

Advanced Cell Culture Solutions for Your Seahorse XF Analyzer

Agilent sensor cartridges and cell culture microplates





Gain a Clearer Picture of What Your Cells Are Doing

Comprising instruments, assay kits, software, and consumables, Agilent Seahorse XF platforms are designed to support you from sample to insight.





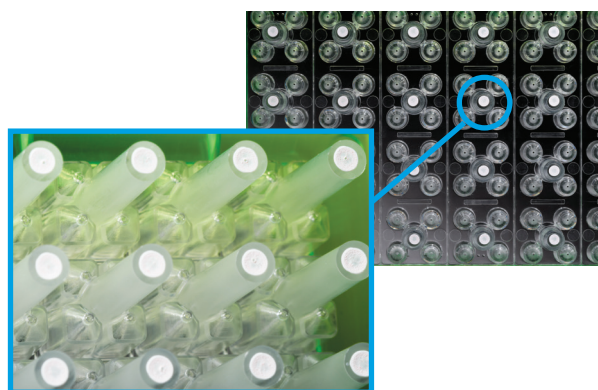
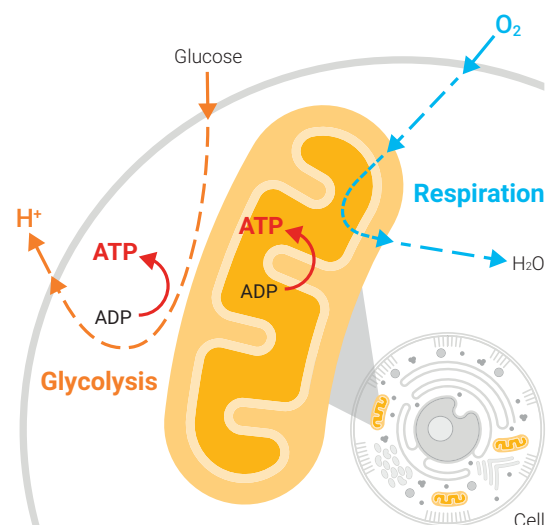
Sensor cartridges for reliable kinetic measurements

Cellular oxygen consumption (respiration) and proton excretion (glycolysis) cause rapid changes to the concentrations of dissolved oxygen and free protons. Agilent sensor cartridges for Seahorse XF analyzers ensure sensitive, kinetic measurements to simultaneously analyze both metabolic energy pathways.

Key features

- Proprietary transient microchamber improves analytical sensitivity and signal-to-noise of OCR and ECAR readings.
- Solid-state sensor probes containing polymer-embedded fluorophores detect oxygen and proton levels in cell culture media. The probes reside 200 μm^* above the cells and take measurements every few seconds.
- Integrated injection ports—a proprietary design—let you add compounds, stimulators, inhibitors, substrates, and beads conjugated with antigens.
- Sensors are spotted onto the cartridge using both manual and machine vision inspection.
- Every lot is 100% quality controlled for performance and lot-to-lot consistency.

* Microchamber volume differs by tissue culture plate type.



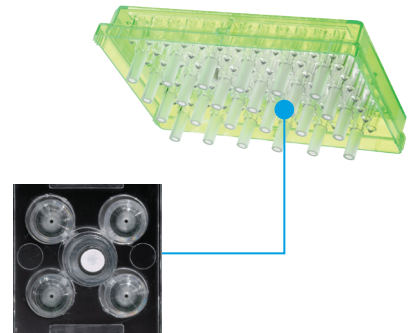
Agilent Seahorse XF FluxPaks Take You from Sample to Insight

Convenient FluxPaks contain the essential consumables you need to perform XF assays.

Sensor cartridges

The essential component for simultaneously measuring bioenergetic pathways.

- Non-invasive sensors to measure dissolved oxygen and free protons
- Four injection ports
- Lot-to-lot consistency
- High-precision manufacturing process
- One-year shelf life from manufacturing date
- Proprietary design



Cell culture microplates

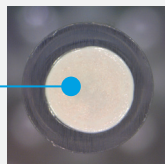
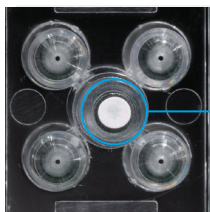
Choose from many plates to suit your application and sample type. See page 8 for a complete list.

- Tissue culture treated and irradiated for sterility
- Tapered walls to facilitate cartridge alignment, especially at low volumes
- Well “bumps” define microchamber height and volume
- Conforms to ANSI/SLAS microplate standards for footprint dimensions and well positions.
- Polystyrene material
- Living cells, isolated mitochondria, islets, tissue, spheroids, and organoids
- Poly-D-Lysine 96- and 8-well formats



Calibrant and calibration plates

- Premixed calibrant: ready to use and optimized for XF sensor cartridge calibration
- Calibration plates: suitable for calibration and hydration
- Hydro Booster: optimize hydration workflow

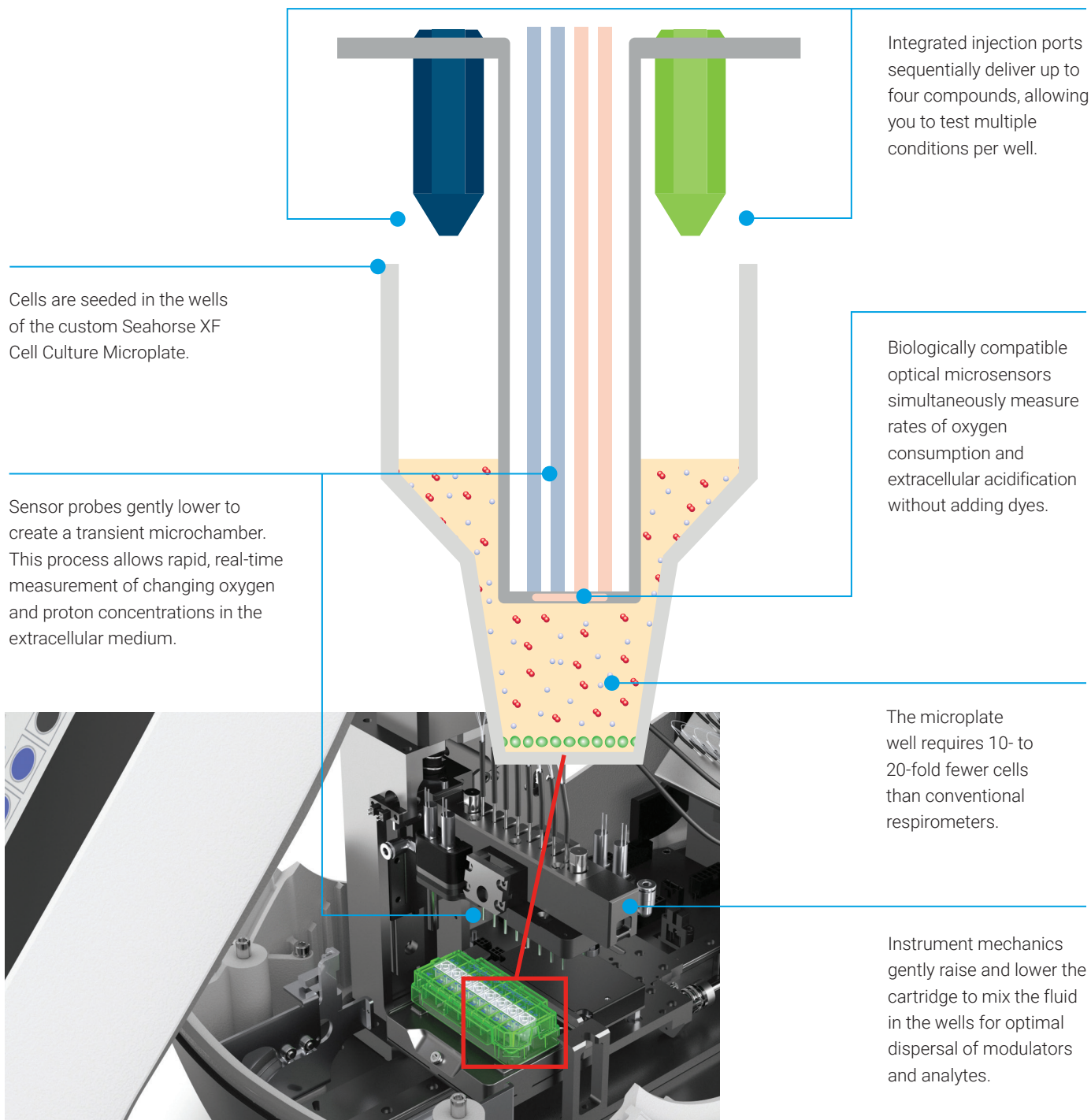


Precise sensor cartridge spotting

High-resolution machine vision imaging inspects the spot quality on every cartridge.

Seahorse XF Technology: A Closer Look

The integrated drug delivery system lets you sequentially add up to four compounds per well, so you can perform a complete mitochondrial or glycolytic kinetic assessment.

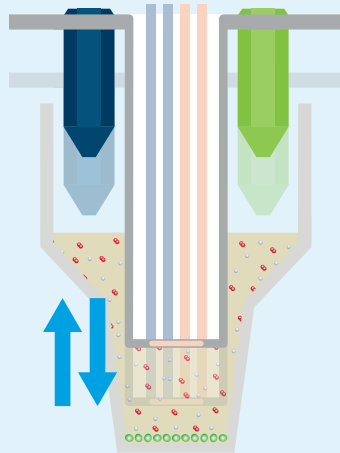


What happens during a measurement cycle?

Each measurement cycle amounts to one time point; over time, the kinetic data is plotted and displayed.

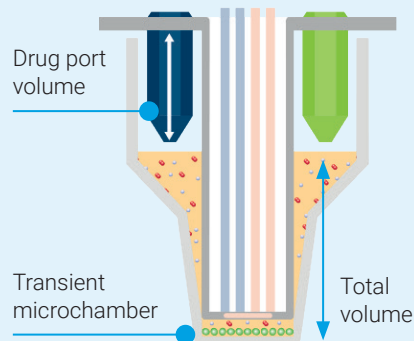
Mix

When the assay starts, the sensor cartridge probes lower into each well and repeatedly mixes the culture medium.



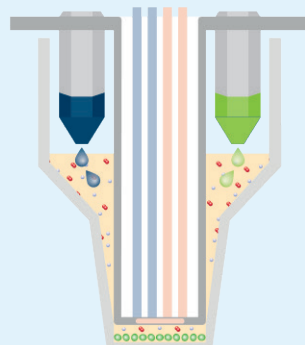
Measure

The probes lower to form the extremely small volume of the transient microchamber.



Inject

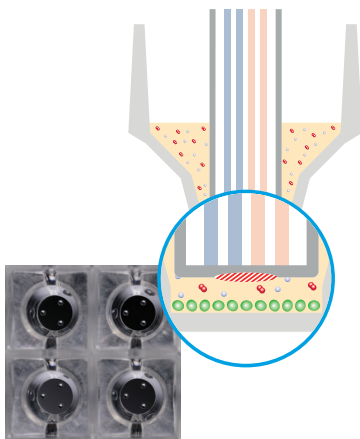
After a series of basal measurements, constituents are injected from the drug ports into the culture medium at user-programmable intervals.



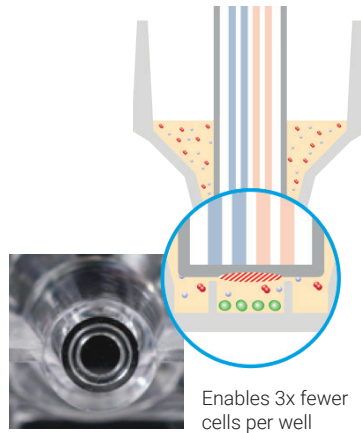
Cell Culture Microplate Types and Specifications



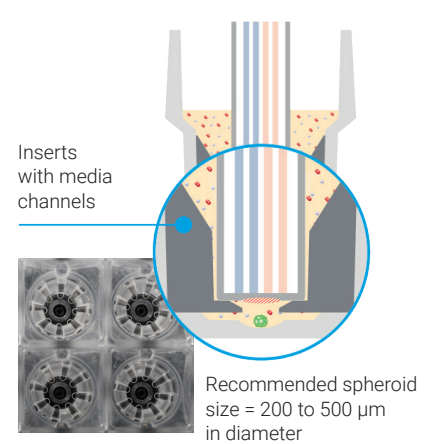
Standard Microplate



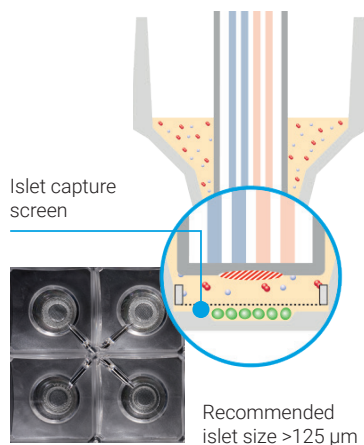
XF HS Miniplate



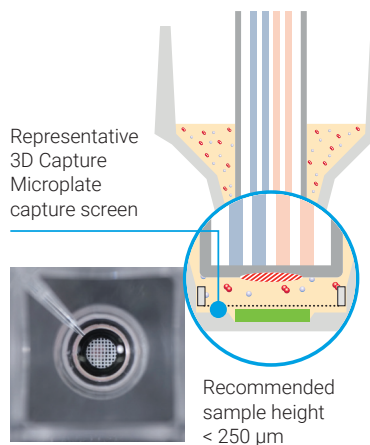
Spheroid Microplate



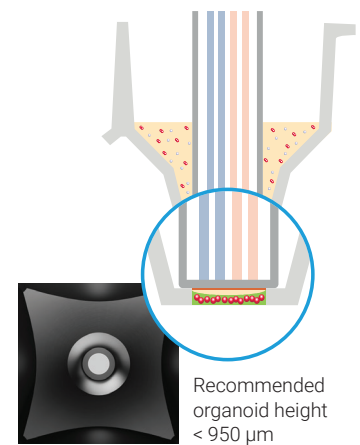
Islet Capture Microplate

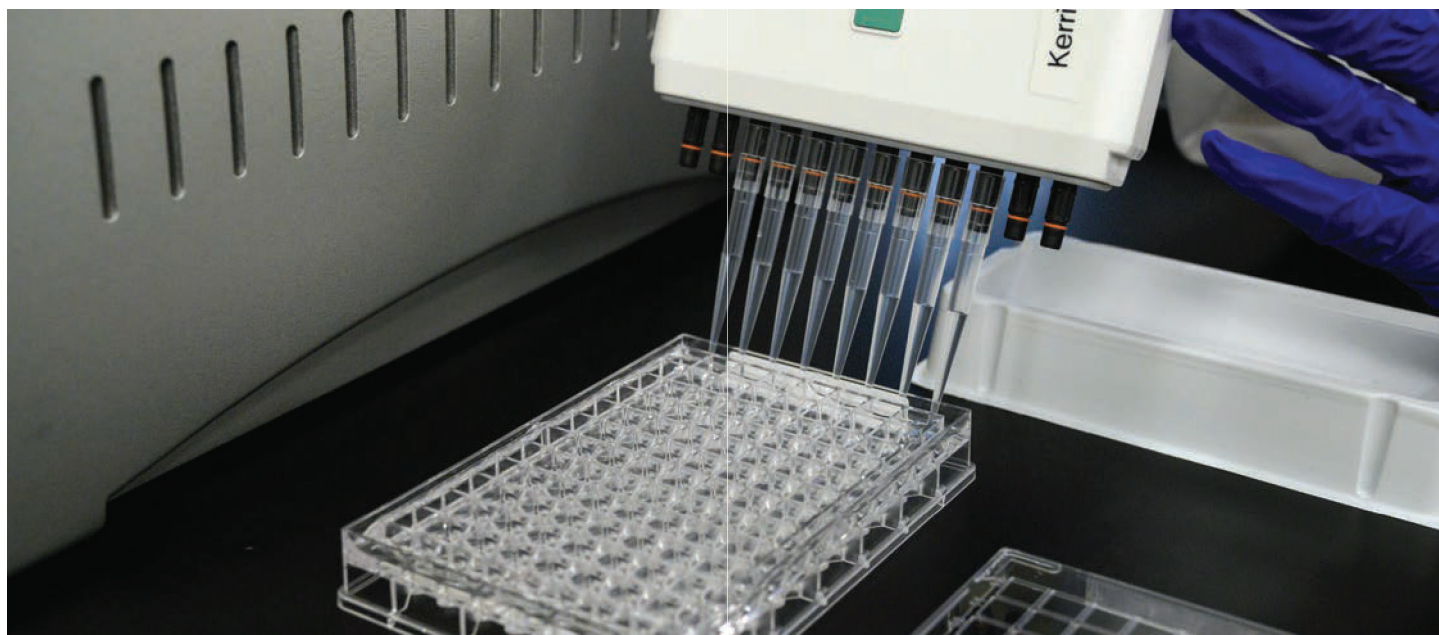


3D Capture Microplate-S/-L



Organoid Microplate





Seahorse XF Cell Culture Microplates and Miniplates can be modified with substrates to improve cellular adherence. You can purchase precoated Poly-D-Lysine plates or modify manually (such as collagen or Cell-Tak).

Analyzer	Plate Type	Number of Wells	Total Volume (μL)	Microchamber Volume (μL)	Height of Microchamber (μm)	Material	Cell Types	Isolated Mitochondria	Part Number
XF Pro	V3 PS (M Type plate)	96	250	2.28	203	PS	2-D, monolayer	Yes	103774-100
XFe96 or XF Pro	V3 PS	96	250	2.28	203	PS	2-D, monolayer	Yes	103794-100
XFe96 or XF Pro	V3 PS (+PDL)	96	250	2.28	203	Poly-D-Lysine on PS	2-D, suspension and monolayer	Yes	103799-100
XFe96 or XF Pro	Spheroid	96	250	3.69	856	PS	3-D, spheroids	No	102978-100
XFe24/XF Flex	V7 PS	24	1,000	5.65	203	PS	2-D, monolayer	Yes	100777-004
XFe24/XF Flex	V28 PS	24	1,000	22.2	813	PS	2-D, monolayer	No	100882-004
XFe24	Islet	24	1,000	16.87	1,422	PS	3-D, islets	No	101122-100
XF HS Mini or XFp	V3 PS	8	250	2.28	203	PS	2-D, monolayer	Yes	103025-100
XF HS Mini or XFp	V3 PS (+PDL)	8	250	2.28	203	Poly-D-Lysine on PS	2-D, suspension and monolayer	Yes	103721-100
XF HS Mini	PS	8	250	0.69	203	PS	High sensitivity* 2-D; suspension and monolayer	Yes	103725-100
XF HS Mini	PS (+PDL)	8	250	0.69	203	Poly-D-Lysine on PS	High sensitivity* 2-D; suspension and monolayer	Yes	103727-100
XF Flex	3D Capture-L	24	1,000	8.5	762	PS	Tissue/Large 3D Models	No	103862-100
XF Flex	3D Capture-S	24	1,000	8.5	762	PS	Islets/Small 3D Models	No	103875-100
XF Flex	Organoid	24	1,000	12.6	950	PS	Embedded 3D Organoid Models	No	103865-100

PS = Polystyrene

* = XF HS Miniplate enables fewer cells per well.

Ordering information for Agilent Seahorse XF plastic ware

Product Description	Product Content	Part Number
XF Pro Analyzer		
Seahorse XF Pro M FluxPak	18 96-well sensor cartridges, 18 XF Pro M microplates	103775-100
Seahorse XF Pro M FluxPak Mini	6 96-well sensor cartridges, 6 XF Pro M microplates	103777-100
Seahorse XF Pro M Microplates	6 XF Pro M microplates	103774-100
Seahorse XFe96/XF Pro FluxPak	18 96-well sensor cartridges, 18 XFe96/XF Pro microplates	103792-100
Seahorse XFe96/XF Pro FluxPak Mini	6 96-well sensor cartridges, 6 XFe96/XF Pro microplates	103793-100
Seahorse XFe96/XF Pro Microplates	6 XFe96/XF Pro microplates	103794-100
Seahorse XFe96/XF Pro PDL FluxPak Mini	6 96-well sensor cartridges, 6 XFe96/XF Pro PDL microplates	103798-100
Seahorse XFe96/XF Pro PDL Microplates	6 XFe96/XF Pro PDL microplates	103799-100
Seahorse XFe96 Spheroid FluxPak	6 XFe96 sensor cartridges, 6 XFe96 spheroid culture microplates	102905-100
Seahorse XFe96 Spheroid Plate	1 polystyrene plate, 1 mm (divot diameter)	102959-100
Seahorse XFe96 Spheroid Microplates	6 polystyrene plates, 1 mm (divot diameter)	102978-100
XFe96 Analyzers		
Seahorse XFe96/XF Pro FluxPak	18 96-well sensor cartridges, 18 XFe96/XF Pro microplates	103792-100
Seahorse XFe96/XF Pro FluxPak Mini	6 96-well sensor cartridges, 6 XFe96/XF Pro microplates	103793-100
Seahorse XFe96/XF Pro Microplates	6 XFe96/XF Pro microplates	103794-100
Seahorse XFe96/XF Pro PDL FluxPak Mini	6 96-well sensor cartridges, 6 XFe96/XF Pro PDL microplates	103798-100
Seahorse XFe96/XF Pro PDL Microplates	6 XFe96/XF Pro PDL microplates	103799-100
Seahorse XFe96 Spheroid FluxPak	6 XFe96 sensor cartridges, 6 XFe96 spheroid culture microplates	102905-100
Seahorse XFe96 Spheroid Plate	1 polystyrene plate, 1 mm (divot diameter)	102959-100
Seahorse XFe96 Spheroid Microplates	6 polystyrene plates, 1 mm (divot diameter)	102978-100
XFe24 Analyzers		
Seahorse XFe24 FluxPak	18 XFe24 sensor cartridges, 20 XF24 V7 PS tissue culture microplates	102340-100
Seahorse XFe24 FluxPak Mini	6 XFe24 sensor cartridges, 10 XF24 V7 PS tissue culture microplates	102342-100
Seahorse XFe24 Islet Capture FluxPak	6 XFe24 sensor cartridges, 6 XF24 islet capture culture microplates	103518-100
Seahorse XFe24/XF Flex V7 PS Culture Microplates	6 polystyrene plates	100777-004
Seahorse XFe24/XF Flex V28 PS Culture Microplates	6 polystyrene plates	100882-004
Seahorse XF24 Islet Capture Microplates	6 polystyrene plates	101122-100
XFp Analyzers		
Seahorse XFp FluxPak	12 XFp sensor cartridges, 12 XFp PS tissue culture microplates	103022-100
Seahorse XFp Cell Culture Miniplates	12 polystyrene plates	103025-100
Seahorse XFp FluxPaks (PDL Miniplates)	12 8-well sensor cartridges, 12 XFp miniplates	103721-100
Seahorse XFp PDL Miniplates	12 XFp PDL miniplates	103722-100
XF HS Mini Analyzers		
Seahorse XFp FluxPak	12 XFp PS tissue culture microplates	103022-100
Seahorse XFp Cell Culture Miniplates	12 polystyrene plates	103025-100
Seahorse XFp FluxPak (PDL Miniplates)	12 8-well sensor cartridges, 12 XFp PDL miniplates	103721-100
Seahorse XFp PDL Miniplates	12 XFp PDL miniplates	103722-100
Seahorse XF HS Mini FluxPak	12 8-well sensor cartridges, 12 XF HS miniplates	103723-100
Seahorse XF HS Mini FluxPak (PDL Miniplates)	12 8-well sensor cartridges, 12 XF HS PDL miniplates	103724-100
Seahorse XF HS Miniplates	12 XF HS miniplates	103725-100
Seahorse XF HS PDL Miniplates	12 8-well sensor cartridges, 12 XF HS PDL miniplates	103727-100

PS = Polystyrene

PDL = Poly-D-Lysine

Product Description	Product Content	Part Number
XF Flex Analyzers		
Seahorse XFe24 FluxPak	18 XFe24 sensor cartridges, 20 XF24 V7 PS tissue culture microplates	102340-100
Seahorse XFe24 FluxPak Mini	6 XFe24 sensor cartridges, 10 XF24 V7 PS tissue culture microplates	102342-100
Seahorse XFe24/XF Flex V7 PS Culture Microplates	6 polystyrene plates	100777-004
Seahorse XFe24/XF Flex V28 PS Culture Microplates	6 polystyrene plates	100882-004
Seahorse XF Flex 3D Capture Microplates-L	6 polystyrene plates	103862-100
Seahorse XF Flex 3D Capture FluxPak-L	6 24-well sensor cartridges 6 XF Flex 3D Capture Microplates-L	103864-100
Seahorse XF Flex Capture Microplates-S	6 polystyrene plates	103875-100
Seahorse XF Flex 3D Capture FluxPak-S	6 24-well sensor cartridges 6 XF Flex 3D Capture Microplates-S	103874-100
Seahorse XF Flex Organoid Microplate	6 polystyrene plates	103865-100
Seahorse XF Flex Organoid FluxPak	6 24-well sensor cartridges 6 XF Flex Organoid Microplates	103866-100

PS = Polystyrene

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RA260105.579

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© Agilent Technologies, Inc. 2021, 2022, 2023, 2025
Published in the USA, December 9, 2025
5991-8657EN

