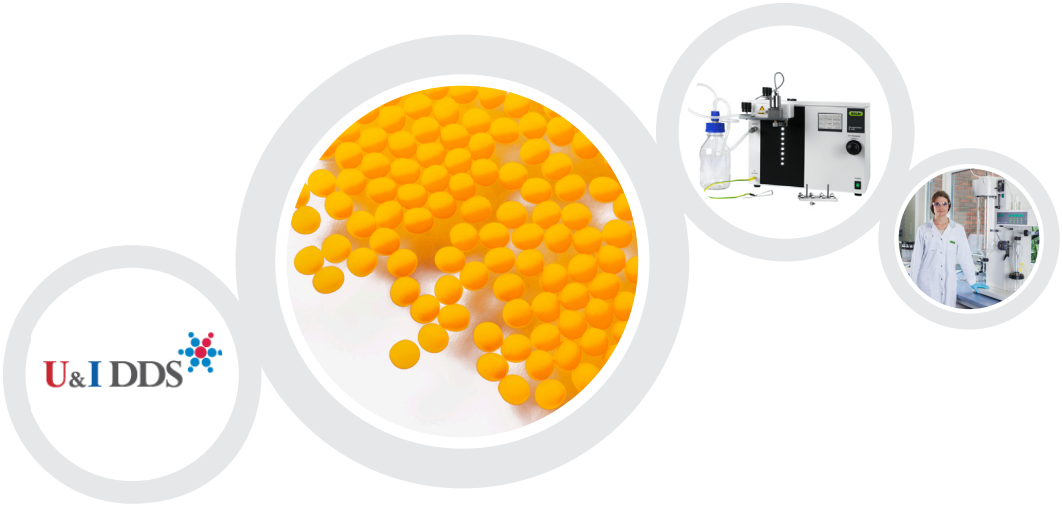
Case Study
Drug delivery research



Customer: Utah-Inha DDS & Advanced Therapeutics Research Center, Korea

Utah-Inha Drug Delivery Systems and Advanced Therapeutics Research Center is a joint international research center between the department of pharmaceutics and pharmaceutical chemistry at the University of Utah and Inha University Hospital. The center develops various drug delivery systems, especially for low molecular weight pharmaceuticals and peptide and protein based therapeutics.

Application: Preparation of polymeric microbead

In the pharmaceutical and biomedical field, polymeric hydrogels are widely investigated as carriers for drug delivery, tissue engineering and bionanotechnology. Various microbeads are prepared by extruding polysaccharides such as alginate, dextran, chitosan, and hyaluronic acid by means of an encapsulator.

Equipment: Encapsulator B-390

The center used to work with the Mini Spray Dryer B-290 to produce micrometer-size carriers. Recently, they bought an Encapsulator B-390 to obtain larger microbeads.

Benefit / Conclusion: Various nozzle sizes and bead uniformity

The vibration nozzle technology with a number of different nozzle sizes allows an easy production of various bead sizes with good uniformity in shape and size. The B-390 enables to work with poly-mers with a melting point above room temperature thanks to the integrated nozzle heating. The B-395 Pro is the preferred instrument for encapsulation under sterile conditions. Nevertheless the B-390 offers almost sterile operation if it is used in aseptic conditions. This is possible, because all parts in contact with the encapsulation medium are autoclavable.

“Thanks to the introduction of the new BUCHI Encapsulator, various micro-beads can be produced quickly, and the production of beads under sterile conditions is easy.“
Dr. Eunhye Lee, Utah-Inha DDS & Advanced Therapeutics Research Center

PH-112-12/10