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Fortifying Bread

Pharmaceutical production processes can better meet the requirements of food fortification.

BY SHEILA WAN, EDITOR



Companies need to meet regulatory requirements in terms of safety, traceability and manufacturing processes when using nutrient supplements.

Besides mouth feel and product presentation, manufacturers are seeing more demand for baked goods that are fortified with healthful ingredients. Dr. Lutz Popper, head of Mühlenchemie's Research and Development department tells *Asia Food Journal* on the current market trends and regulatory demands concerning such food.

AFJ: How widespread is the use of nutritional supplements in the bakery industry?

Dr. Popper: The supplementation of flour with vitamins and minerals is mandatory in nearly 60 countries. There are also other countries where manufacturers do so voluntarily. It is estimated that over 80% of the world's population consume fortified flour as a result of regulations and recommendations by the governments, as well as voluntary decisions made by manufacturers.

While producers of baked goods worldwide are using nutritional supplements to create more attractive products, we believe there are consumers who have yet to benefit from the fortification of flour-based products.

AFJ: What are some of the popular nutritional supplements used?

Dr. Popper: The micro-nutrients recommended for food fortification by the World Health Organization (WHO) such as iron, folic acid, zinc, vitamin A and more recently, vitamin B12 (cyanocobalamin) are the most common nutritional supplements used in baked products. The governments find incorporating the micro-nutrients in staple food such as bread helps to improve the health of the lower income population and increases the health and wealth of

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their people, resulting to a more productive workforce and lighter healthcare burden.

Besides economic reasons, consumers are demanding products that contribute to nutrition, particularly in developed countries where an adequate supply of calories is no longer a driving force. As "eat fast and healthy" seems to become a popular motto, more food products are expected to be supplemented with micro-nutrients, including baked goods.

AFJ: What regulations are bakery processors mindful of today?

Dr. Popper: The milling and baking industries today expect solutions that support and enhance their processes in terms of quality, efficiency and cost. In order to meet this demand, suppliers need to optimize their processes and guarantee the gentle handling of products and adherence to formulations and hygiene. When manufacturing sensitive products for use in baked goods, companies also need to be mindful of consumers' health and well being.

In India, there are government specifications for fortifying flour where certain nutrient supplements can be considered as either food or drugs. Companies therefore need to meet regulatory requirements in terms of safety, traceability and manufacturing processes using such ingredients.

The need for companies to comply with regulations is becoming more prevalent in the global economy. They need to acquire the relevant information on the origin and processing of a product from their suppliers in order to comply with local laws and regulations.

AFJ: How do the requirements of flour improvers differ between developed markets such as Europe and developing markets in certain parts of Asia?

Dr. Popper: While Europe has not adopted flour fortification as a general rule, although there are proven benefits for the populations of developed countries, the fortification of flour-based products is a common practice in the region. While flour fortification is mandatory

in Australia, Central Asia, Indonesia, the United Arab Emirates (UAE) and the US, it is voluntary in China and India. Although the WHO recommends the amount of micro-nutrients to be added to food, the level of fortification differs from country to country due to consumer habits, the cost of fortification and the health of the local population.

AFJ: How are manufacturers appreciating your facility as pharmaceutical-grade in producing micro-nutrient premixes for baking?

Dr. Popper: The demands made on flour fortification differ among manufacturers. While some require a nutrient such as iron and folic acid, and occasionally vitamin A, to be added to food, most countries with mandatory or voluntary flour fortification requirement need more complex premixes.

In markets where fortification is mandatory, the micronutrient content of the fortified food is usually controlled by supervisory authorities that may also test for impurities. A reliable composition of the premixes is therefore needed to protect the consumer and for fortified products to be marketed successfully. A plant using pharmaceutical production processes can meet these requirements: it permits extremely precise blending and excludes the risk of contamination even if the nutrient premixes required are highly complex. ■



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