What is TAMARA?

The TAMARA Nanoparticle Formulation System is a plug-and-play microfluidic platform **covering all R&D stages**, ensuring **controlled nanoparticle synthesis** with optimal sample usage & reusable chips.

It is the perfect companion for any nanoparticle specialist - **from beginners to experts** - looking for a comprehensive, user friendly, and efficient nanoparticle system for the development of **novel nanomedicines**.

Benefits:

- One platform **for all nanoparticles**
- Best size, **PDI, EE% & repeatability**
- One system **from screening to in-vivo**
- **Maximized** reagent use
- **Speed up** your lab routine
- **Minimize cost** per run

Key features:

From 200 µL to 30 mL of nanoparticle*
*Optimal efficiency range: 0.5 to 5 mL

No dead volume
For maximized reagent use

Encapsulation efficiency **EE% > 98%** & **PDI < 0.2** for RNA-LNP

Reusable chips and reservoirs

Optimal size control (50 to 200 nm) and **repeatability** (±3%)

Less than 2 minutes per run

They **trust** us:

UNIVERSITY OF CAMBRIDGE
moderna
Lilly
UCL
OSE IMMUNO THERAPEUTICS
ETH zürich
Technical University of Munich

Microfluidic Technology:

TAMARA uses the **state-of-the-art microfluidic technology** for the synthesis of nanoparticles by nanoprecipitation.

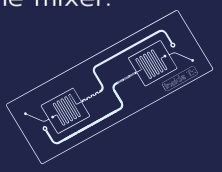
Using our technology, **reach PDI < 0.2, encapsulation efficiency > 98%, size control and repeatability of ±3%**. Our proprietary microfluidic chips are **embedding 2 designs** head to toe for more flexibility one herringbone mixer and one baffle mixer.

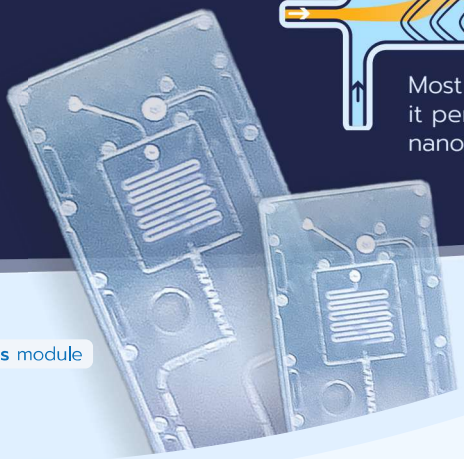
Herringbone mixer

Most commonly used micromixers, it permits an easy tuning of the nanoparticle size via the TFR.

Baffle mixer

Alternative mixer for achieving a broader size range





Two designs available
on the same reusable chip

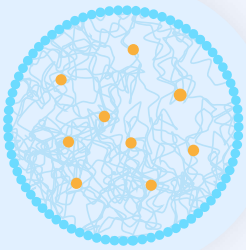
Synthesis module

Flexible nanoparticles:

With TAMARA, synthesize **all polymer and lipid based nanoparticles**, including:

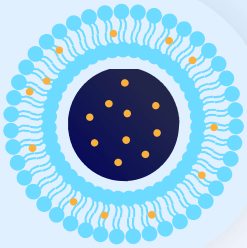
PLGA

Versatile and highly biocompatible carrier for small molecules



Liposome

Lipid bilayers designed for delivering a wide range of agents in pharmaceutical and cosmetic applications



LNP

Specially engineered for delivery any types of RNA (mRNA, siRNA, miRNA, ASO...)

& **any other polymeric or lipid-based nanoparticles**, (nanoemulsion, peptidic nanoparticles,...)

Intuitive operation:

1. Set your formulation parameters

2. Pipette your liquids

3. Close, run & collect