

Advanced Drug Delivery system µCapsul™ controlled-release polymer

µCapsul[™] is a bioabsorbable copolymer consist of mPEG and poly(lactideco-glycolide). The defining feature of µCapsul[™] is its temperature reversible sol-gel transition, making it a game-changer in the field of pharmaceuticals and medical devices.

Cool μ CapsulTM appear in liquid form and alter to gel form in body temperature. In the gel state, the highly lipophilic and network structure of the μ CapsulTM make it an exceptionally efficient vehicle for localized administration of proteins and small molecules, especially for hydrophilic factors. By maintaining these factors, a high local concentration, we create a reservoir for these factors and can be released slowly over time.





Feature

- 100% synthetic, pathogen free
- Temperature reversible sol-gel transition
- Localized delivery of antibiotics/peptide/analgesics/vaccine
- Excellent biocompatibility and biodegradability
- Manufactures in ISO 13485 certified facilities
- FDA MAF registration: MAF 3119

Specification

Specification	Sterility	Catalog No.	Package	Storage
<0.5 EU/ml, 15%	Sterile	B00-04MA-15B	3ml	-20°C





Procedures

<u>In vitro control release testing in μ CapsulTM (Please note: Following is a general guideline; further optimization might be required.)</u>

- 1. Cool the μ CapsulTM solution and target ingredients to 2-8°C
- Open the package in a sterile environment and add 0.3 mL of target ingredient directly to 3 ml μCapsulTM solution <u>on ice</u>. You may also determine the ratio of target ingredients to μCapsulTM according to your requirements.
- 3. Pipet gently to assist target ingredient dissolving, avoid bubble during this process.
 - <u>Note: Before target ingredient dissolved completely, keep the mixture on ice to avoid</u> μCapsulTMturn into gel form.
- After completely dissolving, load µCapsul[™] to a 24-well plate with Transwell inserts as the image below. Regarding the amount of µCapsul[™], for example, 200 – 300 µL is sufficient for a well of a 24-well plate.



- 5. Put it into an incubator (37 °C), μCapsulTM will turned into solid 3D gel around 5 minutes.
- 6. Add 1 ml PBS buffer solution for each well.
- 7. Collect the released medium at a regular interval, for example, 12-24hr at the beginning. Then replaced each well with fresh PBS immediately.
- 8. Determined and analysis is the target ingredient in released medium by spectrophotometry, ELISA or other suitable method. The cumulative release curve then could be calculated.