

BIOLOGIK

NATURALLY SUSTAINABLE

ADVANCED BIOLOGICAL SOLID FORMULATIONS



BIO-URINAL CUBES

A unique combination of bacteria to solve the problems of smell and scale build up in urinals.

BIOLOGIK BIO-URINAL CUBES

Overview

Biologik Bio-Urinal cubes deliver large numbers of application-specific organic waste-degrading bacteria.

The cubes also contain the latest eco-friendly scale prevention technology to reduce inorganic and organic scale build-up in urinals, traps associated pipe work. The removal of this scale prevents the formation of odors at source.

Experience has shown that the frequency of urinal flushing can be reduced, possibly as far as one to two service flushes per day, offering the opportunity for significant water cost savings.

Each Bio-Urinal cube weighs 33 grams is approximately 30mm in each dimension.

Dosing: One Bio-urinal cube is placed in each urinal and will last 2-6 weeks. In case of troughs, approximately every 50cm, and then change every 2-6 weeks or when cube has been reduced to less than one quarter of the original size.

During use the cube slowly dissolves, delivering a combination of application-specific bacteria and eco-friendly scale prevention technology which, in combination, massively reduces inorganic and organic scale in urinals, traps and associated pipe work.

Note that this product is not intended to compete directly with traditional chemical (PDCB) toss blocks where a pile of blocks is placed in each urinal and is then replaced frequently.

The Bio-urinal Cubes are scientifically formulated so that one cube treats one urinal for up to 6 weeks.

Features and benefits of Bio-Urinal Cubes

The application-specific bacteria and scale control technology combination reduces scale build-up and helps prevent slow flow situations.

This reduces labor costs in mechanically clearing pipework following blockages.

Easy and simple to use

Cost saving- no additional plumbing or retrofitting required unlike some biological urinal systems

Compatible with all urinal materials: Stainless steel, porcelain, natural stone and ceramics

Can be used in all formats of urinals currently available.

Does not contain harmful chemicals such as PDBC:

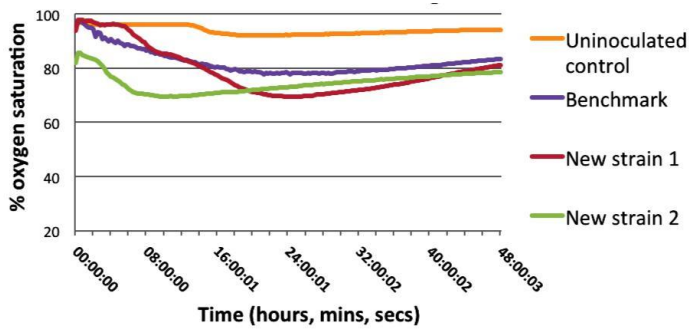
Reduces to operators and urinal use.

Bio-Urinal Cubes contain a fragrance for immediate odor masking effects:

Creates a pleasant washroom environment during use.

Data

R&D results on uric acid degradation



We have demonstrated the ability of the Bio-Urinal Cube bacteria to degrade uric acid via oxygen uptake testing. The benchmark is an original strain. This is clearly able to degrade uric acid (purple) compared to the uninoculated control (orange).

Recent R&D discovered new strains that are capable of faster or more extensive activity on this difficult to degrade material (green and red).

This scale in urinals consists of organic and inorganic elements.

Organic scale

The organic materials come from urine itself, which contains uric acid (a compound that is moderately soluble in warm water but insoluble in cold water and can be the cause of kidney stones).

As urine comes into contact with the cold flush water, uric acid from the urine comes out of solution and tend to deposit on the surface.

The Bacillus bacteria in Biologik Bio-urinal Cubes are specially selected strains that degrade the organic compounds presented in urine such as uric acid, very rapidly, using them as substrates for growth, and therefore preventing uric acid from contributing to scale build-up

Inorganic Scale

Inorganic scale is a much more complex science, consisting of simple compounds from the flush water such as calcium carbonate (the scale found in kettles in hard water areas) plus more complex inorganic combinations, such as struvite.

Struvite is a compound called magnesium ammonium phosphate.

The magnesium and phosphate are present in the water and the ammonia comes from breakdown of the compounds in urine.

The scale forms as a regular lattice, represented by the brown balls in the right hand diagram above.

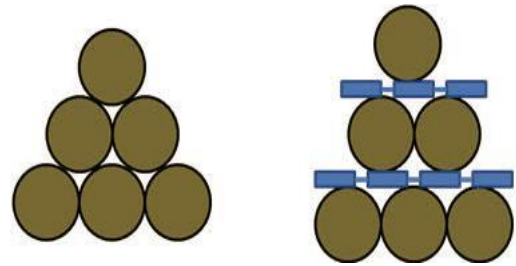
Rather than attempting to bind every inorganic scale forming element, Bio-Urinal cubes contain a scale prevention technology.

The scale prevention material is represented as the blue lines in the right hand diagram above.

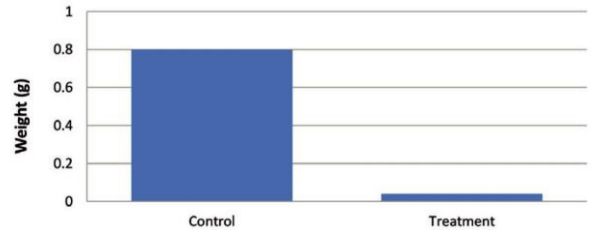
It lies within the scale structure (brown balls) preventing the formation of rigid scale lattice, as would occur in an untreated situation (right hand diagram).

Although some deposits may still form, they are soft in nature and are more easily remove by cleaning or by the flush water.

Prevention of struvite scale



Prevention of Struvite scale



The scale prevention technology prevents the formation of simple and complex inorganic scales; a few parts per million of the active substance resulted in a 94% reduction in struvite formation.

Technical specifications

targeted compounds	Organic and inorganic scale, uric acid	
bacterial count	1.0e8 cfu/gram	
bacterial type	<i>Bacillus</i> spores	
formula properties	Green cube with fragrance	
performance properties	One cube lasts 2-6 weeks	
packaging	1 tub containing 50 cubes or singular cubes	

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