

Biopharma

By your side

Advancing mRNA vaccines and therapeutics



Your ally, empowering every step of your mRNA-based therapeutics

The market for mRNA-based therapeutics is rapidly expanding, presenting exciting opportunities. However, the analysis of these innovative drugs is extensive and requires a comprehensive approach. Key analysis areas include intact mRNA analysis, mRNA mapping, lipid nanoparticle analysis, mRNA capping efficiency, and poly(A) tail analysis. To ensure accurate and efficient analysis of mRNA-based

therapeutics, it is crucial to select the right hardware and software solutions. These solutions empower researchers and analysts to confidently and swiftly analyze these cutting-edge therapies. Discover how our advanced analysis solutions can streamline and enhance the analysis of mRNA-based therapeutics, enabling you to stay ahead in this dynamic field.

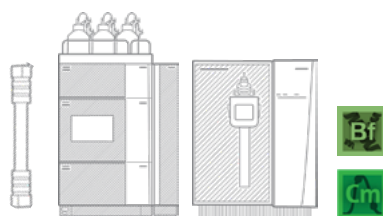


mRNA-based therapeutics

A portfolio of solutions to fully understand mRNA-based drug products

mRNA based therapeutics are a fast growing market but the analysis of these drugs is extensive. Analysis includes Intact mRNA analysis, mRNA mapping, lipid nanoparticle analysis, mRNA capping efficiency and poly(A) tail analysis. Choosing the right hardware and software solution will enable confident and fast analysis of mRNA-based therapeutics.

mRNA mapping



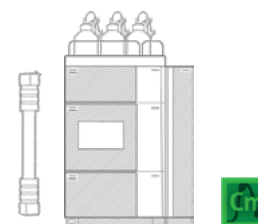
Vanquish UHPLC-Orbitrap Exploris 240 MS

Accurate sequence identification through automated annotation of high quality HRAM MS and MS/MS spectra in BioPharma Finder software



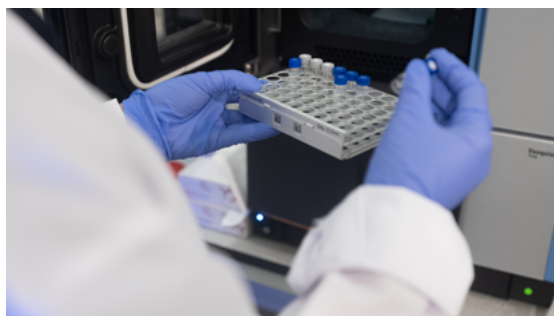
mRNA Therapeutic

Lipid nanoparticle analysis



Vanquish UHPLC-Charge Aerosol Detector (CAD)

Fast high-resolution separation on the Thermo Scientific™ Accucore™ C30 column in 10 minutes
Universal detection with wide dynamic range up to 10⁵, quantification of impurities and high-level API in a single run



Value-added workflow benefits

mRNA Mapping

- Direct sequence analysis of large mRNAs by LC-HRMS
- Simple automated workflow suitable for unmodified and modified mRNA

Lipid Nanoparticle Analysis

- CAD - Industry leading technique for determination of lipid nanoparticle (LNP) composition



Learn more about mRNA-based therapeutics



Application note - mRNA direct sequence mapping using automated partial digestion with magnetic nuclease and LC-HRMS



Application note - Characterization and quantification of lipid nanoparticle components and their impurities/degradants using an LC-HRAM MS platform

By your side goes beyond products

As an ally with a deep understanding of the challenges of biotherapeutic development, we are driven to perfect the technologies that help you deliver next-generation drugs to market faster. You're gaining ground and advancing science at every step. It's a lot of pressure, but you've got the knowledge and we're here to help. That's why being by your side extends well beyond our technologies. Thermo Fisher Scientific also supports you with superior services and application expertise that we've spent over decades curating. By getting the most out of your Thermo Scientific workflow solutions, you can put your focus where it needs to be—making a positive impact.

**Learn more about how Thermo Fisher Scientific
can power your biotherapeutic discovery**

 Learn more at thermofisher.com/byyourside

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