

**HUMAN NUTRITION &  
HEALTH SOLUTIONS**





## Human Nutrition & Health Solutions

Human Nutrition & Health Solutions business of Jubilant Ingrevia offers a basket of food ingredients including straight and premixes. They have been developed leveraging ingredients expertise, unmatched knowledge and years of research and development. We deliver nutritional and functional ingredient solutions, and tailored premixes for use in the food, nutrition and fortification market.

We understand the demands of constantly evolving food market and its corresponding trends and stay at the forefront of market development and awareness, utilising this knowledge to expertly guide our customers to the most advanced nutrition ingredient solutions with defined health benefits. We can be the right partner of choice for developing your business in today's ever-conscious Clean Label market by providing more natural, minimally processed and familiar ingredients.

## PRODUCT PORTFOLIO

### Premixes for Food/ Nutra application

#### Micronutrients premixes for individual health

We are a leading global manufacturer of Vitamin B3 and premixes for Human Nutrition.

Premixes are Dry or Liquid customized blends of desired functional ingredients like Vitamins, Minerals, Amino acids, Nutraceuticals, botanicals, Proteins and Other Micronutrients. We offer customised premix formulations depending on the customer needs and applications.

We help customer with:

- Reduction in development time
- High quality products at competitive cost
- Nutrient optimization
- Application and technical expertise
- Regulatory support

### Choline and Derivatives

#### An essential nutrient with many benefits

Choline is considered as an Vitamin like nutrients and it plays an important part in many processes in our body. Choline is a important for structural integration of cell membranes, Transmission of lipids, Cholesterol transport and metabolism.

Choline bitartrate is the bioavailable form of choline which is easy to absorb and it is more economical than other choline sources. Choline It is considered a cholinergic compound as it increases levels of acetylcholine within the brain.

Choline Chloride is commonly used in formulations for beverages, nutraceutical formulations and infant formulas.

Choline plays an essential role in,

- **Parental & Infant Health:** Promotes early brain development.
- **Cardiovascular Health:** Choline Contributes to normal homocysteine metabolism ( Efsa)
- **Mental Focus & Memory:** Helps in Cognitive health. Prevents neural tube defects
- **Liver Health & Metabolism:** Normal lipid transportation and metabolism. supporting cell membrane, healthy metabolism, DNA synthesis as well as
- **Energy & Fitness:** Supports Sports performance

It is commonly used in:

1. Premixes: designed for food / nutra applications
2. Pharmaceutical uses: Hepatic protector and anti-stress preparations
3. Multivitamin complexes, energy and sport drinks ingredient, Infant , Follow up formulas

### Green Ethanol-based acetic acid

Acetic acid is a clear, colorless, corrosive carboxylic acid with sour taste and pungent smell. Acetic acid is produced both synthetically and by bacterial fermentation. The fermentation route remains important for vinegar production, as the world food laws indicate that vinegar used in foods must be of biological origin.

### Encap. Sorbic acid

Encapsulation is a process to encapsulate active ingredients within a carrier inert protective material (Coating).

Sorbic acid is a carboxylic acid and the highly effective food preservative against yeast, molds and bacteria. Still historically, it is not being used in yeast leavened products as it inhibits the yeast leavening action, leading to a reduced /low volume product.

Encapsulation of the Sorbic acid creates a barrier around the sorbet acid and does not allow the Sorbic acid to interact with yeast, it allows the yeast to function with minimal inhibition.

### Benefits

- Optimised yeast fermentation
- Extend shelf life to, reduce wastage of the bread
- Blends easily with dry ingredients
- Enhanced performance when used in conjugation with calcium propionate

### Calcium propionate

Calcium propionate (E 282) is a commonly used organic salt of propionic acid which help preserve various food products including **baked goods** – bread, muffins etc.

**Processed Meat** – hot dogs, hams, luncheon meats etc.

Calcium propionate extends the shelf life by inhibiting the growth and reproduction of molds and other microorganisms.

Jubilant can offer both granular and fine grade material for the customers.

### Food Protection Solutions

Food Protection Solutions is the most effective and commonly used bakery preservative.

Baked goods are sterile after baking process, but get re-contaminated during cooling due to the high moisture content, which makes the bakery good susceptible to yeast and mold growth.

Preservatives have two functions:

- Effective Antifungal / Mold inhibitor
- Prolong shelf life of baked goods
- Minimum sensory impact on the baked goods

Bread is one of the most popular foods around the world. A typically made bread from flour, yeast and sugar has a limited shelf life of about 2-3 days. With urbanisation, distribution and long shelf life demand of breads has become an important issue and hence industry has been looking out for use of effective food preservatives to enhance the shelf life of bread.

- (i) to retard the rate of yeast and mold growth
- (ii) to prevent the bacterial spoilage “rope” caused by certain *Bacillus* spp.

### Fermentation route

The food-grade Acetic Acid from Jubilant Ingrevia is produced from natural bio-based material and offers clean label. It provides a healthier option for food preservation requirements, as compared to the Acetic Acid produced through synthetic route.







Jubilant Ingrevia Limited is a global integrated Life Science products and Innovative Solutions provider serving Pharmaceutical, Nutrition, Agrochemical, Consumer and Industrial customers with customised products and solutions that are innovative, cost-effective and conforming to excellent quality standards. The Company offers a broad portfolio of high-quality ingredients that find application in a wide range of industries. The company has 2,100 employees and serves more than 1,400 customers in more than 50 countries across the world. The Company's portfolio also extends to custom research and manufacturing for pharmaceutical and agrochemical customers on an exclusive basis.

## MANUFACTURING FACILITIES

### UTTAR PRADESH

- Gajraula

### GUJARAT

- Bharuch
- Samlaya

### MAHARASHTRA

- Nira
- Ambarnath

## OFFICE LOCATIONS

### India

#### Maharashtra

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