

The Black Garlic

J. Sasaki

Department of Emergency Medical Technology, Hirosaki University of Health and Welfare Junior College, 2/5 Ohgimachi, Hirosaki 036/8104, Japan

Despite newly developed vegetable armed with great bio-function, black garlic is still maintaining at low level recognition in society. Black garlic was the processed garlic (*Allium sativum*) made by control of humidity and temperature without any additives around for a month. During processing fresh garlic gradually changed color from white, brown, and to deep black at the end of processing. This processing was a well-known chemical reaction called “*Maillard-Browning Reaction*”. The final product was soft and sweet with no pungent smell, and directly edible like fruit. This manufacturing process was established after repeated experiments by Japanese citizen “rice-dealer” at Mie prefecture Japan 1998, and chemically analyzed but no bio-functional works. In chemical analysis S-allyl-L-cysteine increased in amount, which was a trace in fresh garlic. Thirteen out of 18 amino acids tested increased accompanied with elevation of carbohydrate contain. Black garlic extracts demonstrated strong anti-tumor potency in mouse tumor. Fujita Hoken-Eisei University in Japan reported anti-carcinogenic potency in a rat model. Other bio-activities as enforcement of immune system, bacteria-killing and anti-oxidant activity were serially issued from our laboratory. These reports drew citizen’s attention, who were seeking for health maintenance foods, to the black garlic. However a few researchers continue studies bio-function but are insufficient to draw whole features of black garlic at the moment. Black garlic companies and persons interested gathered in Japan 2016 to establish the world black garlic association to promote active research aiming at more contribution to people’s health promotion.

Keywords black garlic (*Allium sativum*); processing manner controlled humidity and temperature; no additive; anti-tumor activity; immune enhancement; anti-oxidative potency; anti-bacteria potency

References

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