Sulphur treatment alters the therapeutic potency of alliin obtained from garlic leaf extract.

Nasim SA, Dhir B, Samar F, Rashmi K, Mahmooduzzafa, Mujib A.
Department of Botany, Environmental Biotechnology Laboratory, Hamdard University, New Delhi, India.

Abstract
The therapeutic potency of garlic leaf extract obtained from normal and sulphur treated plants was compared. Alliin, the active compound of garlic leaf extract showed 32% increase in yield under sulphur treated conditions. Alliin obtained from leaf extract of plants brought a significant reduction in serum glucose, triglycerides, total lipids, total cholesterol, LDL- and VLDL-cholesterol levels than glibenclamide in alloxan-induced diabetic rats. Alliin from sulphur treated plants was more effective in comparison to that obtained from plants raised in normal conditions. Serum glucose levels showed significant reduction of 50% in rats administered with leaf extract from sulphur treated plants in comparison to 37% noted in rats administered with leaf extract from normal plants. No alteration in HDL-cholesterol was noted. Similarly, alliin obtained from leaf extract of plants lowered the serum enzyme (ALP, AST and ALT) levels towards normal than glibenclamide. The reduction in serum enzyme levels was significant in rats administered with leaf extract of plants raised under sulphur treated conditions in comparison to that raised under normal conditions. The present findings suggest that leaf extract from sulphur treated garlic possess more antidiabetic potential and hence show more therapeutic potency in comparison to extract obtained from normal plants.

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