3.7. Evaluation the effect of different flow rates on insulin metabolism in liver

In the present study, significant differences were found between insulin perfusion at 5 ml/min and 1 ml/min flow rates in both normal and diabetic livers ($p < 0.05$). In addition, streptozotocin-treated livers at high flow rate were resulted in the most potent insulin action.

After insulin perfusion at different flow rates and drying the effluent, in normal rats the dissolved insulin administration decreased the blood concentration of glucose at 5 ml/min more than 1 ml/min flow rate (Figure 3.22). Moreover, in diabetic rats the glucose levels were reduced in the same manner as can seen in (Figure 3.23).

In (Figure 3.24), the maximal blood glucose reduction was evaluated from insulin subcutaneously injected after the perfusion in diabetic liver at 5 ml/min ($p < 0.05$). The observed difference of insulin action between perfusion on diabetic and non-diabetic livers at the low flow rate (1 ml/min) was reported in (Figure 3.25).