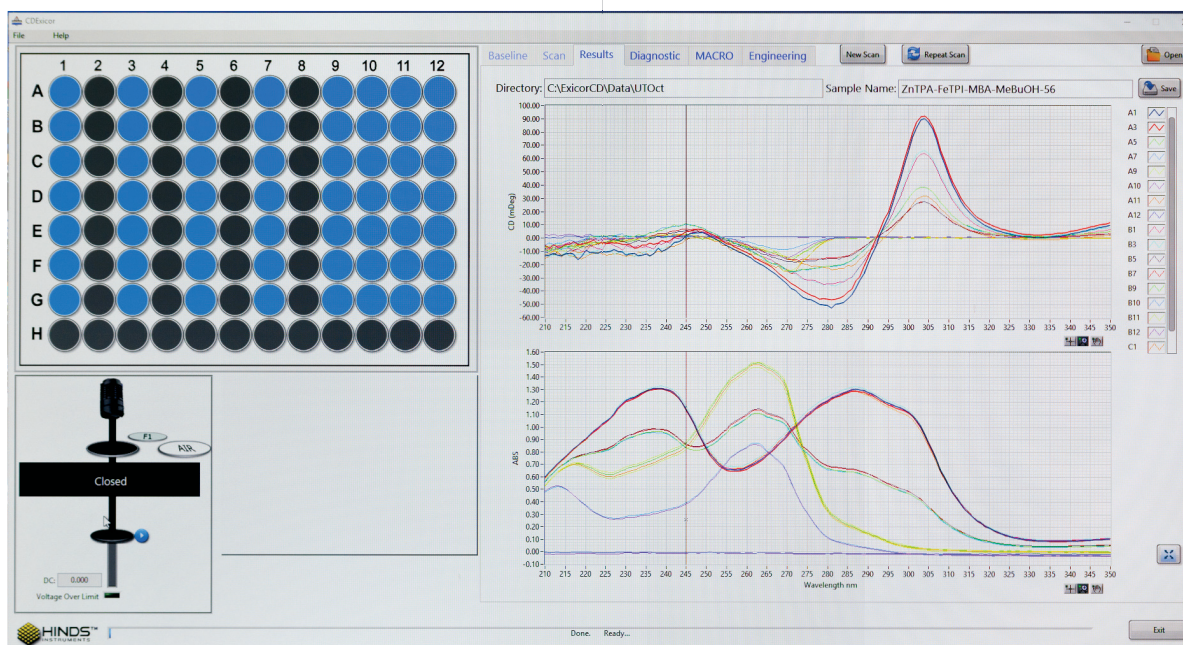


The CD Microplate Reader™ fills the need for high throughput chiral screening and analysis. It operates for CD like a number of other well plate readers already on the market for absorbance and fluorescence – spectral information is read directly from the well plate. By eliminating the need to transfer samples to a cuvette – along with the required cleaning steps – researchers can significantly reduce the amount of time spent running the large number of samples in high throughput chiral studies. The CD Microplate Reader can run 96 wells at a single wavelength in less than 2 minutes. Alternatively, it is now possible to run a full spectral scan of 96 wells (from 185nm to 850nm) much faster than a traditional CD spectrometer.

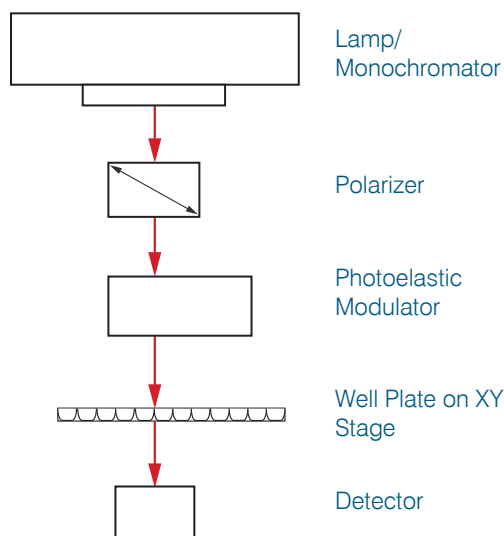
High Throughput Screening (HTS) in asymmetric synthesis calls for a fast method to measure enantiomeric excess (ee). Conventional HPLC is slow and expensive in terms of solvent utilization and instrument time. Conventional CD is designed to measure one sample at a time. Throughput can be improved with robotic transfer from a well plate to the cuvette, this is still a very cumbersome and time-consuming process. The CD Microplate Reader offers a welcome breakthrough in the speed and efficiency required to perform HTS in asymmetric synthesis and catalysis.

Features:

- ♦ High throughput chiral analysis and screening for asymmetric synthesis and catalysis
- ♦ Faster and less expensive than HPLC methods
- ♦ Faster than conventional CD spectrometry
- ♦ Less cumbersome than conventional CD with auto-sampling attachments
- ♦ Finds enantiomerically enriched compounds fast
- ♦ ee values read directly from well plate
- ♦ Enables reading thousands of ee values per hour
- ♦ Includes PC with CD MicroPlate Reader Software and Monitor
- ♦ Smaller footprint than a conventional CD spectrometer with an automatic sampling attachment: 21" x 23" x 29" (54cm x 59cm x 74cm)



This breakthrough in CD technology was accomplished by turning the normal CD instrument configuration on its side. In conventional (horizontal) CD, the optical configuration is designed to allow the light beam to traverse a cuvette filled with liquid. By converting to a vertical configuration, it is now possible to analyze sample solutions directly in the well plate. A precision XY motion stage moves the well plate relative to the light beam from cell to cell.



Rapid Operation:

- ♦ Measurement Speed For Single Wavelength:
1 sec/well; Less than 2 mins for 96 well plate
- ♦ Measurement Speed For Multiple Wavelengths:
Full Spectrum (185nm - 850nm), 1nm interval:
~11 mins/well; ~18 hours per 96 well plate.
Selected Spectrum (example: 210nm-350), 5 nm interval:
30 secs/well; 52 mins per 96 well plate.

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CD Technology for Over 40 Years

Specifications:

- ♦ Noise floor: as low as 0.05 mdeg
- ♦ Wavelength range: 185nm - 850nm
- ♦ 1nm bandwidth across 185nm - 850nm
- ♦ Rapid operation for a compound that can be run at a selected wavelength (less than 2 minutes for 96 wells)
- ♦ Measurement time: 1-3 second per well with single wavelength reading (average 2 sec/well)
- ♦ Obtain full spectra (185nm - 850nm) as fast as 1 sec per data point. For a 5 nm bandwidth scan of 96 wells from 185 nm to 350nm results in under two hours
- ♦ Other wellpates optional
- ♦ 50 kHz modulation frequency
- ♦ Patent: #10,436,644. Mitigating Meniscus Effects in Vertically Oriented Circular Dichroism Spectrometry

