NEWOMICS
Enabling Precision Medicine

Multiply Your Mass Spectrometry Performance

Microflow LC-Nanospray MS

The Native MS kit is a ready-to-use solution to start analyzing proteins in their native state. The kit is made to study Native MS with different approaches:

- **With Column** → to identify proteins and protein complexes in their native state with LC-MS
- **With Direct Infusion** → to analyze proteins and protein complexes in their native state with direct infusion ESI

Product Details

Catalog #	Product	Flow rate	Column Set	Direct Infusion set
NAK-01	Native MS Kit	1-10 µL/min	1. PolyHydroxyethyl A capillary, 150x0.30 mm, 3µm, 300-Å (*app. note 7*) 2. PolyHydroxyethyl A capillary, 150x0.30 mm, 3µm, 1000-Å (*app. note 4*)	1. 500 µl Gastight Syringe 2. 100 µl Gastight Syringe 3. The kit also includes nanoViper, union, filter, injector, and adaptor

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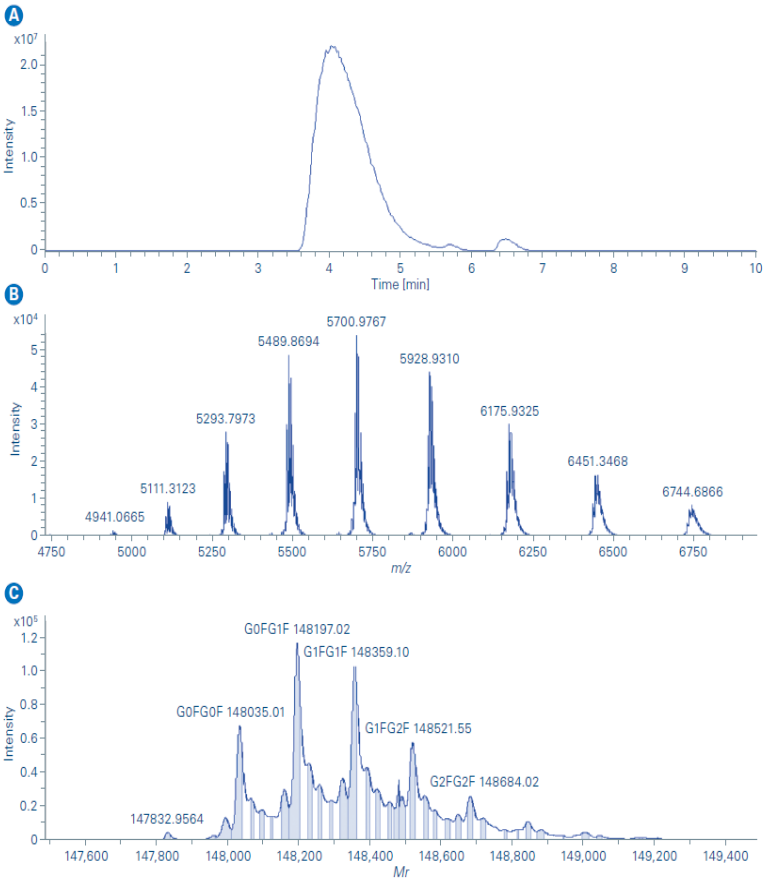
Properties

Benefits of the Native MS Kit with Newomics MnESI platform:

- **Better ionization**: more charge available for each smaller droplet (via multinozzle) during electrospray ionization process.
- **Lower voltage compared to high flow**: softer ionization to maintain the protein, protein-drug interactions, and protein complexes in the native states.
- **Room temperature for desolvation gas**: maintain the protein, protein-drug interactions, and protein complexes in the native states.

Applications



Monoclonal Antibodies analysis under Native conditions

The Newomics MnESI platform was applied for intact NIST- mAb characterization under native conditions. Nebulizer gas flow, dry gas flow, dry temperature, isCID, and other MS acquisition parameters were optimized for the native NISTmAb characterization.

As illustrated by the extracted ion chromatogram (m/z 5000 – 6500) in *Figure A*, the NISTmAb was eluted at 4.1 min.

The mass spectra in *Figure B* shows that a native charge distribution envelope was observed with the corresponding most abundant charge state of 26+ suggesting the native conformation of NISTmAb was well preserved with the Newomics MnESI. The deconvoluted mass spectrum of NISTmAb (*Figure C*) shows all major glycoforms of NISTmAb were identified and this further demonstrated enhanced desolvation and adduct removal can be achieved with the Newomics MnESI source.

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Learn more about native MS at
www.newomics.com/native-ms/