

## ICP - Mass Spectrometry

## Key Features:

- Reliably delivers intact cells to the ICP plasma
- Consistently runs small-volume samples at micro flow rates
- Efficiently agitates samples prior to analysis, ensuring cells are suspended prior to analysis
- Decreases sample uptake and wash time
- Accommodates a wide range of sample racks and well plates



## Single Cell Micro DX Autosampler

The Single Cell Micro DX Autosampler is a microfluidic automation platform for biological samples. It is part of PerkinElmer's award-winning NexION® ICP-MS Single Cell Analysis System, which offers a first-to-market complete solution to quantitatively measure the metal content in individual cells, unveiling new capabilities to study intrinsic metals content and the uptake of dissolved (ionic) and nanoparticulate metals into cells. The NexION ICP-MS Single Cell Analysis System provides new insights into drug delivery, mobilization/immobilization of metal content, bioavailability, and bioaccumulation mechanisms.

The Single Cell Micro DX Autosampler enables single-digit microliter sample handling, cell resuspension through user-defined agitation protocol and accommodates most microwell plates. It gently agitates the sample, precisely and accurately loads the sample loop, and smoothly delivers the content of the loop to a microflow high efficiency nebulizer (HEN) at defined rates from 10-100  $\mu\text{L}/\text{min}$ . It ensures reliable delivery of intact cells to the ICP plasma while minimizing sample uptake and wash time (Figure 1).

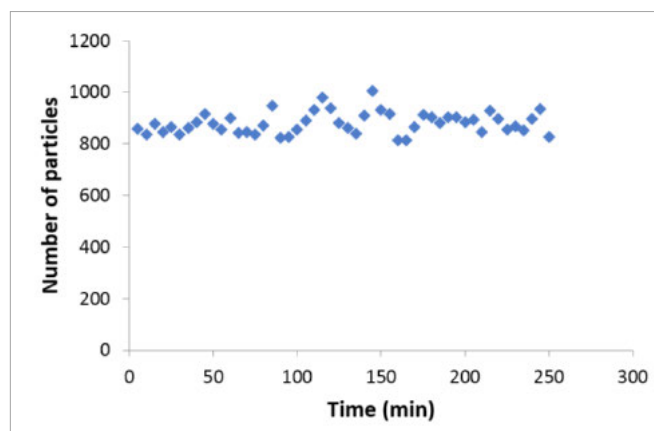


Figure 1. 50 nm Au gold NPs (PerkinElmer Standards Part No. N8151035) diluted at 100,000 particles per mL in UHP water simulating cells. A sample was measured every five minutes for 250 minutes (50 injections). Great stability with 877 ( $\pm 4\%$ ) particles per injection.

## Specifications

### Dimensions

- Height: 438 mm (17.25 in)
- Width: 452 mm (17.8 in)
- Depth: 222 mm (8.75 in)
- Weight: 13.6 kg (30 lbs)

### Power Requirements

- 24V DC switching power supply, 8.3A (included)
- Input power: 100-240 VAC  $\pm$  10%, 50-60 Hz

### Environmental Conditions

- Ambient operating temperature: 15 °C to 35 °C
- Ambient operating humidity: 20 to 80% RH non-condensing

### Minimum PC Specification

- All versions of Microsoft® Windows® including Vista, Windows® 7 and Windows® 10

### Electrical Connections

- RS-232 with USB and IEEE-488 options
- 3 External Switches In/Out

## Sample Racks

The Single Cell Micro DX Autosampler can hold a wide range of sample racks for both large- and small-volume vials.

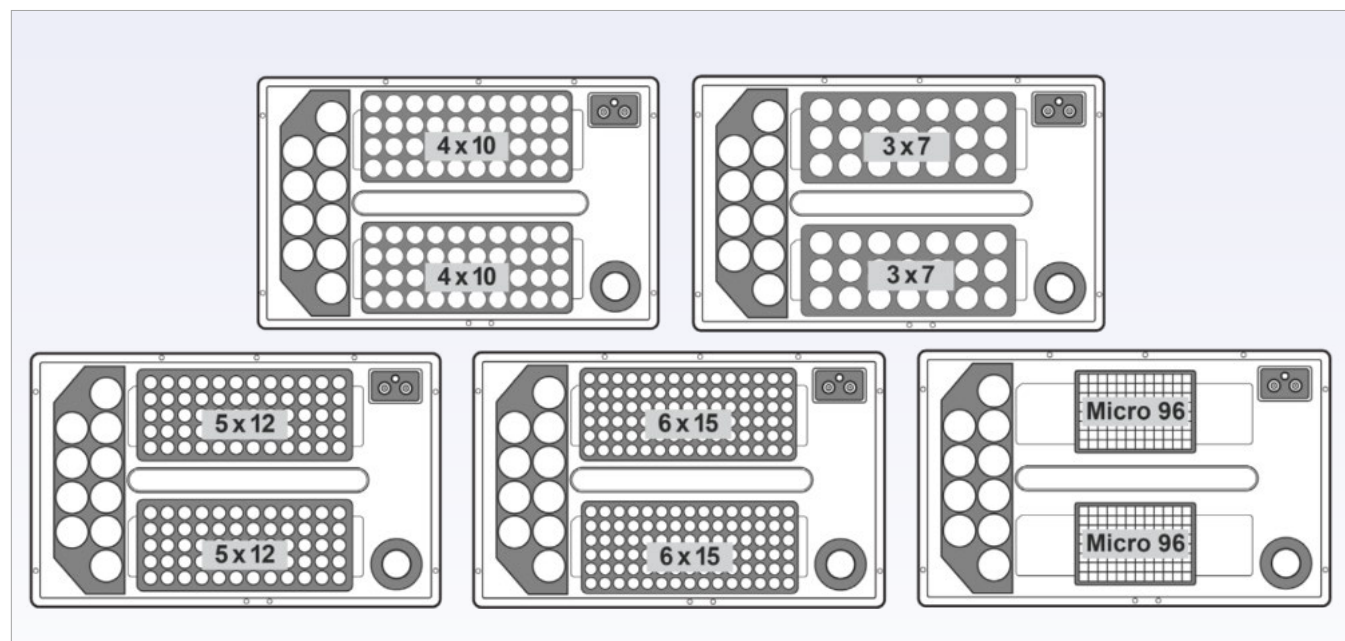


Figure 2. Examples of available rack configurations.

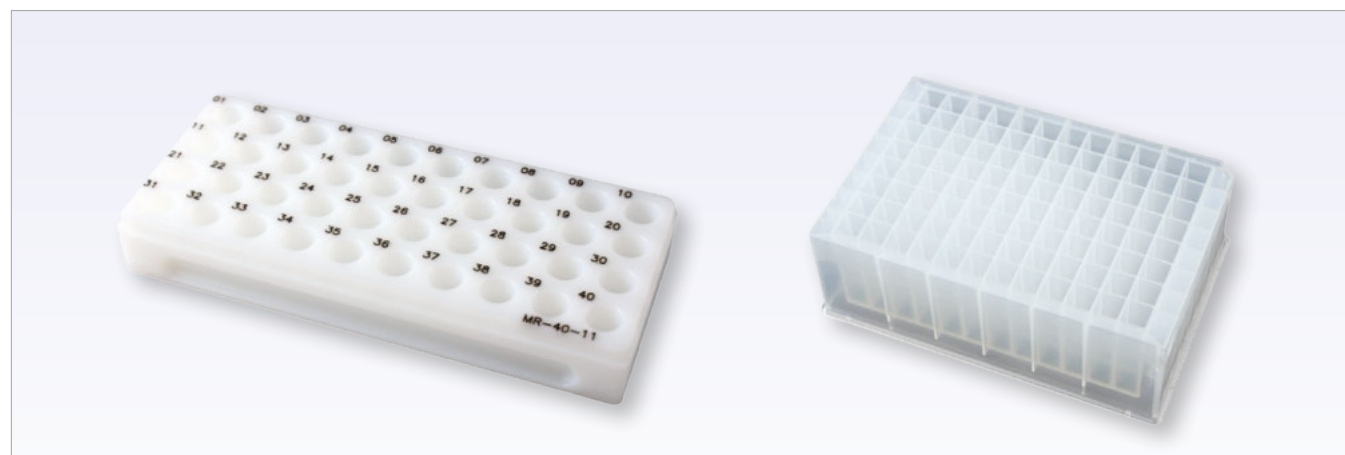


Figure 3. Available rack options - Left: 40-Position Micro Standards Rack; Right: 96-Well 2 mL Microtiter Plate Square Well.

## Ordering Information

Description	Part No.
Single Cell Automation Kit for NexION 1000/2000 ICP-MS	N8150039
Single Cell Automation Kit for NexION 300/350 ICP-MS	N8140039
1.0 mL PFA Vials Pkg. 10	N0777403
2.0 mL PFA Vials Pkg. 10	N0777404
21-Position Micro Rack 14 mm ID Qty. 1	N0777229
40-Position Micro Standards Rack for 28 mm Vials Qty. 1	N8152541
96-Well, 2 mL Microtiter Plate Square Well, Polypropylene Pkg. 5	N0777239
96-Well, 500 µL Microtiter Plate, Polystyrene Pkg. 5	N8145354

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