The Effect of Kappa-Carrageenan Consumption on Blood Glucose Level of Diabetic Wistar Rat (Ratus norwegicus)

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Abstract

The effect of kappa-carrageenan consumption on blood glucose level were studied on diabetic male wistar rat (Ratus norvegicus). The rats were made diabetic by aloxan injection, and then were given that a ration contains 5, 10, 15, 20% (w/w) kappa-carrageenan, standard ration (negative control), and parental glibenklamid (positive control). The results showed that the standard ration could not reduce blood glucose from hyperglycemic to normal level, while the ration contained kappacarrageenan could. The higher kappa-carrageenan seaweed level in the ration has higher capacity to decrease blood glucose level. The ration containing 20% and 15% kappa-carrageenan could reduce blood glucose in 18 and 21 days, respectively. The effect of this ration was similar to that of glibenklamid which reduced blood glucose to normal level in 18 days. The ration containing 5 and 10% kappa-carrageenan could reduce blood glucose level; Blood glucose leve return to normal on the 21st day.

Key words: blood glucose, kappa-carrageenan, glibenklamid.