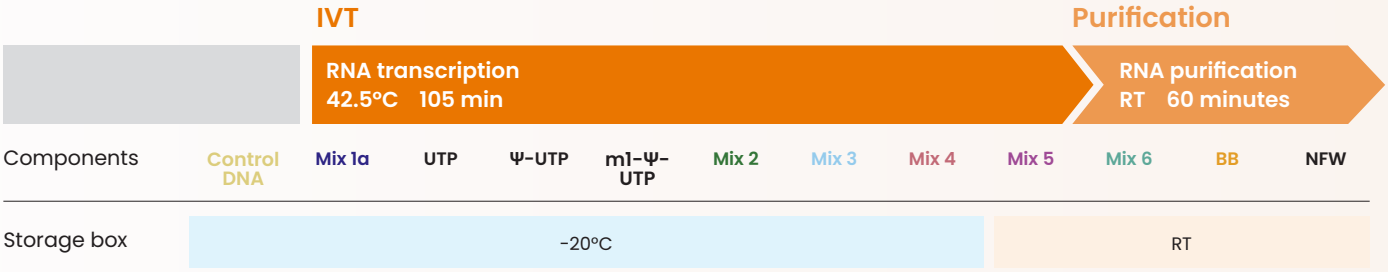
Ntensify® mano

Quantoom Biosciences

Product specifications

Box contents



DNA requirements

- **Linear DNA** at 0.5mg/mL with T7 promoter and a transcription start site "AG" for co-transcriptional capping (from 1 to 11kb).
- **T7 RNA polylmerase promoter with AG initiation sequence.**

  -17 +1
  TAATACGACTCACTATA**AG**G
- We recommend using templates with poly(A) tails that are 80-120 nucleotides long.

Pre-requisites not supplied in Ntensify® mano

- **Equipment:** regular lab items, vortex, thermoshaker
- **Consumables:**
  - IVT: 0.5 mL RNase-free and DNA low binding micro-centrifuge tubes
  - Purification: 1.5 mL (Eppendorf™ recommended) RNase-free and DNA low binding micro-centrifuge tubes
  - Final products: 1.5 mL RNase-free and DNA low binding micro-centrifuge tubes
- **Reagent:** absolute ethanol 99%
- **Linear DNA** at 0.5mg/mL with T7 promoter and a transcription start site "AG" for co-transcriptional capping (from 1 to 10kb).
- **Magnetic separation rack** - we recommend the **Ntensify** manoMAG

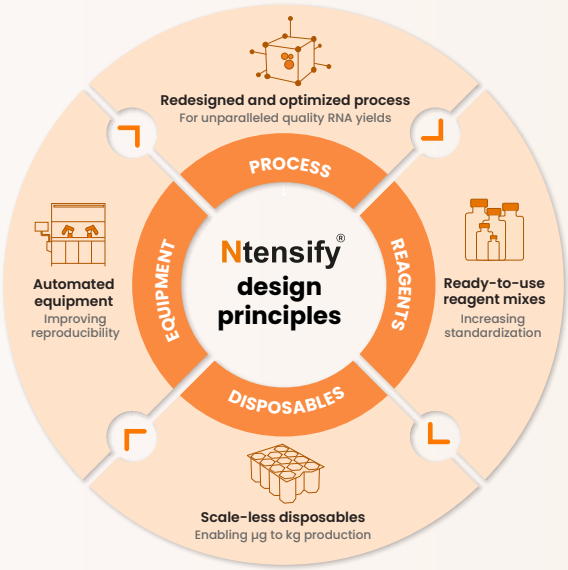
Ordering considerations

- **Orders from the EU, US, and Canada are shipped with DAP INCOTERMS.**
- **Shipments to other countries are organized in ExWorks**. Ownership of the goods/products shall transfer to the Buyer immediately upon the goods/products leaving the Seller's premises. The Buyer acknowledges and agrees that upon transfer of ownership, the Seller has no further liability or responsibility for the goods/products, including any claims related to intellectual property. For any question, feel free to reach out to customers@quantoom.com to get in touch with your local respresentative.
- **To place an order, please send your purchase order at** customers@quantoom.com.
- Note that the use of Ntensify mano is made available for research use only and not for commercial applications.
- Special terms and conditions of sale of Quantoom Biosciences SA apply.
- Quantom Biosceinces reserves the right to adjust prices on purchase orders as prices are subject to change.

Next generation mRNA production

Ntensify are low footprint automated Production Technologies able to synthesize and purify short to very long Messenger RNAs in bulk. Our systems use Quantoom's reagent pre-mixes to maximize yield, quality, and cost-effectiveness, starting from a chosen DNA template. This produces purified naked RNA, ready to be formulated into a drug product.

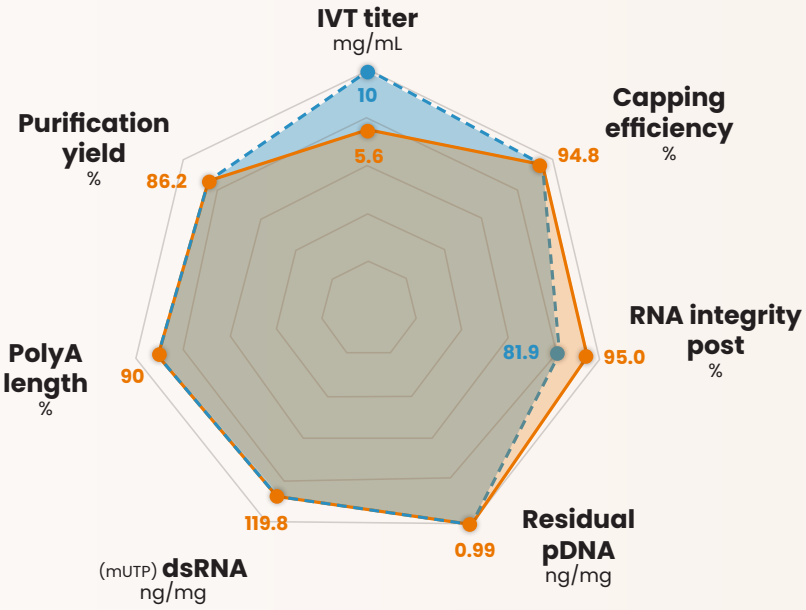
Ntensify is more than just equipment, it includes:
- An optimized process for high performance (yield and quality)
- Reagent premixes to ensure the best results
- Single use disposables for ease of use



Ntensify® process

Ntensify is a novel approach to mRNA production, achieved through advanced Design of Experiments (DoE) and after four years of optimization. It enables high-yield, low-contaminant mRNA to be produced while simultaneously reducing the overall costs.

The process is construct-agnostic and includes an optimized one-pot IVT with co-transcriptional capping and a redesigned single-step purification to minimize mRNA losses and increase available drug-substance mRNA. It can scale seamlessly from mg-scale (R&D level) to kg-scale (commercial production).



Average performances of the Ntensify process related to process parameters and mRNA quality attributes.

mRNA (Version 4.3 v2) saRNA (Version 6.0 v1)

Quantoom Biosciences' Ntensify process* has been developed through numerous experiments on various mRNA constructs

- Number of reactions: > 300
- Number of constructs: 40+
- Construct size ranging from 998 to 10865 nucleotides:
  - mRNA from 998 to 4284 nucleotides
  - saRNA up to 10865 nucleotides

* process developed in collaboration with etherna

Ntensify® product line

From small scale to large scale using the same process

Choose the solution adapted to your needs

mano	micro	mini	midi	midi flex
				SOON
				
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**	**Pandemic readiness at maxi capacity**

mRNA capacity per batch (purified naked mRNA)

250 µg - 1 mg	250 µg – 100 mg	2 mg – 100 mg	1 – 5 g	1 – 16 g

saRNA capacity per batch (purified naked saRNA)

400 µg – 1.6 mg	400 µg – 160 mg	3.2 mg – 160 mg	NA	1 – 26 g

Level of automation & run duration

Manual in 4 hours	Automated in under 1 day