

## **2. Experimental Part**

### **2.1. Chemicals and Instruments**

#### **2.1.1. Chemicals**

High molecular weight chitosan (HMWC) (M.W.~250 kDa and DDA 99%, Xiamen Xing, Shanghai, China). Oleic acid was obtained from Merck, Germany. Surfactant, Labrasol® (PEG-8 caprylic/capric glycerides, which is a mixture of 30% mono-, di- and triglycerides of saturated C6-C14 fatty acids, 50% of mono- and di-fatty acid esters of polyethylene glycol (PEG 400), and 20% of free PEG 400, HLB 14), and cosurfactant, Plurol Oleique® (polyglyceryl-6 dioleate, HLB 6), were obtained from Gattefosse, France. Diacylglycerol (DAGs) from Merck, Germany. Recombinant human (rh) insulin powder (Batch No. EE-B10-10-000481/00563) was obtained from Biocon Limited, Bangalore, India. Streptozotocin (STZ) was purchased from Calbiochem, Germany. Tris (hydroxymethyl)-aminomethane was obtained from Merck, Germany and hydroxyl propyl  $\beta$ -cyclo dextrin (HP $\beta$ CD) from Merck, Germany. Bacitracin was purchased from Sigma–Aldrich, MO, USA. Chloroform was obtained from chloroform spirit BP, medex company, UK. All chemicals were used as received without further purification. Water was double distilled and deionized (measured conductance was less than 2  $\mu$ S/cm).