PHENIX
RESEARCH PRODUCTS
Phone 800-767-0665

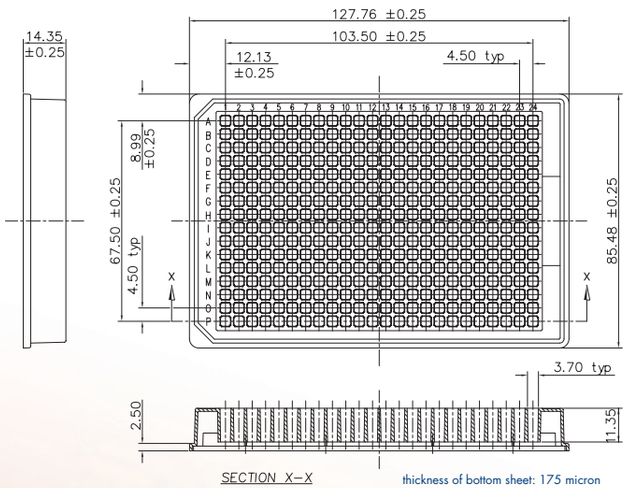
Vision Plate 384

For cell based high content screening
www.phenixresearch.com/visionplate.asp

The Vision Plate 384 has been designed for high content cell based assays. The plate provides best signal to noise ratios within detection systems and optimum conditions for cell adherence and cell growth.

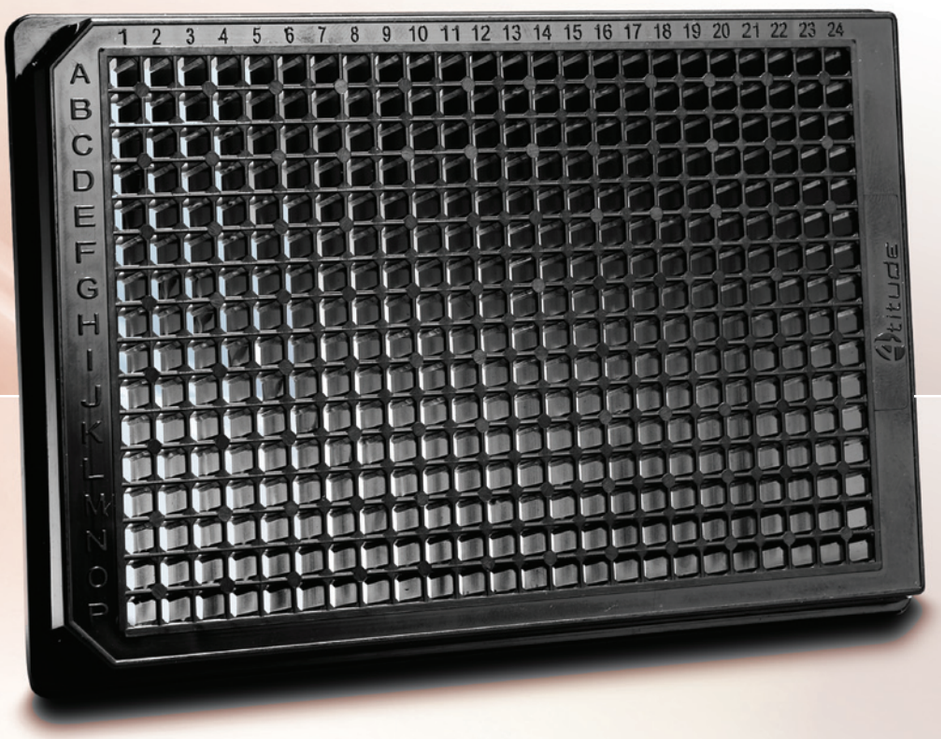
The optical base of the plate is flat to within 100 microns allowing for fast and high quality screening results.

Plate Dimensions



Benefits

- Optimum signal to noise ratios
- Surface flatness within 100 microns
- Improved cell adherence
- Cyto-toxin free
- Well design eliminates wicking and bubble formation
- Fits most detection systems
- Conforms to SBS tolerances



Key Applications

- Cell based assays
- Fluorescence assays
- Chemiluminescence assays
- Colorimetric assays

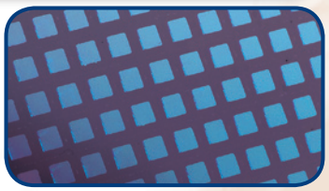
Vision Plate 384

The Vision Plate 384 has been designed for high throughput screening (HTS) assays in drug development and related areas. This high quality optical bottom plate assures the necessary accuracy and consistency for automated HTS systems, generating optimum signal to noise ratios. By employing state of the art manufacturing technology Phenix now offers a product which offers several key advantages to the end user:

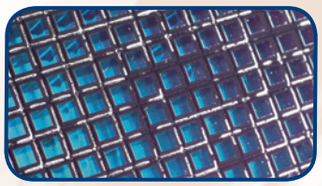
New Patented Plate Assembly Technology Reduces Auto Fluorescence & Cross Contamination

Vision Plates are assembled by using novel patented laser welding technology. In contrast, most competitors' clear bottom microplates are assembled by either glueing a clear film to the frame portion of the plate or by heat welding the components together. Both techniques may cause problems with regards to cell growth and the subsequent microscopic or fluorometric analysis.

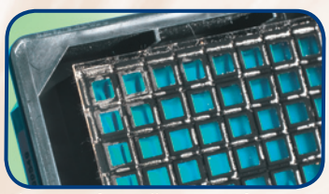
- Heat welding of the two plate components under high pressure (e.g. in ultrasonic welding) typically causes overheating of the polymers and results in autofluorescence at the well edges ("halo effect").
- Autofluorescence can also be observed in plates where the two components are glued together, caused by organic solvents used within the adhesives.
- The same solvents have also been shown to have Cyto-toxic effects. This may lead to the inhibition of cell growth or even cell death.
- Incomplete glue lines or weld lines often result in well to well leakage.



Close-up of a well section of the **Vision Plate 384**. The image clearly shows the consistent and ripple-free bonding of the two plate components.



Close-up of a well section of a **competitor's plate**. Areas of the plate can be identified where no adhesive is present, leaving sections of the optical base unbonded and liable to cross contamination.



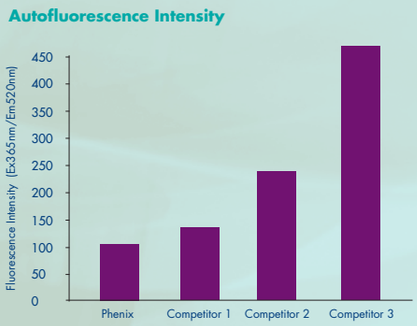
Close-up of a well section of a **competitor's plate**. Areas can be identified where adhesive has ingressed into the plate wells. This may result in autofluorescence and cell death.

Optical quality of the polymer film

The clear bottom component of our Vision Plate 384 demonstrates superior properties in terms of optical clarity (low absorbance and high transmission), low background fluorescence and consistency of material thickness.

The latest extrusion technology is used for manufacturing an ultraclear base of 175 microns in thickness to provide optimum results with confocal microscopy and laser based detection systems.

Variation across the plate is minimized so that the time needed for complex screening applications can be reduced dramatically.

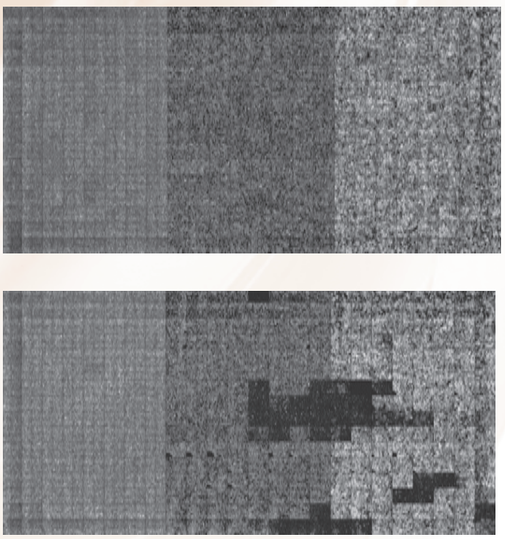


The figure shows the intensity of autofluorescence of the **Vision Plate 384** compared to leading brand competitors.

Cell Adhesion

Polymers such as polystyrene are very hydrophobic and need to be surface treated to increase wettability and to allow for cell adhesion. To introduce the necessary charges to the plastic surface screening plates are commonly undergoing corona treatment or similar low cost modifications. The drawbacks of such treatments are that they are partly reversible and that the density of the charges varies across the surface area, resulting in uneven cell growth and a short shelf life of the products.

The Vision Plate uses a novel low pressure plasma process for treating the plastic surface which produces a more consistent and stable surface. The treatment has been especially designed to improve cell adhesion under difficult conditions (e.g. reduced serum conditions). It is also useful for growing cells with low adhesion properties such as transfected cells overexpressing proteins.



Light microscope image of 3 different cell lines in the **Vision Plate 384** (top) and a **competitor's 384 well screening plate** (bottom). Left: U2-OS (osteosarcoma), middle: HeLa (cervical epitheloid carcinoma), right: HuH (hepatoblastoma).

2000 cells were seeded in each well and incubated for 48 hours to achieve 90% confluency. They were then fixed in PFA and stained with Hoechst nuclear stain, followed by 5 wash steps in a PW384. U2-OS cells stayed adherent in both plates but the more sensitive HeLa and HuH cells only stayed adherent in all areas of the Vision plate.

Ordering Information

Cat. No.	Description	Unit	Price
MP-201HS4	384 Well Vision Plate TC Treated w/lid, Sterile Black with Clear Bottoms	24/cs	$249.90
MP-202HS4	384 Well Vision Plate Black TC Treated without lids, Sterile	30/cs	239.90
MP-203HS4	384 Well Vision Plate Black Non TC Treated without lids, Sterile	30/cs	179.90

PHENIX
RESEARCH PRODUCTS
73 Ridgeway Road
Candler, NC 28715
Phone 800-767-0665
FAX 828-670-7020
www.PhenixResearch.com