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Evaluation of antidiabetic and antioxidative effects of wood vinegar *in vitro*

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Diabetes mellitus is the fourth leading cause of death among Koreans. To control postprandial hyperglycemia is one of major goals for the treatment of diabetes mellitus. The major cause of death of diabetic patients is diabetic complications. Since oxidative stress could be one of the major factors to aggravate diabetic complications, compounds with antioxidant acivities could improve diabetic complications. Inhibitory activity of wood vinegar against α-glucosidase was measured *in vitro*. Wood vinegar inhibited yeast α-glucosidase activity by 76.3% at the concentration of 0.5 mg/mL *in vitro*. The antioxidative activities of wood vinegar was investigated by measuring the radical scavenging effect on DPPH (1,1-diphenyl-2-picrylhydrazyl) radical. The radical scavenging activity was by 92.1% at the concentration of 0.05 mg/mL The radical scavenging activity of L-ascorbic acid, a standard antioxidant was 96.9% at the same concentration. Thus further study will be required to study the beneficial effect of wood vinegar on glycemic control and improvement of diabetic complications *in vivo*.