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Novatia uses electrospray ionization liquid chromatography mass spectrometry (ESI-LCMS) to characterize oligonucleotides. We can perform these analyses in a high-throughput mode to confirm desired products from oligo synthesis reactions or in a more detailed mode using high resolution chromatographic separation. Our MS services span the full range from high-throughput MW determination to detailed LCMS and MSMS structural analysis. We pride ourselves on providing our clients with the best data in a timely manner.

KEY OLIGONUCLEOTIDE MS SERVICES

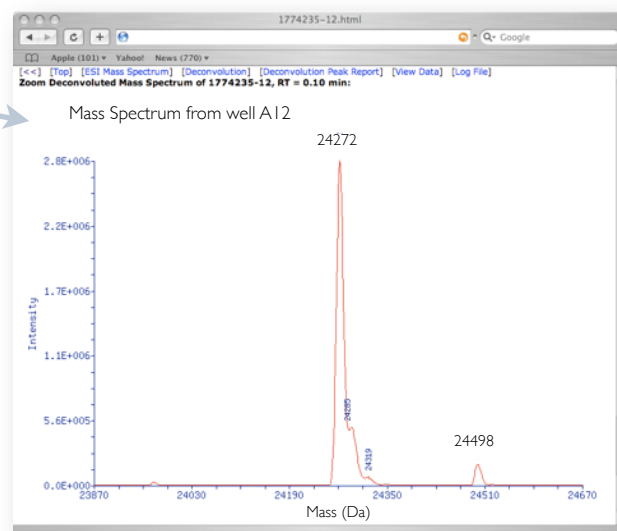
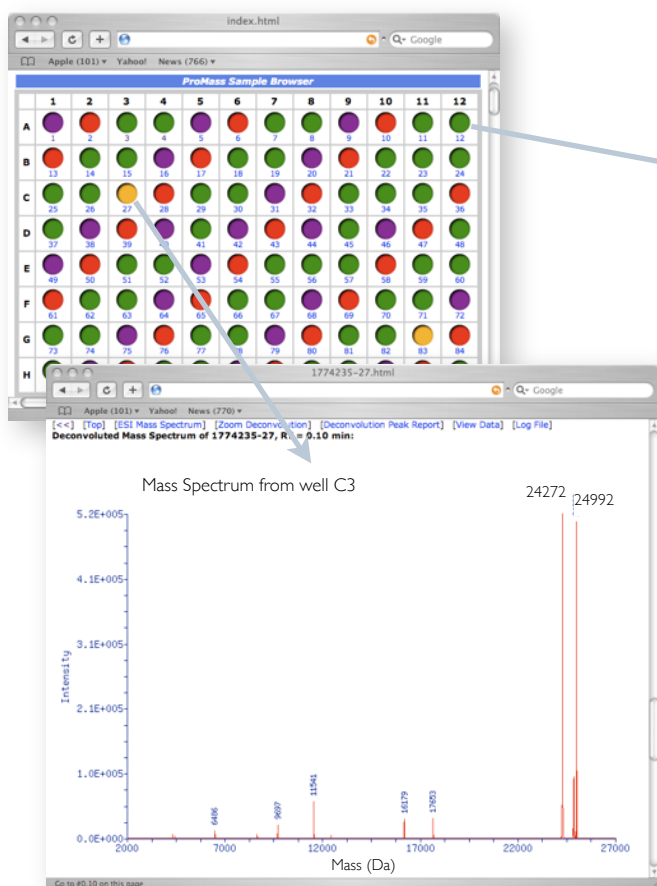
MW determination of oligonucleotides - high-throughput (96-well) or individual samples analyzed

MW determination of "challenging" samples including very long oligos and heavily modified oligos

LCMS profiling for impurity assessment and i.d.

LCMS profiling for metabolite i.d. and metabolic stability

MS/MS analysis to confirm oligo sequences



Color-coded sample plate view from 96-well oligonucleotide MS analysis. The deconvoluted mass spectrum from the green sample well A12 indicates the desired product was found as the major component. The mass spectrum from well C3 contained a major impurity, as indicated by the yellow color code.

KEY FEATURES OF OUR SERVICES

Superior mass accuracy for MW determination is routinely achieved, typically 0.02% or better with our standard service and 3 parts-per million (ppm) or better for our high-resolution accurate mass service.

Our ESI-LCMS methods provide superior quality results when compared to MALDI-TOF.

Our ProMass charge deconvolution and web-based reporting software is used to provide reliable, and highly detailed information.

Our user-friendly results are viewable from any web browser.

The highly efficient nature of our approach allows for very rapid turn-around times, usually the same or next day after receipt of samples for many of our services.

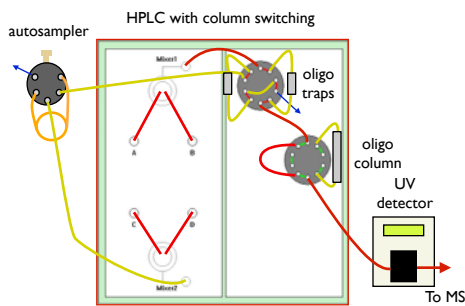


Our oligo MS services are powered by the same methods used in our Oligo HTCS instrument systems, which are used by leading oligonucleotide manufacturers.



Novatia uses ion trap mass spectrometers, including the latest high-performance linear ion trap and orbitrap high-resolution mass spectrometers in our oligo MS services.

Novatia's detailed LCMS report confirms the presence of target masses, lists sequence failures and provides a chromatogram summary listing the masses under each chromatographic peak. Chromatogram peak areas and area percentages are also reported. Since the results can be viewed from any web browser, results are easily shared among colleagues and clients.



Our unique methods use advanced column switching techniques to achieve high-throughput or detailed LCMS.



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WHAT ARE CUSTOMERS SAYING ABOUT OUR SERVICES

"Novatia provides us with cutting-edge information that we use to improve our processes. The easy submission process, rapid service, and prompt reporting are first-class. We especially enjoy the web data retrieval as it allows all of our chemists and engineers to access and share the detailed reports in a 96-well plate format anywhere in our global company." *M. Scott Sample - Sigma-Genosys, The Woodlands, TX*

"We are definitely very satisfied with your response time and the quality of the data provided, as well as the ease at which we can access it over the web from across the Atlantic. We've had much use for the quick and exact analyses and the accompanying remarks about each sample, especially the tricky R&D ones that no-one else can manage. Thank You very much!" *Häken Johnson - SGSDNA, Köping, Sweden*

