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

www.quantoom.com

Rue de la Maîtrise 11
1400 Nivelles
BELGIUM

Get in touch!
bd@quantoom.com
www.quantoom.com

Trusted by

Supported by

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Ntensify® micro

Quantoom Biosciences

RNA production and purification for R&D and small GMP production batchs

The **Ntensify® micro** is an advanced (sa)mRNA production system designed for ultimate flexibility, supporting 96-well plates & 20mL tubes. This compact, manual equipment enables seamless *in-vitro* transcription (IVT) and purification processes for various research applications.

The system integrates the **Ntensify® process protocol**, ensuring plug-and-play functionality for streamlined mRNA and saRNA production and purification, with parameters adaptable to specific experimental needs.

Height
21 cm / 8.27 in

Weight
15 kg / 33 lb

Depth
32 cm / 12.6 in

Width
38 cm / 14.96 in



The equipment comes supplied with **material certificates** and an optional **IQ/OQ package**, which can be performed either by your team or ours.

Key **figures**

Up to 160 mg **3h workflow**	Based on **Ntensify® process**	**1-pot** IVT **1-step** purification	**mRNA and saRNA** processes included	**Flexible configuration** 96 well plate **OR** 20 mL bioreactor

Redesigned Process

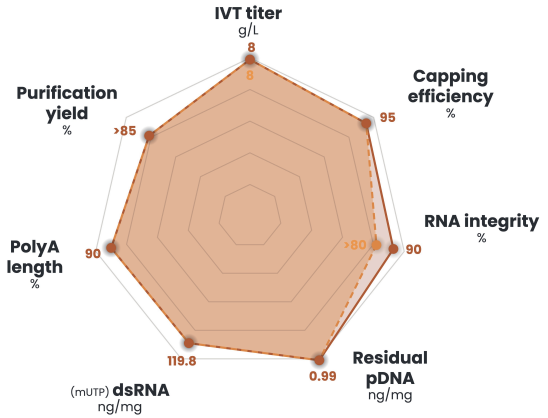
By opting for a single-step magnetic bead-based purification method to streamline DSP and reduce process-related losses.

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)



Achievable performances of the Ntensify® process related to process parameters and (sa)mRNA quality attributes.

mRNA (Version 4.5) saRNA (Version 6.3)

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

Throughput **flexibility**

Click or scan the QR code to watch the video presentation



Starting from 96 constructs at 100 µL

Up to 1 construct at 20 mL

Mixes of **reagents**

The Ntensify® micro is tailored to work with our Ntensify® R&D kit, containing all necessary mixes of reagents.

Supplied ready-to-use with the following certificates :

- CoA
- AOF
- SDS
- RNAse
- TSE BSE
- Bioburden*
- Endotoxin*

* Only for GMP batch



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.

Quantoom Biosciences ACADEMY



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**	**midi** *flex*
			
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 – 8 g
saRNA capacity per batch (purified naked saRNA)			
320 µg – 2.5 mg	640 µg – 128 mg	10 mg – 123 mg	0.128 g – 8 g
Level of automation & run duration			
Manual in 4 hours	From 4 to 6 hours	Automated in under 1 day	

Curious to hear more? Reach out to bd@quantoom.com