

Bioproduction

Scaling mRNA vaccine production

Enable agility in your process from vaccine development to manufacture with one technology designed for flexible mRNA synthesis and purification



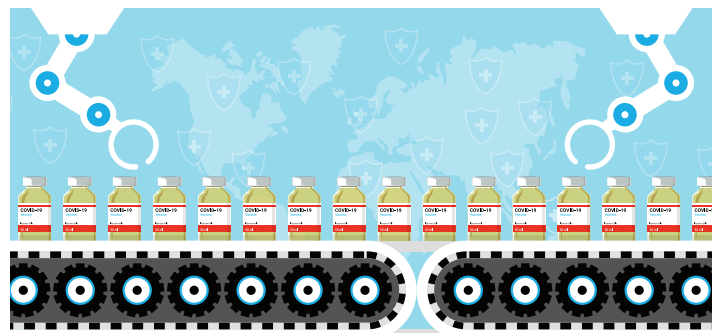
Global vaccine demand

As vaccination programs around the world continue to address global health issues, the industry faces the challenge of meeting fluctuating demand quickly and economically.



Production methods for mRNA are not standardized

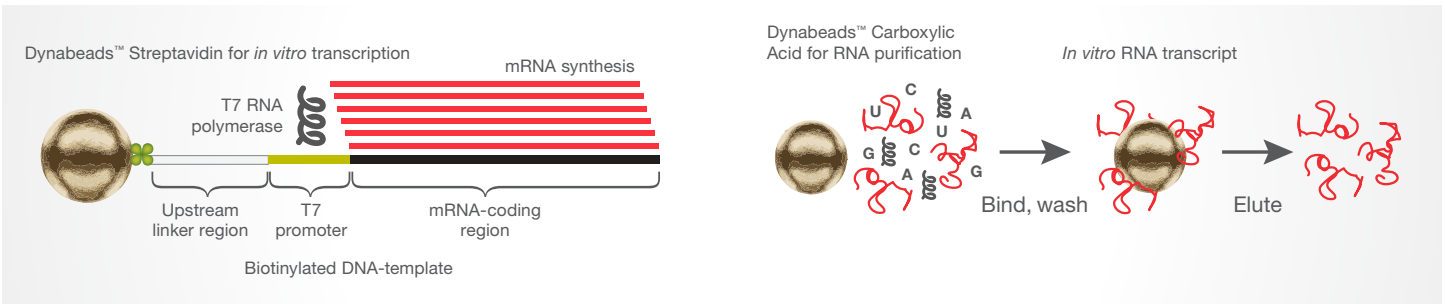
There's an urgent need for cost-effective, flexible, and highly scalable vaccine production that meets critical process, scale, quality, and regulatory requirements.





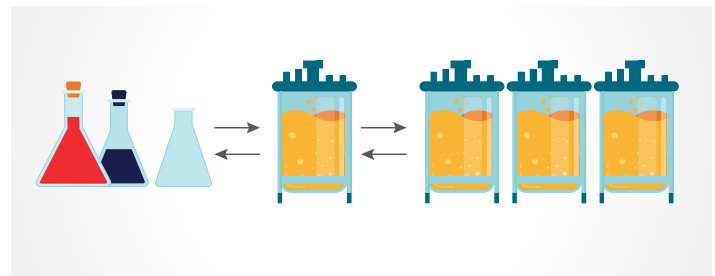
Innovation creates new possibilities in bioprocessing

Introducing a completely new Invitrogen™ Dynabeads™ platform for the synthesis and purification of mRNA that meets regulatory requirements for mRNA vaccines.



mRNA production must meet desired scale

A major challenge has been scaling mRNA production—flexible scale-up and scale-down workflows are vital to optimize bioprocesses moving from development to manufacturing.



Reusable mRNA synthesis and purification

Our solution minimizes the effort needed for plasmid preparation while maximizing the mRNA productivity through re-use of template, in scales from µg to g.



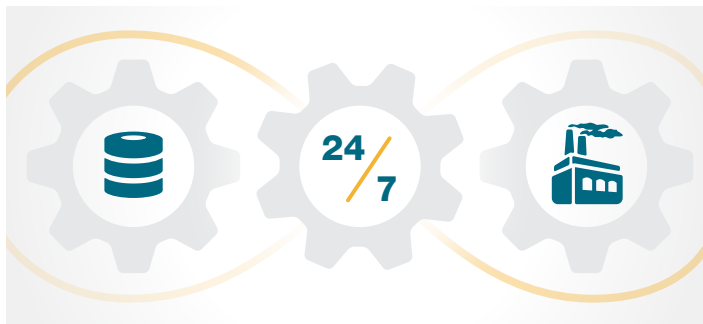
Bioprocess workflows can be expensive

Demand for vaccines requires manufacturing to be more productive—automation-ready workflows can help reduce labor costs and shorten turnaround times.



Rapid transition from bench to production

Mitigate risk of transition from development to manufacturing with continuity of quality product and raw materials and automation-ready workflows, driving rapid development and scale-up.



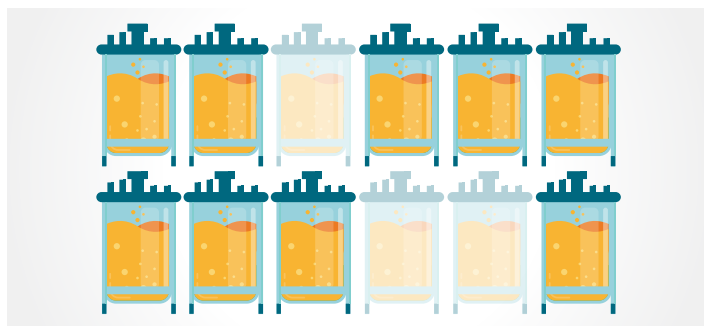
Limitations of manufacturing scale

The ability to adjust the scale (up or down) for a manufacturing process can significantly cut manufacturing costs.



Invitrogen™ Dynabeads™ magnetic beads enable a modular manufacturing approach

Large-scale production of mRNA can be done using the same technology suitable for diverse volume ranges (from μ L to L scale).



Generation of high-quality, GMP-grade mRNA for vaccines

These new Dynabeads products are manufactured under a mature quality system (adherent to ISO 13485 requirements) and are designed to be suitable as raw materials for use in GMP manufacturing of therapeutics. They are optimized for vaccine development and manufacture with a simple, scalable workflow that gives our customers the capability to deliver mRNA on demand.

Learn how to scale mRNA production using a modular approach with Dynabeads product solutions

- Harness rigorously controlled product solutions and raw materials required for vaccine development and manufacture
- Deliver on required product quality with regulatory support, published data, and technical support
- Choose from synthetic or plasmid DNA template for *in vitro* transcription of mRNA, providing flexibility for mRNA design
- Adopt automation-compatible workflows that are easily scalable from the benchtop to small or large manufacturing capabilities
- Transition from a manual to a fully automated workflow to match required scale
- Minimize footprint, enabling modular manufacturing to cost-effectively match required scale (increase or decrease)
- Access a safe and flexible supply of beads for vaccine developers, from development to manufacturing, saving cost and time



Learn more at thermofisher.com/dynabeadsmrna

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