Mareeba Black Garlic

Mareeba Black Garlic has various antioxidants:

- **Amadori/Heyns compounds:** These are formed during the Maillard reaction. Amadori/Heyns compounds are strong antioxidants, and compared to fresh garlic, black garlic has up to 40 to 100 times more of these compounds.
- **5-hydroxymethylfurfural:** This is an antioxidant that also has some anti-inflammatory effects. Compared to white garlic, black garlic has a higher amount of this beneficial component, as 5-HMF is created under very high heat. [R]
- **Organosulfur compounds**: Diallyl sulfide, diallyl disulfide, diallyl trisulfide, and diallyl tetrasulfide.
- **Pyruvate: This is a key antioxidant and anti-inflammatory molecule of black garlic**. It reduces nitric oxide and prostaglandin E2, both of which prolong and intensify inflammation.
- *S*-allylcysteine
- Tetrahydro-β-carbolines
- *N*-fructosyl glutamate
- *N*-fructosyl arginine
- Allixin
- Selenium
- *N*-alpha-(1-deoxy-d-fructos-1-yl)-l-arginine
- Other alkaloids, polyphenols, and flavonoids

Black garlic also contains nitrogen oxide, which has strong antiviral and antitumor effects.

It also contains 2-linoleoylglycerol, an anti-inflammatory molecule. It lowers levels of prostaglandin E2 and cytokines, which are key promoters and signals of the inflammatory response. They prolong and increase cell death, swelling, and the uncomfortable symptoms of an allergy, infection, or other sicknesses.

PTO

Mareeba Black Garlic

Contains a high abundance of **hydrogen-sulfur donating compounds, which are very important for antioxidant properties to be possible**. **Allicin**, an unstable component of garlic, is converted into organosulfur compounds, which are more stable and also contain hydrogen-sulfur donating capabilities.

Hydrogen-sulfur donating compounds are vital to antioxidant effects, as they activate the **Nfr-2 factor.**

Nfr-2 factors bind to antioxidant response elements, which trigger the release of various **enzymes**

- Heme oxygenase-1
- Superoxide dismutase
- Catalase
- Quinone-oxidoreductase-1
- Glutathione S-transferase

All of these enzymes are important because they become powerful antioxidants, transforming damaging oxygens and nitrogens into nonreactive states that can significantly harm cells in the human body.

Black garlic has **increased fructose and glucose content**, explaining its sweet flavor.

In a cell study of immune system cells from volunteers, **black garlic showed stronger antioxidant and anticancer activity** than fresh garlic.

Another study showed that black garlic is the **optimal choice as an antioxidant** for neutralizing reactive oxygen species.

Various cell studies have proven the antioxidant nature of black garlic, and it is this main property that further extends to its other consequent benefits. Few extensive human clinical trials have been conducted, so it is difficult to predict the long-term effects of black garlic.