

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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Trusted by



Supported by



Member of



Ntensify[®]mini

Quantoom
Biosciences

mRNA production and purification system for drug discovery and pre-clinical research

The **Ntensify mini** is a research-grade mRNA and saRNA production and purification system introducing a novel approach to RNA bioprocessing. Both steps are automated in a single equipment to enable production of anywhere from 48 different RNA constructs at a 2mg scale (multiplexing) to a single RNA construct at a 100mg scale (pooled).

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



Key figures



Redesigned Process

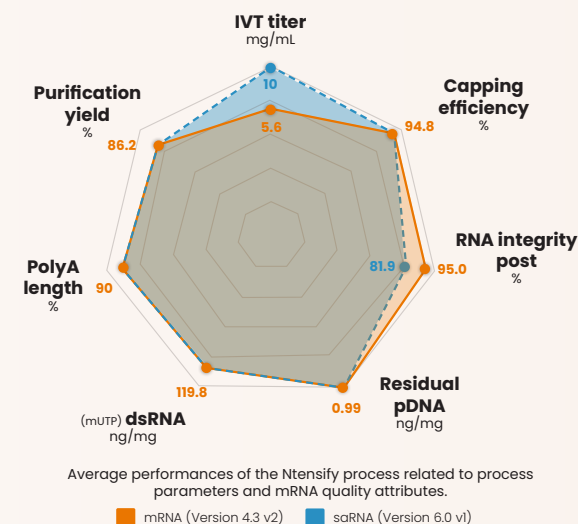
By opting for a single-step bead-based purification method to streamline DSP and reduce process-related losses.

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)



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	1.6 mL	8 mg	10 mg
Maximum per batch	19.2 mL	92 mg	123 mg
Batches per year		208	208

Mixes of **reagents**

A single kit containing all the necessary mixes of reagents to synthesize and purify up to 100mg of drug-substance mRNA.

Supplied ready-to-use with the following certificates :

CoA	AOF
TSE BSE	RNAse
SDS	



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*

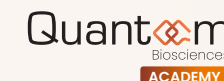
Training **packages**

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



Entry point for RNA construct assessment
in vitro & *in vivo* studies

micro



Drug discovery & pre-clinical phase
Up to 96 constructs

mini



Drug discovery & pre-clinical phase
Up to 48 constructs

midiflex



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