

BIO CLEANING SOLUTIONS

BIO TECH Probio WSP (Water Soluble Powder) **Yellow**

Multi-Purpose – Probiotic Enhanced Cleaning, Degreasing, and Deodoriser – A powerful In- Use Concentrated powder.

The formulation for deep cleaning and maintenance cleaning.

All Green Worx Cleaning Solutions Products are Certified as follows:



Green Worx Cleaning Solutions has developed a new range of probiotic-based products in powder format packed in 10-gram sachets and colour-coded to meet HACCP standards.

In their natural environment, probiotics produce hundreds of enzymes in response to the organics present in their environment. They produce extracellular enzymes that break down proteins, starches, fats, oils, greases, urine, esters, and toilet tissue into smaller particles outside the bacterial cell. The bacteria then transport the smaller particles across their cell membrane for use as an energy source and to build new cellular components. Since bacteria detect the organics present as potential food and produce specific enzymes to break down these organics, it is a very efficient system. Many different enzymes are required to break down a substrate completely.

The bacillus consortium used in *Bio Tech Probio WSP* powders produces several separate enzymes to ensure a swift degradation of key organic contaminants, drain lines, grease traps, septic systems, and hard surfaces are biologically cleaned, and odours are controlled. Although many bacteria can utilise these organics as food sources, the bacteria with the most rapid production of these enzymes provide the most dramatic effects. Technologically, it is the most advanced formulation in the South African market.

Safety of Bio Tech Probio WSP Consortium:

Bio Tech Probio WSP contains a blend of safe *Bacillus* microorganisms (Probiotics). Toxicity studies done by the independent Global GreenTag organization show that the *Bio Tech Probio WSP* consortium has no acute oral toxicity, no acute dermal toxicity, and no acute inhalation toxicity at maximal in-use dose. Acute dermal irritation and acute eye irritation studies classify the *Bio Tech Probio WSP* consortium as non-irritating. *Bio Tech Probio WSP* consortium does not elicit a skin sensitization reaction, allergies, or asthma.

DATA SHEET

Benefits

Features

<ul style="list-style-type: none"> • Hard Surface cleaning and odour control – <i>penetrates cracks, crevices, and pores of surfaces where organics accumulate, removing the organics and</i> leaving a visually cleaner surface. Provides long-term odour control by removing the organics that cause odours and preventing their return. • Drain lines – degrades and eliminates organics found in drainlines. Regular addition of <i>BIO TECH PROBIO WSP</i> maintains a cleaner and odour-free system. • Septic and waste treatment – maintains effective activity in septic systems, eliminating the need for excessive pumping. Removes odours caused by incomplete digestion of malodorous volatile fatty acids. Also, an effective treatment of pit toilets. 	<ul style="list-style-type: none"> • A stable consortium of safe <i>Bacillus</i> spores • Production of multiple enzymes providing a wide range of degradation capabilities • A synergistic blend that works in concert to provide superior performance across multiple applications. • Excretion of high levels of amylase, cellulase, lipase, protease, urease, esterase & xylanase enzymes • Ability to work under aerobic and anaerobic conditions. • Single product simplicity for multi-application flexibility <p>ENVIRONMENT</p> <ul style="list-style-type: none"> • Minimising our impact on the environment is core to everything we do. <p>REDUCE CARBON FOOTPRINT BY 97%</p> <ul style="list-style-type: none"> • Compared to transporting liquid concentrates. Bio Tech GTX Powder products result in no transportation of water. <p>BIODEGRADABLE, PRE-DOSED FORMULATIONS</p> <ul style="list-style-type: none"> • No risk of chemical overdosing, which has the potential to impact the planet negatively. <p>NO SINGLE- USE PLASTIC</p> <ul style="list-style-type: none"> • Our bottles are designed to be durable and last a lifetime. Through reusing our bottles, the system reduces waste by 90% compared to using traditional commercial cleaning solutions. <p>PLANET FRIENDLY PACKING</p> <ul style="list-style-type: none"> • Sachets are compostable and recyclable. <p>PRODUCT HEALTH RATE CERTIFIED</p> <ul style="list-style-type: none"> • Global GreenTag asthma and allergy safe
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PRODUCT CHARACTERISTICS

- **Bacteria CFU Counts** : 1.2e8 /ml.
- **Bacteria Type:** *Bacillus* (probiotic) consortium producing the following enzymes:
 - ✓ **Protease** – breaks down proteins (e.g., meat, excreted/secreted proteins) into amino acids.
 - ✓ **Lipase** – breaks down fats/grease into fatty acids & glycerol. If not broken down, fats can go rancid & lead to off-odours and blocked drains/fat grease traps.
 - ✓ **Amylase** – starch acts as a glue for dirt – amylases catalyse the breakdown of starch into sugars, which are then further used as a food source by the *bacillus*.
 - ✓ **Cellulase** – breaks down cellulosic material.
 - ✓ **Urease** - catalyses the hydrolysis of urea into break-down products.
 - ✓ **Esterase** - splits esters into an acid and an alcohol in a chemical reaction with water called hydrolysis. Esters have characteristic odors, most of which are pleasant/fruity; however, they can also include onion/garlic and worse odors.
 - ✓ **Xylanase** – help in breaking down plant cell walls.
 - o What this means – the *bacillus* uses the multitude of enzymes produced to break down the components of malodour and staining to provide microbial cleaning at the smallest level of dirt/contamination.
- **Salmonella** : Not detected
- **Appearance** : Clear liquid
- **Fragrance** : Pleasantly perfumed
- **Shelf-life** : Two years; maximum loss of 1.0 log at recommended storage condition store in a cool, dry place.

Cleaning Efficiency Test – by an independent laboratory.

The test.

The sample was tested as is to investigate the cleaning efficiency in accordance with SANS 892 General Purpose Detergent (Beads, granules, and powders).

The results.

Sample Name	Sample ID	Dilution	Temperature °C	Method/ Instrument	Result %	Pass / Fail	Requirements
BIOTECH W.S.P (BLUE)	DET 02-2023	As is	40 °C ±2 °C	Gravimetric	114	Passes	Cleaning efficiency is at least 100% of the standard detergent

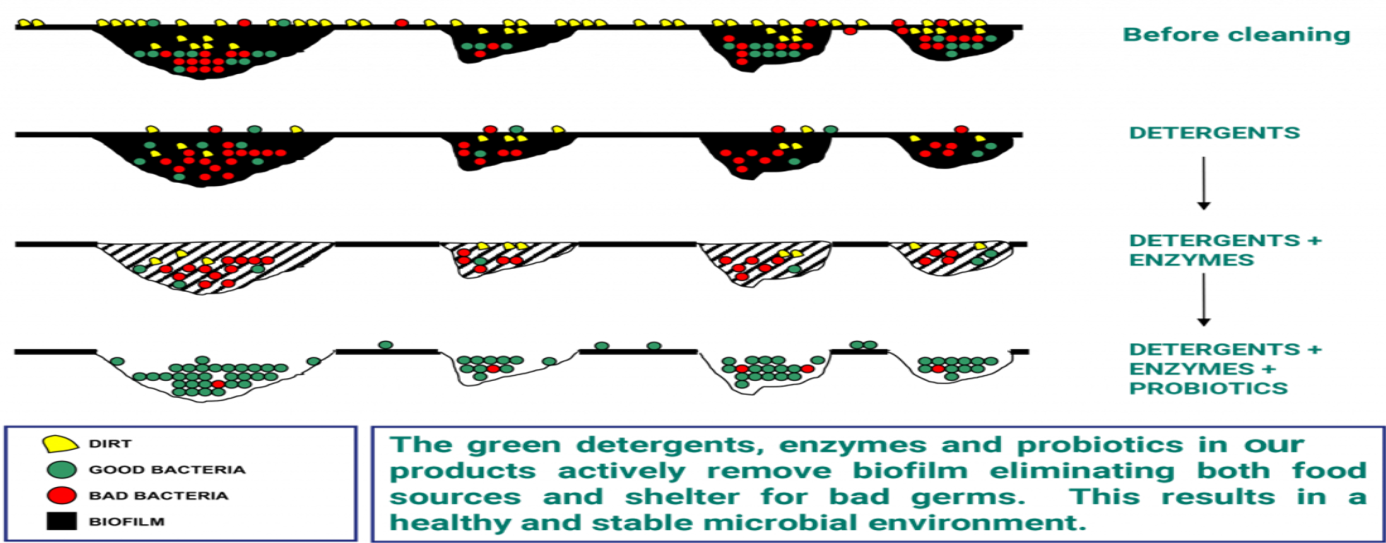
The conclusion.

The results show that the detergent under investigation, i.e., BIOTECH W.S.P exceeds the requirements of SANS 892 regarding cleaning efficiency.

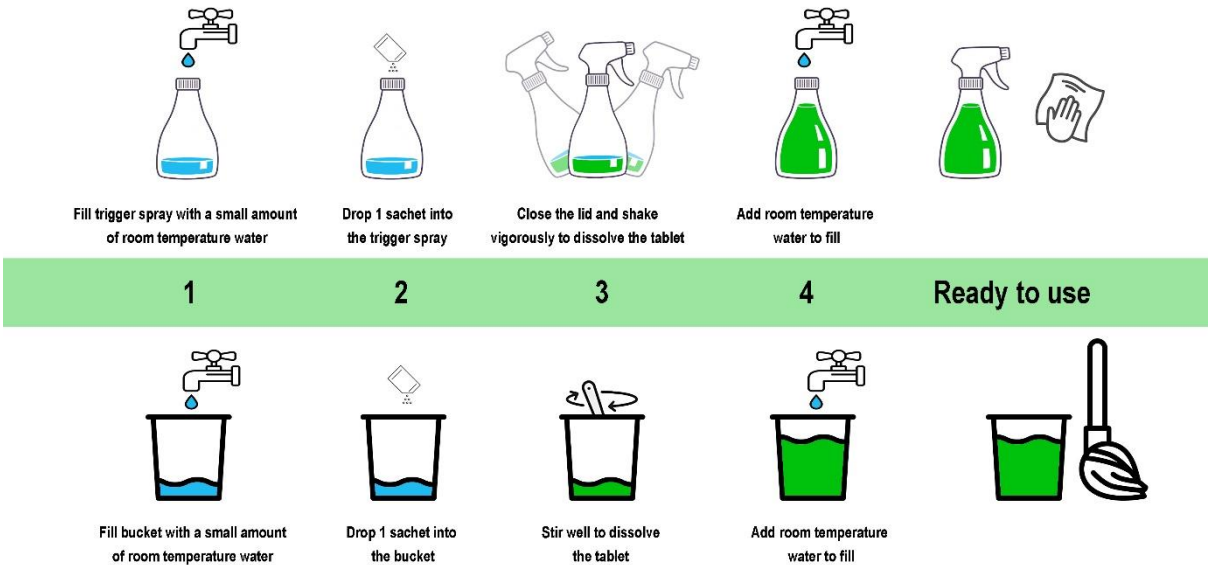
Infogram on how bio enzyme probiotics work?

Results available on application.

Infogram on how bio enzyme probiotics work?



DOSE RATES (Follow mixing and dilution rate)



Bio Tech Probio WSP Powder- Follow the instruction in the diagram below –

One sachet (10 gram) per one liter for deep cleaning applications

One sachet per 10-liter bucket or buddy jug for daily maintenance cleaning.

when used in a 10-liter bucket or buddy jug – please be advised that the solution will remain biologically viable for up to 14 days.

Discard the bucket's contents after this period and pour them into a drain – they will naturally act as a drain cleaner, saving you time and money.

Bio Tech Probio WSP Health & Eco Profile.

Global GreenTag Health Rate – Asthma and Allergy Sensitive certification allows for an easier and safer product choice for people with asthma and allergies brought on by cleaning chemicals. The Global Greentag Health Rate certification is a unique robust certification undertaken combined with – Product health declarations and health rate healthiness. In-use ratings that together reduce consumer and manufacturer risk and build trust in Green Worx Cleaning Solutions products.

Global GreenTag's International Asthma and Allergy Sensitive claim and HealthRATE marks indicate dramatically safer asthma and allergy risk potential and rate the healthiness of products used for the end user.

The assessments are conducted under GreenTag's PHD program and address the increasing numbers of indoor impact studies highlighting the need to provide a more thorough and transparent product assessment for people who suffer from asthma and allergies by ranking each product with a tiered rating system of HealthRATE outcomes that provide peace of mind for the end user.

Safety of Bio Tech Probio WSP

Bio Tech Probio contains a blend of safe Bacillus microorganisms / Probiotics. All microbes have been identified to a sepsis level by 16s rDNA sequencing and confirmed to belong to Biosafety Level 1, as defined by the National Institute of Health (NIH), and to Risk Group 1, as defined by EU Directive 2000/54/EC.

Bio Tech Probio WSP powder RTU is designed as a bio-technical aid in the treatment of organic waste material, offering liquefaction and reduction of solids, reduction of odour easier disposal of waste, aids general cleaning of soiled areas, safety in the operation of effluent systems, offers a viable alternative to current processing techniques using a bio-technical approach.

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+27 11 708 6626 info@greenworx.eco www.greenworx.eco