

# TELOS MICROPLATE™

## *The Versatile 96-well Plate for Small Volume Biological Fluid Samples*

- Versatile 96-well format for small volume biological fluid samples
- Optimised well geometry for 5 and 10mg sorbent mass
- 50µl elution volume for minimal sample dilution and reduced evaporation time
- Populated plates and loose wells
- Compatible with vacuum and positive pressure
- Automation compatible

Developments in LC-MS/MS detection levels have seen biological fluid sample volumes reduced to an extent that conventional SPE formats are not always suitable, or provide considerable analyte dilution and extended evaporation times. When extracting from sample volumes of less than 100µl, it is important the elution volumes and the sample preparation format are fully compatible with the original sample volumes being processed.



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The new TELOS MicroPlate™ is optimised for the sample processing and extraction of small volume biological fluids. The internal diameter, frit design and sorbent allow biological fluid samples to be processed. The TELOS MicroPlate is a modular design, allowing for flexibility in sample numbers. Full or partially populated plates can be processed using vacuum or positive pressure. In addition, the well outlet design ensures good collection plate penetration, removing any possibility of well to well cross contamination.

### Sorbents

The TELOS MicroPlate is available in 5 and 10mg sorbent masses, packed with five TELOS *neo* SPE Sorbents - PRP, PCX, WCX, PAX and WAX.

### Well Design

The individual well of the TELOS MicroPlate is designed to both allow maximum interaction between the analyte and sorbent and ensure elution volumes are kept to a minimum. This is particularly important for sample volumes of 100µl and less, and ensures minimal evaporation times prior to analysis by LC-MS/MS.

The optimised well and frit design (see Figure 1) of the TELOS MicroPlate provide an overall bed volume of 10 - 15µl. A well packed with 5mg sorbent allows analytes to be eluted in as little as 50µl (see Table 1).

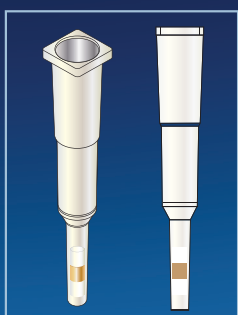


Figure 1: TELOS MicroPlate well design

### Populated Plates and Loose Wells

The TELOS MicroPlate is available as either populated plates or loose wells. This allows the product to be used for both high throughput assays (populated plate) and assays where the sample numbers vary, populating the base plate with the required number of wells. When using vacuum, the unrequired ports on the base plate can be sealed.

The individual wells can be removed or added very easily, with a secure “click” when the wells are added to the base plate. A well removing tool facilitates the easy removal of individual wells.



### Vacuum and Positive Pressure

The TELOS MicroPlate is compatible with both vacuum and positive pressure manifolds. The well outlets extend beyond the plate “shelf” and ensure they fully penetrate the collection plate.

### Recovery and Elution Volumes

The TELOS MicroPlate 5mg plate allows elution volumes of 50µl. The following recovery data and elution volumes are for two β-blockers, Metoprolol and Propranolol, when extracted from human plasma (50µl) using a TELOS *neo* PRP 5mg MicroPlate.

ANALYTE	CONCENTRATION	MEAN RECOVERY (%)	RSD (%)
Metoprolol	0.5ng/ml	86.8	3.93
	2.5ng/ml	92.6	3.12
	10ng/ml	93.9	2.21
Propranolol	1ng/ml	88.1	3.54
	5ng/ml	90.2	2.03
	20ng/ml	95.6	3.17

Table 1: Recoveries for Metoprolol and Propranolol using 50µl elution



## Ordering Information

The TELOS MicroPlate is available as either populated plates or loose wells.

### TELOS MicroPlate: Populated Plates

PART NUMBER	DESCRIPTION	PACK SIZE
<b>TELOS neo PRP</b>		
600-005-096MP	TELOS neo PRP MicroPlate, 5mg (populated plate)	Each
600-010-096MP	TELOS neo PRP MicroPlate, 10mg (populated plate)	Each
<b>TELOS neo PCX</b>		
620-005-096MP	TELOS neo PCX MicroPlate, 5mg (populated plate)	Each
620-010-096MP	TELOS neo PCX MicroPlate, 10mg (populated plate)	Each
<b>TELOS neo WCX</b>		
640-005-096MP	TELOS neo WCX MicroPlate, 5mg (populated plate)	Each
640-010-096MP	TELOS neo WCX MicroPlate, 10mg (populated plate)	Each
<b>TELOS neo PAX</b>		
660-005-096MP	TELOS neo PAX MicroPlate, 5mg (populated plate)	Each
660-010-096MP	TELOS neo PAX MicroPlate, 10mg (populated plate)	Each
<b>TELOS neo WAX</b>		
680-005-096MP	TELOS neo WAX MicroPlate, 5mg (populated plate)	Each
680-010-096MP	TELOS neo WAX MicroPlate, 10mg (populated plate)	Each

### TELOS MicroPlate: Populated Plates

PART NUMBER	DESCRIPTION	PACK SIZE
<b>TELOS neo PRP</b>		
600-005-096LW	TELOS neo PRP MicroPlate, 5mg (loose wells)	100
600-010-096LW	TELOS neo PRP MicroPlate, 10mg (loose wells)	100
<b>TELOS neo PCX</b>		
620-005-096LW	TELOS neo PCX MicroPlate, 5mg (loose wells)	100
620-010-096LW	TELOS neo PCX MicroPlate, 10mg (loose wells)	100
<b>TELOS neo WCX</b>		
640-005-096LW	TELOS neo WCX MicroPlate, 5mg (loose wells)	100
640-010-096LW	TELOS neo WCX MicroPlate, 10mg (loose wells)	100
<b>TELOS neo PAX</b>		
660-005-096LW	TELOS neo PAX MicroPlate, 5mg (loose wells)	100
660-010-096LW	TELOS neo PAX MicroPlate, 10mg (loose wells)	100
<b>TELOS neo WAX</b>		
680-005-096LW	TELOS neo WAX MicroPlate, 5mg (loose wells)	100
680-010-096LW	TELOS neo WAX MicroPlate, 10mg (loose wells)	100

### TELOS MicroPlate: Method Development Kit

PART NUMBER	DESCRIPTION	PACK SIZE
000-010-096LW	TELOS MicroPlate Method Development Kit, 10mg (loose wells)*	100

\*contains 20 x 10mg wells of TELOS neo PRP, PCX, WCX, PAX and WAX, a base plate, base plate sealing strips and well removing tool.

### TELOS MicroPlate: Accessories

PART NUMBER	DESCRIPTION	PACK SIZE
000-0000-096BP	TELOS MicroPlate Base Plate	5
000-0000-096SS	TELOS MicroPlate Base Plate Sealing Strips	25
000-0000-096WT	Well Removing Tool	1

## Additional Information

Further product information is available on the TELOS *neo* Sorbents for generic SPE. Please request the Product Sheet from your local Kinesis Representative or Distributor.

Kinesis presented scientific posters at The 6<sup>th</sup> European Bioanalytical Forum (*Barcelona, Spain*) and Eastern Analytical Symposium (*EAS, Somerset, NJ*) in 2013. To request a copy of the poster please contact your local Kinesis Representative or Distributor.

## Related Kinesis Products for the Processing and Analysis of Biological Fluid Samples

**TELOS**  
**HPLC AND UHPLC COLUMNS**

- Comprehensive range of high density bonded phases producing robust materials
- Wide range of selectivities utilising bonded phases from C8, C18, C18 Acid/Base Deactivated and C18 Polar phases to Silica HILIC and Cyano
- Unique selectivities of Phenyl Hexyl and Penta Fluoro Phenyl
- Low bleed Penta Fluoro Phenyl and mass spec optimised C18
- 300Å C4 for peptides and proteins

Kinesis has developed a range of TELOS<sup>®</sup> HPLC and UHPLC Columns. Expertise in high purity silica selection, surface modification, high density bonding technology and column packing technology has enabled Kinesis to produce high quality materials which encompass a vast range in selectivities. TELOS HPLC and UHPLC Columns provide superior reliability, reproducibility and performance, with excellent selectivity.

TELOS HPLC & UHPLC Columns are available packed with a variety of standard and wide pore materials, and optimum column geometries for 1.8, 3 and 5µm particle sizes.



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**TELOS *neo***  
Polymeric Solid Phase  
Extraction Columns



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**Deep Well Plates and Sealing Mats**

The KX range of plates and mats from Kinesis is suitable for a wide range of applications including high throughput screening, in-vitro growth chambers, compound storage and sample collection in life science applications and small molecule research.

**Deep Well Plates**

- Manufactured from 100% virgin polypropylene
- Manufactured to comply with ANSI/SBS dimensions
- Excellent chemical resistance and temperature stability
- RNase, DNase and endotoxin free
- Light sensitive plates available
- Ideal for LC/MS applications

The KX range of 96 and 384 well plates are designed for use in compound storage, reagent transfer and mixing. Several options are available to suit your application. The round well plate reduces the tendency for "crosstalk" common in square well plates resulting in reduced sample capacity. Plates with 18-shaped well bottom generally aid re-suspension, while conical or V-bottom plates are recommended for sample recovery.

KX plates are compatible with solvents, including phenols, chloroform and DMSO and will stand temperatures from -80 through to +120°C.

**Silicone Sealing Mats**

- Prevent cross contamination by individually sealing each well
- 96 and 384 well formats for both square and round wells
- Pre-pierced option

Plates in 96 and 384 well format are often the preferred platform for sample storage prior to analysis in scientific techniques and offer significant advantages over sample vials. Sealing foil and PTFE mats do not seal the wells effectively or re-seal following injection or pipetting leading to evaporation and cross contamination.

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