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Exploring the Biochemical and Therapeutic Properties of Aged Garlic

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Abstract : The core objective of this work is to explicate the biochemical and therapeutic properties of aged garlic. For this purpose, two varieties of garlic were obtained from Ayub Agricultural Research Institute (AARI) Faisalabad-Pakistan. Additionally, fresh garlic was converted into aged garlic via fermentation method in the incubator at 70 to 80 % humidity level and 60C0 temperature for one month. Similarly, biochemical and antioxidant properties of fresh and aged garlic were also elucidated. Mean values showed that moisture content was decreased, whereas crude fat, crude protein, crude fiber, crude ash and total carbohydrates were enhanced after fermentation. Additionally, crude protein of fresh and aged garlic was 7.57±0.16 and 5.52±0.12%, respectively, whilst 9.68±0.41 and 8.78±0.29%, respectively, after the fermentation process. In addition, NFE contents were also enhanced up to 39% after the fermentation method. Moreover, Zn, S, Al, K, Fe, Na, Mg, and Cu contents were also increased. Furthermore, Total phenolic contents (TPC) of fresh and aged garlic were 2498.70 & 2188.50mg GAE/kg whilst 3008.59, & 2591.81mg GAE/kg for aged garlic. In conclusion, aged garlic explicated the better biochemical properties, mineral profile and antioxidant properties as compared to fresh garlic.

Keywords : aged garlic, nutritional values, bioactive properties, fermentation
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