

## Cardamom Extract Leaves Decreased Atherogenic Indexes and Blood Glucose Level of Diabetic Rats Alloxans-Induced

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<b>Abstract</b>	<p>Cardamom (<i>Amomum Cardomomum</i>) leaves has antioxidant in vitro, which was supported by a high flavonoids and vitamin C contents. It has been reported that antioxidants improved atherogenic index and insulin secretion. The aims of this study were to explore the potential of cardamom leaves extracts as atherogenicity and blood glucose levels controlling in alloxan-induced diabetic rats. The animal experiments were 45 rats (<i>Rattus norvegicus</i> L.) Sprague Dawley strain, male, aged 2-3 months, weighing 210-310 g. After acclimatization for 1 week, rats were fasted overnight and then induced alloxan monohydrate at a dose of 120 mg/kg body weight. One week later, the rats in the test blood glucose levels using the Nesco Multi Check Glucose, Kemel Int'l Corp. via the lateral tail vein of rats, blood glucose check attached to the equipment, and after 5 seconds glucose levels was read. Atherogenic index was determined by the formula: <math>\frac{\{(Chol-tot)-HDL\}}{HDL}</math>. Blood samples for analysis of total-cholesterol and chol-HDL taken from the eye vein, after the rat anesthetized using ketamine. Rats with blood glucose levels &gt; 200 mg/dL, were selected as experimental animals, and then divided into 3 groups of 15 each. Group I, fed standard and cardamom leaves extract; Group II, fed standard and glibenclamide, whereas group III, only fed standard for 2 weeks. At the beginning diabetic, their weight dropped from 247.63 +/- 28.5 to 220.9 +/- 26.6 g (<math>P &lt; 0.05</math>). However, after feeding cardamom leaves extract for 2 weeks their body weight were stable (<math>P &gt; 0.05</math>), the blood glucose levels decreased from 199.25 +/- 100.5 to 102.88 +/- 17 mg/dL (<math>P &lt; 0.05</math>), and the atherogenic index decreased from 0.61 to 0.38 (<math>P &lt; 0.05</math>). Based on the result, it could be concluded that cardamom leaves extract is potential as anti-atherogenic, lowers blood glucose levels, and maintain weight loss in diabetic rats.</p>
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