

BASF
We create chemistry

Sugar Fortification
An Investment in the Future

The fortification of staple foods such as sugar is an effective public health strategy to improve micronutrient intake in populations at risk of deficiency.

At BASF, we are driven by a clear purpose: to help build a healthier future by improving access to micronutrients, e.g. vitamin A. Through our high-quality, reliable product solutions, we enable food fortification and thereby help to close nutritional gaps.

We see adequate vitamin supply not only as a nutritional necessity, but as an investment in long-term well-being and better lives for millions of people worldwide.

Why Fortify Sugar?

Sugar is a staple food widely consumed across all population groups, making it an ideal vehicle for micronutrient fortification. However, fortifying sugar with fat-soluble nutrients such as vitamin A presents technical challenges and requires a carefully developed vitamin A powder formulation.

The formulation must ensure excellent homogeneity within the sugar matrix and deliver high stability throughout storage. This is achieved through microencapsulation of vitamin A combined with alpha-tocopherol as an antioxidant (no BHT added).

BASF Product Solutions

BASF is a leading producer of highly stable vitamin A offering a specific powder formulation for the fortification of sugar:

Dry Vitamin A-Palmitate 250 CP CWD
Retest period: 24 months

The product contains 250,000 IU/g of vitamin A. It has been optimized for providing homogeneity and stability in sugar.

BASF Testing Solution

To test for the vitamin A content of sugar, BASF has developed a semi-quantitative test kit.

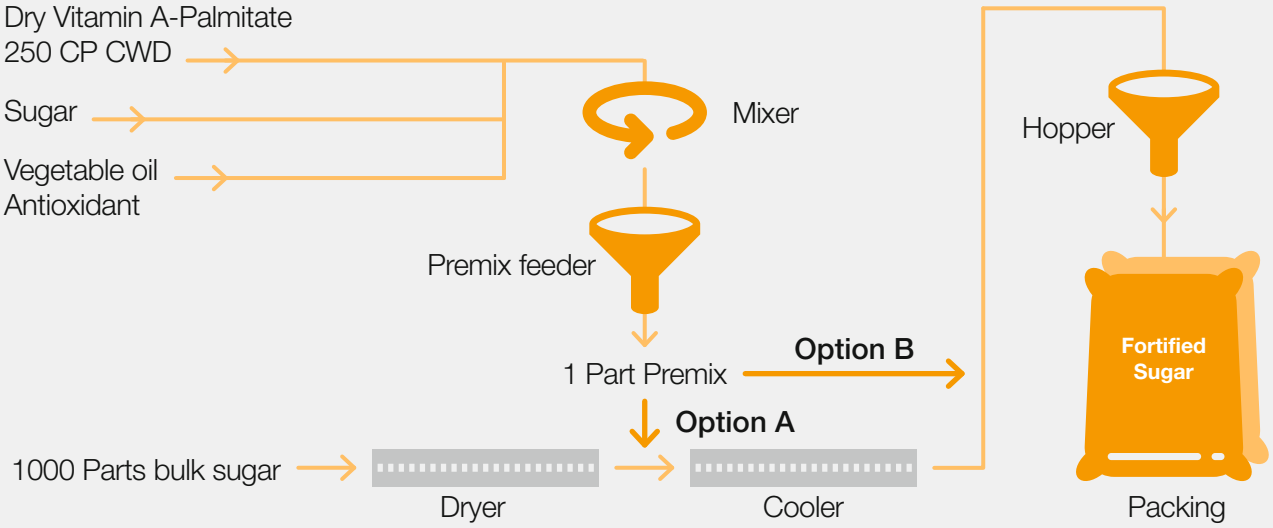
It is easy to use and allows fast screening of sugar for the presence of vitamin A at low cost.

Sugar Fortification Principle

The sugar fortification process begins with the preparation of a premix, which consists of sugar, Dry Vitamin A Palmitate 250 CP CWD, a small amount of vegetable oil, and an antioxidant.

The premix is then added to sugar after the drying step (Option A). Alternatively, it can be added to sugar after the cooling step (Option B). To ensure optimal stability of vitamin A in the final sugar product, addition after the drying step is recommended.

Sugar Fortification Process



Please note: local legislations on fortification of sugar with vitamin A may vary and need to be considered.

Product Stability

Vitamin A particles are spherical and smaller than the angular sugar crystals. Thus, to avoid segregation after the mixing process, the mobility of the vitamin A particles has to be reduced. This is achieved by adding a small quantity of vegetable oil.



For information about other vitamins for food fortification, and applications in oil, milk or flour, please contact us.

Stability of Vitamin A Palmitate in Sugar

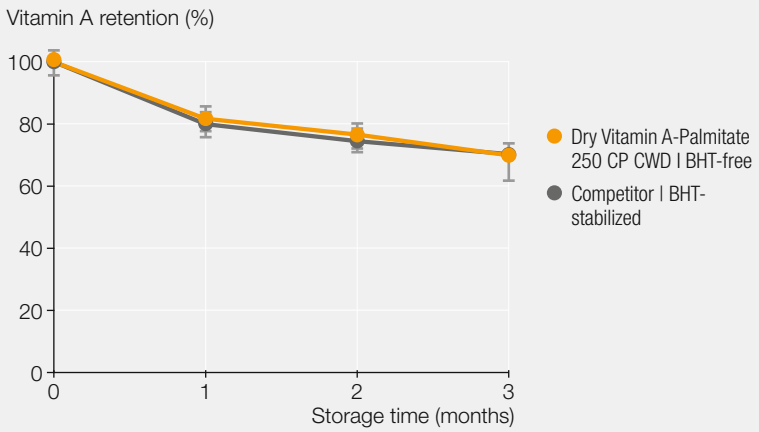


Figure: values are mean ± 3% SD (n=2). Sugar with a vitamin A content of 50,000 IU/G was stored at 40 °C /75% r.h. in a sealed container. BASF study No. S-1021.

Empower yourself with MyBASFWorld

BASF Human Nutrition

basf.com/human-nutrition

Impressum: BASF SE, Ludwigshafen, Germany (June 2026); MarComm-2026-00117