

# Compost Accelerator Optimizes Degradation of Organic Matter

Organic materials make up approximately 20-30% of household wastes. Many municipalities are opting for composting in addition to recycling to reduce the overall load arriving at landfills. Composting facilities can accommodate large volumes of organic material including fruits and vegetable wastes, grasses, fats, oils and greases, and many animal by-products.

## Product Description

Bionetix BCP 85 Compost Accelerator is a blend of bacteria (*Bacillus* and *Pseudomonas* species), active yeast (*Saccharomyces*), enzymes (cellulase, protease, lipase and amylase), and nutrients for the acceleration and optimization of the degradation of household and agricultural organic wastes in composting processes. A number of microorganisms and nutrients have been selected to formulate this product in order to both enrich the waste material to be degraded and achieve an enriched fertilizer from the composted material.



Composting is a waste treatment method used for over 2000 years. It is a natural process whose purpose is the decomposition of organic waste material into the form of fine humus that is dark brown to black in color. Composting is achieved through the action of microorganisms such as bacteria and fungi. Composting requires humidity between 50% and 70% with good porosity and permeability to supply adequate water amounts to the microorganisms. Adequate aeration and ventilation is important for oxygen supply. A ratio of carbon/nitrogen (C/N) between 20 and 35, a ratio of carbon/phosphorus (C/P) between 50 and 150, trace elements, vitamins and minerals ensure enhanced microbial growth. The organic matter can be degraded over several weeks or months given a well maintained system. Adding BCP 85 can help speed this process.

We know that degradation of organic matter during composting depends on several interrelated factors. The diversity of the bacteriological community and their total amount in the waste material will play key roles in both yield of degradation of the organic waste and the quality of the compost material. Bionetix BCP 85 will guarantee a good microbial diversity for better maturation and degradation of the compost. Growth factors such as mineral elements and vitamins are other important requirements that must be carefully monitored to maintain a good microbial activity. BCP 85 contains mineral elements, amino acids, peptides, and vitamins all necessary for the growth and metabolic activity of a wide variety of microorganisms including bacteria, yeasts, and fungi all necessary in the composting processes. Thus using BCP 85 will provide elementary nutrients often missing in organic waste material for proper composting and optimization of humus quality that can then be used as an organic fertilizer. Enzymes and active yeast will address the issues of material with a slow rate of biodegradability.

## Reduction of Recalcitrant Compounds

A major environmental concern from large scale composters is the control of contaminants such as pesticides and preservatives found in fruits and vegetables, grass trimmings etc. BCP 85 will provide support for the breakdown of a large number of these contaminants currently used in agriculture, and that end up concentrated in residential

organic waste. The use of this composting accelerator will permit the addition of specialized microorganisms capable of degrading recalcitrant compounds with hydrocarbon backbones.

## Product Specification

Description: Tan color free flowing powder

Packaging: 400 x 28g (10 kg pail);  
200 x 56g (11.2 kg pail); 40 x 250g  
(11.2 kg pail) water soluble pouches;  
also available in custom packaging  
and in bulk

Stability: Maximum loss of 1 log/yr

Bulk density: 0.5-0.7 g/cm<sup>3</sup>

Moisture content: 15%

Nutrient: Biological nutrients and  
microbial growth factors: mineral elements,  
vitamins, amino acids and peptides

Bacteria count: Minimum 5 billion cfu per gram (cfu colony forming units)



## Bionetix BCP 85 COMPOST ACCELERATOR CAN:

- Save time by accelerating the speed of degradation.
- Improve microbial growth by providing trace elements that may be lacking.
- Optimize the microbial diversity since several groups of microorganisms including mesophilic bacteria; thermophilic bacteria, yeasts, and fungi must take turns to reduce the long carbon chains into smaller molecules.
- Ensure the availability of effective microorganisms to degrade complex and recalcitrant organic molecules such as hydrocarbons and inhibitors found in pesticides and chemical fertilizers.
- Reduce the amount of loaded waste by liquefying the solid materials.
- Improve the quality of the compost by yielding high quality humus.
- Stabilize the humus while reducing malodorous molecules from the finished product.
- Enhance the quality of agricultural products that will be produced from the natural compost fertilizers.

## Application Instructions

1 metric ton of total solid waste can be treated with 250g of Bionetix BCP 85.

BCP 85 can be applied by either dry or wet application. BCP 85 can be diluted in water and directly sprayed onto the waste material to be composted. We recommend diluting one part powder in 20 parts of water for this application. Or, water-soluble pouches can be manually thrown in with the matter given that the soil moisture is above 50%. Once the product is added, it is important to



ensure that the product is well mixed into the material. The dosage rate can vary according to system variation. The above dosing is for a typical, well-maintained system. Parameters such as pH, nutrient levels, oxygen availability, and moisture content are critical to the success of composting as described above.

BCP 85 Compost Accelerator can be used in all types of municipal or



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industrial scale composters such as: vermicomposting; aerated static pile composting; windrow composting; and in-vessel composting; Each of these systems vary in treatment design, and can all be enhanced by the use of BCP 85. For further information on applications, contact your BIONETIX technical representative at [support@bionetix.ca](mailto:support@bionetix.ca).

Bionetix International produces biological waste treatment products that are used in thousands of field applications worldwide. The Biological Series of products—among the earliest products introduced by Bionetix Canada – can

be found in countless food preparation and processing locations in the United States, Europe, South America, and Asia. Numerous municipalities around the world have accepted these products. Headquartered in Quebec, Canada; Bionetix International is a subsidiary of Cortec® Corporation. ISO 9001:2000 Certified.

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