

# Bionator



## Bionator

- Bionator is a liquid bacterial concentrate which combines unique odor binding chemistry and microbiology to offer a proven, innovative and effective long term approach to odor control and general cleaning
- Available in Fresh white Citrus scent and Unfragranced



# Bionator

## Purpose

- Bionator is a sophisticated formulation with a focus on complete odor elimination through **encapsulation** and **biological technology**.
- Superior alternative to Competitive products
- Improved alternative to simply using a fragranced deodorizer along with a bacteria package for complete degradation of odor sources
- Prevents malodors from reoccurring



# Bionator

## Previous Chemistry

- **Surfactant**
  - Petroleum based
- **Deodorizing Technology**
  - older technology
    - Not as fast reacting
- **Chelating Agents**
  - Low biodegradability
  - Some Bioaccumulation



# Bionator

## Eco-benign Improvements

- **Surfactant**

- Natural Plant-Based - Zero impact to environment
- Nonionic
- Excellent cleaning characteristics
  - Benefit not available in previous formulations

- **Chelating Agents**

- Readily Biodegradable

- **Odor encapsulation technology**

- Readily Biodegradable
- Preferred performance to competitors



# Bionator

## Biological Advantage:

- The multi-strain blend in this product was carefully selected, in studied proportions, and by their enzymatic production

We chose:

- Our best lipase producers to degrade fats, oils and greases
- Our best protease producers to quickly control protein based stains
- Our best urease producers for ammonia reduction



# Bionator

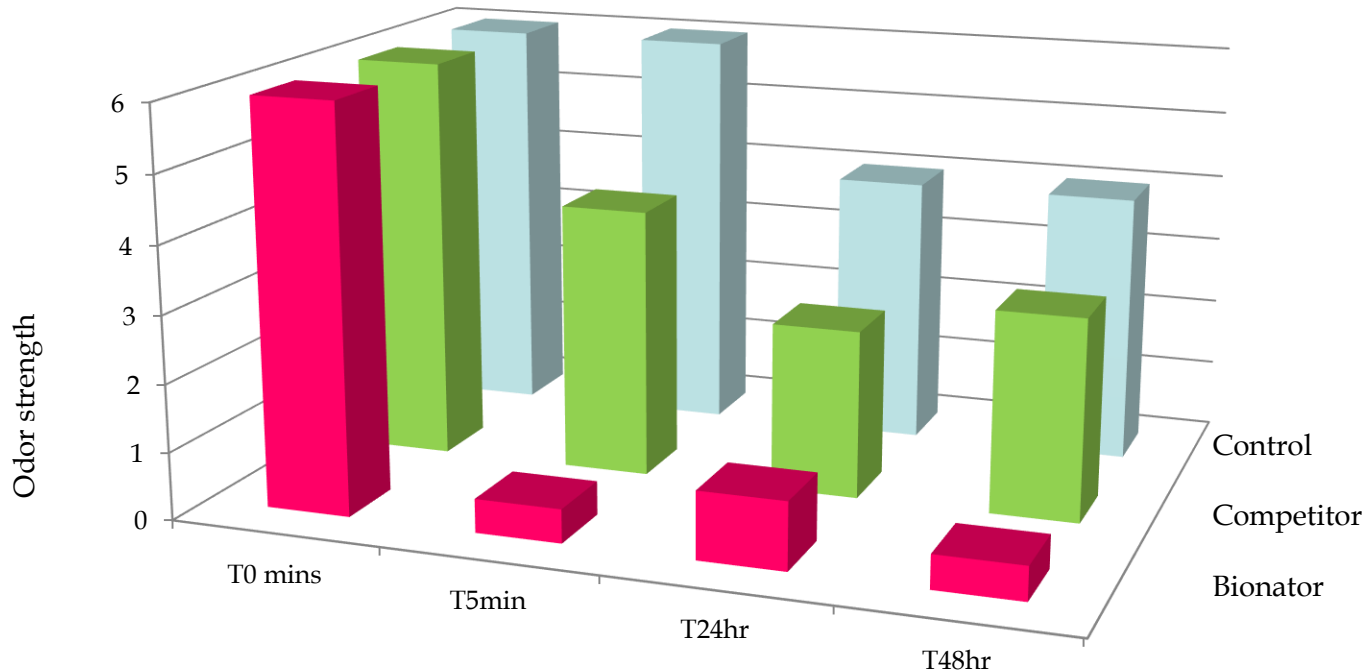
## Performance Data

- Proven Performance
  - Odor Control
  - Waste Degradation



# Bionator

**Relative odor control ability of Bionator as compared to competitor product**



**A small amount of the red fox urine is placed in disposable plastic containers. Bionator and other test products are added via mini spray bottles, and the odor assessed by an odor panel using a scoring system from one to six representing a very weak odor to a very strong offensive odor. Results for Bionator (red bars) shows rapid and prolonged reduction of the odor, compared to the control odor which fades only slightly over 48 hours (blue bars). A major biological competitor product (green bars) has much less effect on the odor compared to Bionator.**





## Bionator Benefits

- Superior, performance driven formulation with focus on complete odor elimination
- Powerful, unique odor encapsulation technology binds and traps odors immediately.
- Performance driven, proprietary bacterial consortium degrades a broader spectrum of substrates for controlling and reducing odors.
- Performance driven application-specific bacteria rapidly degrades organic materials.
- Powerful, biological action removes odors at the source rather than just masking them.
- Verified, field trials have proven product efficacy.
- Proven to work against a wide range of odors including urine, spoiled milk, fish, cigarette, smoke, garbage and hydrogen sulfide.



## Bionator Benefits

- Excellent cleaner
- Highly effective formulation - product is readily biodegradable
- Product is safe for users and the environment
- Easy to use, very user friendly



# Bionator

## Product Summary

- Superior chemistry package using latest technology
  - Plant Based Surfactant
  - Environmentally-friendly Chelating agent
- Unique odor control technology featuring microencapsulation for immediate effects and supreme biological activity for complete odor neutralization through degrading of odor-causing sources
  - Environmental improvement over old and competitors odor encapsulating technologies
- 2.55e12 CFU/gallon of application specific bacteria
  - 27% higher than industry standard



# Bionator

- Bionator can be used to solve odor problems in a wide range of applications:
  - Carpets and fabric care
  - Automobile interiors
  - Garbage collection trucks and bins
  - Pet cages and pens
  - Agricultural production facilities
  - Receiving docks in food plants
  - Hotel/Motel cleaning and odor control
  - Disaster remediation
    - Flood Restoration
    - Fire Restoration

