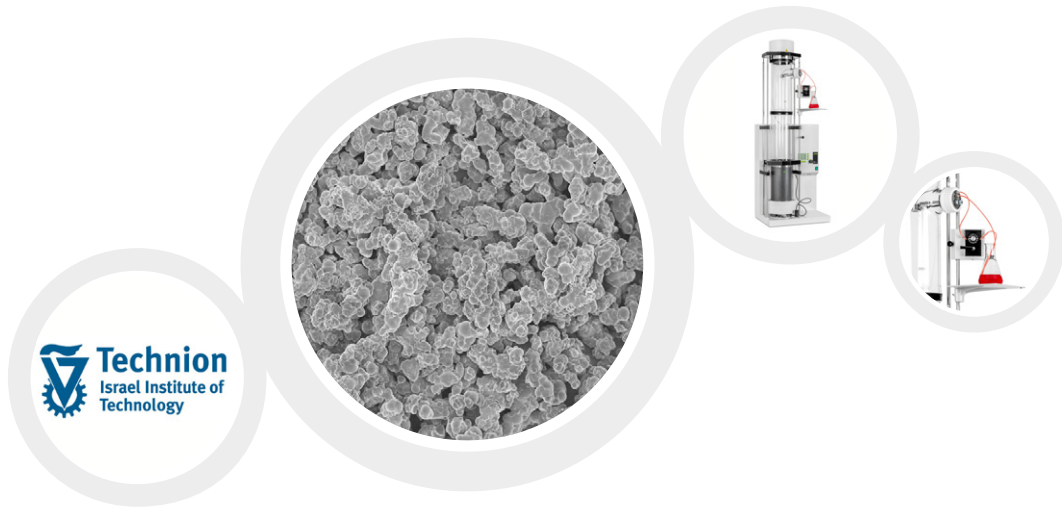


Case Study

Spray Drying of polymeric micelles



Customer: Technion-Israel Institute of Technology, Haifa, Israel

The research focuses on the pharmaceutical nanomaterials science and drug delivery fields, with special interest in biomaterials science, colloidal chemistry (drug and polymer self-assembly), mucoadhesive drug delivery systems, nanomedicine (drug encapsulation, release and targeting).

Application: Drying polymeric micelles

Polymeric micelles produced in aqueous medium are spray dried with the new Nano Spray Dryer B-90 HP in order to produce stable nanoparticles used in nanopharmaceuticals and drug delivery.

Equipment: Nano Spray Dryer B-90 HP

The Nano Spray Dryer B-90 HP is a gentle solution to produce submicron particles from solutions, nanoemulsions or nanosuspension of sensitive materials. Moreover, the spray drying of preformed nanoparticles (e.g., polymeric micelles) enables the production of nanomaterials of few hundreds of nanometers.

Benefit / Conclusion: New particles in a near future

By using the Nano Spray Dryer B-90 HP, particles can be produced from micellar dispersion with a good productivity. Several other types of nanoparticles will therefore be investigated with this system in the near future.

“The Nano Spray Dryer B-90 HP shows high potential to investigate innovative nanoparticle types for nanopharmaceuticals and drug delivery, including stabilization of self-assembly nanomaterials such as polymeric micelles.”

Prof. A. Sosnik, Head Laboratory of Pharmaceutical Nanomaterials Science, Technion-Israel Institute of Technology
