

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.



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).

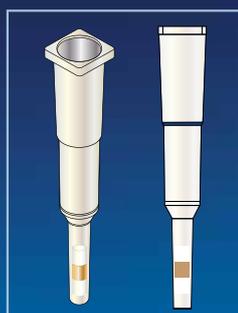


Figure 1: TELOS MicroPlate well design

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
TELOS neo PRP		
600-005-096MP	TELOS neo PRP MicroPlate, 5mg (populated plate)	Each
600-010-096MP	TELOS neo PRP MicroPlate, 10mg (populated plate)	Each
TELOS neo PCX		
620-005-096MP	TELOS neo PCX MicroPlate, 5mg (populated plate)	Each
620-010-096MP	TELOS neo PCX MicroPlate, 10mg (populated plate)	Each
TELOS neo WCX		
640-005-096MP	TELOS neo WCX MicroPlate, 5mg (populated plate)	Each
640-010-096MP	TELOS neo WCX MicroPlate, 10mg (populated plate)	Each
TELOS neo PAX		
660-005-096MP	TELOS neo PAX MicroPlate, 5mg (populated plate)	Each
660-010-096MP	TELOS neo PAX MicroPlate, 10mg (populated plate)	Each
TELOS neo WAX		
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
TELOS neo PRP		
600-005-096LW	TELOS neo PRP MicroPlate, 5mg (loose wells)	100
600-010-096LW	TELOS neo PRP MicroPlate, 10mg (loose wells)	100
TELOS neo PCX		
620-005-096LW	TELOS neo PCX MicroPlate, 5mg (loose wells)	100
620-010-096LW	TELOS neo PCX MicroPlate, 10mg (loose wells)	100
TELOS neo WCX		
640-005-096LW	TELOS neo WCX MicroPlate, 5mg (loose wells)	100
640-010-096LW	TELOS neo WCX MicroPlate, 10mg (loose wells)	100
TELOS neo PAX		
660-005-096LW	TELOS neo PAX MicroPlate, 5mg (loose wells)	100
660-010-096LW	TELOS neo PAX MicroPlate, 10mg (loose wells)	100
TELOS neo WAX		
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 6th 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 utilizing bonded phases from C₈, C₁₈, C₁₈ AcidBase, Desalted and C₁₈ Polar phases to Silica HPLC and Cyano
- Unique selectivities of Phenyl Hexyl and Penta Fluoro Phenyl
- Low Mixed Penta Fluoro Phenyl and mass spec optimised C₁₈
- 300Å C₄ for antibodies and proteins

Kinesis has developed a range of TELOS[®] 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 columns with consistent performance across a wide range of applications. TELOS[®] HPLC and UHPLC columns provide superior stability, reproducibility and performance with superior selectivity.

TELOS[®] HPLC and UHPLC columns are available packed with a variety of bonded and wide pore materials and different column geometries for U.S. & non-USA markets.

Kinesis
Scientific Experts

TELOS neo
Polymeric Solid Phase
Extraction Columns

Kinesis
Scientific Experts

Deep Well Plates and Sealing Mats

The KK 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 the lab and applications and small molecule research.

Deep Well Plates

- Manufactured from 100% virgin polystyrene
- Manufactured to comply with ANSI/SBS dimensions
- Excellent chemical resistance and temperature stability
- White, clear and amber base
- Light sensitive plates available
- Ideal for LC-MS applications

The KK range of 96 and 384 well plates are designed for use in compound storage, sample transfer and testing. These plates are well suited for high throughput applications. The clear well plates reduce the number of the "empty" wells in a single well plate resulting in higher throughput. The white and amber plates are ideal for applications where light sensitivity is a concern. The plates are available in a variety of well volumes and are recommended for assay screening.

KK plates are compatible with inserts, including phenolic, polystyrene and PS/PC and well depth configurations from 40 to 200µl.

Silicone Sealing Mats

- Prevents evaporation and contamination
- Prevents leakage and spill
- 96 and 384 well formats for both liquid and solid wells
- Free standing design

Plates in 96 and 384 well format offer the standard options for screen storage plate to include an insert, horizontal and vertical. The mats are made of high quality silicone and are suitable for use with the wide variety of plates in the KK range. The mats are designed for use in high throughput applications.

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