

## Evaluation of Drug Delivery Effect Using Biodegradable Carrier

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As one of the most important and essential researches to develop the convenient and effective drug in the medical industry, more focus has been paid on the non-injection or parenteral drug. The meaning of the drug release study is linked directly with the dignity of human being in the aspect to reduce the pain by the drug delivery. This study has been increasingly applied to the various fields including the inhibitor of partial nerves, medical supplies for kids, and substitutes for the existing drug. It has been known that chitosan is suitable for controlled drug release thanks to its advantages of biodegradability and bio-compatibility. This study investigated the individual drug characteristics and drug release behavior by manufacturing the chitosan patch using insulin, drug for diabetes, at a low temperature, and further tried to find the optimal condition by adding the skin activating agent to the chitosan patch using mice. According to the analysis using the chitosan-insulin drug and the skin activating agent, a decrease in the blood glucose level was achieved. An experiment was performed in vivo by utilizing chitosan nanoparticles as a biopolymer to control the drug delivery rate at an optimal condition. It was observed that the experiment of the drug delivery by nanoparticles containing insulin could effectively lower the blood glucose of the mouse.