ENVIA CORE™

Multi-Enzyme Hydrolysis Accelerator

ENVIA CORE™ is a high-performance multi-enzyme formulation designed as a flexible platform for detergent and cleaning applications. It combines five synergistic enzymes that target proteins, starches, fats, and complex polysaccharides, significantly improving stain removal efficiency and overall cleaning performance.

Validation testing was performed under standardized laundry testing (ASTM D4265).

The ENVIA CORE™ platform is particularly valuable for detergent and cleaning formulations, where the complementary action of multiple enzymes significantly improves stain removal and surface cleanliness.

Protease breaks down protein-based stains such as blood, grass, sweat, and food residues. Amylase hydrolyzes starches and carbohydrate soils such as sauces and gravies. Lipase targets oils, sebum, and grease. Mannanase degrades mannans and gum-based thickeners. Cellulase improves textile brightness and color clarity by removing microfibrils from cotton fibers.

Through this enzymatic synergy, ENVIA CORE™ acts as a flexible technology platform that enhances detergent formulations, industrial cleaning solutions, and environmental remediation processes.

Features & Benefits

- Multi-enzymatic formulation (amylase, protease, lipase, mannanase, cellulase)
- Enzyme technology platform for multiple industrial applications
- Enhances stain removal performance, particularly on food, protein, and starch-based soils
- Enhances degradation of starch, grease, proteins, and fibers
- Reduces reliance on harsh chemical cleaners
- Helps reduce soil redeposition, supporting cleaner fabrics and improved appearance

Performance Highlights

Performance analysis based on ASTM D4265* demonstrates measurable improvements in stain removal efficiency.

- Up to 70% higher efficiency on protein-based stains
- Up to 27% higher efficiency on starch-based soils
- Up to 33% higher efficiency on polysaccharide and gum-based residues
- Up to 33% reduction in soil redeposition

**Optimized performance occurred under standardized warm washing conditions at 40 °C.*

Specifications

Color & Appearance	Dark amber clear liquid
pH	5.0–6.0
Viscosity	0–100 cps
Total Enzymatic Activity	Protease: 18,000 u/mL Amylase: 2,000 u/mL Lipase: 3,850 u/mL Cellulase: 1,750 u/mL Mannanase: 45 u/mL
Temperature Stability	Active between 20–70 °C, with optimal cleaning performance typically observed between 35–60 °C
Shelf Life	2 years

The system maintains ≥50% of its nominal enzymatic activity within pH 5.5–8.5 and temperatures of 35–60 °C under standard assay conditions.

Storage

Store in a cool, dry location. Do not freeze. Keep containers tightly closed, protected from moisture and direct sunlight. Please follow the recommendations and use the product before the best before date. Mix well before use. Contact Bionetix® with questions. Avoid inhalation, eye contact, and prolonged skin contact. Wash hands thoroughly after handling.

Packaging

Available in 21 kg (46 lb.) pails.

Typical Applications

- Liquid laundry detergents
- Automatic dishwashing detergents
- Industrial and institutional cleaning formulations
- Stain removers and pre-treatment products
- Grease trap and drain maintenance
- Food processing cleaning systems
- Clean-in-place (CIP) sanitation
- Marine wastewater applications
- Hydrocarbon and oil residue degradation on marine surfaces and equipment

Directions for Use

- **Liquid Laundry Detergents (LLD):**
  - Dose at 0.4%–1.5% by weight of the final detergent.
    - Standard detergents: 0.4%–0.8%
    - Concentrated/heavy-duty: 0.8%–1.5%
  - Effective within pH 4.0–10.0 (optimum 8.0–9.5) and 20–60 °C.
- **Automatic Dishwashing (Tablets & Liquids):**
  - Dose at 0.8%–2.0% by weight of final product.
  - Effective within pH 4.5–9.0 and 45–65 °C.
- **Stain Removers & Pre-Soaks:**
  - Dose at 1.5%–5.0% by weight.
  - Effective within pH 6.5–9.5 and room temperature to 40 °C.
  - Apply directly to stains before washing.
- **Industrial & Institutional (I&I) Cleaning:**
  - Dose at 0.5%–2.0% by weight of the formulation.
  - Effective within pH 7.5–9.5 and 20–70 °C.
- **Food Processing (CIP Systems):**
  - Dose at 0.5%–1.5% in the cleaning solution.

- Effective within pH 6.0–8.5 and 40–55 °C. For best performance, always adjust dosage according to soil load, wash cycle parameters, and product formulation requirements. For specific dosages, contact your Bionetix® representative.

Disclosure

Under standard assay conditions, ≥50% enzyme activity is maintained within a defined operational pH range and temperature window. Enzyme stability is dependent on exposure time, substrate, and formulation conditions. Activity decreases outside optimal ranges and under prolonged thermal exposure.

bionetix®
innovative biosolutions

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ISO 9001 certified

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