



NUTRITION & CURE

**KELATERIN**

NANOBIOTECHNOLOGY

SINCE 2008

## AGRICULTURAL FERTILIZERS

- INNATE IMMUNE SYSTEM INTENSIFIER
- ELICITOR
- CELL METABOLISM REGULATOR
- EFFECTIVE MICROORGANISMS
- BIO-STIMULANT

## ORGANIC CULTIVATION

- ORGANIC PEST CONTROL
- ANTI-STRESS; BIOTIC & ABIOTIC
- ANTI-VIRUS
- ANTI-NEMATODE
- ANTI-FUNGAL
- ANTI-BACTERIAL
- ANTI-SALINITY
- ANTI-FREEZE
- Q & Q; QUANTITY & QUALITY



**KELATERIN**  
NANOBIOTECHNOLOGY

*Highly Innovative Technology*



*Kelaterin*



NUTRITION & CURE

# KELATERIN

NANOBIOTECHNOLOGY

SINCE 2008



### Guaranteed Analysis

ANALYT	w/w	w/v	ppm	ANALYT	w/w	w/v	ppm
Organic Matter (O.M)	43/1	57/7	577,000	Iron (Fe)	0/02	0/03	300
Organic Carbon (O.C)	25	33/5	335,000	Zinc (Zn)	0/01	0/01	100
Nitrogen (N)	4/9	6/5	65,000	Copper (Cu)	0/11	0/15	1500
Phosphorus (P <sub>2</sub> O <sub>5</sub> )	2/9	3/9	39,000	Molybdenum (Mo)	0/12	0/15	1500
Potassium (K <sub>2</sub> O)	2/4	3/2	32,000	Boron (B)	0/03	0/04	400

**Avira** : An Innovative Solution for Enhancing Plants' Innate Immune System Against Pests and Diseases  
Avira is an advanced nano-bio-organic formulation designed to enhance the innate immune system of plants. By activating natural defense mechanisms, it strengthens plant resistance against pests and diseases. Unlike chemical pesticides that directly target pathogens, Avira stimulates the plant's own defenses by increasing silica metabolism, wax production, and the synthesis of secondary metabolites. This improves the plant's capacity to manage both biotic and abiotic stresses. This approach not only minimizes pest and disease damage but also promotes long-term plant health and environmental sustainability.

#### Key Benefits:

Avira offers a wide range of benefits for farmers and growers. Being naturally derived, it contains no harmful chemical residues, making it safe for both consumers and the environment. By boosting the plant's immune system, it reduces the need for repeated pesticide applications, thereby lowering production costs. Avira also enhances plant tolerance to environmental stresses such as drought, salinity, heat, and frost—resulting in improved crop yield and quality. These features make Avira a sustainable and eco-friendly solution for modern agriculture.

#### Broad Applicability and Ecosystem Compatibility:

Avira is suitable for various types of crops, including field crops, orchards, and greenhouse plants, and is compatible with most Integrated Pest Management (IPM) programs. In addition to stimulating silica accumulation, wax biosynthesis, and secondary metabolite production, it promotes the generation of defense compounds such as phytoalexins and antioxidant enzymes. These natural responses prepare plants to resist a wide range of pests and pathogens.

Thanks to its excellent environmental compatibility and non-resistance-inducing mode of action, Avira is an ideal choice for organic and sustainable farming practices. By adopting this innovative technology, we move closer to achieving healthier crop production and ecological balance.

#### Supporting Healthy Crops and Ecological Balance:

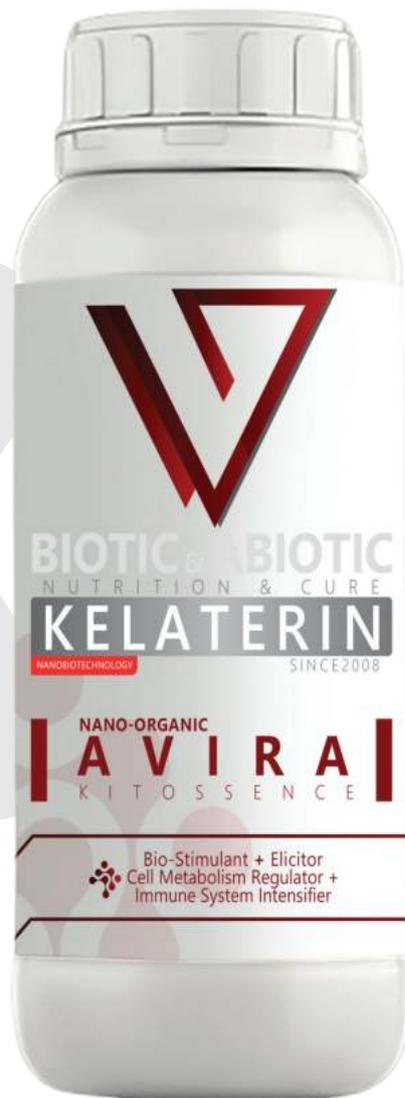
Avira represents a significant advancement in modern agriculture—a scientifically backed, sustainable, and eco-conscious solution for plant protection. By empowering plants to defend themselves rather than relying solely on external chemical inputs, Avira contributes to healthier crops, reduced environmental impact, and a more balanced ecosystem.

ORGANIC MATTERS	SOURCE OF ORGANIC MATTERS / ACTIVE INGREDIENTS
Humic acids	Potassium humate
Fulvic acids	Potassium folvate
Seaweed extract	Potassium alginate & hormones precursors
Natural (L) amino acids	Animal/herbal protein hydrolysate
Poly amines/carboxylates	Amino acids with more than one amine / carboxyl groups
Carbohydrates (sugars)	Polysaccharides, oligosaccharides, mono and disaccharides
Organic acids	Organic acids resulting from microbial fermentation process
Poly carboxylic acids	Organic acids with more than one carboxyl groups such as citric acid
Fatty acids	Herbal oils
Alcohols	Alcohols resulting from microbial fermentation process
Herbal extracts	Aqueous & oil based herbal extracts
Hormones or the precursors	Arginine, Glycine, Tryptophan, Methionine, Phenylalanine, mono & polyunsaturated fatty acids
Essential oils	Herbal extracts
Phenols & tannins	Phenolic compounds, polyphenols, tannins
Chitosan (low molecular weight)	Hydrolysed & deacetylated chitin & chitosan

NANO-ORGANIC  
**AVIRA**  
K I T O S S E N C E

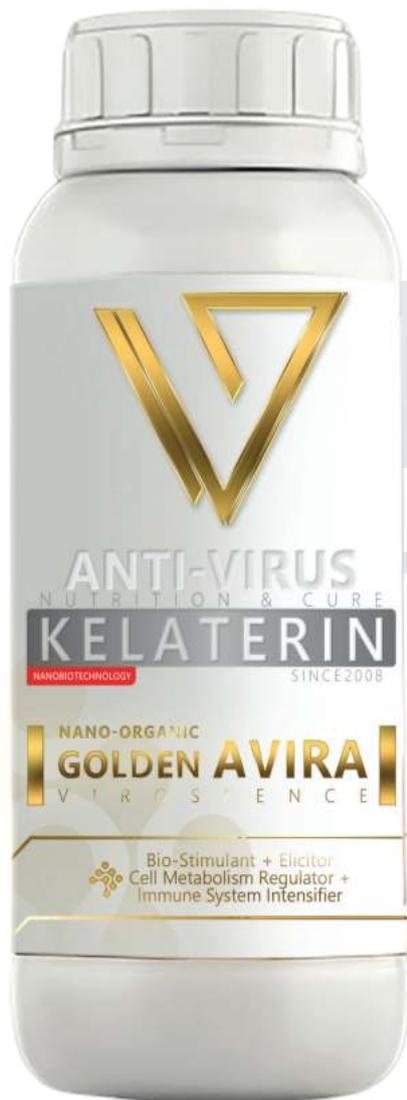


Bio-Stimulant + Elicitor  
Cell Metabolism Regulator +  
Immune System Intensifier



NANO-ORGANIC  
**GOLDEN AVIRA**  
V I R O S S E N C E

 Bio-Stimulant + Elicitor  
Cell Metabolism Regulator +  
Immune System Intensifier



**Guaranteed Analysis**

ANALYT	w/w	w/v	ppm	ANALYT	w/w	w/v	ppm
Organic Matter (O.M)	40.7	49	490,000	Potassium (K <sub>2</sub> O)	3.3	4	40,000
Organic Carbon (O.C)	23.7	28.5	285,000	Amino Acid (A.A)	38.5	40	40,000
Nitrogen (N)	1.5	1.9	19,000	Iron(Fe)	0.02	0.03	300
Phosphorus (P <sub>2</sub> O <sub>5</sub> )	0.2	0.25	2500	Boron (B)	0.01	0.02	200

**GOLDEN AVIRA:** A Groundbreaking Solution for Complete Plant Virus Control.

Golden Avira is an advanced nano-bio-organic formulation specifically designed to provide effective protection and treatment against plant viruses. Utilizing a revolutionary mechanism, it disrupts viral replication while enhancing the plant's natural defense systems. Unlike traditional chemical pesticides, Golden Avira delivers superior efficacy without encouraging viral resistance or harming beneficial organisms.

**Universal Protection with Unmatched Effectiveness:**

Golden Avira stands out for its proven ability to:

- Eliminate all known plant virus strains
- Work effectively at any stage of disease development
- Protect all types of plants and crops
- Offer both preventive and curative action

**This all-in-one solution empowers farmers to:**

- Stop the spread of plant viruses immediately
- Reverse active infections
- Boost crop immunity over the long term
- Enhance yield and improve crop quality

**Key Benefits:**

- Improve nutrient use efficiency (reduce fertilizer dependency)
- Enhance root & shoot growth
- Increase stress resilience (drought, heat, and salinity)
- Boost soil health & microbial activity
- Higher crop yield & quality

**Applications:**

- Agriculture (organic & conventional farming)
- Horticulture (fruits, vegetables, and flowers)
- Turf & landscaping
- Hydroponics & greenhouse cultivation

**Regulation & Market Trends:**

- The global market is growing due to demand for sustainable agriculture.

ORGANIC MATTERS	SOURCE OF ORGANIC MATTERS / ACTIVE INGREDIENTS
Humic acids	Potassium humate
Fulvic acids	Potassium fulvate
Seaweed extract	Potassium alginate & hormones precursors
Natural (L) amino acids	Animal/herbal protein hydrolysate
Poly amines/carboxylates	Amino acids with more than one amine / carboxyl groups
Carbohydrates (sugars)	Polysaccharides, oligosaccharides, mono and disaccharides
Organic acids	Organic acids resulting from microbial fermentation process
Poly carboxylic acids	Organic acids with more than one carboxyl groups such as citric acid
Fatty acids	Herbal oils
Alcohols	Alcohols resulting from microbial fermentation process
Herbal extracts	Aqueous & oil based herbal extracts
Hormones or the precursors	Arginine, Glycine, Tryptophan, Methionine, Phenylalanine, mono & polyunsaturated fatty acids
Essential oils	Herbal extracts
Phenols & tannins	Phenolic compounds, polyphenols, tannins
Chitosan (low molecular weight)	Hydrolysed & deacetylated chitin & chitosan

**I-V-X-XX  
LITRE**



### Guaranteed Analysis

ANALYT	w/w	w/v	ppm	ANALYT	w/w	w/v	ppm
Organic Matter (O.M)	28.2	35.7	357,000	Manganese(Mn)	0.2	0.3	3,000
Organic Carbon (O.C)	16.5	20.8	208,000	Iron (Fe)	0.14	0.17	1,700
Nitrogen (N)	3.5	4.6	46,000	Zinc (Zn)	0.4	0.5	5,000
Phosphorus (P <sub>2</sub> O <sub>5</sub> )	0.5	0.7	7,000	Copper (Cu)	0.08	0.1	1,000
Potassium (K <sub>2</sub> O)	3.5	4.3	43,000	Molybdenum (Mo)	0.03	0.03	300
Magnesium (MgO)	0.2	0.26	2,600	Boron (B)	0.5	0.7	7,000

**Adjuvant: Advanced Nanobiotechnology for Smart Agriculture:** Adjuvant is a cutting-edge nanobiotechnology product based on chitosan nanocapsules, capable of encapsulating a wide range of agricultural inputs—including fertilizers, biostimulants, chemical pesticides, and fungicides. This technology significantly enhances the absorption efficiency of active ingredients, reduces the required dosage, and promotes sustainable agricultural practices.

**Enhanced Efficiency and Reduced Chemical Use:** By leveraging chitosan nanocapsule technology, Adjuvant significantly increases the effectiveness of fertilizers, pesticides, and fungicides. Its smart delivery system enables the targeted and controlled release of active compounds, minimizing chemical input and reducing application costs. Moreover, faster and more efficient absorption by plants helps reduce product waste and environmental runoff.

**Environmental Protection and Human Safety:**

A major advantage of Adjuvant lies in its environmentally friendly nature. Chitosan nanocapsules are biodegradable and leave no toxic residues in the soil or groundwater. This makes Adjuvant an ideal solution for eco-conscious agriculture, while lowering health risks for farmers, consumers, and surrounding ecosystems.

**Improved Plant Resistance to Environmental Stress:**

In addition to improving the efficiency of agricultural inputs, Adjuvant enhances plant resilience. It promotes nutrient uptake and protects crops from pathogens, thereby strengthening plant immunity. Treated crops exhibit improved tolerance to environmental stresses such as drought, salinity, and pest infestations—an essential benefit for farming in harsh or nutrient-poor conditions.

**Broad Compatibility Across Crop Types:**

Adjuvant is compatible with a wide range of crops, including field crops (such as wheat, rice, and corn), orchard crops (such as citrus, apple, pistachio, and grape), and greenhouse crops (including vegetables and ornamentals). It works effectively with both liquid and solid fertilizers, systemic and contact pesticides, and most commonly used fungicides. It can be applied via foliar spraying or irrigation systems, making it highly adaptable to different farming practices.

**Future Outlook and Nanotechnology Innovation:**

Looking ahead, chitosan nanocapsule technology holds great promise for the future of agriculture. With rising global food demand and climate challenges, innovations in nanotechnology—such as combining chitosan with other bio-based materials, improving nanocapsule stability, and developing crop-specific formulations—will drive the next generation of precision agriculture. As a pioneer in this domain, Adjuvant is helping pave the way for smarter, safer, and more sustainable farming.

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Humic acids	Potassium humate
Fulvic acids	Potassium folvate
Seaweed extract	Potassium alginate & hormones precursors
Natural (L) amino acids	Animal/herbal protein hydrolysate
Poly amines/carboxylates	Amino acids with more than one amine / carboxyl groups
Carbohydrates (sugars)	Polysaccharides, oligosaccharides, mono and disaccharides
Organic acids	Organic acids resulting from microbial fermentation process
Poly carboxylic acids	Organic acids with more than one carboxyl groups such as citric acid
Fatty acids	Herbal oils
Alcohols	Alcohols resulting from microbial fermentation process
Herbal extracts	Aqueous & oil based herbal extracts
Hormones or the precursors	Arginine, Glycine, Tryptophan, Methionine, Phenylalanine, mono & polyunsaturated fatty acids
Essential oils	Herbal extracts
Phenols & tannins	Phenolic compounds, polyphenols, tannins
Chitosan (low molecular weight)	Hydrolysed & deacetylated chitin & chitosan

## NANO-ORGANIC ADJUVANT NANO-CAPSULATION

Bio-Stimulant + Elicitor  
Cell Metabolism Regulator +  
Immune System Intensifier



1-V-X-XX  
LITRE



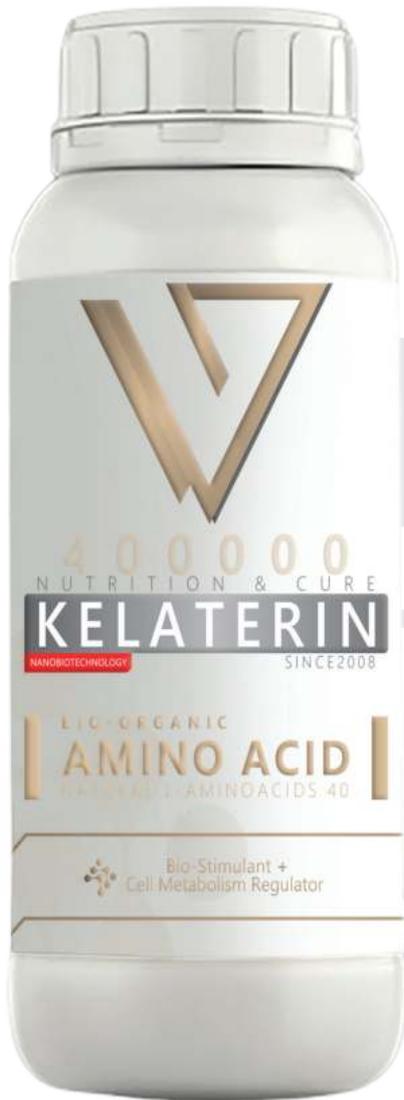
BIO-ORGANIC

# AMINO ACID

NATURAL L-AMINOACIDS 40



Bio-Stimulant +  
Cell Metabolism Regulator



### Guaranteed Analysis

ANALYT	w/w	w/v	ppm	ANALYT	w/w	w/v	ppm
Organic Matter (O.M)	26.3	36.5	365,000	Potassium (K <sub>2</sub> O)	3	4.2	42,000
Organic Carbon (O.C)	15.3	21.3	213,000	Amino Acid (Free)	25.52	35.7	357,000
Nitrogen (N)	5.4	7.5	75,000	Amino Acid (Total)	28.7	40.18	401,800
Phosphorus (P <sub>2</sub> O <sub>5</sub> )	0.9	1.2	12,000				

### Liquid Amino Acid Fertilizer

Liquid amino acid fertilizer is an organic and nutritional fertilizer made from a blend of essential amino acids that are crucial for plant growth and development. Due to its liquid form, it is rapidly absorbed by the roots and leaves, enhancing the plant's metabolic processes. Amino acids, as the fundamental building blocks of proteins, play a vital role in the synthesis of enzymes, hormones, and other essential compounds within plants.

#### Advantages

##### Reducing Environmental Stresses:

This fertilizer strengthens the plant's immune system, helping it to better cope with drought, soil salinity, and temperature fluctuations.

**Enhancing Resistance:** Regular use increases plants' defense mechanisms against pests and diseases, improving their overall health.

##### Supporting Critical Growth Stages:

Applying the fertilizer during key phases such as germination, flowering, and fruit development significantly improves crop quality and yield.

##### Applications

**Foliar Spray:** Best applied during cooler parts of the day, such as early morning or late afternoon, to maximize absorption through the leaves.

##### Soil Application:

Can be added to irrigation water to strengthen roots and improve soil structure.

##### Dosage

Varies based on plant species, growth stage, and environmental conditions; following the manufacturer's instructions is essential for optimal results.

##### Environmental Compatibility and Application:

Thanks to its natural and organic composition, this fertilizer is highly compatible with sustainable and organic farming practices. It can be safely combined with other fertilizers and pesticides without causing adverse effects, making it suitable for horticulture, agriculture, and ornamental plant cultivation.

##### Comparison with Chemical Fertilizers:

Compared to chemical fertilizers, liquid amino acid fertilizer has fewer side effects, with a very low risk of root or leaf burn, even when overused. This fertilizer also promotes the activity of beneficial soil microorganisms and, over the long term, improves soil fertility.

**Conclusion:** Ultimately, liquid amino acid fertilizer is an excellent choice for increasing agricultural productivity, reducing chemical fertilizer use, and producing healthier, higher-quality crops. With the growing demand for organic products, this fertilizer can play a significant role in the future of sustainable agriculture. Research has shown that regular use of this fertilizer not only boosts plant performance but also contributes to environmental conservation and human health.

ORGANIC MATTERS	SOURCE OF ORGANIC MATTERS / ACTIVE INGREDIENTS
Humic acids	Potassium humate
Fulvic acids	Potassium fulvate
Seaweed extract	Potassium alginate & hormones precursors
Natural (L) amino acids	Animal/herbal protein hydrolysate
Poly amines/carboxylates	Amino acids with more than one amine / carboxyl groups
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Fatty acids	Herbal oils
Alcohols	Alcohols resulting from microbial fermentation process
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Hormones or the precursors	Arginine, Glycine, Tryptophan, Methionine, Phenylalanine, mono & polyunsaturated fatty acids
Essential oils	Herbal extracts
Phenols & tannins	Phenolic compounds, polyphenols, tannins
Chitosan (low molecular weight)	Hydrolysed & deacetylated chitin & chitosan



I-V-X-XX  
LITRE



### Guaranteed Analysis

ANALYT	w/w	w/v	ppm	ANALYT	w/w	w/v	ppm
Organic Matter (O.M)	42/5	57	570,000	Iron (Fe)	0/01	0/02	200
Organic Carbon (O.C)	25	33/2	332,000	Zinc (Zn)	0/01	0/02	200
Nitrogen (N)	5.5	7/2	72,000	Copper (Cu)	0/1	0/15	1500
Phosphorus (P <sub>2</sub> O <sub>5</sub> )	2/5	3/3	33,000	Molybdenum (Mo)	0/1	0/15	1500
Potassium (K <sub>2</sub> O)	2/5	3/3	33,000	Boron (B)	0/06	0/08	800

**EXSALTER** (for Soil Salinity Remediation & Lime Decomposition)

#### Mechanism and Function:

Exsalter is an advanced biotechnological product specifically designed to manage soil salinity, dissolve insoluble nutrient complexes, break down lime, and improve the physicochemical properties of soil. It utilizes a unique blend of Effective Microorganisms (EM), potent organic acids, decomposing enzymes, and humic compounds, offering a sustainable solution for the rehabilitation of degraded and saline soils.

#### Key Benefits:

- Neutralizes soil salinity by decomposing mineral salts (e.g., sodium and chloride) and facilitating their leaching from the root zone.
- Dissolves insoluble complexes, releasing locked nutrients (such as phosphorus, iron, and zinc) through organic acid production and natural chelation.
- Decomposes active lime, reducing pH in calcareous soils and enhancing micronutrient availability.
- Improves soil permeability by reducing clay particle cohesion and breaking down carbonates.
- Stimulates microbial activity, encouraging beneficial soil bacteria to accelerate organic and mineral nutrient cycling.

#### Unique Advantages:

- Rapidly rehabilitates saline and alkaline soils—no heavy leaching required.
- Reduces reliance on chemical fertilizers by unlocking native soil nutrients.
- Compatible with organic and sustainable farming practices.
- Synergizes with Kelaterin products (Avira Kitossence, Kitomate, Rootex, Fermentaz) for boosted performance.
- Prepare soil for cultivation and builds a solid foundation for higher yields and reduced environmental stress.

#### Recommended Use:

For optimal results, apply in combination with Fermentaz (organic matter decomposition) and Rootex (root development support).

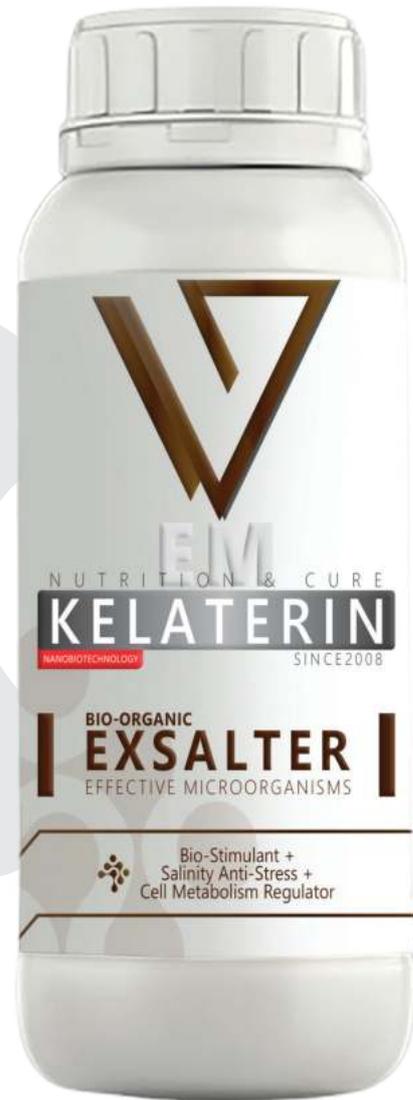
BIO-ORGANIC

# EXSALTER

EFFECTIVE MICROORGANISMS



Bio-Stimulant +  
Salinity Anti-Stress +  
Cell Metabolism Regulator



ORGANIC MATTERS	SOURCE OF ORGANIC MATTERS / ACTIVE INGREDIENTS
Humic acids	Potassium humate
Fulvic acids	Potassium folvate
Seaweed extract	Potassium alginate & hormones precursors
Natural (L) amino acids	Animal/herbal protein hydrolysate
Poly amines/carboxylates	Amino acids with more than one amine / carboxyl groups
Carbohydrates (sugars)	Polysaccharides, oligosaccharides, mono and disaccharides
Organic acids	Organic acids resulting from microbial fermentation process
Poly carboxylic acids	Organic acids with more than one carboxyl groups such as citric acid
Fatty acids	Herbal oils
Alcohols	Alcohols resulting from microbial fermentation process
Herbal extracts	Aqueous & oil based herbal extracts
Hormones or the precursors	Arginine, Glycine, Tryptophan, Methionine, Phenylalanine, mono & polyunsaturated fatty acids
Essential oils	Herbal extracts
Phenols & tannins	Phenolic compounds, polyphenols, tannins
Chitosan (low molecular weight)	Hydrolysed & deacetylated chitin & chitosan



## I-V-X-XX LITRE



BIO-ORGANIC  
**FERMENTAZ**  
EFFECTIVE MICROORGANISMS

 Bio-Stimulant +  
Cell Metabolism Regulator



**Guaranteed Analysis**

ANALYT	w/w	w/v	ppm	ANALYT	w/w	w/v	ppm
Organic Matter (O.M)	24	30/3	303,000	Iron (Fe)	0/38	0/3	30,000
Organic Carbon (O.C)	14	17/7	177,000	Copper (Cu)	0/08	0/07	8000
Nitrogen (N)	5/5	6/9	690,000	Molybdenum (Mo)	0/01	0/01	1000
Potassium (K <sub>2</sub> O)	3/7	4/7	470,000	Boron (B)	0/04	0/03	4000

**FERMENTAZ** (Fully Fermented Organic Matter Decomposer & Soil Enhancer) is a 100% fermented bio-enzymatic solution designed to accelerate organic matter decomposition, enhance soil fertility, and stimulate microbial activity. Utilizing a high-potency consortium of beneficial microorganisms (EM), enzymes, and bioactive compounds, it transforms crop residues, manure, and organic waste into stable humus, improving soil structure and nutrient availability. Its fully fermented formulation ensures immediate microbial action, making it ideal for rapid organic breakdown, carbon cycling, and soil regeneration in both conventional and organic farming systems.

**Fermantaz** also acts as a natural plant growth stimulant, enhancing nutrient uptake and improving plant resistance to environmental stresses such as drought, salinity, and temperature fluctuations. This product stimulates the production of plant growth hormones like auxins and gibberellins, promoting root development and increasing crop yield. Additionally, **Fermantaz** reduces the accumulation of toxic substances and heavy metals in the soil, providing a safe and healthy environment for plant growth. Studies have shown that regular use of this solution not only boosts agricultural productivity but also prevents soil erosion and enhances biodiversity in farming ecosystems. Given **Fermantaz**'s high compatibility with various soil types and climatic conditions...

**Key Benefits:**

- Speeds up decomposition of crop residues (straw, leaves, compost) and organic amendments.
- Boosts humus formation, enhancing soil water retention and cation exchange capacity (CEC).
- Suppresses pathogenic fungi & bacteria through competitive microbial dominance.
- Releases locked nutrients (N, P, K) from organic matter, reducing synthetic fertilizer dependency.
- Improves soil aeration & tilth by breaking down compacted organic debris.

**Formulation Highlights:**

- Bioactive Enzymes:
- Cellulase, amylase, protease, and lipase for efficient organic breakdown.
- Natural Growth Stimulants:
- Humic & fulvic acids, seaweed extracts, and fermented plant juices.

**Unique Advantages:**

Eco-Friendly Alternative to Chemical Decomposers: No toxic residues, fully biodegradable. Enhances Soil Biology: Establishes a thriving microbiome for long-term fertility. Compatible with Exsalter, Kitomate, Kampochai, & Rootex: Combined use improves soil structure, nutrient cycling, and root health.

ORGANIC MATTERS	SOURCE OF ORGANIC MATTERS / ACTIVE INGREDIENTS
Humic acids	Potassium humate
Fulvic acids	Potassium fulvate
Seaweed extract	Potassium alginate & hormones precursors
Natural (L) amino acids	Animal/herbal protein hydrolysate
Poly amines/carboxylates	Amino acids with more than one amine / carboxyl groups
Carbohydrates (sugars)	Polysaccharides, oligosaccharides, mono and disaccharides
Organic acids	Organic acids resulting from microbial fermentation process
Poly carboxylic acids	Organic acids with more than one carboxyl groups such as citric acid
Fatty acids	Herbal oils
Alcohols	Alcohols resulting from microbial fermentation process
Herbal extracts	Aqueous & oil based herbal extracts
Hormones or the precursors	Arginine, Glycine, Tryptophan, Methionine, Phenylalanine, mono & polyunsaturated fatty acids
Essential oils	Herbal extracts
Phenols & tannins	Phenolic compounds, polyphenols, tannins
Chitosan (low molecular weight)	Hydrolysed & deacetylated chitin & chitosan

**1-V-X-XX  
LITRE**



### Guaranteed Analysis

ANALYT	w/w	w/v	ppm	ANALYT	w/w	w/v	ppm
Organic Matter (O.M)	42.5	57	570,000	Iron (Fe)	0.01	0.02	200
Organic Carbon (O.C)	25	33.2	332,000	Zinc (Zn)	0.03	0.04	400
Nitrogen (N)	5.5	7.2	72,000	Copper (Cu)	0.1	0.15	1,500
Phosphorus (P <sub>2</sub> O <sub>5</sub> )	1.1	1.5	15,000	Molybdenum (Mo)	0.1	0.15	1,500
Potassium (K <sub>2</sub> O)	2.5	3.3	33,000	Boron (B)	0.05	0.06	600

**Rootex** (Advanced bio-enzymatic root booster & soil activator)

#### Mechanism & Benefits:

Rootex is a 100% fermented, high-performance bio-enzymatic solution designed to enhance root development, improve soil vitality, and accelerate organic matter decomposition. Powered by a synergistic blend of beneficial microorganisms (EM), bioactive enzymes, and natural growth stimulants, Rootex promotes vigorous root systems, optimizes nutrient cycling, and boosts soil fertility. Its fully fermented formulation ensures immediate microbial action, making it ideal for organic farming, regenerative agriculture, and conventional systems seeking sustainable soil enhancement

#### Key Benefits:

- Stimulates root growth: Enhances root biomass, branching, and nutrient uptake efficiency.
- Accelerates organic decomposition: Breaks down crop residues, compost, and organic waste into stable humus.
- Improves soil structure: Enhances aeration, water retention, and microbial diversity.
- Unlocks bound nutrients: Releases nitrogen (N), phosphorus (P), and potassium (K) from organic matter, reducing synthetic fertilizer needs.
- Clears vascular blockages (xylem & phloem): Dissolves organic and mineral deposits in plant vessels, improving water and nutrient flow.
- Suppresses soil-borne pathogens: establishes beneficial microbial dominance to protect roots from diseases.

#### Unique Advantages:

- Eco-Friendly & Sustainable: No toxic residues, fully biodegradable.
- Enhances microbial activity builds long-term soil fertility through a thriving microbiome.
- Improves vascular flow: Prevents and clears xylem/phloem obstructions for healthier plants.
- Compatible with Fermentaz, Exsaler & Kitomate: Combined use maximizes soil health, nutrient cycling, and plant resilience

#### Recommended Applications:

- Pre-planting soil treatment: Conditions soil for better root establishment.
- Compost & residue decomposition: Speeds up breakdown of straw, leaves, and manure.
- Root zone drenching: Boosts nutrient absorption and root vigor in crops.
- Pathogen suppression: Reduces fungal and bacterial infections in the rhizosphere.

Rootex is the ultimate solution for farmers and growers seeking to improve root health, regenerate soil, and maximize crop productivity naturally. Harness the power of beneficial microbes and enzymes for a thriving, resilient farming system.

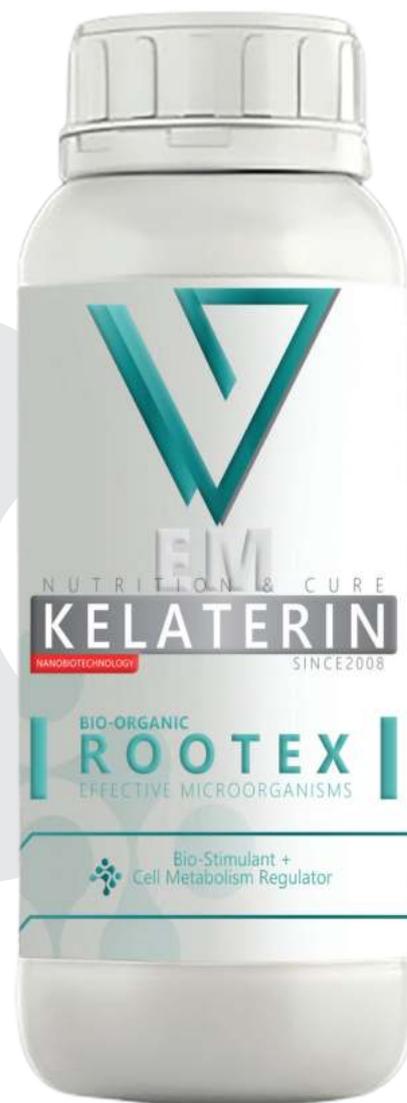
Use Rootex with Fermentaz, Exsaler, and Kitomate for unparalleled soil and plant performance.

ORGANIC MATTERS	SOURCE OF ORGANIC MATTERS / ACTIVE INGREDIENTS
Humic acids	Potassium humate
Fulvic acids	Potassium folvate
Seaweed extract	Potassium alginate & hormones precursors
Natural (L) amino acids	Animal/herbal protein hydrolysate
Poly amines/carboxylates	Amino acids with more than one amine / carboxyl groups
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Hormones or the precursors	Arginine, Glycine, Tryptophan, Methionine, Phenylalanine, mono & polyunsaturated fatty acids
Essential oils	Herbal extracts
Phenols & tannins	Phenolic compounds, polyphenols, tannins
Chitosan (low molecular weight)	Hydrolysed & deacetylated chitin & chitosan

# BIO-ORGANIC ROOTEX

EFFECTIVE MICROORGANISMS

Bio-Stimulant +  
Cell Metabolism Regulator



I-V-X-XX  
LITRE



BIO-ORGANIC  
**KITOMATE**  
EFFECTIVE MICROORGANISMS

 Bio-Stimulant +  
Cell Metabolism Regulator



**Guaranteed Analysis**

ANALYT	w/w	w/v	ppm
Organic Matter (O.M)	26.2	32	320,000
Organic Carbon (O.C)	15.25	18.06	180,000
Nitrogen (N)	1.7	2	20,000
Phosphorus (P <sub>2</sub> O <sub>5</sub> )	0.5	0.6	6000
Potassium (K <sub>2</sub> O)	3.5	4.2	42,000
Molybdenum (Mo)	0.1	0.11	1100
Boron (B)	0.07	0.08	800

**KITOMATE** is produced through the fermentation of Effective Microorganisms [E.M.] in a highly specific and enriched culture medium over a defined period. It is a unique formulation, enriched with E.M. and natural organic [bio-organic] compounds, including organic acids, amino acids, vitamins, alcohols, humic & fulvic acids, seaweed extract, sugars & carbohydrates, fatty acids & essential oils, pro-hormones, and cell metabolism regulators [C.M.R]. Kitomate enhances the innate energy of plants by regulating cellular metabolism pathways. It stimulates the activity of key enzymes, promotes gene expression, and activates critical cell signaling cascades resulting in improved plant growth, resilience, and productivity. Moreover, Kitomate along with Exsalter, Fermentaz, Rootex, and Avira Kitossence plays a vital role in strengthening the plant's natural defense guard by activating its innate immune responses [I.I.R.], making it a key product in sustainable and proactive crop management. Kitomate enhances plant growth, nutrient efficiency, stress tolerance, and crop quality without being a traditional fertilizer or pesticide. These products work by stimulating natural processes in plants and soil, improving nutrient uptake, and enhancing resilience to environmental [abiotic] stresses like drought, salinity, or pests and diseases [biotic].

**Key Benefits:**

- Improve nutrient use efficiency (reduce fertilizer dependency)
- Enhance root & shoot growth
- Increase stress resilience (drought, heat, and salinity)
- Boost soil health & microbial activity
- Higher crop yield & quality

**Applications:**

- Agriculture (organic & conventional farming)
- Horticulture (fruits, vegetables, and flowers)
- Turf & landscaping
- Hydroponics & greenhouse cultivation

**Regulation & Market Trends:**

- The global market is growing due to demand for sustainable agriculture.

ORGANIC MATTERS	SOURCE OF ORGANIC MATTERS / ACTIVE INGREDIENTS
Humic acids	Potassium humate
Fulvic acids	Potassium folvate
Seaweed extract	Potassium alginate & hormones precursors
Natural (L) amino acids	Animal/herbal protein hydrolysate
Poly amines/carboxylates	Amino acids with more than one amine / carboxyl groups
Carbohydrates (sugars)	Polysaccharides, oligosaccharides, mono and disaccharides
Organic acids	Organic acids resulting from microbial fermentation process
Poly carboxylic acids	Organic acids with more than one carboxyl groups such as citric acid
Fatty acids	Herbal oils
Alcohols	Alcohols resulting from microbial fermentation process
Herbal extracts	Aqueous & oil based herbal extracts
Hormones or the precursors	Arginine, Glycine, Tryptophan, Methionine, Phenylalanine, mono & polyunsaturated fatty acids
Essential oils	Herbal extracts
Phenols & tannins	Phenolic compounds, polyphenols, tannins
Chitosan (low molecular weight)	Hydrolysed & deacetylated chitin & chitosan

**I-V-X-XX  
LITRE**



### Guaranteed Analysis

ANALYT	w/w	w/v	ppm	ANALYT	w/w	w/v	ppm
Organic Matter (O.M)	28.5	32	320,000	Phosphorus (P <sub>2</sub> O <sub>5</sub> )	0.4	0.45	4,500
Organic Carbon (O.C)	16.5	18.6	186,000	Potassium (K <sub>2</sub> O)	2.8	3.1	31,000
Nitrogen (N)	1.3	1.5	15,000	Boron (B)	0.03	0.03	300

### KAMPOCHAI A Blend of Effective Microorganisms

Kamposchai is an enriched liquid fertilizer produced by combining Effective Microorganisms (EM) with compost. Containing high populations of beneficial bacteria, fungi, and yeasts, this product accelerates organic matter decomposition and produces high-quality compost in less than one month. This technology not only reduces composting time but also stabilizes essential nutrients such as nitrogen, phosphorus, and potassium in organic matter.

#### Mechanism of Action

The microorganisms in Kamposchai produce degradative enzymes that break down complex polymers such as cellulose and lignin into simpler molecules. This process enables rapid digestion of organic matter and efficient nutrient release. Additionally, some microorganisms fix atmospheric nitrogen, converting it into plant-available forms. Collectively, these properties make Kamposchai a complete and fast-acting organic fertilizer.

#### Benefits of Using Compost Tea

- Reduces composting time from several months to less than 30 days
- Enhances compost quality by increasing nutrient concentrations
- Fully decomposes tough materials such as tree branches and dry leaves
- Suppresses unpleasant odors and reduces pathogen levels
- Improves soil structure and stimulates beneficial microbial activity
- Suitable for organic and sustainable agricultural practices

#### Application Methods and Dosage

Kamposchai can be applied through irrigation systems at a rate of 5–10 liters per hectare. For accelerated composting, apply 0.5 liters per ton of organic matter by spraying it directly onto the compost pile. Optimal results are obtained when maintaining 50–60% moisture content and compost pile temperatures between 50–60°C.

#### Special Applications and Economic Value

Kamposchai is particularly beneficial for farmers requiring large-scale, rapid compost production. It is widely used in orchards, crop fields, and greenhouse cultivation. Economically, Kamposchai helps reduce fertilizer production costs, enhances crop yields, and decreases reliance on chemical fertilizers. This eco-friendly innovation represents a significant step forward in sustainable agriculture and organic waste management.

ORGANIC MATTERS	SOURCE OF ORGANIC MATTERS / ACTIVE INGREDIENTS
Humic acids	Potassium humate
Fulvic acids	Potassium fulvate
Seaweed extract	Potassium alginate & hormones precursors
Natural (L) amino acids	Animal/herbal protein hydrolysate
Poly amines/carboxylates	Amino acids with more than one amine / carboxyl groups
Carbohydrates (sugars)	Polysaccharides, oligosaccharides, mono and disaccharides
Organic acids	Organic acids resulting from microbial fermentation process
Poly carboxylic acids	Organic acids with more than one carboxyl groups such as citric acid
Fatty acids	Herbal oils
Alcohols	Alcohols resulting from microbial fermentation process
Herbal extracts	Aqueous & oil based herbal extracts
Hormones or the precursors	Arginine, Glycine, Tryptophan, Methionine, Phenylalanine, mono & polyunsaturated fatty acids
Essential oils	Herbal extracts
Phenols & tannins	Phenolic compounds, polyphenols, tannins
Chitosan (low molecular weight)	Hydrolysed & deacetylated chitin & chitosan

BIO-ORGANIC

# KAMPOCHAI

EFFECTIVE MICROORGANISMS



Bio-Stimulant + Elicitor  
Cell Metabolism Regulator +  
Immune System Intensifier



## 1-V-X-XX LITRE



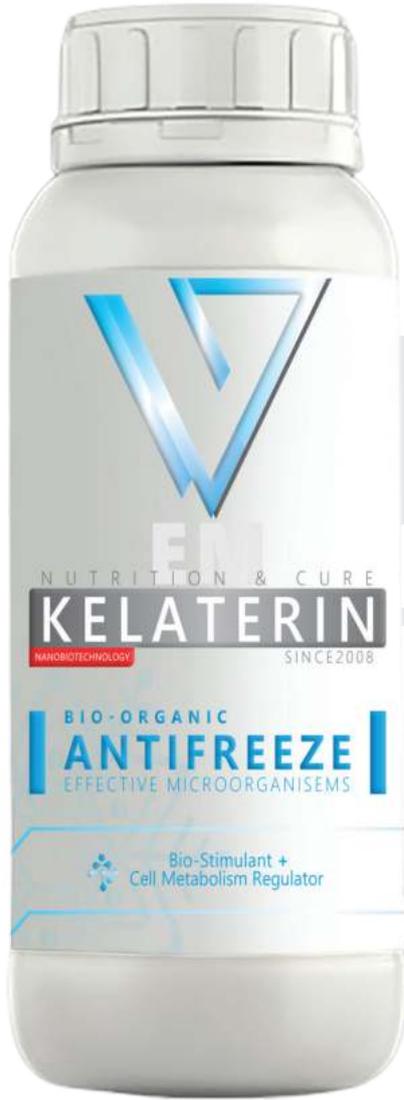
BIO-ORGANIC

# ANTIFREEZE

EFFECTIVE MICROORGANISMS



Bio-Stimulant +  
Cell Metabolism Regulator



### Guaranteed Analysis

ANALYT	w/w	w/v	ppm	ANALYT	w/w	w/v	ppm
Potassium (K <sub>2</sub> O)	3.6	3.9	39,000	Boron (B)	0.06	0.07	700
Nitrogen (N)	1.7	1.8	18,000	Organic Matter (O.M)	24.5	26.5	265,000
Phosphorus (P <sub>2</sub> O <sub>5</sub> )	0.5	0.55	5,500	Organic Carbon (O.C)	14.3	15.4	154,000
Molybdenum (Mo)	0.08	0.09	900				

### EFFECTIVE ANTI-FREEZE MICROORGANISMS

represent an advanced biological formulation composed of specialized beneficial bacteria and fungi designed to protect plants from frost damage. This product creates a protective layer on plant surfaces and roots, enhancing plant resistance to sub-zero temperatures. Particularly developed for cold regions and winter seasons, this innovative technology effectively prevents frost-related crop damage.

#### Mode of Action

The microorganisms in this product function by producing natural anti-freeze proteins (AFPs) while stimulating the plant's production of cold-resistant hormones. These microbes additionally decompose organic matter in soil, generating supplemental heat that maintains optimal root zone temperatures. This dual-action process not only safeguards plants from freezing conditions but also promotes healthier growth during cold periods.

#### Applications and Benefits

Effective Anti-Freeze Microorganisms\* are suitable for various agricultural crops, orchards, and greenhouse cultivation. The product proves especially valuable for fruit trees, vegetables, and cold-sensitive plants like bananas, tomatoes, and peppers. Key advantages include significant frost damage reduction, enhanced environmental stress resistance, and improved plant development under adverse conditions.

#### Application Methods

This product can be applied through both foliar spraying and soil irrigation. For foliar application, mix 2-3 liters per 1000 liters of water, applying during high frost-risk periods (early morning or evening). For irrigation, use 3-5 liters per hectare mixed with irrigation water. Optimal application timing coincides with starter fertilization irrigation or 1-2 weeks before anticipated temperature drops, allowing sufficient microorganism activation time.

#### Environmental and Economic Advantages

Effective Anti-Freeze Microorganisms\* offer an eco-friendly, sustainable solution against frost damage. Unlike chemical alternatives, this product causes no soil or water pollution while actually improving soil fertility. Economically, it boosts crop yields by minimizing frost losses, thereby increasing farmer profitability. This cutting-edge technology represents a significant advancement toward climate-resilient, sustainable agriculture.

ORGANIC MATTERS	SOURCE OF ORGANIC MATTERS / ACTIVE INGREDIENTS
Humic acids	Potassium humate
Fulvic acids	Potassium folvate
Seaweed extract	Potassium alginate & hormones precursors
Natural (L) amino acids	Animal/herbal protein hydrolysate
Poly amines/carboxylates	Amino acids with more than one amine / carboxyl groups
Carbohydrates (sugars)	Polysaccharides, oligosaccharides, mono and disaccharides
Organic acids	Organic acids resulting from microbial fermentation process
Poly carboxylic acids	Organic acids with mre than one carboxyl groups such as ctric acid
Fatty acids	Herbal oils
Alcohols	Alcohols resulting from microbial fermentation process
Herbal extracts	Aqueous & oil based herbal extracts
Hormones or the precursors	Arginine, Glycine, Tryptophan, Methionine, Phenylalanine, mono & polyunsaturated fatty acids
Essential oils	Herbal extracts
Phenols & tannins	Phenolic compounds, polyphenols, tannins
Chitosan (low molecular weight)	Hydrolysed & deacetylated chitin & chitosan

1-V-X-XX  
LITRE



### Guaranteed Analysis

ANALYT	w/w	w/v	ppm	ANALYT	w/w	w/v	ppm
Organic Matter (O.M)	28.5	36.5	365,000	Iron (Fe)	0.1	0.15	1,500
Organic Carbon (O.C)	16.6	21.2	212,000	Copper (Cu)	0.07	0.09	900
Nitrogen (N)	3.5	4.5	45,000	Molybdenum (Mo)	0.02	0.03	300
Phosphorus (P <sub>2</sub> O <sub>5</sub> )	1	1.3	13,000	Boron (B)	0.4	0.5	5,000
Potassium (K <sub>2</sub> O)	4.1	5.3	53,000	Manganese (Mn)	0.2	0.3	3,000

### ORGANIC MULTI-NUTRIENT LIQUID FERTILIZER

advanced, all-natural formulation containing a complete spectrum of macro and micronutrients essential for plant growth. Utilizing innovative technology, this product provides all vital elements including nitrogen, phosphorus, potassium, iron, zinc, manganese and other trace nutrients in fully organic, plant-available forms. It is specially designed for organic farming and sustainable horticulture practices.

#### Unique Features

This fertilizer features exceptional rapid absorption through both foliar and root uptake due to its specialized formulation. \*Organic Multi-Nutrient Liquid Fertilizer\* contains organic compounds such as amino acids, vitamins and natural growth stimulants that not only meet plants' nutritional requirements but also enhance their resistance to environmental stresses. The product is completely free from harmful chemicals and fully environmentally compatible.

#### Applications

This versatile fertilizer is suitable for all growth stages and can be used for various field crops, orchards and greenhouse plants. \*Organic Multi-Nutrient Liquid Fertilizer\* is applicable through foliar spraying, fertigation and hydroponic systems. It performs particularly effectively during nutrient deficiency conditions, environmental stresses and critical growth phases like flowering and fruiting.

#### Key Benefits

- Simultaneous supply of all essential plant nutrients
- Increased crop yield and quality
- Improved soil structure and enhanced beneficial microbial activity
- Significant reduction in chemical fertilizer usage
- Ideal for organic and sustainable agriculture
- Enhanced plant resistance to diseases and pests

#### Application Guidelines

For \*Organic Multi-Nutrient Liquid Fertilizer\*, recommended dosage is 1-2 liters per 1000 liters for foliar application and 3-5 liters per hectare for fertigation. Early morning or evening application is optimal. For hydroponic systems, use at 1-2 ml per liter concentration. For best results, maintain a regular fertilization program with this product.

ORGANIC MATTERS	SOURCE OF ORGANIC MATTERS / ACTIVE INGREDIENTS
Humic acids	Potassium humate
Fulvic acids	Potassium folvate
Seaweed extract	Potassium alginate & hormones precursors
Natural (L) amino acids	Animal/herbal protein hydrolysate
Poly amines/carboxylates	Amino acids with more than one amine / carboxyl groups
Carbohydrates (sugars)	Polysaccharides, oligosaccharides, mono and disaccharides
Organic acids	Organic acids resulting from microbial fermentation process
Poly carboxylic acids	Organic acids with more than one carboxyl groups such as citric acid
Fatty acids	Herbal oils
Alcohols	Alcohols resulting from microbial fermentation process
Herbal extracts	Aqueous & oil based herbal extracts
Hormones or the precursors	Arginine, Glycine, Tryptophan, Methionine, Phenylalanine, mono & polyunsaturated fatty acids
Essential oils	Herbal extracts
Phenols & tannins	Phenolic compounds, polyphenols, tannins
Chitosan (low molecular weight)	Hydrolysed & deacetylated chitin & chitosan

BIO-ORGANIC  
**10TE+CMR**  
CHELATED ELEMENTS 12



Bio-Stimulant +  
Cell Metabolism Regulator



I-V-X-XX  
LITRE



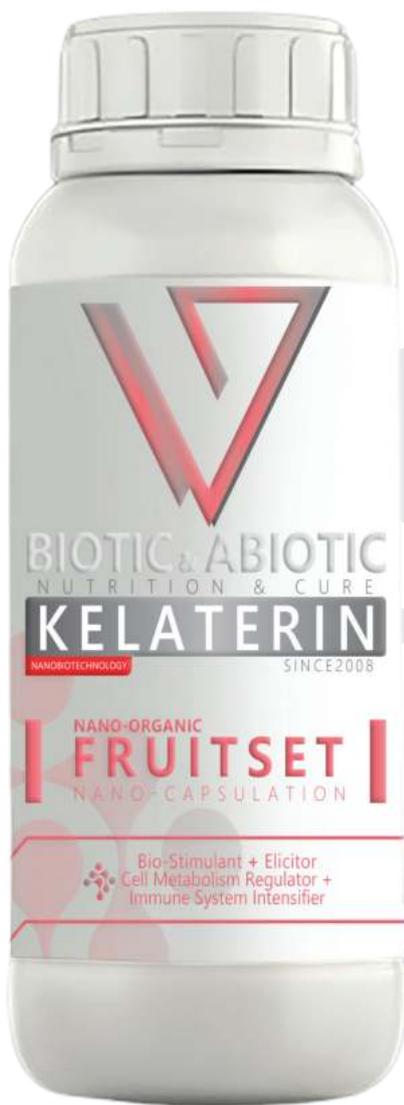
NANO-ORGANIC

# FRUITSET

NANO-CAPSULATION



Bio-Stimulant + Elicitor  
Cell Metabolism Regulator +  
Immune System Intensifier



### Guaranteed Analysis

ANALYT	w/w	w/v	ppm	ANALYT	w/w	w/v	ppm
Organic Matter (O.M)	30.5	43.5	435,000	Potassium (K <sub>2</sub> O)	1.9	2.7	2,700
Organic Carbon (O.C)	18	25.3	253,000	Zinc (Zn)	4.8	7	7,000
Nitrogen (N)	4	5.5	55,000	Boron (B)	1.5	2.2	2,200
Phosphorus (P <sub>2</sub> O <sub>5</sub> )	0.12	0.17	170				

**Organic Fruit Set Liquid Fertilizer:** is a comprehensive organic growth enhancer, specially formulated to improve both the quality and quantity of orchard crops. This advanced formulation combines balanced macro- and micronutrients with organic growth stimulants to support plants during key developmental stages including bud initiation, flowering, and fruit set. Its application enhances stress resistance, improves pollination efficiency, and promotes optimal fruit development—ultimately leading to significantly higher yields.

#### Advanced Composition & Mode of Action:

This innovative product contains essential nutrients—nitrogen, phosphorus, potassium, zinc, boron, and other vital micronutrients—in fully organic, plant-available forms, enriched with amino acids and seaweed extracts. Organic Fruit Set Liquid Fertilizer works by stimulating phytohormone synthesis and activating key enzymatic processes. This optimizes plant metabolism and facilitates nutrient translocation, ensuring efficient nutrient uptake and directing plant energy toward high-quality fruit production.

#### Application Protocol

For best results, apply Organic Fruit Set Liquid Fertilizer during three critical growth stages:

\* Pre-bud swelling \* Post-petal fall \* Initial fruit formation

Methods of application:

- Foliar spray: 1–2 ml/L for mature fruit trees, greenhouse crops, and field crops
- Fertigation: 3–5 L per hectare per application

Its concentrated formula ensures cost-effective use while delivering rapid, visible improvements.

#### Key Benefits

- Boosts Yield: Increases orchard productivity by up to 100% under proper agronomic management.
- Enhances Fruit Quality: Improves aroma, flavor, color uniformity, and post-harvest shelf life.
- Promotes Sustainable Agriculture: 100% natural and free from harmful chemicals, making it ideal for organic farming systems.
- Improves Soil Health: Contributes to long-term soil fertility by enriching the soil with organic matter.
- Reduces Crop Stress: Enhances plant resilience against environmental stressors and improves pollination efficiency.
- Optimizes Nutrient Use: Facilitates better nutrient absorption and utilization through metabolic stimulation.

#### Technical Recommendations:

- Integrate with a balanced crop nutrition program
- Avoid mixing with chemical pesticides
- Always conduct a compatibility test before tank mixing
- Follow recommended application timings as per crop development stage

When applied as directed, Organic Fruit Set Liquid Fertilizer offers measurable improvements in both crop yield and quality—making it an essential input for high-performance organic orchards.

ORGANIC MATTERS	SOURCE OF ORGANIC MATTERS / ACTIVE INGREDIENTS
Humic acids	Potassium humate
Fulvic acids	Potassium fulvate
Seaweed extract	Potassium alginate & hormones precursors
Natural (L) amino acids	Animal/herbal protein hydrolysate
Poly amines/carboxylates	Amino acids with more than one amine / carboxyl groups
Carbohydrates (sugars)	Polysaccharides, oligosaccharides, mono and disaccharides
Organic acids	Organic acids resulting from microbial fermentation process
Poly carboxylic acids	Organic acids with more than one carboxyl groups such as citric acid
Fatty acids	Herbal oils
Alcohols	Alcohols resulting from microbial fermentation process
Herbal extracts	Aqueous & oil based herbal extracts
Hormones or the precursors	Arginine, Glycine, Tryptophan, Methionine, Phenylalanine, mono & polyunsaturated fatty acids
Essential oils	Herbal extracts
Phenols & tannins	Phenolic compounds, polyphenols, tannins
Chitosan (low molecular weight)	Hydrolysed & deacetylated chitin & chitosan

I-V-X-XX  
LITRE



### Guaranteed Analysis

ANALYT	w/w	w/v	ppm	ANALYT	w/w	w/v	ppm
Organic Matter (O.M)	34.7	47.6	476,000	Phosphorus (P <sub>2</sub> O <sub>5</sub> )	0.3	0.4	4000
Organic Carbon (O.C)	20.1	27.7	277,000	Potassium (K <sub>2</sub> O)	1.7	2.3	23,000
Nitrogen (N)	3.7	5.2	52,000	Iron (Fe)	3.1	4.2	42,000

### ORGANIC LIQUID IRON 4%

Organic Liquid Iron 4.2% is an effective natural fertilizer produced in liquid form, containing 4.2% iron in an organic formulation. This fertilizer is designed to strengthen plants and address iron deficiencies, making it highly suitable for organic and sustainable agriculture due to its natural origin. Iron is an essential element for plant growth, playing a key role in chlorophyll formation and photosynthesis. Iron deficiency typically appears as yellowing of young leaves (iron chlorosis). The use of this fertilizer quickly alleviates such symptoms, enhances leaf greening, and improves plant resistance to environmental stressors.

### ADVANTAGES

One of the main advantages of Organic Liquid Iron 4.2% is its rapid absorption and high efficiency. Thanks to its chelated and soluble form, it is easily absorbed by plants through both roots and leaves, with visible positive effects in a short time. This makes it a fast and effective solution for plants suffering from severe iron deficiency.

In addition, unlike chemical fertilizers, this organic product does not damage soil structure or contaminate groundwater. It also promotes the activity of beneficial soil microorganisms and enhances soil fertility. These features make it a safe and sustainable option for eco-conscious farming.

### APPLICATIONS

Organic Liquid Iron 4.2% is suitable for a wide range of crops, including field crops, fruit trees, greenhouse plants, and ornamentals. It can be applied as a foliar spray or through irrigation systems (fertigation), offering flexibility and convenience for both farmers and gardeners.

### RECOMMENDATIONS FOR USE

To achieve the best results, it is recommended to apply this fertilizer regularly and follow the manufacturer's instructions. For tailored guidance, consulting with agricultural experts is also advised.

ORGANIC MATTERS	SOURCE OF ORGANIC MATTERS / ACTIVE INGREDIENTS
Humic acids	Potassium humate
Fulvic acids	Potassium folvate
Seaweed extract	Potassium alginate & hormones precursors
Natural (L) amino acids	Animal/herbal protein hydrolysate
Poly amines/carboxylates	Amino acids with more than one amine / carboxyl groups
Carbohydrates (sugars)	Polysaccharides, oligosaccharides, mono and disaccharides
Organic acids	Organic acids resulting from microbial fermentation process
Poly carboxylic acids	Organic acids with more than one carboxyl groups such as citric acid
Fatty acids	Herbal oils
Alcohols	Alcohols resulting from microbial fermentation process
Herbal extracts	Aqueous & oil based herbal extracts
Hormones or the precursors	Arginine, Glycine, Tryptophan, Methionine, Phenylalanine, mono & polyunsaturated fatty acids
Essential oils	Herbal extracts
Phenols & tannins	Phenolic compounds, polyphenols, tannins
Chitosan (low molecular weight)	Hydrolysed & deacetylated chitin & chitosan

## BIO-ORGANIC IRON+CMR CHELATED IRON 4.2

Bio-Stimulant +  
Cell Metabolism Regulator

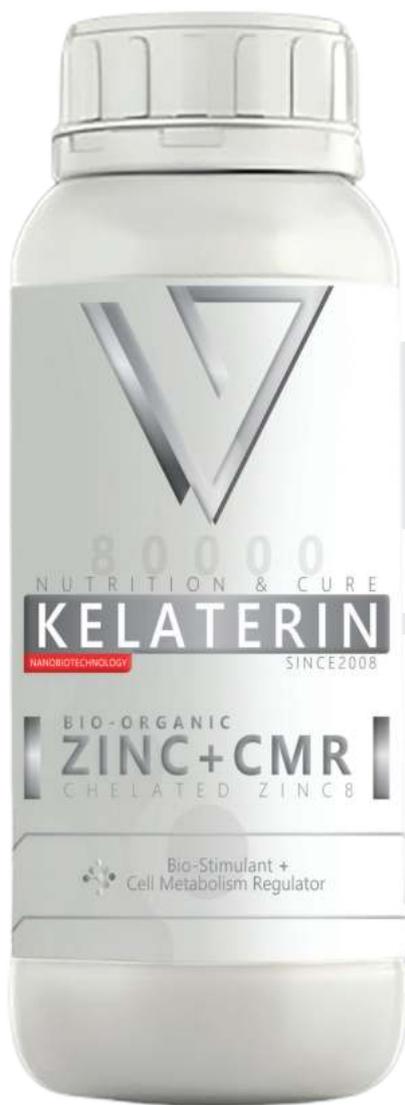


I-V-X-XX  
LITRE



# BIO-ORGANIC ZINC+CMR CHELATED ZINC 8

Bio-Stimulant +  
Cell Metabolism Regulator



## Guaranteed Analysis

ANALYT	w/w	w/v	ppm	ANALYT	w/w	w/v	ppm
Organic Matter (O.M)	30.8	39.5	395,000	Potassium (K <sub>2</sub> O)	1.6	2	20,000
Organic Carbon (O.C)	17.9	23	230,000	Zinc (Zn)	6.2	8	80,000
Nitrogen (N)	3.5	4.4	44,000	Molybdenum (Mo)	0.06	0.08	800
Phosphorus (P <sub>2</sub> O <sub>5</sub> )	1.3	1.65	16,500	Copper (Cu)	0.06	0.08	800

### ORGANIC LIQUID ZINC 8%

Organic Liquid Zinc 8% is a highly effective natural fertilizer produced in liquid form, containing 8% zinc in an organic formulation. This fertilizer is specifically designed to correct zinc deficiency in plants while enhancing their growth and resilience. Zinc is an essential micronutrient that plays a vital role in enzyme activity, protein synthesis, and the regulation of plant growth hormones. Application of this fertilizer promotes better germination, flowering, and overall crop quality. Its natural origin makes it an excellent choice for organic and sustainable farming practices.

### Applications

This fertilizer is suitable for a wide range of crops, including field crops, orchards, and greenhouse plants, with visible results in a short period. It can be applied either as a foliar spray or through irrigation systems (fertigation), providing flexibility that simplifies its use for farmers.

### Symptoms of Zinc Deficiency

Zinc deficiency in plants typically manifests as stunted growth, smaller leaves, yellowing between veins (chlorosis), and reduced fruit formation. Organic Liquid Zinc 8% rapidly supplies this essential nutrient, helping to alleviate these symptoms and restore normal plant growth.

### \*Benefits

#### Rapid Absorption and Utilization

One of the key advantages of Organic Liquid Zinc 8% is its rapid absorption through both foliar and root uptake. Its chelated and soluble form enables plants to quickly utilize zinc, especially in cases of severe deficiency. This makes it an ideal emergency solution for plants under nutritional stress.

#### Environmental Safety

Unlike chemical fertilizers, Organic Liquid Zinc 8% is environmentally friendly and causes no harm to soil or groundwater due to its natural composition.

#### Soil Health Improvement

It enhances the activity of beneficial soil microorganisms and contributes to maintaining ecological balance. Long-term use improves soil structure and fertility, making it an ideal choice for organic and eco-conscious farming.

#### Effective Nutrient Management

Organic Liquid Zinc 8% is a natural and effective solution for preventing and treating zinc deficiency in plants. Regular and optimal use helps avoid nutritional disorders while significantly boosting plant health and productivity.

#### NOTE:

For best results, follow the manufacturer's instructions and consult agricultural experts when necessary. This product is a reliable choice for farmers and gardeners seeking sustainable, natural methods to enhance crop quality.

ORGANIC MATTERS	SOURCE OF ORGANIC MATTERS / ACTIVE INGREDIENTS
Humic acids	Potassium humate
Fulvic acids	Potassium fulvate
Seaweed extract	Potassium alginate & hormones precursors
Natural (L) amino acids	Animal/herbal protein hydrolysate
Poly amines/carboxylates	Amino acids with more than one amine / carboxyl groups
Carbohydrates (sugars)	Polysaccharides, oligosaccharides, mono and disaccharides
Organic acids	Organic acids resulting from microbial fermentation process
Poly carboxylic acids	Organic acids with more than one carboxyl groups such as citric acid
Fatty acids	Herbal oils
Alcohols	Alcohols resulting from microbial fermentation process
Herbal extracts	Aqueous & oil based herbal extracts
Hormones or the precursors	Arginine, Glycine, Tryptophan, Methionine, Phenylalanine, mono & polyunsaturated fatty acids
Essential oils	Herbal extracts
Phenols & tannins	Phenolic compounds, polyphenols, tannins
Chitosan (low molecular weight)	Hydrolysed & deacetylated chitin & chitosan

I-V-X-XX  
LITRE



### Guaranteed Analysis

ANALYT	w/w	w/v	ppm	ANALYT	w/w	w/v	ppm
Organic Matter (O.M)	33.6	48.4	484,000	Calcium(Ca)	6.5	10	100,000
Organic Carbon (O.C)	19.5	28.2	282,000	Iron (Fe)	0.01	0.02	200
Nitrogen (N)	6.6	9.5	95,000	Copper (Cu)	0.07	0.1	1000
Phosphorus (P <sub>2</sub> O <sub>5</sub> )	1.7	2.5	25,000	Molybdenum (Mo)	0.07	0.1	1000
Potassium (K <sub>2</sub> O)	1.7	2.5	25,000				

### ORGANIC LIQUID CALCIUM 10% FERTILIZER

is a highly effective plant nutritional supplement formulated as a water-soluble solution containing 10% calcium derived entirely from organic sources. This product is specifically designed to prevent and treat calcium deficiency in plants. Calcium is a vital element for plant growth, playing a key role in cell wall strength, cell division, and root development. Using this fertilizer enhances fruit resistance to rot, improves crop quality, and increases post-harvest shelf life.

#### Unique Advantages

Due to its organic formulation and high calcium concentration, this fertilizer is rapidly absorbed and immediately available to plants. Unlike mineral calcium sources, whose absorption depends on soil pH, Organic Liquid Calcium 10% Fertilizer is effective in all soil conditions. This feature allows plants to benefit from its positive effects in the shortest possible time. The product is fully compatible with various fertilization systems, including foliar spraying, fertigation, and hydroponic systems.

#### Deficiency Symptoms and Treatment Solutions

Calcium deficiency in plants typically appears as leaf tip burn, blossom end rot (especially in tomatoes and peppers), cessation of terminal bud growth, and softening of plant tissues. Organic Liquid Calcium 10% Fertilizer quickly alleviates these symptoms and prevents physiological disorders related to calcium deficiency. For optimal results, use this fertilizer during critical growth stages such as fruit formation and rapid plant development.

#### Environmental Benefits

With its organic base, this product is environmentally friendly and has no harmful effects on beneficial soil microorganisms. Unlike chemical calcium fertilizers, Organic Liquid Calcium 10% Fertilizer does not damage soil structure or increase salinity. Regular use not only meets plants' calcium needs but also significantly contributes to long-term soil quality improvement and fertility enhancement.

#### Usage Instructions and Expert Recommendations

For optimal results, apply via foliar spraying early in the morning or late in the evening. For fertigation, apply at regular intervals of 10–15 days. Dosage varies from 2 to 5 liters per hectare, depending on plant type, age, and deficiency severity. For greenhouse and hydroponic plants, use a concentration of 1–2 ml per liter. In cases of severe deficiency, increase application frequency as needed.

ORGANIC MATTERS	SOURCE OF ORGANIC MATTERS / ACTIVE INGREDIENTS
Humic acids	Potassium humate
Fulvic acids	Potassium folvate
Seaweed extract	Potassium alginate & hormones precursors
Natural (L) amino acids	Animal/herbal protein hydrolysate
Poly amines/carboxylates	Amino acids with more than one amine / carboxyl groups
Carbohydrates (sugars)	Polysaccharides, oligosaccharides, mono and disaccharides
Organic acids	Organic acids resulting from microbial fermentation process
Poly carboxylic acids	Organic acids with more than one carboxyl groups such as citric acid
Fatty acids	Herbal oils
Alcohols	Alcohols resulting from microbial fermentation process
Herbal extracts	Aqueous & oil based herbal extracts
Hormones or the precursors	Arginine, Glycine, Tryptophan, Methionine, Phenylalanine, mono & polyunsaturated fatty acids
Essential oils	Herbal extracts
Phenols & tannins	Phenolic compounds, polyphenols, tannins
Chitosan (low molecular weight)	Hydrolysed & deacetylated chitin & chitosan

BIO-ORGANIC

**CALCIUM+CMR**  
CHELATED CALCIUM 11



Bio-Stimulant +  
Cell Metabolism Regulator



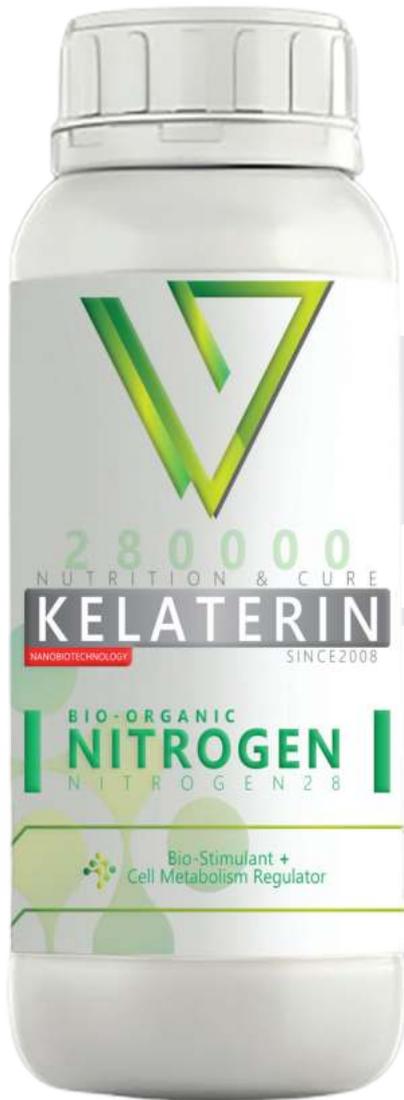
**I-V-X-XX  
LITRE**



# BIO-ORGANIC NITROGEN NITROGEN 25



Bio-Stimulant +  
Cell Metabolism Regulator



## Guaranteed Analysis

ANALYT	w/w	w/v	ppm	ANALYT	w/w	w/v	ppm
Organic Matter (O.M)	7	8.5	85,000	Nitrogen (N)	23	28	280,000
Organic Carbon (O.C)	4	5	5,000	Phosphorus (P <sub>2</sub> O <sub>5</sub> )	3.7	4.5	45,000
Iron (Fe)	0.02	0.02	200	Potassium (K <sub>2</sub> O)	1.9	1.9	19,000

### ORGANIC LIQUID NITROGEN FERTILIZER 25%

Organic liquid nitrogen fertilizer 25% is an important source of nitrogen for plants, containing organic nitrogen compounds such as urea, amino acids, and hydrolyzed proteins. This liquid-form fertilizer offers rapid absorption and high efficiency, suitable for application through drip irrigation systems or foliar spraying. The 25% nitrogen concentration represents an optimal level for most agricultural and horticultural crops, effectively meeting plant needs while preventing excessive nitrogen accumulation in soil.

#### Importance of Nitrogen in Plants:

Nitrogen is one of the most vital elements for plants, playing a key role in growth and development processes. It is a fundamental component of important molecules like chlorophyll, amino acids, proteins, enzymes, and nucleic acids. Nitrogen deficiency leads to stunted growth, yellowing of older leaves (chlorosis), and reduced crop yield. Conversely, adequate nitrogen promotes leaf expansion, enhances photosynthesis, and ultimately improves both the quantity and quality of agricultural produce.

#### Nitrogen Metabolism in Plants:

After absorption by plants, nitrogen undergoes several metabolic pathways. In specific metabolic cycles, nitrogen is converted into amino acids glutamine and glutamate. These amino acids serve as precursors for synthesizing other amino acids and proteins. Some nitrogen is utilized in constructing nucleotide bases for DNA and RNA, while another portion contributes to forming secondary metabolites like alkaloids and plant hormones. These transformations demonstrate that nitrogen not only plays a structural role in plants but is also crucial for regulating metabolism and physiological functions. The use of organic nitrogen fertilizers like the 25% formulation, with its gradual release synchronized with plant needs, can significantly enhance nitrogen uptake and utilization efficiency in plants.

#### Note:

In the presence of effective microorganisms, urea reacts with organic acids such as acetic and citric acid, several possible products can form depending on reaction conditions (temperature, concentration, catalysts, etc.). Urea and acetic acid may produce acetamide (CH<sub>3</sub>CONH<sub>2</sub>), CO<sub>2</sub>, and water. With citric acid, urea can form urea citrate or cyclic compounds like citric acid diurea, possibly releasing ammonia and CO<sub>2</sub>. In a combined reaction of all three, a mixture of acetamide, urea citrate, or complex acetyl-citrate derivatives may result. Under heat, urea may decompose into ammonia and isocyanic acid.

ORGANIC MATTERS	SOURCE OF ORGANIC MATTERS / ACTIVE INGREDIENTS
Humic acids	Potassium humate
Fulvic acids	Potassium folvate
Seaweed extract	Potassium alginate & hormones precursors
Natural (L) amino acids	Animal/herbal protein hydrolysate
Poly amines/carboxylates	Amino acids with more than one amine / carboxyl groups
Carbohydrates (sugars)	Polysaccharides, oligosaccharides, mono and disaccharides
Organic acids	Organic acids resulting from microbial fermentation process
Poly carboxylic acids	Organic acids with more than one carboxyl groups such as citric acid
Fatty acids	Herbal oils
Alcohols	Alcohols resulting from microbial fermentation process
Herbal extracts	Aqueous & oil based herbal extracts
Hormones or the precursors	Arginine, Glycine, Tryptophan, Methionine, Phenylalanine, mono & polyunsaturated fatty acids
Essential oils	Herbal extracts
Phenols & tannins	Phenolic compounds, polyphenols, tannins
Chitosan (low molecular weight)	Hydrolysed & deacetylated chitin & chitosan

I-V-X-XX  
LITRE



### Guaranteed Analysis

ANALYT	w/w	w/v	ppm	ANALYT	w/w	w/v	ppm
Organic Matter (O.M)	35.5	51.2	512,000	Potassium (K <sub>2</sub> O)	1.6	2.5	25,000
Organic Carbon (O.C)	20.7	30	300,000	Iron (Fe)	0.02	0.03	300
Nitrogen (N)	4	5.6	56,000	Copper (Cu)	0.09	0.1	100
Phosphorus (P <sub>2</sub> O <sub>5</sub> )	16.1	23.12	231,200	Molybdenum (Mo)	0.06	0.08	800

### ORGANIC LIQUID PHOSPHORUS 25% FERTILIZER

The 25% organic liquid phosphorus fertilizer is a rich and rapidly absorbable source of phosphorus for plants. This fertilizer contains organic phosphorus compounds such as Phytin, nucleic acids, and phospholipids, provided in a water-soluble form. Its liquid formulation allows for quick absorption through roots and leaves, making it highly suitable for modern irrigation systems like drip irrigation and foliar spraying. The 25% phosphorus concentration meets plant needs without the risk of excessive accumulation in the soil.

#### Absorption and Metabolic Pathways of Phosphorus in Plants

After absorption, phosphorus enters the plant's metabolic cycles as phosphate ions (H<sub>2</sub>PO<sub>4</sub> and HPO<sub>4</sub><sup>2-</sup>). These ions play vital roles in plant cells, including ATP production (cellular energy), DNA and RNA synthesis, and the formation of cell membrane phospholipids. Some absorbed phosphorus is also used for Phytin formation, which serves as a storage form of phosphorus in seeds. The primary metabolic pathways include:

- 1) Energy transfer cycle (ATP production)
- 2) Pentose phosphate pathway
- 3) Nucleotide synthesis
- 4) Formation of membrane phospholipids

#### Importance of Phosphorus in Plants:

Phosphorus is the second most essential element after nitrogen in plant growth, with key functions such as:

- Acting as a primary factor in cellular energy transfer (ATP)
- essential component of DNA and RNA structures
- cell division and root growth
- Contributing to fruit maturation and ripening
- Enhancing plant resistance to environmental stresses

Phosphorus deficiency can cause growth stunting, leaf discoloration, delayed crop maturation, and weak root systems. The use of 25% organic liquid phosphorus fertilizer, with its rapid absorption and high efficiency, can quickly correct these deficiencies and significantly improve plant performance.

#### Advantages:

The organic liquid phosphorus 25% fertilizer offers significant advantages over solid phosphorus fertilizers, such as ordinary superphosphate, including faster absorption and higher efficiency due to its soluble form and compatibility with modern irrigation systems. Additionally, due to its high phosphorus concentration and organic formulation, it reduces the risk of soil salinity or heavy metal accumulation, making it more suitable for sustainable and organic farming. Furthermore, its ability to be combined with other fertilizers and supplements in foliar spraying or irrigation enhances its effectiveness for plants at various growth stages.

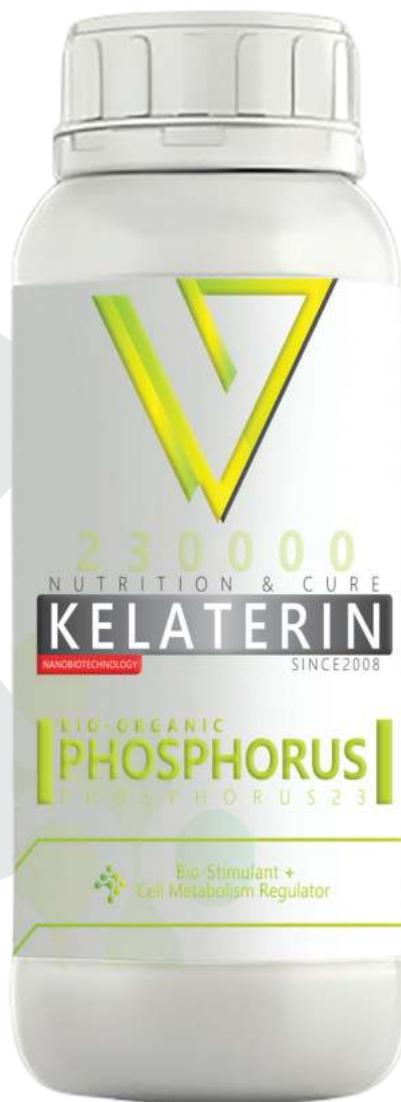
Organic Matters	Source of Organic Matters / Active Ingredients
Humic acids	Potassium humate
Fulvic acids	Potassium folvate
Seaweed extract	Potassium alginate & hormones precursors
Natural (L) amino acids	Animal/herbal protein hydrolysate
Poly amines/carboxylates	Amino acids with more than one amine / carboxyl groups
Carbohydrates (sugars)	Polysaccharides, oligosaccharides, mono and disaccharides
Organic acids	Organic acids resulting from microbial fermentation process
Poly carboxylic acids	Organic acids with more than one carboxyl groups such as citric acid
Fatty acids	Herbal oils
Alcohols	Alcohols resulting from microbial fermentation process
Herbal extracts	Aqueous & oil based herbal extracts
Hormones or the precursors	Arginine, Glycine, Tryptophan, Methionine, Phenylalanine, mono & polyunsaturated fatty acids
Essential oils	Herbal extracts
Phenols & tannins	Phenolic compounds, polyphenols, tannins
Chitosan (low molecular weight)	Hydrolysed & deacetylated chitin & chitosan

# BIO-ORGANIC PHOSPHORUS

PHOSPHORUS 23



Bio-Stimulant +  
Cell Metabolism Regulator

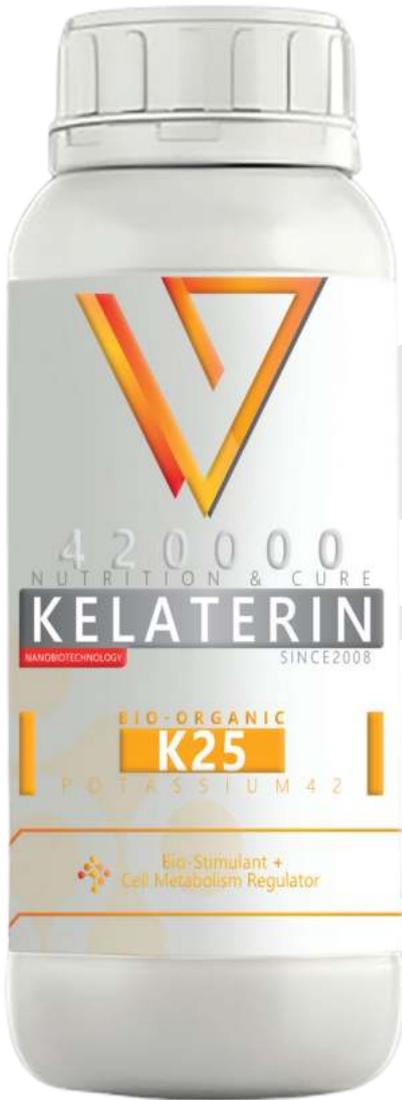


I-V-X-XX  
LITRE



BIO-ORGANIC  
**K25**  
P O T A S S I U M

 Bio-Stimulant +  
Cell Metabolism Regulator



**Guaranteed Analysis**

ANALYT	w/w	w/v	ppm	ANALYT	w/w	w/v	ppm
Nitrogen (N)	0.25	0.4	4000	Organic Matter (O.M)	24	36.7	360,000
Phosphorus (P <sub>2</sub> O <sub>5</sub> )	0.03	0.04	400	Organic Carbon (O.C)	14	21.5	215,000
Iron (Fe)	0.01	0.01	100	Potassium (K <sub>2</sub> O)	27.5	42	420,000

**LIQUID POTASSIUM FERTILIZER 25%**

Liquid potassium fertilizer 25% is an important source of plant nutrition, playing a vital role in plant growth and health due to its high potassium (K) concentration. This fertilizer is produced in liquid form and can be easily used in drip irrigation systems or foliar spraying. As one of the three primary nutrients required by plants, potassium is involved in metabolic processes such as protein synthesis, enzyme activation, and osmotic regulation in plant cells. The use of this fertilizer is particularly effective during the reproductive growth stages of plants, such as fruit formation and flowering.

**Key Benefits:**

- Foliar spray:- Applied during vegetative and reproductive growth stages (especially before flowering and after fruit formation).
- Soil application (fertigation): Suitable for pressurized irrigation systems or traditional watering methods.
- Dosage:- Varies depending on crop type, growth stage, and soil conditions—soil testing and expert consultation are recommended for precise application.

**Broad Applicability and Ecosystem Compatibility:**

- Foliar spray:- Applied during vegetative and reproductive growth stages (especially before flowering and after fruit formation).
- Soil application (fertigation):- Suitable for pressurized irrigation systems or traditional watering methods.
- Dosage:- Varies depending on crop type, growth stage, and soil conditions—soil testing and expert consultation are recommended for precise application.

**Usage Recommendations:**

Before application, a soil test is advised to determine the appropriate dosage tailored to crop needs. This helps maximize benefits while avoiding nutrient over-application.

**Supporting Healthy Crops and Ecological Balance:**

This fertilizer is particularly beneficial for field crops, orchards, and greenhouse plants, especially during peak phosphorus and potassium demand periods. To avoid over-application, soil testing and agronomic advice should be followed.

ORGANIC MATTERS	SOURCE OF ORGANIC MATTERS / ACTIVE INGREDIENTS
Humic acids	Potassium humate
Fulvic acids	Potassium fulvate
Seaweed extract	Potassium alginate & hormones precursors
Natural (L) amino acids	Animal/herbal protein hydrolysate
Poly amines/carboxylates	Amino acids with more than one amine / carboxyl groups
Carbohydrates (sugars)	Polysaccharides, oligosaccharides, mono and disaccharides
Organic acids	Organic acids resulting from microbial fermentation process
Poly carboxylic acids	Organic acids with more than one carboxyl groups such as citric acid
Fatty acids	Herbal oils
Alcohols	Alcohols resulting from microbial fermentation process
Herbal extracts	Aqueous & oil based herbal extracts
Hormones or the precursors	Arginine, Glycine, Tryptophan, Methionine, Phenylalanine, mono & polyunsaturated fatty acids
Essential oils	Herbal extracts
Phenols & tannins	Phenolic compounds, polyphenols, tannins
Chitosan (low molecular weight)	Hydrolysed & deacetylated chitin & chitosan

I-V-X-XX  
LITRE



### Guaranteed Analysis

ANALYT	w/w	w/v	ppm	ANALYT	w/w	w/v	ppm
Potassium (K <sub>2</sub> O)	30	45	450,000	Organic Matter (O.M)	24	36	360,000
				Organic Carbon (O.C)	14	22	220,000

#### ORGANIC LIQUID POTASSIUM FERTILIZER 45%

is a highly effective agricultural fertilizer that, due to its high potassium concentration (45%), is quickly absorbed by plants and plays a key role in enhancing drought resistance, improving fruit quality, and increasing crop yields. This fertilizer is produced in liquid form and can be easily applied through irrigation systems or foliar spraying.

One of the main advantages of this fertilizer is its organic composition, which minimizes harm to soil and the environment. Unlike chemical fertilizers, it contains natural substances that are released gradually, providing long-lasting benefits for plant growth. Additionally, its use improves soil structure and promotes the activity of beneficial microorganisms.

#### Key Benefits:

Organic Liquid Potassium Fertilizer 45% is suitable for a wide range of crops, including cereals, vegetables, fruits, and ornamental plants. It is particularly effective during rapid growth and fruit-setting stages, as potassium plays a crucial role in protein synthesis and nutrient transport within the plant.

The use of this fertilizer also helps mitigate environmental stresses such as soil salinity and water scarcity. The potassium it contains regulates water balance in plant cells, preventing wilting and yield loss. This feature makes it highly popular in arid and semi-arid regions.

#### Broad Applicability and Ecosystem Compatibility:

Finally, due to its liquid formulation, this fertilizer ensures fast and uniform absorption, making it easier to use compared to powdered fertilizers. Farmers can easily mix it with other fertilizers and pesticides without the risk of sedimentation or reduced efficacy. These qualities have made \*Organic Liquid Potassium Fertilizer 45%\* a preferred choice in modern agriculture.

#### Usage Recommendations:

Before application, a soil test is advised to determine the appropriate dosage tailored to crop needs. This helps maximize benefits while avoiding nutrient over-application.

#### Supporting Healthy Crops and Ecological Balance:

This fertilizer is particularly beneficial for \*field crops, orchards, and greenhouse plants, especially during peak phosphorus and potassium demand periods. To avoid over-application, soil testing and agronomic advice should be followed.

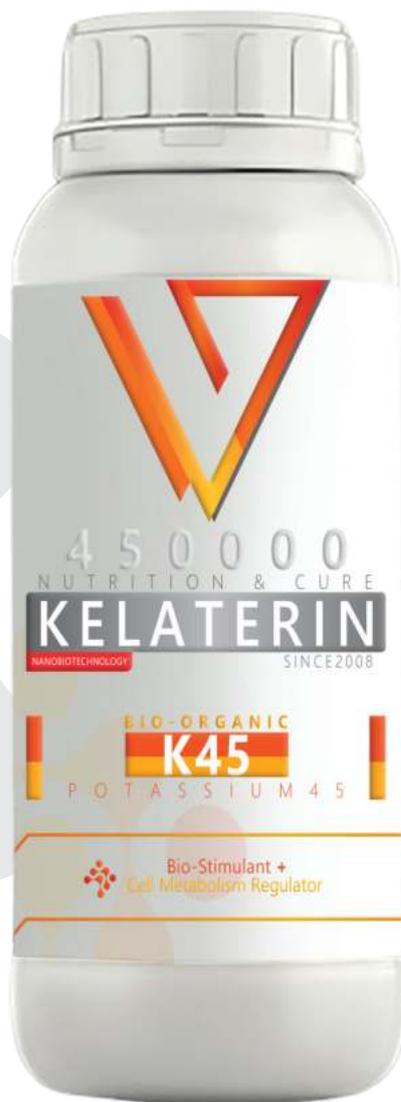
ORGANIC MATTERS	SOURCE OF ORGANIC MATTERS / ACTIVE INGREDIENTS
Humic acids	Potassium humate
Fulvic acids	Potassium folvate
Seaweed extract	Potassium alginate & hormones precursors
Natural (L) amino acids	Animal/herbal protein hydrolysate
Poly amines/carboxylates	Amino acids with more than one amine / carboxyl groups
Carbohydrates (sugars)	Polysaccharides, oligosaccharides, mono and disaccharides
Organic acids	Organic acids resulting from microbial fermentation process
Poly carboxylic acids	Organic acids with more than one carboxyl groups such as citric acid
Fatty acids	Herbal oils
Alcohols	Alcohols resulting from microbial fermentation process
Herbal extracts	Aqueous & oil based herbal extracts
Hormones or the precursors	Arginine, Glycine, Tryptophan, Methionine, Phenylalanine, mono & polyunsaturated fatty acids
Essential oils	Herbal extracts
Phenols & tannins	Phenolic compounds, polyphenols, tannins
Chitosan (low molecular weight)	Hydrolysed & deacetylated chitin & chitosan

BIO-ORGANIC  
**K45**

P O T A S S I U M



Bio-Stimulant +  
Cell Metabolism Regulator

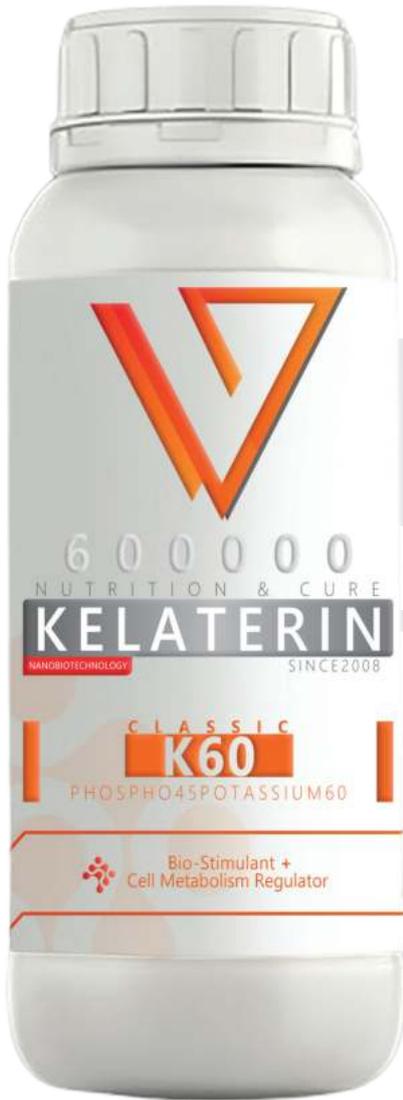


1-V-X-XX  
LITRE



CLASSIC  
**K60**  
PHOSPHO45POTASSIUM60

 Bio-Stimulant +  
Cell Metabolism Regulator



**Guaranteed Analysis**

ANALYT	w/w	w/v	ppm	ANALYT			
Phosphorus (P <sub>2</sub> O <sub>5</sub> )	26	45	450,000	Potassium (K <sub>2</sub> O)	34	60	600,000

**LIQUID PHOSPHORUS 45% AND POTASSIUM 60% FERTILIZER**

Liquid Phosphorus 45% and Potassium 60% is a highly effective and complete nutrient solution that provides plants with high concentrations of readily absorbable phosphorus and potassium. Thanks to its liquid formulation, this fertilizer is quickly absorbed through both roots and leaves, outperforming solid fertilizers—especially under adverse conditions such as drought, soil salinity, or during critical growth stages.

**Key Benefits:**

- Rapid supply of phosphorus and potassium: A high absorption rate and reduced soil fixation ensure optimal nutrient availability during critical growth phases (e.g., flowering and fruit setting).
- Enhanced plant stress resistance: The high potassium content improves plant resilience against environmental stresses such as drought, cold, pests, and diseases.
- Improved crop quality: Enhances fruit size, color, taste, and post-harvest shelf life.
- High compatibility with irrigation systems: Fully soluble, making it ideal for drip irrigation and fertigation systems.

**Broad Applicability and Ecosystem Compatibility:**

- Foliar spray: Apply during vegetative and reproductive growth stages, particularly before flowering and after fruit formation. systems and traditional watering methods.
  - Dosage: Varies depending on crop type, growth stage, and soil conditions. Soil testing and expert consultation are recommended for precise application.
- This fertilizer is especially beneficial for field crops, orchards, and greenhouse plants, particularly during periods of high phosphorus and potassium demand. To prevent over-application, always follow soil analysis results and professional agronomic advice.

**Usage Recommendations:**

Before application, a soil test is advised to determine the appropriate dosage tailored to crop needs. This helps maximize benefits while avoiding nutrient over-application.

**Supporting Healthy Crops and Ecological Balance:**

This fertilizer is especially beneficial for field crops, orchards, and greenhouse plants, particularly during periods of high phosphorus and potassium demand. To prevent over-application, always follow soil analysis results and professional agronomic advice.

**Potassium in Plants**

In plants, potassium (K<sup>+</sup>) is an essential element for growth and enzyme function. This ion acts as a cofactor or activator for many key enzymes and plays a vital role in metabolic processes, protein synthesis, photosynthesis, and osmotic regulation.

**Roles of Potassium in Plants**

- Enzyme Activation: Potassium serves as a cofactor or structural regulator for metabolic enzymes.
- Osmotic Regulation: Controls turgor pressure, regulating stomatal opening and closing.
- Photosynthesis: Enhances ATP production and Rubisco activity.
- Solute Transport: Facilitates the movement of sugars and other compounds in the phloem.
- Stress Resistance: Potassium deficiency reduces tolerance to drought, salinity, and diseases.

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LITRE**



### Guaranteed Analysis

ANALYT	w/w	w/v	ppm	ANALYT	w/w	w/v	ppm
Organic Matter (O.M)	0.3	0.4	4,000	Nitrogen (NO <sub>3</sub> )	39	55.5	555,000
Organic Carbon (O.C)	0.16	0.23	2,300	Nitrogen (N-NO <sub>3</sub> )	8.6	12.5	125,000
Nitrogen (N)	8.8	12.5	125,000	Calsum(Cao)	15.5	22.5	225,000

**Liquid Calcium Nitrate Fertilizer:** Liquid calcium nitrate fertilizer is a highly efficient, fully water-soluble fertilizer that provides plants with two essential nutrients—nitrogen and calcium—in liquid form. Its advanced formulation ensures rapid absorption and immediate correction of nutrient deficiencies. Designed for versatility, it is suitable for a wide range of crops including vegetables, fruits, and ornamental plants. By supplying both nutrients without interfering with each other's uptake, this fertilizer plays a vital role in promoting healthy growth, improving fruit quality, and preventing common calcium-related disorders.

#### Nutrient Benefits

Nitrogen (N): Stimulates vegetative growth and lush foliage

Calcium (Ca): Strengthens cell walls

Supports cell division

Enhances fruit firmness and quality

#### Key Advantages

Simultaneous delivery of nitrogen and calcium with no nutrient antagonism

Fast plant availability due to advanced liquid formulation

Effective solution for combined deficiencies in calcium and nitrogen

#### Additional Benefits

Improves fruit quality and extends post-harvest shelf life

Increases plant resistance to environmental stressors

Especially beneficial in acidic or calcium-deficient soils

#### Application Methods:

Foliar spraying:

Ensures fast calcium uptake through leaves

Ideal when root absorption is impaired

#### Fertigation:

Allows even distribution via irrigation systems

Best application timing:

During fruit development

During periods of rapid vegetative growth

#### Effective Against:

Blossom-end rot in tomatoes

Bitter pit in apples

Tip burn in lettuce

#### Precautions

While highly beneficial, improper or excessive application of liquid calcium nitrate fertilizer can lead to soil salinity and nutrient imbalances, especially in sensitive soils. To ensure safe and effective use, it is strongly recommended to conduct soil and tissue analyses before application. This allows growers to determine the precise nutrient requirements and avoid over-fertilization. Dosage should always be adjusted based on crop type, growth stage, and soil conditions, ensuring optimal plant health without adverse side effects.

#### Result:

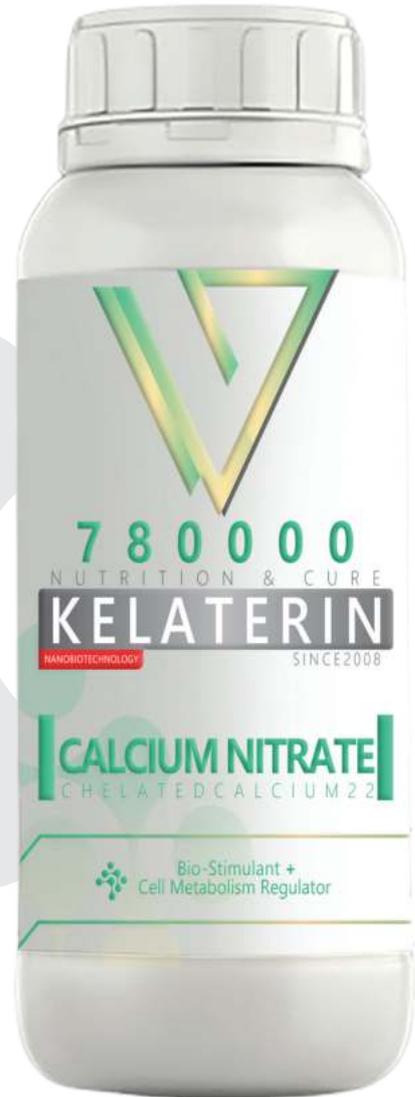
When applied correctly and at the appropriate growth stages, liquid calcium nitrate fertilizer can significantly improve both the quantity and quality of agricultural yields. It promotes stronger plant structure, enhances fruit firmness, improves shelf life, and increases resistance to stress. As a result, farmers benefit not only from healthier crops but also from greater productivity and profitability.

# CALCIUM NITRATE

CHELATED CALCIUM 11



Bio-Stimulant +  
Cell Metabolism Regulator



I-V-X-XX  
LITRE



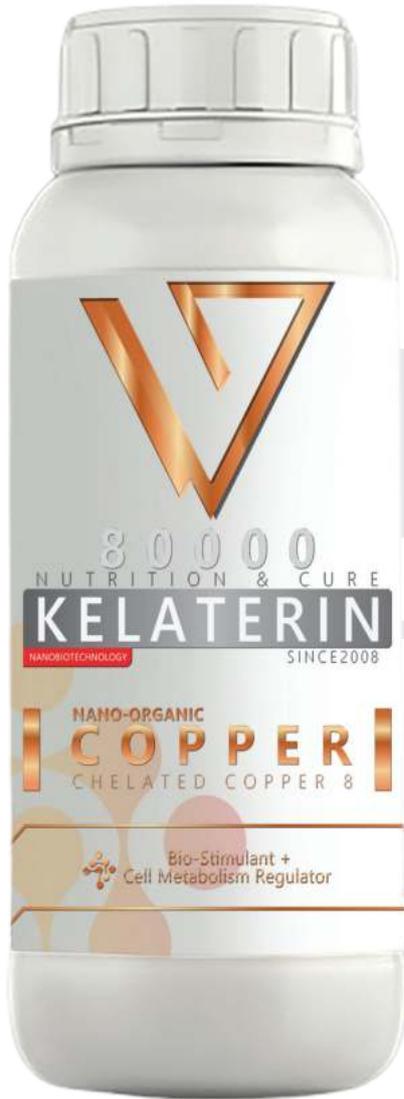
NANO-ORGANIC

**COPPER**

NANO-CAPSULATION



Bio-Stimulant +  
Cell Metabolism Regulator



**Guaranteed Analysis**

ANALYT	w/w	w/v	ppm	ANALYT	w/w	w/v	ppm
Organic Matter (O.M)	10.3	13	130,000	Copper Soluble (Cu)	6.5	8	80,000
Organic Carbon (O.C)	6	7.5	75,000	Sulfur(SO <sub>4</sub> )	9.8	12.2	122,000
Copper (Cu)	4.3	5.5	55,000	Amino Acid	0.13	0.16	1,600

**Liquid Organic Copper Fertilizer:** Liquid organic copper fertilizer is a specialized agricultural input formulated in liquid form, combining copper with organic compounds. Its liquid formulation enables faster absorption by plants, making it an effective nutritional supplement that supports overall plant growth and health. Copper is essential for enzymatic reactions, photosynthesis, and cell wall formation. A deficiency in this micronutrient can significantly reduce crop yield and quality.

**Key Advantages:** Rapid Plant Absorption

The liquid form ensures quick uptake through roots and leaves, helping plants rapidly overcome copper deficiency symptoms.

• Supports Essential Plant Functions

Copper is involved in enzyme activation, photosynthesis, and lignin formation, leading to improved plant vigor, resilience, and productivity.

• Improves Soil Health

The presence of organic matter enhances soil structure, increases microbial activity, and promotes long-term fertility.

• Environmentally Friendly

Free from synthetic chemicals, this fertilizer aligns with organic and sustainable agriculture practices and reduces environmental risks.

• Suitable for a Wide Range of Crops

Effective for cereals, vegetables, fruits, and orchard crops—especially in alkaline soils where copper availability is limited.

• Restores Nutrient-Depleted Soils

Particularly beneficial in lands affected by intensive farming, as it helps restore essential micronutrient balance.

• Dual Action – Nutritional & Biological

Provides essential copper while enriching soil biology through its organic composition.

**Application Guidelines:**

Liquid organic copper fertilizer is typically applied via two methods:

- Foliar spraying – For quick correction of deficiency symptoms and better absorption through leaves.

- Root zone irrigation – Suitable for systemic nutrient supply and enhancing root-level copper availability.

Due to its high copper concentration, application must be done with caution. Overuse can result in copper toxicity, which may harm plants and soil organisms. A pre-application soil test is strongly recommended to determine the actual copper requirements of the crop and to adjust the dosage accordingly

**Target Crops:**

This fertilizer is appropriate for a broad range of crops, including:

- Cereals (e.g., wheat, corn)
- Vegetables (e.g., tomatoes, peppers, leafy greens)
- Fruits (e.g., berries, grapes)
- Fruit trees (e.g., citrus, apple, pomegranate)

**Target Soils:**

Liquid organic copper fertilizer performs especially well in:

- Alkaline soils, where copper solubility and uptake are reduced.
- Sandy soils, which are typically low in micronutrient retention.
- Soils depleted by continuous cultivation, monoculture, or excessive chemical input.
- Organic farms, where copper supplementation must comply with eco-friendly standards.

**Environmental Compatibility and Best Practices:**

Due to its organic formulation, this fertilizer is a sustainable and eco-conscious alternative to synthetic copper-based fertilizers. For best results:

- Source it from certified and reputable suppliers.
- Apply based on expert consultation and soil analysis.
- Monitor plant response and soil conditions after application.

Proper and informed use of liquid organic copper fertilizer can enhance crop quality and yield, prevent copper-related deficiencies, and contribute to long-term soil and ecosystem health.



**1-V-X-XX  
LITRE**



### Guaranteed Analysis

ANALYT	w/w	w/v	ppm	ANALYT	w/w	w/v	ppm
Organic Matter (O.M)	6.3	8	80,000	Phosphorus (P <sub>2</sub> O <sub>5</sub> )	7.4	9.2	92,000
Organic Carbon (O.C)	3.7	4.6	46,000	Potassium (K <sub>2</sub> O)	1.5	1.8	18,000
Nitrogen (N)	20.51	25.5	255,000	Iron (Fe)	0.02	0.02	200

### LIQUID ORGANIC NITROGEN-PHOSPHORUS FERTILIZER

Liquid Organic Nitrogen-Phosphorus Fertilizer is a complete, nutrient-rich fertilizer formulated in liquid form. It contains essential nitrogen and phosphorus compounds along with organic matter. Thanks to its liquid nature, it is rapidly absorbed by plants, quickly fulfilling their nutritional requirements.

#### Key Nutrients and Functions:

- Nitrogen: Promotes vegetative growth and enhances plant greening.
- Phosphorus: Plays a crucial role in root development, flowering, and fruit formation.
- Organic Matter: Improves soil structure and boosts the activity of beneficial microorganisms.

#### Advantages:

- Fast absorption and immediate impact on plant health
- Balanced composition that minimizes the risk of root burn
- Environmentally friendly and compatible with sustainable agriculture
- Enhances plant resistance to stress factors such as drought and disease

#### Applications:

- Agricultural crops
- Orchards
- Ornamental plants

#### Ease of Use:

One of the major advantages is its simple application. It can be:

- Applied through foliar spraying
- Mixed with water for irrigation systems

This not only saves time and labor but also reduces operational costs for farmers.

#### Use in Modern Farming:

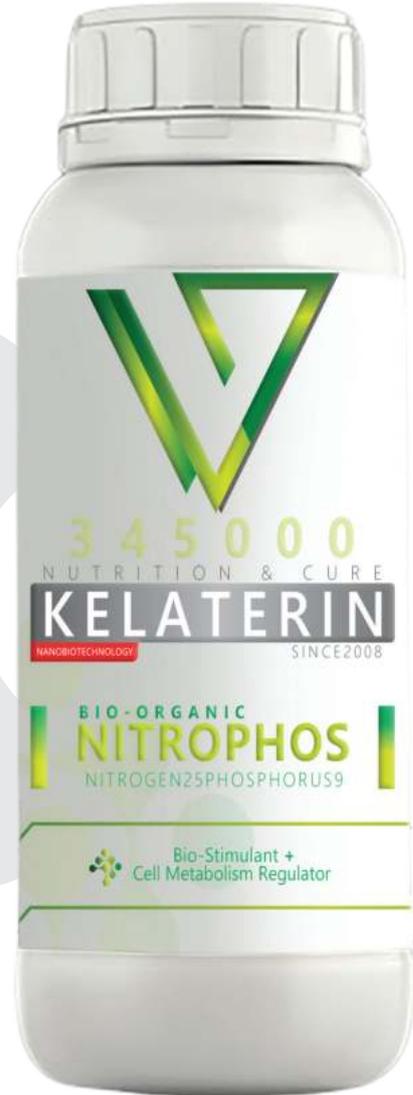
In advanced agricultural systems such as hydroponics and greenhouse cultivation, this fertilizer performs exceptionally well. It dissolves easily in nutrient solutions, is quickly absorbed by plants, and leaves minimal residue.

ORGANIC MATTERS	SOURCE OF ORGANIC MATTERS / ACTIVE INGREDIENTS
Humic acids	Potassium humate
Fulvic acids	Potassium folvate
Seaweed extract	Potassium alginate & hormones precursors
Natural (L) amino acids	Animal/herbal protein hydrolysate
Poly amines/carboxylates	Amino acids with more than one amine / carboxyl groups
Carbohydrates (sugars)	Polysaccharides, oligosaccharides, mono and disaccharides
Organic acids	Organic acids resulting from microbial fermentation process
Poly carboxylic acids	Organic acids with more than one carboxyl groups such as citric acid
Fatty acids	Herbal oils
Alcohols	Alcohols resulting from microbial fermentation process
Herbal extracts	Aqueous & oil based herbal extracts
Hormones or the precursors	Arginine, Glycine, Tryptophan, Methionine, Phenylalanine, mono & polyunsaturated fatty acids
Essential oils	Herbal extracts
Phenols & tannins	Phenolic compounds, polyphenols, tannins
Chitosan (low molecular weight)	Hydrolysed & deacetylated chitin & chitosan

## BIO-ORGANIC NITROPHOS

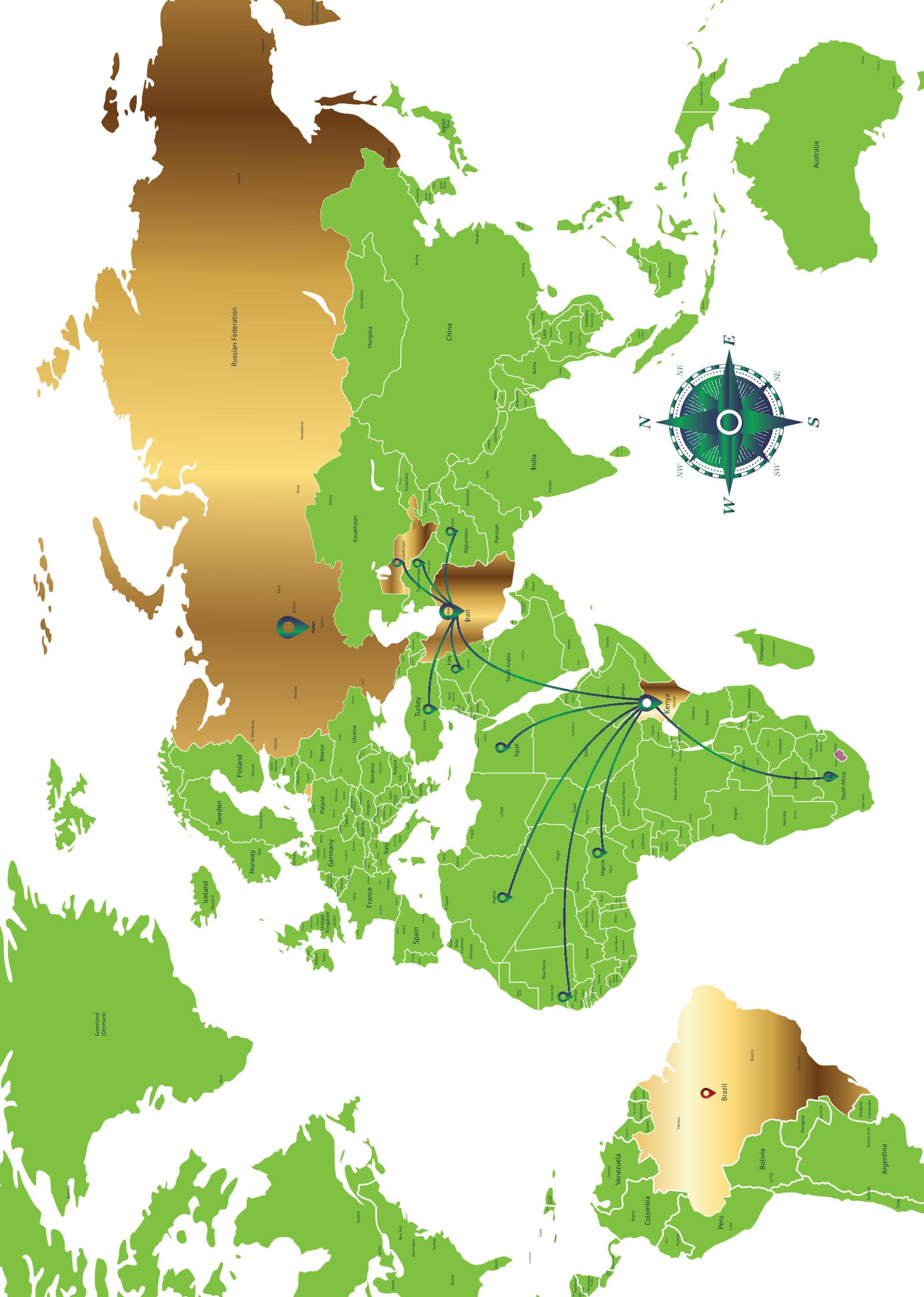
NITROGEN25PHOSPHORUS9

Bio-Stimulant +  
Cell Metabolism Regulator



1-1-V-X-XX  
LITRE







NUTRITION & CURE

**KELATERIN**

NANOBIOTECHNOLOGY

SINCE 2008



CE IMS

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**M A D E I N I R A N**