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PRODUCT DATA

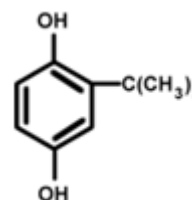
Tertiary-Butyl Hydroquinone [TBHQ]

Introduction :

TBHQ (Tertiary Butyl Hydroquinone) is a synthetic food grade antioxidant used for stabilising various oils, fats and foods against oxidative deterioration, thus retarding development of rancidity in these products and considerably increasing their shelf and storage life. TBHQ has an exceptional stabilising effect in unsaturated fats, particularly in polyunsaturated vegetable oils and in edible animal fats. TBHQ can also be widely used in essential oils, nuts, inedible animal fats, butterfat, packaged fried foods and food packaging materials such as Glassine and Paraffin wax.

Typical Properties :

Chemical Formula:	C ₁₀ H ₁₄ O ₂
Molecular Weight:	166.21
Appearance:	White to light tan crystalline powder
Purity:	99 wt. % (min)
Melting Point:	126.5°C – 128.5°C
Specific Gravity:	1.05 20/4°C
Boiling Point:	295°C
Flash Point:	171°C
Toluene Content, PPM:	20 – 25 PPM
Hydroquinone Content, Wt% :	0.10 Max.
Heavy Metals as Pb, PPM :	0.2 Max.
2,5 Di-tert Butylhydroquinone, Wt%:	0.20 Max.
t-Butyl- P -Benzoquinone Wt%	0.20 Max.
Ultra Violet – Absorbance:	Passes



Structural Formula

Solubility at 25°C (approx. %):

• Water	<1
• Propylene Glycol	30
• Ethanol	60
• Glyceryl Mono Oleate	10
• Soyabean Oil	10
• Cottonseed Oil	10
• Safflower Oil	5

Applications:

TBHQ is an established and excellent antioxidant for vegetable oils and fats. The use of TBHQ (about 0.02 wt%) stabilizes oils like Palm Oil, Soya bean Oil, Sunflower Oil, Peanut Oil, Coconut Oil, Mustard Oil, Rice Bran Oil, Corn Oil etc. TBHQ will ensure good storage properties for both the oil and the cooked product. TBHQ is also found to be very effective in protecting partially refined oils and crude oils during storage prior to refining.

TBHQ can also be easily incorporated in Fats, Animal fats, Lemon oil, Lards, Butter fat, Orange oil etc. for stability. TBHQ in combination with BHA, BHT and Propyl Gallate can be used effectively for various other antioxidant applications.

Methods of Applications :

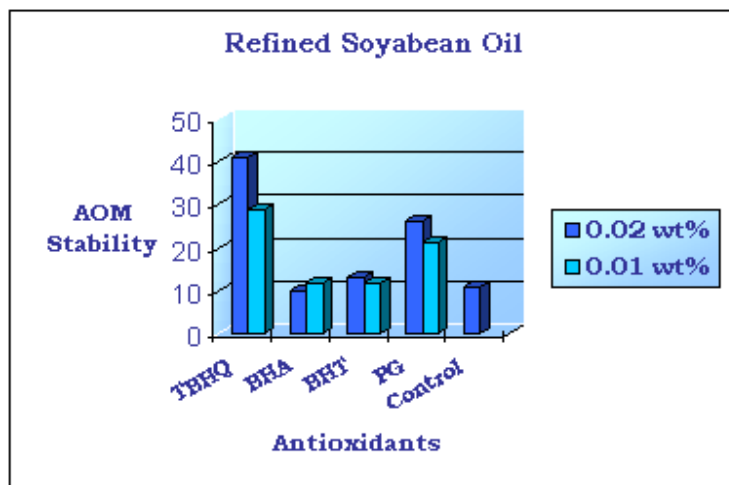
TBHQ antioxidant is readily soluble at use levels in fats and oils and in a number of food grade solvents. While applying antioxidants to food products one should ensure that the antioxidant thoroughly dissolves and dispersed the fat or oil portions. Since only small amounts of antioxidants are required for protection of food, the method of incorporating the antioxidants may determine the success of stabilisation. The method of processing depends upon the product and the available equipment.

Some of the methods that can be followed for the application of TBHQ are: Direct method, Antioxidant Concentrate method, Proportionate method, Spray method etc.

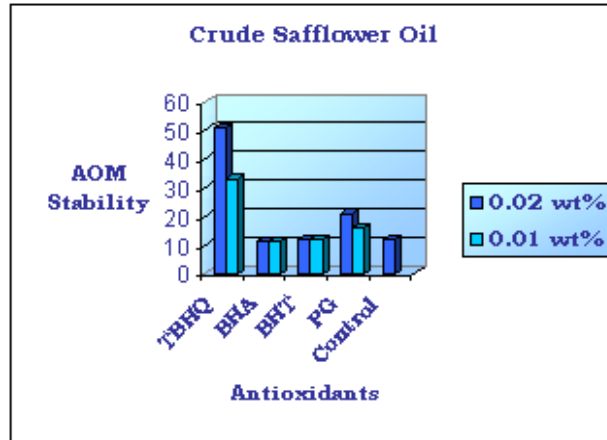
Effectiveness of TBHQ Antioxidant :

TBHQ is an effective antioxidant even at concentrations as low as 0.02 wt% or less. The addition of TBHQ, which is required to stabilize food products, eliminates the contribution of undesirable odour or flavour. The effectiveness of TBHQ on the oxidative stability of fats, oils or food products can be realistically measured by Active Oxygen Method (AOM).

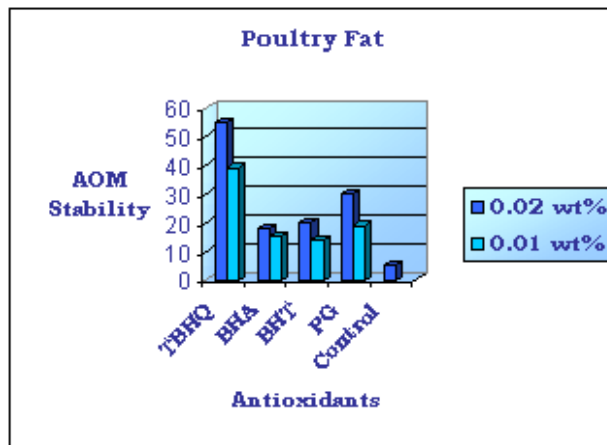
AOM Stability of TBHQ as compared to other antioxidants in 'Refined Soya bean Oil'.



AOM Stability of TBHQ as compared to other antioxidants in 'Crude Safflower Oil'.



AOM Stability of TBHQ as compared to other antioxidants in 'Poultry Fat'.



Safety and Regulations :

TBHQ is certified as safe for human consumption. In many major developing countries organisations like FDA (Food and Drug Administration), FSIS (Food Safety and Inspection Service) and others permit the use of TBHQ or combinations with BHA (Butylated Hydroxy Anisole) or BHT (Butylated Hydroxy Toluene) at concentrations up to 0.02% by weight of the fat or oil content of the food.

Packing :

25 kg Fibre drums

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