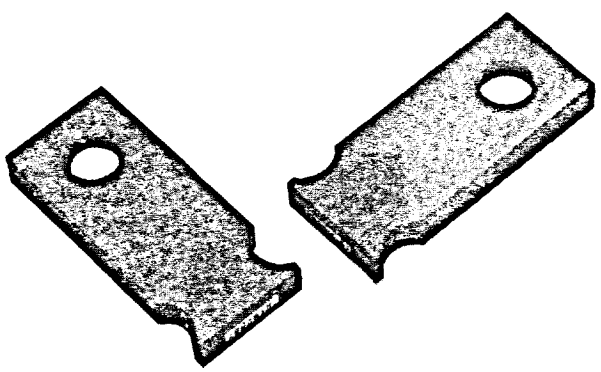
Reads 96 Wells in Less Than 1 Minute

Microprocessor and fiber optic technology combine in the Bio-Rad Model 2550 EIA reader to create a photometer that automatically reads, with blanking and hard copy printout, a 96 well microtitration plate in less than 60 seconds. The Model 2550 incorporates many of the features found on more expensive photometers, yet it is the first fully automatic microtitration plate reader priced so economically that any laboratory can easily afford to own one.

Enzyme immunoassays are rapidly replacing many other methods for detecting or quantitating substances with important biological or pharmacological properties. The new Model 2550 EIA reader has the speed, sensitivity and versatility required for these applications. Its unique, user friendly, membrane control pad makes function entry fast and simple. A digital absorbance-range display (matrix mode) and plate-position indicator, as well as an operator error indicator and an absorbance overflow indicator, guide you during instrument operation. A convenient step control function allows you to advance the plate manually, if automatic reading is not desired.

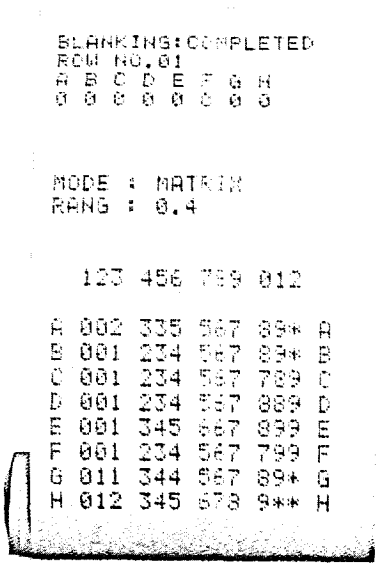
State-of-the-Art Fiber Optics

The EIA reader, which operates as a vertical-pathlength photometer, measures the absorbances of the contents of eight wells, or one row, of a 96 well microtitration plate simultaneously. Using state-of-the-art fiber optics, light is passed upward through the bottom of the microtitration plate, which acts as an optical window, then through the surface of the solution to a bank of eight photo-detectors. This method of measuring absorbance eliminates variability caused by reagent evaporation, because the absorbance measurement is based only on the absolute amount of absorbing material present, and not on its concentration. This proven, sensitive, and widely accepted measuring method allows rapid direct reading of the samples in the microtitration plate. Because the contents of the wells are not aspirated during reading, the results can be verified by re-reading the plate, if desired.



Versatility

The Model 2550 is an extremely versatile instrument. Four high quality, narrow bandwidth interference filters, 405, 414, 450 and 492 nm, are supplied as standard equipment. Other, optional, filters permit wavelength measurement over the range of 380 to 700 nm. The reader has two measuring modes, absorbance mode or matrix mode. The absorbance mode provides a direct hard-copy printout of the absorbance values to three decimal places, identifying corresponding column and row positions on the printout. The absorbance mode can process readings of up to at least 1.5 absorbance units with guaranteed linearity. The matrix mode lets you preselect an absorbance range, and automatically divide it into ten equal segments. The microprocessor assigns a value from 0-9 to each segment, and assay absorbance readings are cataloged into the appropriate range segment. All values are printed out in an 8 × 12 matrix that corresponds exactly to the layout of the 96 well microtitration plate. Absorbance values up to 2.9 absorbance units can be processed using the matrix mode. This mode is particularly useful for end-point determinations or quick screening of assays. These two operating modes, together with the wide selection of filters, provide the flexibility needed for performing enzyme-linked immunosorbent assays (ELISA), monoclonal antibody screening by ELISA, agglutination/haemagglutination assays, complement fixation, antibiotic sensitivity testing (MIC), protein determinations and several other assay procedures requiring colorimetric measurement.



Microprocessor Control

All data processing and operating functions are controlled by the EIA reader's central microprocessor (CPU). This microprocessor control insures reliability, speed, and simplicity of operation. Because the instrument can read a microtitration plate in less than 60 seconds, any effects arising from reagent deterioration are eliminated. The microprocessor can also be interfaced with larger computers using the optional Bio-Rad serial (RS-232-C) or parallel (IEEE 488) interface devices. This makes the EIA reader ideal for high volume laboratories that require sophisticated data manipulation.