HUMAN HEALTH

ENVIRONMENTAL HEALTH







Microplates Guide

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Figure 1. EnSight[™] Multimode Plate Reader offering Corning[®] Epic[®] Label-free Technology and high throughput cell imaging capabilities.

Drawing on many years of experience and in-depth knowledge, PerkinElmer offers microplates for almost every application and throughput. They are the very same microplates we use to develop and validate our instruments and reagents, providing optimal results from your Alpha, TR-FRET, fluorescence, luminescence, absorbance, cell culture, label-free, microfluidic, radiometric, or high content screening assays. We also provide plates and other consumables for our Next-Generation Sequencing sample prep stations.

All of our microplates are manufactured using the highest quality plastics. They deliver important benefits such as low background, optimum light transmission and little or no crosstalk. We also provide custom coating, barcoding and other specialized services to meet your needs.

We have designed many innovative and popular microplate technologies, including our FlashPlates[™] and LumaPlates[™] for specialized radiometric detection assays and AlphaPlates[™] for optimal signal detection in AlphaLISA[®] assays. We continue to develop new microplates such as the CellCarrier[™] Ultra plates for the highest quality cellular imaging from high content screening systems like the Opera[®], Opera Phenix[™] and Operetta[®].

Our microplates are optimized to work well in high throughput settings:

- Footprint dimensions meet the SBS industry standard, guaranteeing compatibility with microplate-based instrumentation.
- Pinch bar design facilitates manual and automated processing using robotic systems
- Bulk packaging formats are available, reducing assay preparation time.

So whether you are detecting sensitive fluorescence readouts at high-throughput, running luminescence or absorbance assays, radiometric or label-free assays, imaging cells with high content imaging systems or preparing samples for next generation sequencing, PerkinElmer has the microplate that meets your needs.

Fluorescence Assays

In a typical fluorescence assay, a chemical or dye-based fluorophore is excited by light at a given wavelength and the resulting fluorescent signal emitted is measured using a plate reader, such as PerkinElmer's VICTOR[™] or EnVision[®] Multilabel Plate Readers, EnSpire[®] or EnSight[™]



Figure 2. EnVision Multilabel Plate Reader.

Multimode Plate Readers, or ViewLux[®] uHTS Microplate Imager. Types of fluorescence assays include fluorescence intensity (FI), fluorescence polarization (FP), FRET (Forster resonance energy transfer), fluorescent calcium flux assays, TRF (time-resolved fluorescence assays, including DELFIA), and TR-FRET (timeresolved FRET, including LANCE[®]).

Considerations When Choosing a Plate for Fluorescence Assays

- **Crosstalk** Opaque-walled plates are recommended to prevent crosstalk between wells and are essential for reading fluorescence.
- Plate density As well number increases (from 96- up to 1536-well), total volume, signal and cost per well decreases.
- Black vs. white plates White plates reflect light resulting in higher raw signals and black plates tend to quench light. However, black plates are generally recommended for fluorescence assays as they provide higher signal-to-noise values (SNR/Z') when signals are high enough that they would result in cross-talk between wells in white plates. Additionally, our specially formulated gray plates are an option when signals and cross-talk are somewhere in between.
- General fluorescence assays (FI, FP, FRET) use fluorophores such as fluorescein, rhodamine, coumarin and others that have relatively short half-lives. Black plates are recommended to reduce background autofluorescence.
- Time-resolved fluorescence assays use longer half-life fluorophores such as Europium chelates and incorporate a "lag/delay time" after exciting thus diminishing background autofluorescence, so white plates are usually recommended.
- **Special treatments** may be needed to promote high to medium binding (HB and MB) of antibodies and other biomolecules to the well surface.
- Cell-based assays may require culturing cells in the assay plate for a few minutes, several days or weeks prior to reading

fluorescence signals. For longer culture periods, sterile, tissue culture-treated (TC) plates are recommended.

- Adherent cells Sterile microplates are TC-treated to promote attachment for strongly-adherent cells. Poorly adherent cells may require one of our special coatings (such as PDL or collagen) to optimize cell adhesion.
- Suspension cells do not require special coatings and are generally performed in standard sterile plates.
- Clear bottom vs. opaque Opaque-walled plates with clear bottoms allow microscopic visualization of adherent cells to monitor confluency and other parameters that can affect cellular responses. Clear bottoms are not typically needed for suspension cell assays.

Microplates for Fluorescence Assays

OptiPlates[™] are standard, highly-versatile microplates offered in solid black, gray or white color with no transparency (top read only) with optional treatment to promote protein binding (HB), and are available in 96-, 384- and 1536-well formats. (Catalog #'s on page 16).



Figure 3. OptiPlate in a 384-well format treated to promote high binding.

ProxiPlate™ microplates are shallow-well plates designed for low-volume assays where the bottom of the well is raised to position the surface of the liquid in each well as close as possible to a top-reading detector, resulting in higher signal. These solid, opaque plates are offered in black or white in 96-well format and black, white or gray in 384-well (Plus) format. For low-volume cellular assays, sterile, TC-treated ProxiPlate Plus TC microplates are offered in a 384-well format. (Catalog #'s on page 16).



Figure 4. ProxiPlate Plus TC microplate with Lid in a 384-well format.

MICROPLATES DESIGNED FOR YOUR APPLICATION

1⁄2 AreaPlates[™] are special opaque plates designed to facilitate pipetting of low assay volumes in a 96-well format with wells spaced to mimic standard 96-well plates and the diameter of each well reduced to allow typical assay volumes of 40-50 μL. Available in black or white. (Catalog #'s on page 14).



Figure 5. ¹/₂ AreaPlate in a 96-well format.

DELFIA™ Yellow Plates are semi-translucent 96-well yellow plates with high protein binding affinity developed to have very low background autofluorescence to give optimal sensitivity in DELFIA TRF assays, especially when multiplexing with more than one lanthanide (e.g. Europium and Terbium chelates). DELFIA clear plates are also an option for bottom-reading instruments and come in 96-well format as a frame with eight strips of 12-wells that snap into the frame. Available in a variety of coatings. (Catalog #'s on page 15).

CulturPlates[™] are sterile, TC-treated and recommended for use with adherent or suspension cells. They are solid, opaque plates that come in black or white and must be read in top-reading plate readers. They are available in 24-, 96-, 384- and 1536-well formats. (Catalog #'s on page 15).



Figure 6. CulturPlate in a 1536-well format.

CellCarrier[™] plates are sterile, TC-treated and have a clear-bottom base with opaque black or white frame. They have been specially designed for high content screening (see page 9) and may also be useful in fluorescence assays. They are available in black 96-, 384- and 1536-well formats and white 96-well format. (Catalog #'s on page 14).

ViewPlates have a clear-bottom base with an opaque frame and are designed for microscopic visualization. They are ideal for multimodal analyses of cellular imaging and fluorescence assays in the EnSight Multimode Plate Reader. We offer ViewPlates in black or white with a variety of plate treatments such as untreated for biochemical assays and TC-treated, Collagen-, or PDL-coated for cellular assays. They are available in and 96-, 384-, and 1536-well formats. Additionally, we offer white $1/_2$ Area 96-well plates. (Catalog #'s on page 18).



Figure 7. ViewPlate in a 96-well format with cover.

For opaque-walled, clear-bottomed plates with 96-wells or less, we also offer **IsoPlates™** and **VisiPlates™** (see descriptions on pages 6-7); (Catalog #'s on pages 15 and 18).

BackSeals (black or white) can be applied to plates with clear bottoms to convert them functionally to opaque plates. (Catalog #'s on page 21).

Luminescence Assays

Luminescence assays generate a luminescent signal (in the form of light or photons) via a chemical reaction and are measured using a plate reader equipped to measure luminescence, such as PerkinElmer's EnSight, EnSpire, EnVision, ViewLux, or VICTOR systems. In general, light collected from luminescent assay measurements is not restricted to particular wavelengths. In most luminescent assays, signal from all of the photons produced by the assay is recorded by the PMT (photo-multiplier tube), CCD (charge coupled device), or other detector within the plate reader. Examples include PerkinElmer's AlphaScreen[®] and AlphaLISA[®], ATPlite[™] assays, britelite[™] assays, steadylite[™] assays, neolite[™] assays, other luciferase-based assays, AequoScreen[®] assays, PhotoScreen[™] assays and luminescent calcium flux assays and chemiluminescent ELISAs.

Considerations When Choosing a Plate for Luminescence Assays

- **Crosstalk** Opaque-walled plates prevent crosstalk between wells.
- Black vs. white vs. gray plates White plates reflect light and black plates tend to quench light, resulting in lower raw signals. Black plates can provide higher signal-to-noise values when luminescence is so high that it causes greater background or crosstalk through white plate wells. Gray plates are designed to give low background and reduced phosphorescence while maintaining high signal.
- **Background phosphorescence** Black plates exhibit less phosphorescence than white but can result in more signal quenching. White plates can be "dark-adapted" by shielding them from light for up to 10 minutes prior to reading the plate.
- AlphaLISA and AlphaScreen assays exhibit very bright luminescence signals that can still bleed through wells in white plates so we developed special, light gray AlphaPlates. Black plates are generally *not* recommended for Alpha assays.
- Cell-based luminescence assays, such as ATPlite and assays using Aequoscreen cell lines may necessitate clear-bottomed plates for viewing cells, such as our white TC-treated ViewPlates or CellCarrier plates.
- **Plate-seals** To prevent evaporation during incubation or a luminescent plate read, we offer a variety of adhesive TopSeals that adhere to and seal our microplates (for options see page 21).

Microplates for Luminescence Assays

AlphaPlates are light gray microplates specially designed to reduce crosstalk in AlphaLISA and AlphaScreen assays. Available in 384- and 1536-well formats and as a shallow-well 384-well plate (Catalog #'s on page 14).



Figure 8. AlphaPlate in a 384-well format.

White **OptiPlates** are generally used for luminescence assays unless cross-talk is high, facilitating the need for gray plates. We then recommend trying our gray OptiPlates or ProxiPlates (HS for High Sensitivity) which contain 5 times more pigment than AlphaPlates (Catalog #'s on page 16).



Figure 9. High sensitivity (gray) OptiPlate in 384-well format.

½-AreaPlates are recommended for low assay volumes in a 96-well format and are compatible with standard Alpha protocols (see description on page 5); (Catalog #'s on page 14).

ProxiPlates are shallow-well, opaque plates suitable for maximizing signal while lowering assay volume (see description on page 4); (Catalog #'s on page 16).

CulturPlates are suitable for most cell-based luminescence assays not requiring cellular visualization. **CellCarrier** and **ViewPlates** are suitable for use with adherent cells when microscopic viewing is necessary (Plate descriptions on page 5); (Catalog #'s on pages 14 and 18).

IsoPlates have clear bottoms with opaque wells like ViewPlates, but are made by molding 96-clear wells, then molding a black or white frame around the clear wells. This makes the color extend to the same depth as the well base, reducing crosstalk in bottom reading assays. **B&W Isoplates** are also an option for assays which require amplification of signal and reduced crosstalk but not visualization. These plates have black frames with white, opaque wells. Available in 96-well format with a variety of treatment options. (Catalog #'s on page 15).

VisiPlates are clear-bottomed plates with white or black wells and are TC-treated for adherent cell attachment. They are similar to ViewPlates and IsoPlates but only available in 24-well format. (Catalog #'s on page 18).

Absorbance/Colorimetric Assays

Absorbance and colorimetric assays detect or quantitate the amount of a reagent or chromogenic substrate by measuring the light absorbed by the reagent or reaction product at a characteristic wavelength. Examples of absorbance assays include colorimetric ELISAs and ELAST ELISA (such as PerkinElmer's Alliance P24 Antigen kits), assays that use chromogenic substrates (such as BCIP, DAB, 4CN, and Fast Red) and Bradford assays. PerkinElmer's VICTOR, EnSpire, EnSight and EnVision microplate readers are equipped to measure absorbance in the UV and visible spectral ranges (230 – 1000 nm).

Considerations When Choosing a Plate for Absorbance Assays

- Absorbance wavelength and plate spectral properties Assays measuring absorbance in the visible light range (400-900 nm) can be run in clear-bottom polystyrene (PS) plates, such as our SpectraPlates[™].
- **Crosstalk** is a consideration in higher density plate formats when absorption from neighboring wells interferes with measurement of the well-of-interest, and indicates the need to use clear-bottomed opaque plates.
- **Special treatments** may be desired for coated-plate assays such as colorimetric ELISAs to promote high binding (HB) of antibodies and other biomolecules to the well surface.
- **Cell-based absorbance assays** may require TC-treated, sterile plates to promote cellular adhesion. Less strongly adherent cells may require a coating such as PDL or collagen.
- Plate reader configuration Bottom-reading plate readers require clear-bottomed microplates.

Microplates for Absorbance Assays

SpectraPlates are transparent polystyrene plates that can be used for either top-reading or bottom-reading microplate readers and are suitable when microscopic visualization is required to check cells. SpectraPlates have a medium binding (MB) affinity and are specified for assays that do not require anchoring of cells or other reagents to the surface of the plate. HB treated plates allow passive, direct coating of antibodies, proteins and other biomolecules using standard plate coating procedures. TC-treated SpectraPlates come with clear lids and are available in 96-, 384-, 1536-well, and shallow 384well formats. (Catalog #'s on page 17).



Figure 10. SpectraPlate in a 96-well format.



Figure 11. Shallow-well SpectraPlate in a 384-well format.

ViewPlates are white or black plates with clear-bottoms that come in a variety of coatings and formats. They are only recommended in colorimetric assays when reducing crosstalk is necessary. (See further description on page 5 and Catalog #'s on page 18).



Figure 12. White ViewPlate in 384-well format.

IsoPlates that are clear-bottomed are also an option as an alternative to ViewPlates and if a 96-well format is desired (See further description on page 6 and Catalog #'s on page 15).

MICROPLATES DESIGNED FOR YOUR APPLICATION

Label-free Assays

Our label-free microplates have been designed for use with the Corning[®] Epic[®] Label-free Technology. This optical technology measures changes in mass within an immobilized layer of biomolecules, or changes in mass distribution within cells in a cellular assay, by monitoring small changes in the wavelength of reflected light on the surface of a biosensor.



Figure 13. EnSpire Multimode Plate Reader with Corning[®] Epic[®] Label-free Technology detects both labeled and label-free assays.

Label-free microplates are ANSI/SBS standard black plates with clear bottoms containing a patented optical biosensor integrated into each well, an integral component of the EnSpire and EnSight label-free detection technology.

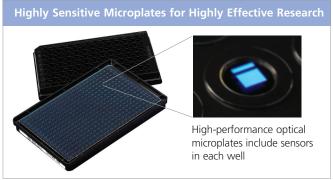


Figure 14. Label-free microplates.

Label-free Cellular microplates are designed for use with the EnSpire and EnSight Multimode Plate Readers with Labelfree Technology. They are available either uncoated or coated with fibronectin. Uncoated cellular microplates are tissueculture compatible and enable the attachment and normal growth of adherent cells. The fibronectin coating enables the attachment and growth of weakly adherent cells or cells seeded using a low serum concentration. Fibronectin is an extracellular matrix glycoprotein used mainly for culturing endothelial cells and fibroblasts. Label-free Biochemical microplates are used for measurement of biochemical label-free assays with the EnSpire and EnSight Multimode Plate Readers with Label-free Technology. They are offered as either amine coupled/pre-activated or high sensitivity/user-activated. The sensors within the pre-activated biochemical microplates are coated with an amine-coupling surface chemistry based on polymeric maleic anhydride groups, that enables covalent attachment of protein targets via primary amine groups. The high sensitivity assay microplate is activated by the user and each sensor is coated with a proprietary maleic anhydride polymer surface which presents a high quantity of carboxylic acid groups in a hydrophilic environment, increasing target immobilization.

(Catalog #'s for all label-free microplates are on page 19).

The EnSight Multimode Plate Reader offers well-imaging, Corning[®] Epic[®] Label-free technology, Alpha, LANCE, DELFIA TRF, absorbance, fluorescence and luminescence detection technologies all in one instrument.



Figure 15. EnSight Multimode Plate Reader offering well-imaging alongside labeled and label-free detection technologies, on a single benchtop platform.

We recommend using our white **ViewPlates** or **CellCarrier** plates when combining well-imaging with luminescence measurements on the EnSight system. Black ViewPlates and CellCarrier plates are recommended for combining imaging with fluorescence measurements. Additionally, with the EnSight reader, cellular assays can be imaged directly in **Label-free Cellular** plates before and after measuring cells' label-free responses.

MICROPLATES DESIGNED FOR YOUR APPLICATION

Microplates for High Content Screening

High Content Screening (HCS) and High Content Analysis (HCA) are imaging-based multiparametric analysis at the single-cell level and are used in a broad range of applications, including target identification, primary and secondary

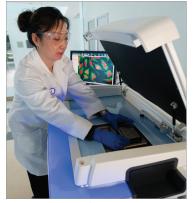


Figure 16. Operetta High Content Imaging System.

screening, safety assessment, and systems biology. Imaging cultured cells using high resolution fluorescence and brightfield microscopy at high-throughput with, for example, the Operetta High Content Imaging System or Opera Phenix High Content Screening System requires the use of high-quality microplates. Better microplates mean better images and higher quality data.

Considerations When Choosing a Plate for HCS

- **Crosstalk** between wells is a common concern in fluorescence imaging, so black plates with clear bottoms are recommended for most HCS assays.
- Bottom thickness The thinner the well bottom, the shorter the working distance and higher the numerical aperture (NA) of the objective that can be used, allowing for more highly magnified, sharper images.
- **Planarity** The more planar (flat) the bottom, the more even the focus across the well. Thicker plastic (PS) bottoms tend to be more rigid (and planar) but lower magnification must be used.
- Glass vs. plastic bottom Glass exhibits excellent optical properties and planarity, but is less suited for cell culture as it usually must be coated to promote adherence and growth.
 - Cyclic olefins have glass-like optical properties and better transparency in the near UV range than PS and are used in the CellCarrier Ultra plates

• Plate format

- 96-well plates are easier to pipette and better suited to long-term live cell applications due to less evaporation.
 However, more volume means higher cost per well and most 96-well plates with thin PS bottoms have insufficient planarity for higher magnification imaging.
- 384-well plates have the advantage of lower cost per well and good planarity but are harder to manually pipette and the use of an automated liquid handler is recommended.
- **1536-well plates** are the most cost-efficient (per well) but require an automated liquid handler for assay preparation.

Microplates for High Content Screening

For most HCS assays, black plates with a clear, flat, low profile PS or glass-bottom for cell culture are suitable. **ViewPlates** are suitable for most HCS applications and available in plastic or 96-well, glass-bottom (GB) varieties. Our **CellCarrier** microplates were developed and validated for use with the Operetta and Opera systems. (Plate descriptions on page 5 and Catalog #s on pages 14 and 18).

CellCarrier Ultra microplates are specially designed for high content screening with high NA and water immersion objectives. They are black cyclic olefin microplates with optically clear, cyclic olefin foil bottom (188 μ m thick) and an ultra-low plate bottom height (200 μ m) for better access to outer wells when using high NA and water immersion objectives. They have corner spacers and new design, low profile polystyrene lids that allow for better plate stacking while minimizing evaporation. They are tissue-culture treated, e-beam irradiated, and are available in a 384-well format.



Figure 17. CellCarrier Ultra in a 384-well format.

Table 1. Specifications of Microplates for High Content Screening Applications

| | ViewPlate-96 | GB ViewPlate-96 | CellCarrier-96 | ViewPlate-384 | CellCarrier-384 | CellCarrier-384 Ultra |
|---|------------------|------------------|------------------|------------------|------------------|---------------------------|
| Well area (mm ²) | 33 | 28 | 34 | 10.9 | 10.7 | 10.6 |
| Working Volume (µL) | 50 - 300 | 50 - 250 | 25 - 340 | 10 - 100 | 10 - 100 | 25 - 100 |
| Max Volume (µL) | 360 | 300 | 390 | 135 | 130 | 145 |
| Bottom Material | PS, TC-treated | Glass | PS, TC-treated | PS, TC-treated | PS, TC-treated | Cyclic Olefin, TC-treated |
| Thickness of bottom (µm) | 760 | 175 | 190 | 190 | 190 | 188 |
| Bottom Height (distance from well bottom to plate bottom in mm) | 2.47 | 0.3 | 3.31 | 2.9 | 0.3 | 0.2 |
| Refractive index of bottom | 1.58 | 1.51 | 1.58 | 1.58 | 1.58 | 1.53 |
| Product numbers (see page #) | Page 18 | Page 19 | Page 14 | Page 19 | Page 14 | Page 14 |
| Packaging | Sterile with lid |

More plate specifications listed on pages 26-27. Technical drawings available on request from Global.TechSupport@PerkinElmer.com

Microplates for Radiometric Assays (Scintillation Counting)

PerkinElmer offers the complete solution for your radiometric assay needs. Assays using radiochemicals can be run in various high-throughput formats, including filtration assays (³Hincorporation and radioligand-binding assays), liquid scintillation counting and scintillant coated-plate assays (LumaPlates), and proximity assays (using SPA beads, FlashPlates, ScintiPlates™ or CytoStar-T[®] plates). Whether you are reading samples using the TopCount NXT[™] or MicroBeta^{2™} Plate Counter or ViewLux[®] for ultra-HTS of SPA assays, we offer the ideal microplate for your radiometric assays.



Figure 18. Left: TopCount NXT Microplate Scintillation Luminescence Counter; Right: Microbeta² Plate Counter.

Microplates for Liquid Scintillation Counting Assays

Flexible PET plates are designed for use with plate cassettes and frames in the MicroBeta. They are made of clear polyethylene-A or polyethylene-G plastic, printed with grid lines to prevent crosstalk, chemically resistant to all DIN-based cocktails, and suited for all general LS applications. Available in 24- and 96-well formats. (Catalog #'s on page 20).



Figure 19. Flexible PET plate in a 24-well format.

PicoPlates™ are white, opaque (solid-colored) plates designed for use in PerkinElmer's TopCount instrument. These plates are made of Barex for chemical resistance and must be read on top-reading instruments. Available in 24- or 96-well formats. (Catalog #'s on page 20).

LumaPlates are white with a bed of solid scintillant coated on the well bottom, eliminating the need to add LSC cocktail. LumaPlates are recommended for use with HPLC or ultraPLC fraction analysis in metabolic studies and ⁵¹Cr release assays. Available in 96-well (shallow or deep-well) and 384-deep-well format. (Catalog #'s on page 20).

Other plates that may be used are untreated **OptiPlates**, **Isoplates** and **VisiPlates** (See complete descriptions on pages 4 and 6 and Catalog #'s listed on pages 15, 16 and 18).

Microplates for Filtration Assays

We offer glass fiber **UniFilter** plates for filtration assays with GF/B (690 μ m thick, 1 μ m sample retention) or GF/C (260 μ m, 1.2 μ m sample retention) filters. UniFilter plates are available with PEI coating (see glossary for description) and in 96-well format. We also offer a 96-well **Harvest Plate** with GF/C filter that is used in conjunction with a Tomtec Mach IIIW automatic harvester. (Catalog #'s on page 20).



Figure 20. UniFilter Plate in a 96-well format with GF/B filter built-in.

Alternatively, filtermats can be placed into cassettes compatible with the detection instrument and used with the FilterMate[™] Universal Harvester or in the **OmniFilter Plate Assembly** (For part numbers of these components, see page 21).



Figure 21. OmniFilter plate assembly.

Specialized Microplates for Scintillation Proximity Assays

FlashPlates are white, opaque plates that contain a scintillating coating on the interior of each well and are for use in solid-phase biochemical and cell membrane-based assays. When a radioactively-labeled molecule binds to an assay component captured to the well wall, its energy interacts with the scintillant coating to produce a light signal read by top-reading instruments. FlashPlates are offered uncoated or with a variety of pre-coated surfaces (SA, WGA, etc.) in either 96- or 384-well formats. (Catalog #'s on page 19).



Figure 22. FlashPlate in a 384-well format.

ScintiPlates are white-walled, clear-bottomed plates with scintillant embedded into the plastic intended for use in coated-plate assays and can be used for bottom-reading or coincidence measurements. ScintiPlates are offered as untreated, TC-treated, or streptavidincoated and come in 96-well format. (Catalog #'s on page 20).



Figure 23. ScintiPlate in a 96-well format.

CytoStar-T plates are sterile, TC-treated, clear-bottomed, whitewalled microplates recommended for cell-based radiometric detection assays. The planar, transparent base of each well is composed of a homogeneous mixture of scintillants and polystyrene that allows for the observation of cell growth. Radioisotopes brought into proximity with the well base through cell uptake or interaction react with the scintillant to produce a light signal. Available in 96-and 384-well formats. (Catalog #'s on page 19).

Microplates for SPA Bead Assays

The use of white plates or white-walled, clear bottom plates is recommended for SPA bead-based assays. **OptiPlates, ProxiPlates,** untreated **Isoplates,** and **VisiPlates** are all good options for assays with SPA beads (see descriptions on pages 4 and 6); (Catalog #'s on pages 15, 16 and 18).

Automated Liquid Handling

Optimize the performance of your Automated Liquid Handling Workstation with our microplates. Our extensive portfolio of microplates are well-suited for use with our platforms such as the JANUS® Automated Workstations (including JANUS BioTx Pro and Pro Plus Workstations and NGS Express[™]), Sciclone® NGS and G3 Workstations and Zephyr® Automated Liquid Handlers, including Zephyr SPE.



Figure 24. Automate small scale protein purification with the JANUS BioTx Pro Workstation.

Microplates for Next Generation Sequencing with Sciclone NGS

All the consumables you need for running next generation sequencing sample preparation workflows on our Sciclone NGS workstation are available directly from PerkinElmer.

Microplates and Accessories for NGS Sample Prep*

| Description | Pcs | Prod No. |
|--|-----|----------|
| Polypropylene (PP) deep-well storage plate, 96 x 2 mL square well, V-bottom | 25 | 6008880 |
| PP deep-well reservoir, 12 column, V-bottom, 21 mL | 25 | 6008700 |
| Universal Microplate Lid | 100 | 6000030 |
| Hard-Shell thin-wall 96-well skirted PCR plate (blue) | 50 | 6008870 |
| PP deep-well storage block, 96 x 1 mL, round bottom | 100 | 6008900 |
| PP low-volume microplate, 384 x 35 μ L, round bottom | 50 | 6008890 |
| TopSeal adhesive seal for PCR plate | 100 | 6050174 |
| StorPlate-96 V. PP storage plate, 96 x 450 µL, V-bottom | 200 | 6008299 |

*Also available as Consumable Kits for running 96 samples through single run, 2-day and 4-day Sciclone NGS/NGSx workflows, intended for use with various reagent platforms. For more information, go to www.perkinelmer.com/NGS



Figure 25. Sciclone NGS workstation.

Microplates to Use With Our LabChip Microfluidic Instruments

PerkinElmer offers plates for use with our LabChip[®] GX, GXII, and EZ Reader microfluidic instruments. The default settings in these instruments are pre-set for these plates so you can get started right away.

Recommended for Use with the LabChip GX and GXII

| Description | Pcs | Prod No. |
|---|-----|----------|
| Hard-shell thin-wall 96-well skirted PCR plate (blue) | 50 | 6008870 |

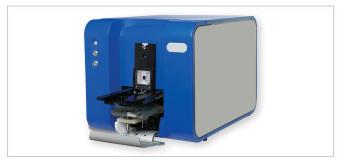


Figure 26. LabChip GX system.

Recommended for Use with the LabChip EZ Reader

Polypropylene microplates are recommended for enzymatic assays analyzed in our LabChip EZ Reader since proteins and peptides that are sipped up by our microfluidic chips tend to stick to polystyrene. Our 384-well V-bottomed **StorPlates™** are the recommended microplates for these assays.

| Description | Pcs | Prod No. |
|--|-----|----------|
| Polypropylene 384-well V-bottomed StorPlates | 5 | 6008591 |
| | 50 | 6008590 |
| | 200 | 6008598 |

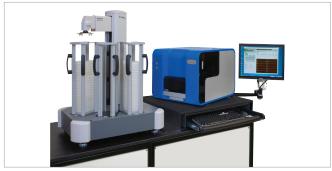


Figure 27. LabChip EZ Reader with Twister II microplate handler.

Microplates for Compound Storage

Plates used for compound storage need to be resistant to the types of solvents that may be used to preserve chemical libraries. PerkinElmer offers 96-well and 384-well polypropylene (PP) **StorPlate** storage plates for compound storage. Polypropylene is both resistant to the solvents used in compound storage and suitable for use at temperatures down to -80 °C. These plates are offered with a variety of options, including U-bottom and V-bottom wells, and to deep-well plates for higher volumes. (Catalog #'s on page 17).

All StorPlates are supplied DNAse, RNAse and pyrogen free and support certification is available on request (contact <u>Global.TechSupport@PerkinElmer.com)</u>.

StorPlates can be used in conjunction with StorMat sealing mats, composed of research-grade silicone. **StorMats** are pierceable and self-sealing, preventing the evaporation of volatile organic compounds (VOCs), aerosols and pathogens into the immediate environment during the automation process. An alphanumeric grid system on each is highly visible and enables easy sample identification (Catalog #'s on page 21).

The 96-well deepwell StorPlates can be used for multi-channel pipetting. For example, to prepare a few working solutions to be pipetted into multiple wells within another microplate, you can prepare your working solutions or serial dilutions in a StorPlate. Due to the shape of the bottom of the StorPlate wells, relatively little volume is wasted when pipetting from these plates into another assay plate. Finally, StorPlates have similar dimensions to standard 96-well or 384-well plates, therefore, most multi-channel pipettors can easily fit the plates for solution transfer.

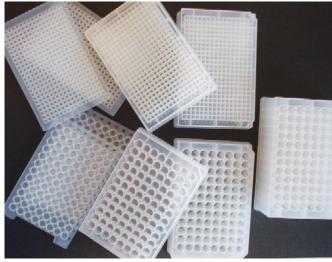


Figure 28. Compound storage pages.

Custom Microplate Services

PerkinElmer offers a range of custom microplate services, including:

- Bulk ordering and special packaging
- Fast and flexible plate barcoding
- Biological plate coating (including poly-D-lysine, collagen, gelatin, streptavidin coating, antibody coating, and other coatings on request)
- Custom tissue culture-treatment
- Custom high protein binding treatment
- Custom sterilization of microplates
- Other microplate treatments

If you are interested in custom microplate services, please contact our custom services team: www.perkinelmer.com/custommicroplates



Figure 29. Barcoded plate.

LIST OF MICROPLATES, DESCRIPTIONS AND PRODUCT NUMBERS

Microplates for Fluorescence, Luminescence, Absorbance and High Content Screening Assays

Table is organized alphabetically by name and then by treatment, color, format, and finally pack size. All plates are polystyrene unless otherwise stated.

| Microplate Name | Color | Description/Treatment | Format (# wells) | Pack Size | Product # |
|----------------------|--------------|--|------------------|-----------|-----------|
| AlphaPlate | Light gray | Alpha Technology | 384 | 50 | 6005350 |
| | | compatible plates | | 200 | 6005359 |
| AlphaPlate | Light gray | Alpha Technology compatible plates | 1536 | 50 | 6004350 |
| | | Alpha Technology compatible | | 50 | 6057690 |
| AlphaPlate | Light gray | plates, HB (high protein binding affinity) | 384 | 200 | 6057699 |
| | | Alpha Technology compatible | | 50 | 6008350 |
| AlphaPlate (SW) | Light gray | plates, Shallow Wells (like ProxiPlate) | 384 | 200 | 6008359 |
| ½AreaPlate | White | Opaque, half-area, | 96 | 50 | 6005560 |
| 72AIEdFidle | vvnite | untreated | 90 | 200 | 6005569 |
| ½AreaPlate | Black | Opaque, half-area, | 96 | 50 | 6005540 |
| 72AIedriale | DIdCK | untreated | 90 | 200 | 6005549 |
| 1/2AreaPlate | White | HB, Opaque, half-area | 96 | 50 | 6057890 |
| | | TC-treated, Sterile with Lids, | | 40 | 6005550 |
| CellCarrier | Black, Clear | Black frame, clear bottom, low bottom height | 96 | 160 | 6005558 |
| | | TC-treated, Sterile with Lids, | | 20 | 6004550 |
| CellCarrier | Black, Clear | Black frame, clear bottom, low bottom height | 1536 | 80 | 6004558 |
| | | TC-treated, Sterile with Lids, | | 40 | 6005510 |
| CellCarrier | White, Clear | White frame, clear bottom, low bottom height | 96 | 160 | 6005518 |
| | | PDL-coated with Lids, | 25 | 40 | 6005450 |
| CellCarrier | Black, Clear | Black frame, clear bottom, low bottom height | 96 | 160 | 6005458 |
| CellCarrier | Black, Clear | PDL-coated with Lids, Black frame, clear bottom, low bottom height | 1536 | 10 | 6004580 |
| | | COL-coated with Lids, | | 40 | 6005920 |
| CellCarrier | Black, Clear | Black frame, clear bottom | 96 | 160 | 6005928 |
| CellCarrier | Black, Clear | COL-coated with Lids, Black frame, clear bottom | 1536 | 10 | 6004920 |
| | Diack Class | TC-treated, Sterile with Lids, | 294 | 50 | 6057300 |
| CellCarrier Ultra | Black, Clear | Black frame, clear bottom, ultra low bottom height | 384 | 160 | 6057308 |
| Coll Corvier Lilture | Plack Class | PDL-coated, Sterile with Lids, | 384 | 40 | 6057500 |
| CellCarrier Ultra | Black, Clear | Black frame, clear bottom, ultra low bottom height | | 160 | 6057508 |
| CellCarrier Ultra | Plack Class | COL-coated, Sterile with Lids, | 384 | 40 | 6057700 |
| | Black, Clear | Black frame, clear bottom, ultra low bottom height | 384 - | 160 | 6057708 |

| Microplate Name | Color | Description/Treatment | Format (# wells) | Pack Size | Product # |
|-------------------|--------------|---|------------------------|-----------|------------|
| CulturPlate | White | White, Opaque, Sterile with Lids | 24 | 50 | 6005168 |
| | | White, Opaque, | | 50 | 6005680 |
| CulturPlate White | White | Sterile with Lids | 96 | 160 | 6005688 |
| | | *200 pack size is without Lids | | *200 | 6005689* |
| | | White, Opaque, | | 50 | 6007680 |
| CulturPlate | White | Sterile with Lids | 384 | 160 | 6007688 |
| | | *200 pack size is without Lids | | *200 | 6007689* |
| | sad 5 | | 4526 | 50 | 6004680 |
| CulturPlate | White | TC-treated, Sterile with Lids | 1536 | 80 | 6004684 |
| | | | | 50 | 6005660 |
| CulturPlate | Black | Black, Opaque, Sterile with Lids | 96 | 160 | 6005668 |
| | | *200 pack size is without Lids | | *200 | 6005669* |
| | | | | 50 | 6007660 |
| CulturPlate | Black | Black, Opaque, Sterile with Lids | 384 | 160 | 6007668 |
| | | *200 pack size is without Lids | | *200 | 6007669* |
| | | | | 50 | 6004660 |
| CulturPlate | Black | TC-treated, Sterile with Lids | 1536 | 80 | 6004664 |
| DELFIA | Clear | Strip well 8 strips v 12 wells | 06 (9 ₁ 12) | 60 | 1244-550 |
| | | Strip-well, 8 strips x 12 wells | 96 (8x12) | | |
| DELFIA | Clear | Streptavidin-coated, Strip-well | 96 (8x12) | 10 | 4009-0010 |
| DELFIA | Clear | Anti-mouse IgG-coated, Strip-well | 96 (8x12) | 10 | 4007-0010 |
| DELFIA | Clear | Anti-rabbit IgG-coated, Strip-well | 96 (8x12) | 10 | 4008-0010 |
| DELFIA | White | Streptavidin-coated white plate | 384 | 10 | CC11-H10 |
| DELFIA | Yellow | Uncoated, HB affinity, yellow translucent plate | 96 | 60 | AAAND-0001 |
| DELFIA | Yellow | Streptavidin-coated yellow plate | 96 | 10 | AAAND-0005 |
| DELFIA | Yellow | Anti-rabbit IgG-coated | 96 | 10 | AAAND-0004 |
| Delfia | Yellow | Anti-sheep IgG-coated | 96 | 10 | CC33-1210 |
| soPlate | Black, Clear | Untreated, | 96 | 50 | 6005020 |
| soriale | Diack, Clear | Black Frame, clear bottoms | 90 | 200 | 6005029 |
| | | Untreated, | 06 | 50 | 6005040 |
| soPlate | White, Clear | White Frame, clear bottoms | 96 | 200 | 6005049 |
| | | Untreated, | | 50 | 6005030 |
| soPlate (B&W) | Black, White | B&W = Black Frame, white wells (opaque bottoms) | 96 | 200 | 6005039 |
| | | HB, Black Frame, | 05 | 50 | 6005570 |
| soPlate | Black, Clear | clear bottoms | 96 | 200 | 6005579 |
| | | HB, White Frame, | | 50 | 6005590 |
| soPlate | White, Clear | clear bottoms | 96 | 200 | 6005599 |
| | | HB, B&W = Black Frame, | | 50 | 6005580 |
| soPlate (B&W) | Black, White | white wells (opaque bottoms) | 96 | 160 | 6005589 |
| | | TC-treated with Lids, | | 50 | 6005050 |
| soPlate | Black, Clear | Black Frame, clear bottoms | 96 | 160 | 6005058 |
| | | | | 50 | 6005070 |
| soPlate | White, Clear | TC-treated with Lids, White Frame, clear bottoms | 96 | 160 | 6005078 |
| | | TC-treated with Lids, | | | |
| soPlate (B&W) | | B&W = Black Frame, white wells | lls 96 – | 50 | 6005060 |
| | | (opaque bottoms) | | 160 | 6005068 |

| Microplate Name | Color | Description/Treatment | Format (# wells) | Pack Size | Product # |
|----------------------|---------------|---|------------------|-----------|-----------|
| OptiPlate | White | Untreated, White, Opaque | 24 | 100 | 6005186 |
| Out Dist. | \ A / = :+ = | Unterstand Milita One mus | 00 | 50 | 6005290 |
| OptiPlate | White | Untreated, White, Opaque | 96 | 200 | 6005299 |
| Out Dist. | 10/1-1+- | | 204 | 50 | 6007290 |
| OptiPlate | White | Untreated, White, Opaque | 384 | 200 | 6007299 |
| OptiPlate | White | Untreated, White, Opaque | 1536 | 50 | 6004290 |
| | | | 05 | 50 | 6005270 |
| OptiPlate | Black | Untreated, White, Opaque | 96 | 200 | 6005279 |
| | | | 204 | 50 | 6007270 |
| OptiPlate | Black | Untreated, Black, Opaque | 384 | 200 | 6007279 |
| OptiPlate | Black | Untreated, Black, Opaque | 1536 | 50 | 6004270 |
| | and to | | 05 | 50 | 6005500 |
| OptiPlate | White | HB | 96 | 200 | 6005509 |
| | 144.1 | | 204 | 50 | 6005620 |
| OptiPlate | White | HB | 384 | 200 | 6005629 |
| OptiPlate | White | HB | 1536 | 50 | 6004620 |
| | | | 05 | 50 | 6005320 |
| OptiPlate | Black | HB | 96 | 200 | 6005329 |
| | | | 204 | 50 | 6005520 |
| OptiPlate | Black | HB | 384 | 200 | 6005529 |
| OptiPlate | Black | НВ | 1536 | 50 | 6004520 |
| Out Dist. | Crew | Untreated, HS (high sensitivity) | 96 | 50 | 6005330 |
| OptiPlate | Gray | | | 200 | 6005339 |
| OptiPlata | Grou | | 204 | 50 | 6005310 |
| OptiPlate | Gray | Untreated, HS | 384 | 200 | 6005300 |
| OptiPlate | Gray | Untreated, HS | 1536 | 50 | 6004360 |
| DurauiDiata | \ A / = :+ - | Untreated, Opaque, | 00 | 50 | 6006290 |
| ProxiPlate | White | Shallow well | 96 | 200 | 6006299 |
| Duraul Direta urbura | 10/1-1+- | Untreated, Opaque, | 204 | 50 | 6008280 |
| ProxiPlate plus | White | Shallow well | 384 | 200 | 6008289 |
| | | TC-treated, Sterile with Lids | 384 | 50 | 6008230 |
| ProxiPlate plus | White | Opaque, Shallow well | | 160 | 6008238 |
| | | *200 pack size without lids | | *200 | 6008239 |
| | | HS (high sensitivity, | 201 | 50 | 6008270 |
| ProxiPlate plus | Gray | low background) Opaque, Shallow Well | 384 | 200 | 6008279 |
| | | Untreated, Opaque, | 05 | 50 | 6006270 |
| ProxiPlate | Black | Shallow well | 96 | 200 | 6006279 |
| | | Untreated, Opaque, | 26.4 | 50 | 6008260 |
| ProxiPlate plus | Black | Shallow well | 384 | 200 | 6008269 |
| | | TC-treated, Sterile with Lids | | 50 | 6008210 |
| ProxiPlate plus | Black | Opaque, Shallow well | 384 | 160 | 6008218 |
| | | *200 pack size without lids | · | *200 | 6008219 |

| Microplate Name | Color | Description/Treatment | Format (# wells) | Pack Size | Product # |
|--------------------|---------------|--|------------------|-----------|-----------|
| CoastraDlata | Clear | MB | 96 | 50 | 6005640 |
| SpectraPlate | Clear | IVID | 90 | 200 | 6005649 |
| Cura atus Diata | Class | MB | 384 | 50 | 6007640 |
| SpectraPlate | Clear | IVIB | 384 | 200 | 6007649 |
| SpectraPlate | Clear | MB | 1536 | 50 | 6004640 |
| SpectraPlate | Clear | HB | 96 | 50 | 6005600 |
| spectramate | Clear | НВ | 90 | 200 | 6005609 |
| SpectraPlate | Clear | HB | 384 | 50 | 6007500 |
| spectrariate | Clear | ПВ | 204 | 200 | 6007509 |
| SpectraPlate | Clear | HB | 1536 | 50 | 6004500 |
| | | TC to start Charile with Lide | | 50 | 6005650 |
| SpectraPlate | Clear | TC-treated, Sterile with Lids *200 pack size without lids | 96 | 160 | 6005658 |
| | | | | *200 | 6005659 |
| | | | | 50 | 6007650 |
| SpectraPlate | Clear | TC-treated, Sterile with Lids *200 pack size without lids | 384 | 160 | 6007658 |
| | | | | *200 | 6007659 |
| Cura atua Dia ta | Clear | TC-treated, Sterile with Lids | 1536 | 50 | 6004650 |
| SpectraPlate | Clear | | 0001 | 80 | 6004654 |
| SpectraPlate (SW) | Clear | MB, Shallow well | 384 | 50 | 6008640 |
| spectrariate (SVV) | Clear | IVID, SHAHOW WEI | 204 | 200 | 6008649 |
| SpectraPlate (SW) | Clear | TC-treated, Shallow well Sterile with Lids | 384 | 50 | 6008650 |
| StorPlate | 'late Natural | U-shaped, Round bottom, | 96 | 50 | 6008190 |
| SIGIFIALE | Natura | 450 µL vol PolyPropylene | 90 | 200 | 6008199 |
| StorPlate | Natural | V-shaped bottom, | 96 | 50 | 6008290 |
| SIUIFIALE | Natura | 450 µL vol PolyPropylene | 90 | 200 | 6008299 |
| StorPlate | Natural | 1.1 mL Deepwell, U-shaped round bottom, PP | 96 | 100 | 6008390 |
| StorPlate | Natural | 2.0 mL Deepwell, U-shaped round bottom, PP | 96 | 50 | 6008490 |
| StorPlate | Natural | V-shaped bottom, | 384 | 50 | 6008590 |
| DIUIFIALE | INATURA | 120 µL volume, PP | 200 | 6008598 | |
| StorPlate | Natural | V-shaped bottom, 240 µL Deepwell, PP | 384 | 50 | 6008690 |

| Microplate Name | Color | Description/Treatment | Format (# wells) | Pack Size | Product # |
|--------------------|--------------|--|------------------|--------------------|-----------|
| ViewPlate | Black, Clear | Untreated, Black frame, clear bottom | 384 | 50 | 6007470 |
| ViewPlate | Black, Clear | Untreated, LoBase black frame, clear bottom | 1536 | 60 | 6004470 |
| ViewPlate | White, Clear | Untreated, White frame, Clear bottom | 384 | 50 | 6007490 |
| ViewPlate | White, Clear | Untreated, White frame, Clear, LoBase bottom | 1536 | 60 | 6004490 |
| | | TC-treated with Lids, Black, | 05 | 50* | 6005182 |
| ViewPlate | Black, Clear | Clear bottom *This size comes with Backseals | 96 | 50 (10 packs of 5) | 6005225 |
| ViewPlate | Black, Clear | TC-treated with Lids, Black, Clear bottom | 384 | 40 | 6007460 |
| ViewPlate | Black, Clear | TC-treated, Sterile with Lids, LoBase Black frame, clear bottom | 1536 | 40 | 6004460 |
| Viewplate | White, Clear | TC-treated with Lids, White frame, clear bottom | 96 | 50 | 6005181 |
| ViewPlate | White, Clear | TC-treated with Lids, White frame, clear bottom | 384 | 40 | 6007480 |
| ViewPlate | White, Clear | TC-treated with Lids, LoBase White frame, Clear bottom | 1536 | 40 | 6004480 |
| ViewPlate | Black, Clear | PDL-coated with Lids, Black frame, clear bottom | 96 | 40 | 6005710 |
| ViewPlate | Black, Clear | PDL-coated with Lids, | 384 | 40 | 6007710 |
| viewnate | | Black frame, clear bottom | 504 | 160 | 6007718 |
| ViewPlate | Black, Clear | PDL-coated with Lids, Black frame, clear bottom | 96 | 40 | 6005710 |
| ViewPlate | Black, Clear | PDL-coated with Lids, | 384 | 40 | 6007710 |
| | Black, clear | Black frame, clear bottom | 501 | 160 | 6007718 |
| ViewPlate | Black, Clear | PDL-coated with Lids Black frame, clear bottom | 1536 | 10 | 6004710 |
| ViewPlate | Black, Clear | COL-coated with Lids, | 96 | 40 | 6005810 |
| viewriate | Diack, Clear | Black frame, clear bottom | 50 | 160 | 6005818 |
| ViewPlate | Diack Clear | COL-coated with Lids, | 29.4 | 40 | 6007810 |
| Viewridle | Black, Clear | Black frame, clear bottom | 384 | 160 | 6007818 |
| ViewPlate | Black, Clear | COL-coated with Lids, Black frame, clear LoBase bottom | 1536 | 10 | 6004810 |
| ViewPlate (GB) | Black, Glass | TC-treated with Lids, Black frame, clear glass bottom | 96 | 40 | 6005430 |
| ViewPlate (GB) | Black, Glass | PDL-coated with Lids, Black frame, clear glass bottom | 96 | 8 | 6005530 |
| ViewPlate (GB) | Black, Glass | COL-coated with Lids, Black frame, clear glass bottom | 96 | 8 | 6005720 |
| | | TC-Treated with Lids, | 05 | 40 | 6005760 |
| ViewPlate (½ Area) | White, Clear | White frame, clear bottom, ½ Area Microplates | 96 | 160 | 6005768 |
| VisiPlate | White, clear | Untreated | 24 | 17 | 1450-601 |
| | | White frame, clear bottom | ۲ | 68 | 1450-602 |
| VisiPlate | White, clear | TC-treated, Sterile with Lids, | 24 | 14 | 1450-603 |
| יואו ומנכ | wille, cledi | White frame, clear bottom | 24 | 56 | 1450-604 |
| VisiPlate | Black, clear | TC-treated, Sterile with Lids, | 24 | 14 | 1450-605 |
| VISIFIALE | | Black frame, clear bottom | ۷4 | 56 | 1450-606 |

LIST OF MICROPLATES, DESCRIPTIONS AND PRODUCT NUMBERS

EnSpire Label-free Microplates

| Microplate Name | Color | Description/Treatment | Format (# wells) | Pack Size | Product # |
|-----------------|-------|---|------------------|-----------|-----------|
| EnSpire-LFC | Black | Uncoated for Label-Free | 96 | 2 | 6055400 |
| спэрпе-сгс | DIdCK | Cellular Assays | 90 | 8 | 6055408 |
| EnSpire-LFC | Black | Fibronectin-coated, | 96 | 2 | 6055420 |
| Elispile-LFC | DIdCK | for Label-Free Cellular Assays | 90 | 8 | 6055428 |
| | Black | Uncoated for Label-Free 38 Cellular Assays | 204 | 2 | 6057400 |
| EnSpire-LFC | BIdCK | | 384 | 8 | 6057408 |
| EnSpire-LFC | Black | Fibronectin-coated, | 384 | 2 | 6057420 |
| Elispile-LFC | DIdCK | for Label-Free Cellular Assays | | 8 | 6057428 |
| EnSpire-LFB | Black | Amine coupled, pre-activated | 384 | 2 | 6057410 |
| спорне-сго | | For Label-Free Biochemical Assays | | 8 | 6057418 |
| | Black | High sensitivity, user-activated, | 384 | 2 | 6057460 |
| EnSpire-LFB | DIdCK | For Label-Free Biochemical Assays | 264 | 8 | 6057468 |

Scintillating Microplates For Radioisotopic Assays

| Microplate Name | Color | Description/Treatment | Format (# wells) | Pack Size | Product # |
|----------------------|--------------|--|---|-----------|--------------|
| CytoStar-T | White, clear | TC-treated, Sterile with Lids, Scintillating | 96 | 5 | RPNQ0162 |
| Cytostal-1 | Wille, clear | | 50 | 100 | RPNQ0163 |
| CytoStar-T | White, clear | TC-treated, Sterile, Scintillating | 384 | 5 | RPNQ0165 |
| Cylosial-1 | White, clear | White, clear TC-treated, sterile, schulating | 204 | 50 | RPNQ0166 |
| | | | | 5 | SMP200E001PK |
| FlashPlate | White | Basic scintillant-coated plate | 96 | 50 | SMP200001PK |
| | | | | 100 | SMP200J001PK |
| | | | | 5 | SMP400E001PK |
| FlashPlate | White | Basic scintillant-coated plate | 384 | 20 | SMP400001PK |
| | | | | 100 | SMP400J001PK |
| | \\/hita | White Phospholipid coated FlashPlate *Note – Can Custom Coat | 96 | 5 | SMP108001PK |
| FlashPlate | vvnite | | | 20 | SMP108A001PK |
| | | Streptavidin-coated | treptavidin-coated 96 te – Can Custom Coat | 2 | SMP410001PK |
| FlashPlate | White | | | 10 | SMP410A001PK |
| | | Note Can castom cour | | 100 | SMP410J001PK |
| | | | 384 | 5 | SMP103001PK |
| FlashPlate | White | Streptavidin-coated *Note – Can Custom Coat | | 20 | SMP103A001PK |
| | | Note Can castom cour | | 100 | SMP103J001PK |
| FlashPlate | White | M/CA costed | 00 | 5 | SMP105001PK |
| FIASIIPIATE | vvnite | WGA-coated | 96 | 20 | SMP105A001PK |
| FlashPlate Assay Kit | White | Adenylyl Cyclase Activation Assay System | 96 | 5 | SMP004A001KT |
| Flashplate Assay Kit | White | Cyclic AMP Assay System | 96 | 5 | SMP001A001KT |

LIST OF MICROPLATES, DESCRIPTIONS AND PRODUCT NUMBERS

Scintillating Microplates For Radioisotopic Assays Continued

| Microplate Name | Color | Description/Treatment | Format (# wells) | Pack Size | Product # |
|-----------------|---|--|------------------|-----------|-----------|
| LumaPlate | White | Shallow well (100 µL), Scintillant- coated | 96 | 100 | 6006633 |
| LumaPlate | White | Deep well (300 µL), Scintillant-coated | 96 | 50 | 6005630 |
| LumaPlate | White | Deep well (60 µL), Scintillant-coated | 384 | 50 | 6007630 |
| | ntiplate White, clear White frame and cle scintillating well | | 96 | 50 | 6005340 |
| Scintiplate | | | | 200 | 6005349 |
| | | TC-treated, Sterile with Lids | | 50 | 6005390 |
| Scintiplate | White, clear | White frame and clear scintillating well | 96 | 160 | 6005398 |
| Scintiplate | White, clear | Streptavidin-coated White frame and clear scintillating well | 96 | 10 | 1450-551 |

Solvent-Resistant Microplates for Isotopic Assays using Liquid Scintillation Cocktails in TopCount®

| Microplate Name | Color | Description/Treatment | Format (# wells) | Pack Size | Product # |
|-----------------|-------|--------------------------|------------------|-----------|-----------|
| PicoPlate-24 | White | Solvent-resistant Barex® | 24 | 100 | 6005163 |
| PicoPlate-96 | White | Solvent-resistant Barex® | 96 | 100 | 6005162 |

Solvent-Resistant Flexible Microplates for Isotopic Assays using LSC in MicroBeta®

| Microplate Name | Color | Description/Treatment | Format (# wells) | Pack Size | Product # |
|----------------------------|-------|--|------------------|-----------|-----------|
| Flexible-24 | Clear | Clear, PETA, flat-bottom | 24 | 25 | 1450-402 |
| Flexible-24, Heat sealable | Clear | Clear, PETG, flat-bottom | 24 | 25 | 1450-408 |
| Flexible-96 | Clear | Clear, PETG, round-bottom | 96 | 25 | 1450-401 |
| Support Frame | | Support Frame for 24- & 96-well Flexible Plates | 24 / 96 | 25 | 1450-481 |

Plates with Glass Fiber Filters for Radioligand Binding Assays

| Microplate Name | Color | Description/Treatment | Format (# wells) | Pack Size | Product # |
|-----------------|-------|--|------------------|-----------|-----------|
| UniFilter | White | GF/B filter, Barex [®] , Shallow well | 96 | 50 | 6005177 |
| UniFilter | White | GF/C filter, Barex [®] , Shallow well | 96 | 50 | 6005174 |
| Unifilter | White | PEI-Coated, GF/B, Barex [®] , Shallow well | 96 | 50 | 6005277 |
| Unifilter | White | PEI-Coated, GF/C, Barex [®] , Shallow well | 96 | 50 | 6005274 |
| Harvest Plate | White | GF/C filter, Standard well size | 96 | 50 | 6051450 |

LISTING OF MICROPLATE SEALS, LIDS AND ACCESSORIES

Plate Seals

| Clear Clear Clear Clear Clear | 100 100 100 100 100 | 6005198 6050195 6050184 | | | |
|--|---|--|--|--|--|
| Clear Clear | 100 | 6050184 | | | |
| Clear | | | | | |
| | 100 | 005350 | | | |
| Clear | | 6005250 | | | |
| Cicul | 100 | 6050174 | | | |
| Clear | 100 | 6050192 | | | |
| Black | 100 | 6050173 | | | |
| White | 55 | 6005199 | | | |
| Black | 55 | 6005189 | | | |
| Clear | 100 | 1450-461 | | | |
| Clear | 100 | 1450-462 | | | |
| Sealing StorMats – for sealing polypropylene StorPlates for compound storage | | | | | |
| White | 50 | 6008096 | | | |
| White | 50 | 6008384 | | | |
| | Black White Black Clear Clear Clear compound storage White | Clear 100 Black 100 White 55 Black 55 Clear 100 Clear 100 Clear 100 White 55 State 55 Clear 100 Clear 100 White 50 | | | |

Microplate Lids

| Product Description | Color | Pack Size | Product # |
|---|-----------------------|-----------|-----------|
| Lid for 96-well plate, non-sterile | Clear | 200 | 6005617 |
| Lid for 96-well plate, sterile | Clear | 200 | 6005619 |
| Lid for 384-well and 1536-well plate, non-sterile | Clear | 200 | 6007617 |
| Lid for 384-well and 1536-well plate, sterile | Clear | 200 | 6007619 |
| Universal Lid for CellCarrier plates, sterile | Clear | 200 | 6000029 |
| Universal Lid, non-sterile | Clear | 200 | 6000030 |
| Lids for stacker operation in PerkinElmer's miniTrak, p | lateTrak or PlateStak | | |
| Sterile lid with spacers for improved airflow | Clear | 200 | 6000020 |
| Sterile lid with spacers | Black | 200 | 6000022 |
| Non-sterile lid with spacers | Black | 200 | 6000023 |
| Sterile lid without spacers | Clear | 200 | 6000024 |
| Sterile lid without spacers | Black | 200 | 6000026 |
| Non-Sterile lid without spacers | Clear | 200 | 6000025 |
| Non-Sterile lid without spacers | Black | 200 | 6000027 |

Filter Plate Assemblies and Adapters for Counting Millipore[®] MultiScreen[®] Filter Plates

| Product Description | Pcs. | Product # |
|--|------|-----------|
| OmniFilter, white, Barex, 96-well | 50 | 6005219 |
| OmniFilter, assembly/disassembly tool | 1 | 6005421 |
| OmniFilter, filter cutting die | 1 | 6005420 |
| OmniFilter, filter cutting template | 1 | 6005226 |
| EasyTab-C, self-aligning filtermats | 100 | 6005422 |
| Standard Glass Fiber Filters | 100 | 6005409 |
| Standard Self-Aligning Glass Fiber Filters | 100 | 6005416 |
| Rigid (RG) Self-Aligning Glass Fiber Filters | 100 | 6005412 |
| MultiScreen [®] Adapter for TopCount, white 96-well | 50 | 6005178 |
| MultiScreen [®] Adapter for TopCount, clear 96-well | 50 | 6005183 |
| MultiScreen [®] Liner for MicroBeta | 20 | 1450-433 |

GLOSSARY OF TERMS AND SURFACE PROPERTIES

Glossary of Terminology and Abbreviations

| Abbreviation/Word | Definition | Applies To |
|-----------------------------|--|---|
| BackSeal | Adhesive Seal for converting clear bottom plates to functionally opaque plates. The color should match the color of the plate wells. | Clear bottom plates |
| COL, collagen | Collagen (rat tail, type 1) coating on microplates. (Other collagen types available as a Custom.) | Culturing of cell types that need added extracellular matrix coating to adhere |
| F, Fluorescence | Black-colored microplates used when high fluorescence signal results in cross-talk between wells | Our Black PS plates |
| GF/B | Glass Fiber Filter type B (thickness is 680 $\mu\text{m},$ 1 um sample retention) | Radiometric Filtration Assays |
| GF/C | Glass Fiber Filter type C (thickness is 260 $\mu\text{m},$ 1 um sample retention) | Radiometric Filtration Assays |
| HB, High Binding Affinity | Plate treatment that allows for high levels of protein binding to the well surface. | Protocols requiring direct passive coating of antibodies or other biomolecules |
| HS, High Sensitivity | Gray-tinted plates in the OptiPlate and ProxiPlate product families that are approximately five times darker than AlphaPlates. | Luminescence assays with increased cross-talk; OptiPlates and ProxiPlates |
| MB, Medium Binding Affinity | Untreated plates that allow for mid-levels of protein binding | Coated plate assays such as ELISA |
| PL,PDL, PLL | Poly-lysine, Poly-D-lysine, or Poly-L-lysine coating | Culturing of cell types that need added extracellular matrix coating to adhere |
| PEI, polyethyleneimine | A cationic polymer coating that neutralizes the negative charge of glass fiber filter plates and is used to minimize non-specific ligand binding or to facilitate cell attachment. | Radiometric, SPA assays, etc. |
| PETA, PETG | Polyethylene-A or -G plastic microplates, resistant to DIN-based scintillation cocktails. | Flexible microplates, Radiochemical assays |
| PP, polypropylene | Plastic used to make sturdier plates that withstand harsher chemicals; less "sticky" than PS and often used in enzyme assays | Compound Storage and Enzyme activity assays on our LabChip EZ Reader |
| PS, polystyrene | Sturdy plastic material used to make most microplates | Most of our plates |
| SA, streptavidin | Streptavidin coated plates will bind biotinylated antibodies, proteins and other moieties for capture assays. | Coated plate assays such as ELISA, DELFIA, and FlashPlate assays |
| Sterile | All our sterile plates are also tissue-culture treated. | Tissue Culture plates |
| SW, shallow-well | Opaque microplates with raised well bottoms creating shallow wells to be used in low-volume assays | ProxiPlates, some SpectraPlates & AlphaPlates; 96 & 384-well formats |
| TC, Tissue-culture Treated | TC treatment involves exposing a PS microplate to a plasma gas to modify the plastic surface to make it more hydrophilic, thus facilitating attachment of adherent cell types. | Culturing of most adherent cells |
| TopSeal | Adhesive for Sealing Microplates for temporary or long-term storage to prevent evaporation. Comes in Clear and Black (AlphaSeal) | A variety of HTS assays when a Lid is not indicated |
| WGA | Wheat germ agglutinin-coating is used to anchor cell membranes to the surface of a plate by interacting with cell-surface sugars/glycoproteins | Radiometric, SPA assays, etc. |

REFERENCE TABLES

Microplates by Application and Instrument

| Method | Application | Assay Type | PerkinElmer Instrument | Recommended Microplates |
|--------------|----------------------------------|---|---|--|
| | FRET | LANCE, LANCE Ultra | VICTOR, EnVision, EnSpire and EnSight, ViewLux | OptiPlate, ProxiPlate, ½Area Plate, CulturPlate |
| | TRF | DELFIA | VICTOR, EnVision, EnSpire and EnSight, ViewLux | DELFIA Yellow, Strip-well plate, OptiPlate HB |
| | Polarization | N/A | VICTOR, EnVision, ViewLux | OptiPlate F, ProxiPlate F |
| Fluorescence | High Content Confocal Imaging | ICC with Tyramide Signal Amplification (TSA); In Vivo Reagents for HCS | Operetta, Opera, and Opera Phenix | CellCarrier, ViewPlate |
| | Cytometry | Brightfield and Fluorescence Cell Counting & Viability, Cell confluency, etc. | EnSight | ViewPlates, CellCarrier |
| | Microfluidic MSAs | Enzyme activity assays & binding reactions- sipped, separated & detected on a microfluidic chip | LabChip EZ Reader, LC3000 | 384-well StorPlates |
| Label-Free | Accaus | Cellular Label-Free Assays | EnSpire & EnSight with Label Free | EnSpire-LFC |
| Laber-free | Label-Free Assays | Biochemical Label-Free Assays | EnSpire & EnSight with Label Free | EnSpire-LFB |
| | uminescence Assays | AlphaLISA, AlphaScreen & AlphaScreen SureFireTM | EnVision, EnSpire, EnSight | AlphaPlate, OptiPlate, ProxiPlate, ½Area Plate, CulturPlate |
| Luminescence | | steadylite plus, britelite Plus, ATPlite and ATPlite 1Step | EnVision, EnSpire, EnSight, VICTOR, ViewLux, LumiLux, TopCount, MicroBeta | OptiPlate, CulturPlate ViewPlate TC |
| | | AequoZen and AequoScreen (Aequorin) | LumiLux, VICTOR, MicroBeta JET, EnVision, EnSpire, EnSight | OptiPlate, CulturPlate, ViewPlate |
| Colorimetric | Absorbance | ELISA | EnVision, EnSpire, EnSight, VICTOR, ViewLux | SpectraPlate, ViewPlate, (clear-bottom) Isoplate |
| | Filtration Assays | Receptor Binding, Cell Harvesting, 3H Thymidine, DNA binding/ hybridization | Filtermate Harvester, TopCount | UniFilter, OmniFilter, Harvest Plate |
| | | Solid-Phase Radiobinding | MicroBeta, TopCount | FlashPlate, CytoStar-T, ScintiPlate (MB) |
| | | Scintillation Proximity Assay (SPA) | TopCount | OptiPlate, ProxiPlate |
| | | | MicroBeta | VisiPlate, Isoplate |
| Radiometric | Icontonic Accourt | Solid Scintillation (HPLC fraction, ⁵¹ Cr Release) | TopCount | LumaPlate, CytoStar-T |
| | Isoptopic Assays | Liquid Scintillation Counting | TopCount | OptiPlate |
| | | Liquid Scintillation Counting | MicroBeta | VisiPlate, Isoplate |
| | | lsotopic samples containing highly polar organic solvents | TopCount | PicoPlate |
| | | | MicroBeta | Flexible Plate |
| Sample Prep | NGS | Next Gen Sequencing Prep | Sciclone and Janus NGS Express Automated Liquid Handlers | See Page 11 |

REFERENCE TABLES

Microplate Quick Reference Guide

| | 24 | 96 | 384 | 1536 | Black | White | Gray | тс | Fluor | Lumi | ELISA/ Abs | HCS | Rads | Label- free |
|-------------------|-------------------------|------------------|------------------|------------------------|--------------|-------------------------|------------------|----------------|------------------------|------------------|------------------|------------------|--------------|----------------|
| 1/2 AreaPlate | | ✓ | | | ✓ | ✓ | | | ✓ | ✓ | | | | |
| AlphaPlate | | | ✓ | ~ | | | ✓ ⁽⁴⁾ | | | ~ | | | | |
| CellCarrier | | ~ | \checkmark | ~ | ✓ | ✓ ⁽⁶⁾ | | \checkmark | ~ | ✓ ⁽⁶⁾ | | ~ | | |
| CellCarrier Ultra | | | ~ | | ✓ | | | \checkmark | | | | ~ | | |
| CulturPlate | ✓ ⁽¹⁾ | ~ | ✓ | ~ | ✓ | ✓ | | \checkmark | ~ | ~ | | | | |
| CytoStar T | | ~ | ✓ | | | ✓ | | \checkmark | | | | | \checkmark | |
| DELFIA | | ✓ ⁽⁵⁾ | ✓ ⁽¹⁾ | | | ✓ ⁽²⁾ | | | ✓ | | ✓ ⁽²⁾ | | | |
| FlashPlate | | ~ | ✓ | | | ✓ | | | | | | | ✓ | |
| Flexible | \checkmark | ✓ | | | | | | | | | | | \checkmark | |
| IsoPlate | | ✓ | | | ✓ | ✓ | | \checkmark | ✓ | ✓ | | | \checkmark | |
| Label-free | | ✓ | ✓ | | ✓ | | | \checkmark | ✓ | | | | | ✓ |
| LumaPlate | | ✓ | ✓ | | | ✓ | | | | | | | \checkmark | |
| OptiPlate | ✓ ⁽¹⁾ | ✓ | ✓ | \checkmark | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | | |
| PicoPlate | \checkmark | ✓ | | | | ✓ | | | | | | | \checkmark | |
| ProxiPlate | | ✓ | ✓ | | ✓ | ✓ | ✓ | \checkmark | ✓ | ✓ | | | | |
| ScintiPlate | | ✓ | | | | ✓ | | \checkmark | | | | | \checkmark | |
| SpectraPlate | | ✓ | ✓ | \checkmark | | | | \checkmark | | | ✓ | | | |
| StorPlate | | ✓ | ✓ | | | | | | | | | | | |
| UniFilter | ✓ | ~ | | | | ✓ | | | | | | | ~ | |
| ViewPlate | | ~ | ✓ | ~ | ✓ | ✓ | | \checkmark | ~ | ~ | | 🗸 ⁽³⁾ | | |
| VisiPlate | ✓ | | | | ✓ | ✓ | | \checkmark | \checkmark | \checkmark | ✓ | | \checkmark | |
| | ⁽¹⁾ White on | ly (2) Also | clear and yello | w ⁽³⁾ Black | only (4) lig | ght gray ⁽⁵⁾ | Also available | e as 8x12 stri | ps ⁽⁶⁾ 96-w | ell white only | | | | |

Microplate Surface Properties

| | МВ | НВ | PDL | тс | Collagen |
|------------------------|---|---|---|---|---|
| Treatment | None | Gamma Irradiated | PDL | Plasma | Collagen |
| Charge | (-) | (-) | (+) | (-) | (+) |
| Binding capacity | 220 ng/cm ² | 600 ng/cm ² | N/A | N/A | N/A |
| Binding Interaction | Hydrophobic | Hydrophobic & Ionic | Hydrophilic & Ionic | Hydrophobic & Ionic | Hydrophobic & Ionic |
| Sample Properties | Large biomolecules > 20 KD with large or abundant hydrophobic region ^s | Medium to large biomolecules > 10 KD that are positively charged with or without hydrophobic regions | Enhances cell attachment and binding | Allows cell attachment and binding | Enhances cell attachment and proliferation |
| Applications | Homogenous & heterogenous assays General purpose (dilutions, etc.) Colorimetric assays (protein quantification) AVOID: cell-based assays | Heterogeneous assays ELISA (perfect for immobilizing antibodies) | Used for difficult to attach cells Helps cells stay attached during wash steps HEK293 cells | Assays using adherent cell lines CHO Cells Note: Gamma irradiated (to sterilize) | Keratinocytes & Hepatocytes |

Microplate Chemical Compatibility Chart

This Chemical Compatibility Chart is only to be used for general guidelines of solvent compatibility. As there are many factors that can affect the behavior of solvents such as temperature, concentration, exposure duration, pressure, etc., it is recommended to perform testing under your own conditions.

Solvent

| Solvent | PS | PETG | РР |
|--------------------------|-----|------|-----|
| 2-Butanol | +/- | | + |
| 2-Propanol | +/- | | + |
| Acetic Acid, 5% | + | +/- | + |
| Acetic Acid, 50% | +/- | | + |
| Acetic Acid, Glacial | | | + |
| Acetic Acid, Anhydride | | | +/- |
| Acetone | | | + |
| Acetonitrile | | | |
| Acrylonitrile | | | +/- |
| Allyl Alcohol | +/- | | + |
| Ammonia | +/- | | + |
| Ammonia, 25% | + | | + |
| Ammonium Hydroxide, 30% | +/- | | + |
| Ammonium Hydroxide, 5% | + | +/- | + |
| Ammonium Salts | +/- | | + |
| Amyl Alcohol | +/- | | + |
| Aniline | _ | | +/- |
| Arsenic Acid | + | + | |
| Benzaldehyde | _ | - | + |
| Benzene | | | _ |
| Benzoic Acid, Sat | +/- | | + |
| Benzyl Alcohol | | | _ |
| Boric Acid | + | | + |
| Bromine | _ | | |
| Butyl Acetate | | | +/- |
| Calcium Hydroxide | +/- | | + |
| Calcium Hypochlorite | +/- | | + |
| Carbon Disulfide | | | - |
| Carbon Tetrachloride | | _ | +/- |
| Chlorine Water | | | +/- |
| Chlorine, 10%, Moist | | | +/- |
| Chlorine, 10%, Air | | | +/- |
| Chlroine, Wet Gas | | | |
| Chloroacetic Acid | +/- | | + |
| Chlorobenzene | | | - |
| Chloroform | | | _ |
| Chromic Acid, 10% | + | | + |
| Chromic Acid, 10% | - | | +/- |
| Citric Acid, 10% | + | | + |
| Cyclohexane | - | _ | - |
| Cyclohexanone | | | |
| Decahydronaphthaline | | | +/- |
| Diacetone | | | +/- |
| Diethyl Benzene | | | |
| Diethyl Ether | | | |
| Diethyl Ketone | | | +/- |
| Diethylene Glycol | +/- | | + |
| Dimethyl Acetamide | | | + |
| Dimethylformamide | | | + |
| Dimethylsulfoxide (DMSO) | + | | + |
| Dioxane | | | +/- |
| Ethanol, 40% | +/- | | + |
| | | | |
| Ether | | | - |
| Ethyl Acetate | | | + |
| Ethyl Alcohol | | | + |

| Solvent | rə | PEIG | rr |
|-----------------------------|-----|------|-----|
| Ethylbenzene | _ | _ | - |
| Ethyl Benzoate | | | +/- |
| Ethyl Chloride | | | |
| Ethylene Chloride | _ | | - |
| Ethylene Glycol | + | + | + |
| Fatty Acids | + | +/- | + |
| Formaldehyde, 40% | _ | | + |
| Formaldehyde, 10% | | | + |
| Formalin, 10% | _ | | + |
| Formalin, 40% | | | + |
| Formic Acid, 100% | | | + |
| Formic Acid, 85% | | | + |
| Formic Acid, 50% | | | + |
| Glutaraldehyde | + | +/- | + |
| Glycerine | + | | + |
| Hexane | - | | +/- |
| Hydrobromic Acid, 50% | _ | + | |
| Hydrochloric Acid, 36% | | | + |
| | - | | + |
| Hydrochloric Acid, 5% | + | | + |
| Hydrogen Peroxide, 30% | + | + | + |
| Hydrogen Peroxide, 3% | + | + | + |
| Isobutanol | +/- | | + |
| Isopropanol, 100% | + | | + |
| Isopropyl Acetate | | | +/- |
| Lactic Acid, 90% | +/- | - | + |
| Mercury | + | | + |
| Methanol, 100% | - | +/- | + |
| Methyl Acetate | - | | +/- |
| Methyl Ethyl Ketone | _ | _ | +/- |
| Methyl Propyl Ketone | | _ | +/- |
| Methylene Chloride | - | _ | |
| Nitric Acid, 25% | - | | |
| Nitric Acid, concentrated | - | - | |
| Nitrobenzene | _ | _ | - |
| Oxalic Acid, 10% | + | + | + |
| Phenol, 50% | | _ | |
| Phosphoric Acid, 85% | +/- | | + |
| Potassium Hydroxide, 25% | +/- | | + |
| Potassium Permanganate | +/- | | + |
| Propane Gas | | _ | - |
| Proprionic Acid | +/- | | + |
| Propylene Glycol | + | | + |
| Pyridine | _ | _ | |
| Sodium Hydroxide, 1% | + | + | + |
| Sodium Hydroxide, 10% | + | + | + |
| Sodium Hydroxide, 50% | + | _ | + |
| Stearic Acid | + | | + |
| Sulfur Dioxide | _ | | |
| Sulfuric Acid, concentrated | _ | | _ |
| Tartaric Acid | +/- | | + |
| Tetrahydrofuran | | | +/- |
| Toluene | | _ | |
| | | | |
| | | | |
| Trichloroethylene Urea | + | | + |

PS

PETG

PP

Suitable for use with solvent.

+/- Effects occur with exposure.

Testing should be performed to ensure compatibility.

Not recommended for use.

PP = polypropylene

PETG = polyethylene G (Flexible microplates)

REFERENCE TABLES

Microplate Specifications

| | | | | <u>Well Volume (µL)</u> | | Plate dimensions (mm) | | | Well Dimensions (mm) | | Well Offset (mm) | | Well-to-Well |
|-------------------------|---------|----------|----------|-------------------------|------------------|-----------------------|--------|-------|----------------------|-------|------------------|------------|--------------|
| Plate | # Wells | # Rows | # Cols | Total | Working | Height | Length | Width | Diameter‡ | Depth | | A1 to Side | |
| ½AreaPlate | 96 | 8 | 12 | 180 | 40 - 160 | 14.40 | 127.76 | 85.48 | 5.0 | 11.50 | 11.24 | 14.38 | 9.00 |
| AlphaPlate | 384 | 16 | 24 | 112 | 24 - 90 | 14.40 | 127.76 | 85.47 | 3.65 | 10.45 | 8.99 | 12.14 | 4.50 |
| AlphaPlate Shallow Well | 384 | 16 | 24 | 28 | 10 - 20 | 14.35 | 127.76 | 85.48 | 3.30 | 5.30 | 8.99 | 12.13 | 4.50 |
| AlphaPlate | 1536 | 32 | 48 | 12 | 4 - 10 | 14.35 | 127.76 | 85.48 | 1.70 | 4.80 | 7.84 | 10.96 | 2.25 |
| CellCarrier * | 96 | 8 | 12 | 392 | 80 - 350 | 14.40 | 127.76 | 85.48 | 6.58 | 10.90 | 11.24 | 14.38 | 9.00 |
| CellCarrier * | 384 | 16 | 24 | 105 | 25 – 90 | 14.40 | 127.76 | 85.48 | 3.27 | 12.40 | 8.99 | 12.13 | 4.50 |
| CellCarrier * | 1536 | 32 | 48 | 12 | 4 - 10 | 7.00 | 127.76 | 85.48 | 1.53 | 5.0 | 7.87 | 11.01 | 2.25 |
| CellCarrier Ultra* | 384 | 16 | 24 | 145 | 25 - 100 | 14.35 | 127.76 | 84.48 | 3.26 | 13.1 | 8.99 | 12.13 | 4.50 |
| CulturPlate | 24 | 4 | 6 | 2390 | 0.5 – 2.39 mL | 18.70 | 127.80 | 85.60 | 14.00 | 16.10 | 11.92 | 12.41 | 20.60 |
| CulturPlate | 96 | 8 | 12 | 400 | 80 - 350 | 14.60 | 127.76 | 85.47 | 7.15 | 10.80 | 11.24 | 14.38 | 9.00 |
| CulturPlate | 384 | 16 | 24 | 112 | 24 -90 | 14.40 | 127.76 | 85.47 | 3.65 | 10.45 | 8.99 | 12.14 | 4.50 |
| CulturPlate | 1536 | 32 | 48 | 12 | 4 - 10 | 14.35 | 127.76 | 85.48 | 1.70 | 4.80 | 7.84 | 10.96 | 2.25 |
| CytoStar-T | 96 | 8 | 12 | 350 | 100 – 250 | 14.22 | 127.76 | 85.47 | 6.86 | 10.67 | 11.23 | 14.35 | 9.00 |
| CytoStar-T | 384 | 16 | 24 | 105 | 25 – 90 | 14.22 | 127.76 | 85.47 | 3.63 | 11.43 | 8.99 | 12.12 | 4.5 |
| DELFIA yellow | 96 | 8 | 12 | 350 | 100 - 200 | 14.40 | 127.76 | 85.48 | 6.97 | 11.40 | 11.30 | 14.30 | 9.00 |
| DELFIA Stripwell | 96 | 8 strips | 12 wells | 350 | 100 - 200 | 14.10 | 127.76 | 85.47 | 7.00 | 9.00 | 9.10 | 14.30 | 9.00 |
| DELFIA white | 384 | 16 | 24 | 112 | 24 - 90 | 14.40 | 127.76 | 85.47 | 3.65 | 10.45 | 8.99 | 12.14 | 4.50 |
| FlashPlate | 96 | 8 | 12 | 400 | 100 - 200 | 14.60 | 127.76 | 85.47 | 7.15 | 10.80 | 11.24 | 14.38 | 9.00 |
| FlashPlate | 384 | 16 | 24 | 112 | 25 - 50 | 14.40 | 127.76 | 85.47 | 3.65 | 10.45 | 8.99 | 12.14 | 4.50 |
| Flexible PET plates | 24 | 4 | 6 | 1400 | 0.5 – 1.0 mL | 14.0 | 128.0 | 86.0 | 12.30 | 12.40 | 16.00 | 19.30 | 18.00 |
| Flexible PET plates | 96 | 8 | 12 | 400 | 100 - 300 | 14.0 | 128.0 | 86.0 | 6.60 | 12.30 | 11.70 | 14.90 | 9.00 |
| IsoPlate | 96 | 8 | 12 | 370 | 80 - 350 | 14.70 | 127.60 | 85.60 | 6.50 | 11.45 | 11.30 | 14.30 | 9.00 |
| Label-free | 96 | 8 | 12 | 209 | 50 - 100 | 14.22 | 127.76 | 85.48 | 4.50 | 11.78 | 11.24 | 14.38 | 9.00 |
| Label-free | 384 | 16 | 24 | 82 | 15 – 50 | 14.22 | 127.76 | 85.48 | 2.82 | 10.92 | 8.99 | 12.13 | 4.50 |
| LumaPlate | 96 | 8 | 12 | 100 | 50 - 90 | 14.45 | 127.76 | 85.47 | 7.15 | 3.25 | 11.24 | 14.38 | 9.00 |
| LumaPlate Deepwell | 96 | 8 | 12 | 400 | 50 - 380 | 14.60 | 127.76 | 85.47 | 7.15 | 10.80 | 11.24 | 14.38 | 9.00 |
| LumaPlate Deepwell | 384 | 16 | 24 | 105 | 25 – 50 | 14.40 | 127.76 | 85.47 | 3.65 | 10.45 | 8.99 | 12.14 | 4.50 |

* Detailed dimension for use in HCS with our Opera/Operetta systems can be found here: www.perkinelmer.com/askmicroplates

‡ Diameter listed is for the functional part of the well - the Top of the well for Opaque plates and the bottom well diameter for clear-bottom plates.

REFERENCE TABLES

Microplate Specifications Continued

| Plate | # Wells | # Rows | # Cols | <u>Well Vo</u> Total | <u>lume (μL)</u> Working | <u>Plate</u> Height | dimensions Length | <u>; (mm)</u> Width | Well Dimer Diameter‡ | n <u>sions (mm)</u> Depth | Well Off A1 to Top | <u>set (mm)</u> A1 to Side | <u>Well–to–Well</u> Spacing (mm) |
|---------------------------|---------|--------|--------|-------------------------|-----------------------------|------------------------|----------------------|------------------------|-------------------------|------------------------------|-----------------------|-------------------------------|-------------------------------------|
| OptiPlate | 24 | 4 | 6 | 2390 | 0.5 – 2.20 mL | 18.70 | 127.80 | 85.60 | 14.00 | 16.10 | 11.92 | 12.41 | 20.60 |
| OptiPlate | 96 | 8 | 12 | 400 | 80 – 350 | 14.60 | 127.76 | 85.47 | 7.15 | 10.80 | 11.24 | 14.38 | 9.00 |
| OptiPlate | 384 | 16 | 24 | 112 | 24 – 90 | 14.40 | 127.76 | 85.47 | 3.65 | 10.45 | 8.99 | 12.14 | 4.50 |
| OptiPlate | 1536 | 32 | 48 | 12 | 4 - 10 | 14.35 | 127.76 | 85.48 | 1.70 | 4.80 | 7.84 | 10.96 | 2.25 |
| PicoPlate | 24 | 4 | 6 | 1800 | 0.5 – 1.70 mL | 18.70 | 127.80 | 85.60 | 14.00 | 9.40 | 11.59 | 12.01 | 20.28 |
| PicoPlate | 96 | 8 | 12 | 400 | 80 - 350 | 14.60 | 127.80 | 85.60 | 7.00 | 11.30 | 11.40 | 14.50 | 8.99 |
| ProxiPlate | 96 | 8 | 12 | 100 | 50 - 90 | 14.45 | 127.76 | 85.47 | 7.15 | 3.25 | 11.24 | 14.38 | 9.00 |
| ProxiPlate | 384 | 16 | 24 | 28 | 10 - 20 | 14.35 | 127.76 | 85.48 | 3.30 | 5.30 | 8.99 | 12.13 | 4.50 |
| ScintiPlate | 96 | 8 | 12 | 370 | 80 - 350 | 14.70 | 127.60 | 85.60 | 6.50 | 11.45 | 11.30 | 14.30 | 9.00 |
| SpectraPlate | 96 | 8 | 12 | 400 | 80 - 350 | 14.60 | 127.76 | 85.47 | 7.15 | 10.80 | 11.24 | 14.38 | 9.00 |
| SpectraPlate | 384 | 16 | 24 | 105 | 25 – 90 | 14.40 | 127.76 | 85.47 | 3.65 | 10.45 | 8.99 | 12.14 | 4.50 |
| SpectraPlate | 1536 | 32 | 48 | 12 | 4 - 10 | 14.35 | 127.76 | 85.48 | 1.70 | 4.80 | 7.84 | 10.96 | 2.25 |
| StorPlate U-bottom | 96 | 8 | 12 | 450 | 80 - 350 | 14.35 | 127.75 | 85.48 | 3.50 | 11.43 | 11.20 | 14.38 | 9.00 |
| StorPlate V-bottom | 96 | 8 | 12 | 450 | 80 - 350 | 14.35 | 127.60 | 85.48 | 3.50 | 12.43 | 11.20 | 14.38 | 9.00 |
| StorPlate DW (1.1mL) | 96 | 8 | 12 | 1100 | 0.2 – 1 mL | 27.00 | 127.70 | 85.60 | 8.50 | 24.50 | 11.30 | 14.30 | 9.00 |
| StorPlate DW (2mL) | 96 | 8 | 12 | 2000 | 0.2 – 1.9 mL | 44.00 | 127.70 | 85.80 | 8.50 | 41.50 | 11.30 | 14.30 | 9.00 |
| StorPlate V-bottom | 384 | 16 | 24 | 120 | 25 – 110 | 14.35 | 127.75 | 85.45 | square | 11.85 | 8.99 | 12.13 | 4.50 |
| StorPlate DW V-bottom | 384 | 16 | 24 | 240 | 25 - 230 | 24.75 | 127.75 | 85.48 | square | 22.31 | 8.99 | 12.13 | 4.50 |
| UniFilter | 24 | 4 | 6 | 600 | 200 - 600 | 18.70 | 127.80 | 85.60 | 14.00 | 4.35 | 11.59 | 12.01 | 20.50 |
| UniFilter | 96 | 8 | 12 | 150 | 80 - 150 | 14.60 | 127.80 | 85.60 | 6.96 | 3.20 | 11.35 | 14.45 | 8.99 |
| Glass-Bottom ViewPlate | 96 | 8 | 12 | 300 | 50 -200 | 11.60 | 127.75 | 85.34 | 6.00 | 11.35 | 11.30 | 14.30 | 9.00 |
| ViewPlate | 96 | 8 | 12 | 350 | 80 -200 | 14.61 | 127.81 | 85.65 | 6.10 | 11.40 | 11.30 | 14.30 | 9.00 |
| ViewPlate | 384 | 16 | 24 | 135 | 25 – 100 | 14.40 | 127.76 | 85.48 | 3.30 | 11.50 | 8.99 | 12.13 | 4.50 |
| ViewPlate | 1536 | 32 | 48 | 12 | 4 - 10 | 10.40 | 127.76 | 85.48 | 1.53 | 5.00 | 7.87 | 11.01 | 2.25 |
| 1/2Area ViewPlates | 96 | 8 | 12 | 190 | 15 - 175 | 14.40 | 127.76 | 85.48 | 4.38 | 11.50 | 11.24 | 14.38 | 9.00 |
| VisiPlate | 24 | 4 | 6 | 3200 | 0.5 – 3 mL | 20.00 | 127.80 | 85.90 | 14.00 | 18.35 | 16.20 | 19.30 | 17.90 |

+ Diameter listed is for the functional part of the well - the Top of the well for Opaque plates and the bottom well diameter for clear-bottom plates.

For our most up-to-date catalog of products: www.perkinelmer.com/microplates For more detailed technical and assay information, www.perkinelmer.com/askmicroplates

PerkinElmer, Inc. 940 Winter Street Waltham, MA 02451 USA P: (800) 762-4000 or (+1) 203-925-4602 www.perkinelmer.com



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