BHA & BHT

BUTYLATED HYDROXYANISOLE & BUTYLATED HYDROXYTOLUENE

Butylated hydroxyanisole (BHA), molecular formula $C_{11}H_{16}O_2$, and butylated hydroxytoluene (BHT), molecular formula $C_{15}H_{24}O$ are antioxidants. BHA is an oil-soluble waxy solid with the E number E320, and BHT is an oil-soluble white powder with the E number E321.

Fatty or oily foods treated with BHA and BHT taste better for longer, due to their chain-breaking antioxidants that quench free radicals. BHA and BHT are time-tested, economical, easy-to-use ingredients that prevents fats in foods from going rancid. BHA and BHT are primarily used as antioxidants and preservatives in food, food packaging, and animal feed, to preserve appealing food odor, color and flavor.

The food industry generally prefers BHT in combination with BHA due to their stability at higher temperatures than vitamin E (mixed tocopherols).

HISTORY

The synthetic antioxidants BHA and BHT were synthesized in the late 1940s and have been used as food additives since the 1940s and 1950s, respectively. BHA & BHT have been linked with having a positive effect due to their antioxidant capacity.

PRODUCTION

BHA and BHT are insoluble in water, but soluble in fats and oils.

APPLICATIONS

Used across a wide variety of food applications, BHA & BHT are most commonly used in snack foods, cookies and dressings:

- to delay oxidation
- to protect against color and flavor loss
- at a maximum allowable usage rate up to 200 ppm in food applications

BHA & BHT can be combined with:

- other synthetics
- citric acid

Format

- dry, liquid blends

Sources:
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https://foodinsight.org/the-benefits-of-preservatives-in-our-food/
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