

# SYNBIOTIC AND PROBIOTIC CONCENTRATES FOR CONTINUOUS CLEANING ACTION

HeiQ Chrisal's microbial concentrates deliver live multi-strain Bacillus spores as probiotic actives for cleaning product formulations. Designed for long-lasting performance, formulation stability, and reliable global supply, they enable manufacturers to create next-generation cleaning solutions that meet consumer demand and regulatory requirements.

## Key benefits for manufacturers

- ✔ **Multi-strain efficacy**
  - consortia of live Bacillus strains act on diverse soils and organic residues
- ✔ **Extended action**
  - probiotics remain active for up to 5 days after application
- ✔ **Odor control**
  - reduces malodors by metabolizing organic waste at the source
- ✔ **Formulation stability**
  - spores tolerate detergents, surfactants, storage, pH and temperature ranges
- ✔ **Shelf life**
  - 3 years at ambient temperature
- ✔ **Versatile applications**
  - laundry detergents, hard-surface cleaners, drain cleaners, institutional products, textile sprays
- ✔ **Flexible inclusion**
  - dilution ratios from 1:10 to 1:1000, with guidance for RTU levels
- ✔ **Packaging & scale**
  - 5 L pails to 1,000 L IBCs, production capacity 100 t/day, global distribution



## Safety and compliance

- Proven safety record: **15+ years of use in hospitals and clinical settings**, no reported concerns
- **Biosafety Level 1 (BSL-1)** – not pathogenic
- **Non-GMO, 100% natural** strains
- **Readily biodegradable**, safe for fauna and flora
- Supports **EU Ecolabel** certifiable formulations
- Meets standards across industries: **GRAS** (US FDA), **EFSA QPS list** (EU), **INCI-listed** (cosmetics)
- Verified safe in **OECD toxicity and irritation tests** (skin, eye, inhalation, sensitization)



# OPTIONS FOR EVERY FORMULATION



## SYNBIOTICS (PRE- & PROBIOTICS)

- ✔ **Powerful synergy**  
Combines probiotics with prebiotic nutrients for enhanced performance
- ✔ **Sustained activity**  
Prebiotics feed probiotics for extended cleaning action
- ✔ **Premium positioning**  
Advanced synbiotic technology for high-value products



## PROBIOTICS

- ✔ **Pure probiotic power**  
Live Bacillus spores for targeted cleaning applications
- ✔ **Cost-effective**  
Streamlined formulation for competitive pricing
- ✔ **Proven performance**  
Established technology with market validation



## ENHANCED BIOSURFACTANT CONCENTRATES

- ✔ **Natural surfactants**  
Microbially-produced biosurfactants for superior cleaning
- ✔ **Biodegradable**  
Environmentally friendly alternative to synthetic surfactants
- ✔ **Enhanced wetting**  
Improved soil penetration and removal efficiency



Tailor each option to your formulation goals, packaging needs, and production scale, from pilot batches to full commercial volumes.



Contact us to learn more!

[synbio@heiq.com](mailto:synbio@heiq.com)