

Our company

At Quantoom Biosciences, scientists and engineers are committed to solving some of the biggest challenges facing (sa)mRNA-based vaccines and therapeutics production.

Located in Belgium, Quantoom Biosciences thrives in a dynamic biotech ecosystem, driving innovation in RNA (i.e. mRNA and saRNA) production to make life-changing therapies available to everyone, everywhere.

BELGIUM

Quantoom Biosciences Headquarters.
Showroom for Ntensify® technologies.

Visit our website



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Ntensify[®] *midi flex*

Quantoom
Biosciences

mRNA production and purification system for clinical trials & commercial manufacturing

The **Ntensify midi** is a GMP-grade RNA production and purification system introducing a novel approach to mRNA and saRNA bioprocessing. Both steps are automated in a single equipment to enable scalable production of 0.1 to 4 g per batch.

The equipment performs the **Ntensify process** for cost-effective production of drug substance mRNA and saRNA, with a high-quality profile while minimizing impurities.



Click or scan the QR code to watch the video presentation

Key figures

mRNA
&
saRNA

Up to
800
mL/batch

GMP
compliant

Max
8 hours
from start
to end

Redesigned Process

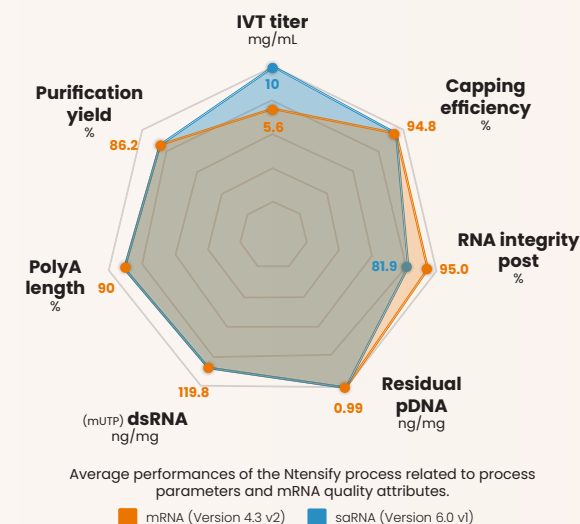
By opting for a single-step bead-based purification method to streamline DSP and reduce process-related losses.

Optimized Process

By optimizing the IVT & DSP to increase RNA quality, minimizing the DSP constraints.

Demonstrated by robust DoE

- > 2000 individual mRNA reactions
- > 500 individual saRNA reactions
- 100+ Different constructs tested
- Different mRNA Sizes (1 to 4kb)
- Different saRNA sizes (8 to 12Kb)



Trusted by



Supported by



Member of



Tailored for the **Ntensify** process

Conventional process	IVT	Post transcriptional capping	Oligo DT	Polish	UF/DF	Simplified process By reducing the number of steps & required unit operations
Ntensify process	IVT with co-transcriptional capping		Silica-based magnetic beads			Accelerated process By reducing the number of steps & automating the execution

Main **specifications**

	Volume	mRNA		saRNA	
Minimum per batch	20 mL	100 mg	5K doses*	128 mg	25K doses*
Maximum per batch	800 mL	4 g	200K doses*	5 g	1M doses*
Batches per year		208		208	

* Calculated dose: 20 µg for mRNA and 5 µg for saRNA

Mixes of **reagents**

A single kit containing all the necessary mixes of reagents, to synthesize and purify either 1 or 5 grams of drug substance mRNA.

Supplied ready-to-use with the following certificates:

CoA	Bioburden
TSE BSE	Endotoxins
SDS	RNAse
AOF	



Installation **timelines**



The timelines provided are average estimates and will be adjusted in accordance with the customer at the time of purchase order confirmation.

Support **packages**

Ensure peace of mind with our after-sales offering!

- Direct support line
- Preventive maintenance
- Repair maintenance
- Discounted spare parts
- Additional training - *Optional*
- On-site field application advisory and run support - *Optional*

Training **packages**

Classroom teaching

Understand the necessary details of the manufacturing methods operated by Quantoom's technologies.

Hands on teaching

Get acquainted with Quantoom's Technologies and become fully autonomous.



Ntensify **product line**

All the production technologies in our product line leverage the same Ntensify process, at any scale. This confers reproducibility to our product line and enables consistency of CQA's and CPP's at every scale, from R&D to commercial production in GMP facilities.

mano	micro	mini	midiflex
Entry point for RNA construct assessment In vitro & in vivo studies	Drug discovery & pre-clinical phase Up to 96 constructs	Drug discovery & pre-clinical phase Up to 48 constructs	Clinical trials & commercial production
mRNA capacity per batch (purified naked mRNA)			
125 µg - 3 mg	400 µg - 100 mg	8 mg - 92 mg	0.1 g - 4 g
saRNA capacity per batch (purified naked saRNA)			
320 µg - 2.5 mg	640 µg - 128 mg	10 mg - 123 mg	0.128 g - 5 g
Level of automation & run duration			
Manual in 4 hours	From 4 to 6 hours	Automated in under 1 day	