 3 product variants defined by pre-configured filter sets



EZ Read 400 Optical Design



Three Biochrom EZ Read 400 Models



1) ELISA Reader

ELISA Assay Substrate	Filter
PNPP	405 nm
ABTS	405 nm
OPD	492 nm
Slow TMB	450 nm
Turbo TMB	450 nm
Ultra TMB	450 nm
Reference wavelength	620 nm

2) Research Reader- includes 4 standard filters plus four listed below:

Cell Biology Assay	Filter
MTT	570 nm
XTT	492 nm
Cell Density	620 nm

Protein Assay	Filter
Bradford	595 nm
BCA	562 nm
Lowry	650 nm

3) Flexi Reader- includes 4 standard ELISA filter as well as the choice of up to 4 additional filters from 400 – 750 nm

Key Selling Points

- Best technical specifications on the market for an inexpensive absorbance reader
- For users that need a simple and easy to use reader for common laboratory assays.
- Typical labs that would use an absorbance reader include:
 - ✓ Microbiology
 - ✓ Biochemistry
 - ✓ Animal Health
 - ✓ Cell Biology
 - ✓ Food Safety

EZ Read 400 Features and Benefits



Feature	Benefit	Use
Auto calibration	Ensures accurate data	Any lab reporting data. Good practice.
Single channel optics	All wells read from the same channel reducing imprecision	Very sensitive assays, looking for small changes in absorbance.
ADAP software authorisation levels for users	Allows users to work within FDA 21 CFR part 11 compliance	Regulated environments: pharmaceutical, quality control
Optional calibration plate available	Allows user to validate and calibrate instrument	Any lab reporting data Confidence in results
Software in English and German	For English and German speakers	English and German speakers
Optional software upgrade (ADAP 2.0 Plus)	ADAP Plus: qualitative and quantitative data analysis, curve fitting, transformation, plate layout, replicate elimination and test validation formulas.	Real-time integrated measurement and analysis.

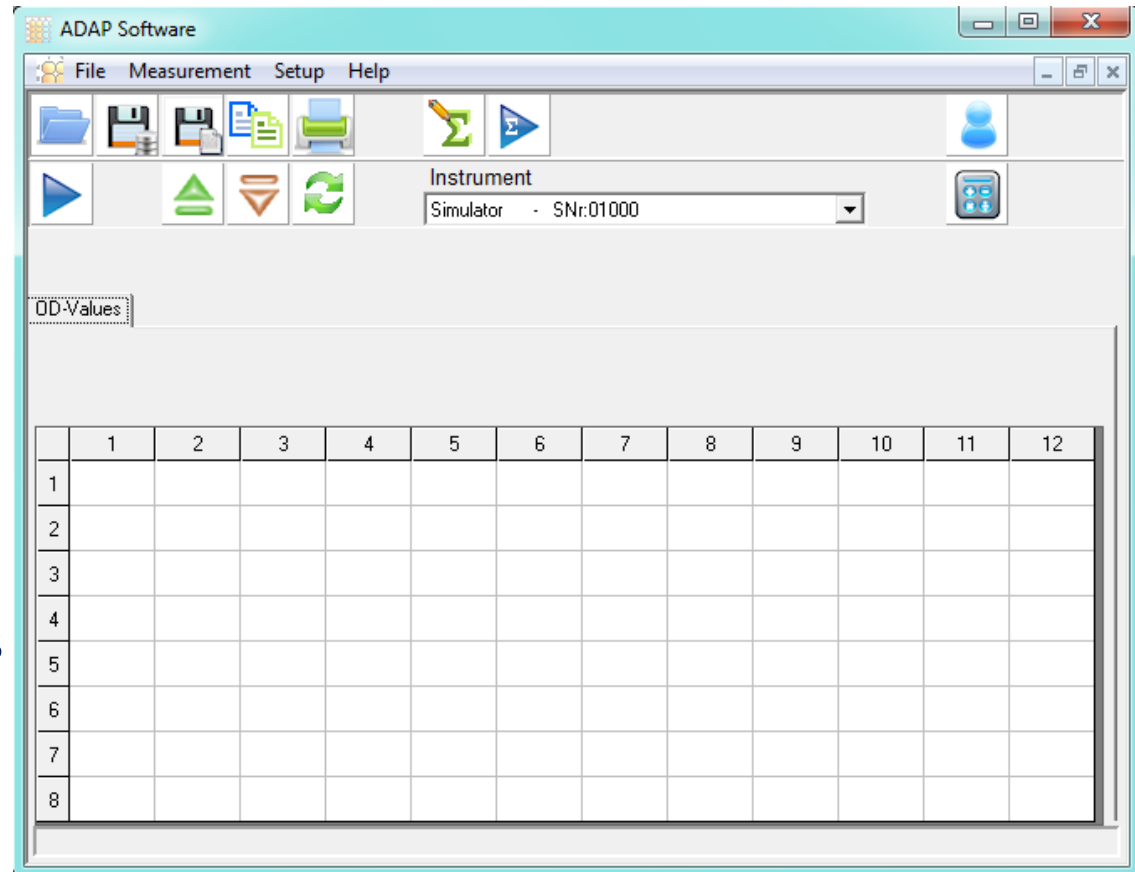
EZ Read 400 Features and Benefits



Feature	Benefit	Use
Easy to use	Minimal training required, quick to set up	Multi-user labs, non native English or German speakers
Economic	Affordable, can be bought with a small budget	Labs with small budgets. As part of multiple instrument purchase for higher throughput
Simple	Does what it says, no un-necessary features, robust	Technicians
PC-controlled	Easy to export data	Additional data analysis. Ease of data transfer between PC's and into specific database
Applications based filter sets	User can customise their instrument depending on their application(s) requirement	Labs with specific application
Timed readings	Allows kinetic assays to be performed	Enzyme kinetics, time-sensitive assays eg. cell proliferation

ADAP 2.0 Software Key Features

- Quick measurements
- Intuitive design
- Simple analysis setup (ADAP 2.0 Plus software)
- Immediate results
- Windows 7-compatible



ADAP 2.0 Recommended Demo Procedure



- ✓ ADAP 2.0 Software Basic is supplied as standard with all EZ Read 400 readers (also standard with all Anthos readers)
- ✓ ADAP 2.0 Plus provides quick and easy analysis using categories with cut-off values or standard curves.
- ✓ ADAP 2.0 Software demo version use to show potential customers ADAP interface and functionality

ADAP 2.0 Software Selling Points

- Intuitive user interface
- Reader control version enables endpoint, kinetic and multiwavelength measurements
- ADAP 2.0 Plus software has easy method set-up. Including:
 - Most common curve-fitting: linear regression and 4-parameter fit
 - Cut-off values and thresholds for qualifying samples (e.g. “positive”, “negative”)
 - Quality controls for replicate rejection and test validation

Biochrom EZ Read 400

End of 2011 Promotions



In keeping with the applications focus of the reader, we have designed the following promotions:

- ✓ **EZ Read Plus:** Reduced price for ADAP Plus software with purchase of the EZ Read 400 Reader (a 50% reduction in price for the software compared to purchasing the software separately) Permanent offer!
- ✓ **EZ Read Flexi Special Offer:** More than 50% discount on our most popular filters to add to the EZ Read 400 Flexi reader (Offer until the end of December)

EZ Read 400 Competition

- Single-channel readers: EZ Read 400 has superior specs and easy to use software.
 - BioTek ELx800
- Multi-channel readers: EZ Read 400 single channel provides better accuracy and precision. Single channel readers are more economically priced.
 - BioTek ELx808
 - BioRad xMark
 - Awareness Chromate
 - LT4000 (range of brands)
 - Tecan Sunrise
 - Thermo Multiskan EX
 - Awareness Statfax 4200
 - BioRad iMark

Competition

BioTek ELx800

- Only 5 filter wheel capacity
- Lower linearity spec of 1%
- Older instrument near the end of its life cycle (concern for service and parts)
- Serial PC interface

BioRad i-Mark

- Higher price
- 3 minute warm up time
- Only 6 filter wheel capacity

Biochrom EZ Read 400

- EZ Read has a 8 filter wheel capacity
- EZ Read has linearity of 0.25% and 0.0025 OD
- EZ Read is a brand new instrument!
- USB PC interface

- EZ Read has a lower price
- EZ Read can be used to measure plates immediately
- EZ Read has an 8-filter wheel capacity

Competition

Tecan Sunrise

- Linearity of “better than 2%”
- 6 filter wheel capacity
- 10 nm bandwidth

Thermo MultiSkan EX

- 2% accuracy
- 6 filter wheel capacity
- Filters have a 10 nm bandwidth

Biochrom EZ Read 400

- EZ Read linearity of 0.25%.
- EZ Read has a 8 filter wheel capacity
- EZ Read Interference filters have an 8 nm capacity.
- EZ Read accuracy of 0.5%
- EZ Read has a 8 filter wheel capacity
- Interference filters have an 8 nm bandwidth

Competition

- **Tecan Sunrise**
 - Linearity of “better than 2%”
 - 6 filter wheel capacity
 - 10 nm bandwidth
- **Thermo MultiSkan EX**
 - 2% accuracy
 - 6 filter wheel capacity
 - Filters have a 10 nm bandwidth
- **EZ Read 400**
 - EZ Read linearity of 2%.
 - EZ Read has a 8 filter wheel capacity
 - EZ Read Interference filters have an 8 nm capacity.
- **EZ Read 400**
 - EZ Read accuracy of 0.5%
 - EZ Read has a 8 filter wheel capacity
 - Interference filters have an 8 nm bandwidth

Questions



- ? What sales tools do you need that you do not currently have?
- ? Who are your major competitors for absorbance readers and microplate washers?
- ? Do you think there is a market for standalone instruments? At what level?
- ? What is the customer perception of the Anthos, Asys and Biochrom brand?
- ? What sort of reader do you wish we made?