

supple>it

Fortification strategy





ABOUT US

Supplevit, a sub-brand of Mirpain, was established to contribute to the global fight against malnutrition by reducing costs and enhancing food security. Supplevit is dedicated to innovation, focusing on the R&D of vitamins and minerals to enhance their application in the food and beverage industry.

PRODUCTS

- Flour & Maize Flour Fortification
- Beverage/Energy Drink Enrichment
- Oil Fortification
- HEB (High Energy Biscuit) / Date Bar Fortification
- MNP (Micronutrient Powder)
- RUTF & RUSF & LNS Fortification
- Dairy Fortification
- Baby Food Fortification
- Super Cereal Fortification
- Infant Cereal Fortification
- Confectionary/Gummy Fortification





LABORATORY

HPLC

We use HPLC to precisely separate and measure the vitamins in our premixes, ensuring accurate content and quality in each batch.



- Vitamin B Groups Analysis (B1, B2, B3, B5, B6, B7, B9, B12)
- Vitamin C (Ascorbic Acid) Analysis
- Fat Soluble Vitamins (Vitamin D, Vitamin E, Vitamin K and Vitamin A)
- Active Ingredients and Colorants

ICP-OES

With ICP-OES, and AAS, we analyze and quantify the mineral content in our products, guaranteeing compliance with nutritional standards.



- Mineral Analysis
 - Heavy Metal Analyses
- We conduct heavy metal analysis for our final products and raw materials.

MICROBIOLOGICAL ANALYSIS

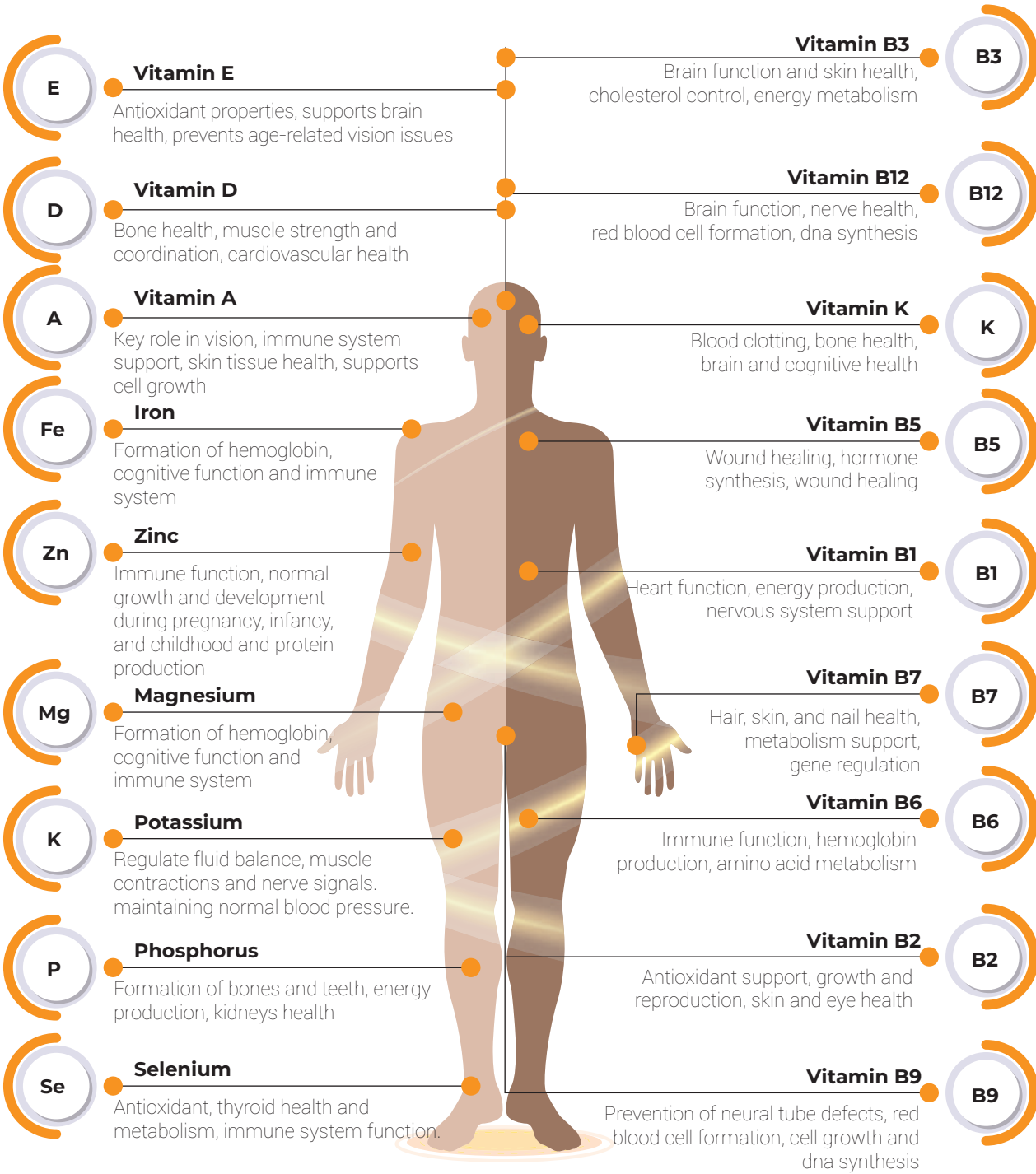
We conduct comprehensive microbiological testing on our final products and raw materials to ensure safety and quality.



Our rigorous testing guarantees that our products meet Food Safety Standards

FACTS

MALNUTRITION PERSISTS WORLDWIDE, JEOPARDIZING CHILDREN'S WELL-BEING AND FUTURE DEVELOPMENT





PROBLEM
SOLUTION
CONTROL

PROBLEM	Serious proportion of the population suffers from malnutrition, this term leads to micronutrient deficiency and later on some health issues.
SOLUTION	Vitamin mineral enrichment into the food substances will help people to overcome malnutrition.
CONTROL	Control can be done with nonprofit organizations and government.

VITAMINS

- Vitamin B1
- Vitamin B2
- Vitamin B3
- Vitamin B5
- Vitamin B6
- Vitamin B7
- Vitamin B9
- Vitamin B12
- Vitamin A
- Vitamin D
- Vitamin C
- Vitamin E
- Vitamin K

MINERALS

- Iron
- Zinc
- Iodine
- Selenium
- Chromium
- Copper
- Potassium
- Calcium
- Manganese
- Molybdate
- Phosphorus
- Magnesium

ACTIVE INGREDIENTS

- Amino Acids
- Taurine
- Caffeine
- D-Glucuronolactone
- Inositol
- Botanical Extracts
- Omega – 3
- Prebiotics
- Probiotics

PROCESS

HOW DO WE WORK?



TAILOR – MADE PREMIXES

We provide tailor-made premix solutions for all food industries. Our technical team is expert on how active ingredients behave in different food applications. With our advanced laboratory, we cover all your enrichment process from beginning to end.

We create premixes according to your product's characteristics and quality parameters.

Main quality criteria are;

- Sensory analysis
- Color of premix
- Shelf life studies
- Solubility of the premix
- Mesh size
- Chemical properties

PREMIX DESIGNED FOR YOUR NEEDS

Our team evaluates and calculates the process losses of vitamins, minerals, and active substances based on your specific process conditions.

WHEAT & MAIZE FLOUR FORTIFICATION

VITAMINS

- Vitamin B1
- Vitamin B2
- Vitamin B3
- Vitamin B5
- Vitamin B6
- Vitamin B7
- Vitamin B9
- Vitamin B12
- Vitamin A
- Vitamin D
- Vitamin E
- Vitamin K

IRON SOURCES

- Elemental Iron
- Sodium Iron EDTA
- Ferrous Fumarate
- Ferrous Sulphate
- Ferric Pyrophosphate

MINERALS

- Iron
- Zinc
- Calcium

Wheat and maize flours, consumed daily by millions worldwide, are ideal for fortification with essential vitamins and minerals such as iron, zinc and B vitamins. This strategy effectively reduces micronutrient deficiencies, decreases the incidence of anemia and neural tube defects, and enhances public health in a cost-effective and scalable manner, particularly benefiting children and pregnant women. According to FFI, 93 countries had mandatory fortification of flours.



SALT FORTIFICATION

Salt fortification with iodine began in the early 20th century and is now mandatory in 125 countries, making it the most successful global fortification initiative. By adding iodine as potassium iodate, this cost-effective strategy prevents deficiency disorders such as goiter and cognitive impairments, leveraging the universal consumption of salt to enhance public health.

Fortified with;

- Iodine

SUGAR FORTIFICATION

Vitamin A is added to sugar to decrease retinol deficiency in the population. Sugar fortification is mandatory in 12 countries according to the FFI. This cost-effective strategy leverages the widespread consumption of sugar to deliver vital nutrients without altering its taste or appearance.

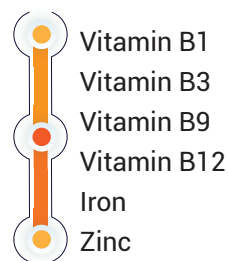
Fortified with;

- Vitamin A

RICE FORTIFICATION

Rice fortification enriches rice with essential vitamins and minerals like iron, zinc, and B vitamins to combat malnutrition.

Commonly used micronutrients are



OIL FORTIFICATION

AD3 OIL FORTIFICATION

Edible oils are used in every house while cooking, baking, etc. Addition of Vitamin A and Vitamin D3 to edible oil is mandatory in 32 countries all around the world.

Fortification sources are;

- Vitamin A
- Vitamin D
- Vitamin E

Vitamin A deficiency remains a critical global health challenge, while vitamin D deficiency is prevalent in regions with limited sunlight or where sun exposure is avoided. Edible oils, a staple in households for cooking and baking, serve as an ideal vehicle for fortification.

Currently, fortifying edible oils with vitamins A and D3 is mandatory in 34 countries worldwide, addressing essential nutritional needs effectively and sustainably

AD₃ oil fortification comes in 5 kg plastic bottles



PRODUCT NAME	OILY VITAMIN BLEND AD3	
PRODUCT DEFINITION	Specially Vitamin Premix For Edible Oil	
COMPOSITION	Compound Name	Target Limit
	Vitamin A Source : Oily Vitamin A Palmitate 1.700.000 IU / g	min. 1.000.000 IU/g blend
	Vitamin D3 Source : Oily Vitamin D 1.000.000 IU /g	min. 100.000 IU/g blend
	Sunflower Oil, DL-Alpha Tocopherol	



CSB (CORN SOYA BLEND) SUPER CEREAL

Corn Soya Blend includes;

- Vitamin-Mineral Premix (V13)
- Di-Calcium Phosphate (DCP)
- Potassium Chloride (KCl)



Super Cereal is a vital part of the World Food Programme's efforts to combat malnutrition and improve health in vulnerable populations. Fortified with essential nutrients like iron, zinc, iodine, fat soluble vitamins and vitamin B group it helps reduce anemia, enhance cognitive development, and lower mortality rates. Supplevit supports this initiative by providing Vitamin Mineral Premix (V13), Di-Calcium Phosphate (DCP), and Potassium Chloride (KCl) to manufacturers, ensuring effective and reliable nutrition solutions.

- Vitamin A
- Vitamin D
- Vitamin E
- Vitamin K
- Vitamin C
- Vitamin B1
- Vitamin B2
- Vitamin B3
- Vitamin B5
- Vitamin B6
- Vitamin B7
- Vitamin B9
- Vitamin B12
- Iron
- Zinc
- Iodine



MNP (MICRONUTRIENT POWDER)

Micronutrient powders (MNP) are an innovative solution to combat malnutrition in challenging environments. Each single-dose sachet contains essential vitamins and minerals, easily sprinkled onto semi-solid foods without altering taste or habits. Supported by the World Food Programme, MNPs enhance children's diets, reducing anemia and promoting healthy growth and development in vulnerable populations.

MNP may contain;

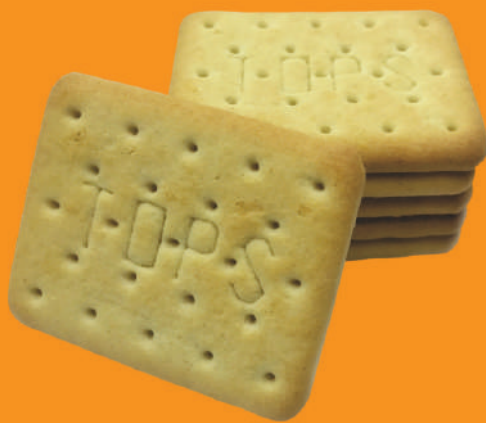
- Vitamin A
- Vitamin C
- Vitamin D3
- Vitamin E
- Vitamin B1
- Vitamin B2
- Vitamin B3
- Vitamin B6
- Vitamin B12
- Folic Acid
- Zinc
- Copper
- Selenium
- Iodine



Micronutrient powder
children 6-59 months
One sachet per child per day.
Mix with food before
consumption.

DATE BAR & HIGH ENERGY BISCUITS (HEB)

They are specialized products developed by the World Food Programme (WFP) and Supplevit provides vitamin mineral premixes for these products.



Date Bars and High Energy Biscuits (HEB), developed by the World Food Programme, are nutrient-dense, ready-to-eat foods ideal for emergencies where cooking and clean water are unavailable. Rich in protein, fats, carbohydrates, and micronutrients, they provide immediate energy and nourishment.

Supplevit supports this initiative by supplying essential vitamin and mineral premixes.

- Vitamin A
- Vitamin D
- Vitamin E
- Vitamin B1
- Vitamin B2
- Vitamin B3
- Vitamin B5
- Vitamin B6
- Vitamin B7
- Vitamin B9
- Vitamin B12
- Iron
- Zinc
- Iodine
- Calcium
- Phosphorus



BABY BISCUITS

This fortification premix enriches biscuits for infants and toddlers with essential nutrients like iron, calcium, and vitamin D, supporting growth, bone health, and immunity.

- Iron
- Calcium
- Zinc
- Magnesium
- Vitamin A
- Vitamin D
- Vitamin C
- Vitamin E
- Vitamin B12



RUTF

(READY-TO- USE THERAPEUTIC FOOD)

RUSF

(READY-TO- USE SUPPLEMENTARY FOOD)

LNS

(LIPID-BASED NUTRIENT SUPPLEMENT)

MICRONUTRIENTS

- Vitamin A
- Vitamin D
- Vitamin E
- Vitamin K
- Vitamin C
- Vitamin B1
- Vitamin B2
- Vitamin B3
- Vitamin B5
- Vitamin B6
- Vitamin B9
- Vitamin B12
- Iron
- Zinc
- Iodine
- Calcium
- Phosphorus
- Potassium
- Magnesium
- Manganese
- Copper
- Selenium

RUTF, RUSF, and LNS are nutrient-dense, ready-to-use products designed to fight acute malnutrition. Rich in proteins, lipids, and micronutrients, they require no cooking and have a two-year shelf life.

RUTF treats severe acute malnutrition (SAM) in children under five, RUSF prevents moderate acute malnutrition (MAM), and LNS supports the nutritional needs of target population.



TABLETS & CAPSULES

Tablets and capsules deliver vitamins, minerals, and botanicals tailored to health needs, such as vitamin D for bones or B12 for anemia. Formulated for specific markets and lifestyles, they use innovations like time-release coatings for better absorption. With strict quality control, they effectively address nutritional gaps and promote wellness.



INFANT CEREAL

Fortified cereals, enriched with vitamins and minerals A, D, and B12, helps prevention of deficiencies like anemia and rickets. They support healthy growth, immune function, and cognitive development in infants and young children, promoting better nutrition during critical growth stages.



BREAKFAST CEREAL

MICRONUTRIENTS

- Vitamin B1
- Vitamin B2
- Vitamin B3
- Vitamin B5
- Vitamin B6
- Vitamin B7
- Vitamin B9
- Vitamin D3
- Iron
- Calcium
- Magnesium



Fortified breakfast cereals are a convenient way to help individuals meet their daily nutritional requirements by providing essential vitamins and minerals. Enriched with nutrients like iron, vitamin B group, and vitamin D, these cereals support a balanced diet, particularly for populations with limited access to diverse or nutrient-rich foods.



BEVERAGE FORTIFICATION

MICRONUTRIENTS

- Vitamin C
- Vitamin D
- Vitamin E
- Vitamin K
- Iron
- Calcium
- Folic Acid



Our beverage fortification premix is meticulously formulated to elevate the nutritional profile of drinks such as juices, sports beverages, and flavored waters. Enriched with essential vitamins and minerals, it supports immune health and overall well-being. Designed for easy dissolution without altering taste, our premix ensures beverages remain refreshing while delivering the nutrients necessary for a healthy lifestyle.



ENERGY / SPORTS DRINKS

ENERGY DRINK

- Vitamin B1
- Vitamin B2
- Vitamin B3
- Vitamin B6
- Vitamin B12
- Vitamin D3
- Caffeine
- Taurine
- Inositol
- Glucuronolactone



SPORTS DRINK

- Calcium
- Sodium
- Potassium
- Magnesium

Our energy/sports drink premix is expertly formulated to enhance performance and energy levels with a precise blend of essential vitamins and active ingredients. Key components, including B vitamins, taurine, caffeine, and D-glucuronolactone, support energy metabolism, combat fatigue, and improve focus.

Designed to meet the highest quality standards, our premix ensures energy drinks not only provide an instant boost but also deliver sustained benefits for peak performance.



GUMMY & CONFECTIONARY FORTIFICATION

MICRONUTRIENTS

- Vitamin A
- Vitamin C
- Vitamin D
- Vitamin E
- B Group Vitamins
- Calcium
- Magnesium
- Zinc
- Selenium
- Chromium

Enriching gummies, chocolates, bars, and candies with essential vitamins and minerals transforms these confectionery products into convenient sources of nutrition. Supplevit's expertly formulated Vitamin and Mineral Premixes enable the creation of nutrient-rich products without compromising texture, quality, or taste.

Each raw material is carefully selected based on its compatibility with the final product and the bioavailability of nutrients, ensuring maximum health benefits while maintaining the product's appeal and functionality.



DAIRY FORTIFICATION

Fortified dairy products, such as milk, cheese, and yogurt, are enriched with essential nutrients like calcium and vitamin D to enhance health. Specialized options, like fortified infant milk, support bone and immune development during a baby's first year.



- Vitamin A
- Vitamin D
- Vitamin E
- Vitamin K
- Vitamin B1
- Vitamin B2
- Vitamin B3
- Vitamin B5
- Vitamin B6
- Vitamin B7
- Vitamin B9
- Vitamin B12
- Vitamin C
- Selenium
- Zinc
- Magnesium
- Phosphorus



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