

Sanitrox:
our natural
sanitising
solution.

brought to you by



bioshield

protecting people, reducing risk

introducing bioshield.

We are Bioshield. The **award-winning, biotechnology business** that specialises in improving hygiene standards across the transportation industries, specifically within food distribution.

We've spent the last two decades working with pioneering businesses that have big ambitions to protect their people and reduce risk through increased sanitisation practices and regular microbial testing. Working with **100% natural, plant-based solutions** and innovative misting machines, together we can ensure that businesses reduce their costs, remain compliant and adhere to the complex requirements of food safety laws.



our pioneering
clients...



BANK OF ENGLAND

amazon

mitie

sky

moto

NHS

TESCO

JD

LOUIS VUITTON

PPG

Sainsbury's

MAG Manchester Airport

co op

BREWDOG



dpd

Dunelm

vodafone

TED BAKER
LONDON

Carlsberg

BRITISH COUNCIL

Whitbread

ASDA

Nestlé

Kellogg's

B&Q

beko

TOYOTA

MISSGUIDED
PEACE, LOVE AND FASHION

COSTA COFFEE

XPO Logistics



NHS
Yorkshire Ambulance Service
NHS Trust

GXO
Logistics at full potential



powered by
an orange.
(well, lots of them really)

we're 100% natural.

Because we're passionate about our people and our planet, we only work with all-natural and plant-based products, which just so happen to be based on the organic compounds of inside an orange.

Our unique formulation combines all organic compounds, natural bioflavonoids and organic acid and is designed to work in close proximity to people and produce.



We've tailored this orange-based, 100% natural solution to suit differing needs. Here are the various solutions we provide:

- Liquid solutions for our misting machines
- Hard surface sanitiser
- Fabric and textiles sanitiser
- Single use antimicrobial wipes

introducing sanitrox.

Sanitrox is a patented combination of Bioflavonoid molecules with known anti-microbial & viral activity:

- Neohesperidin
- Naringin
- Poncirin
- Rhiofolen

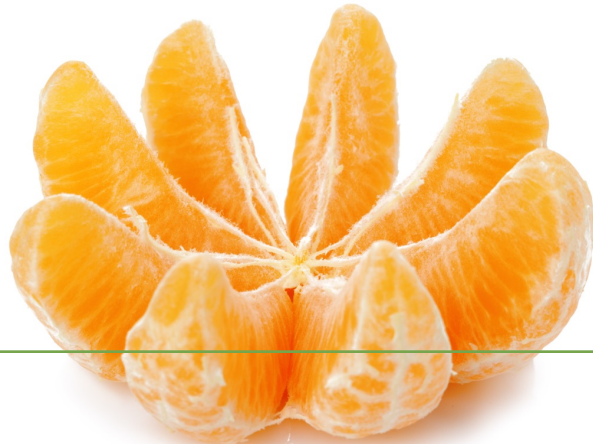
Enhanced activity by addition of natural organic fruit acids:

- Malic
- Citric
- Ascorbate
- Lactic



the benefits of bioflavonoids.

Bioflavonoids have been widely recognized to affect a wide range of systems in the body. The main benefits are...



- Ability to modify the body's reaction to allergens, inflammation, viruses and carcinogens
- Powerful antioxidants, protecting against oxidative and free-radical damage
- Increase the strength of the capillaries, regulating their permeability, preventing ruptures and providing protection against infection
- Help heal wounds and support a healthy immune system

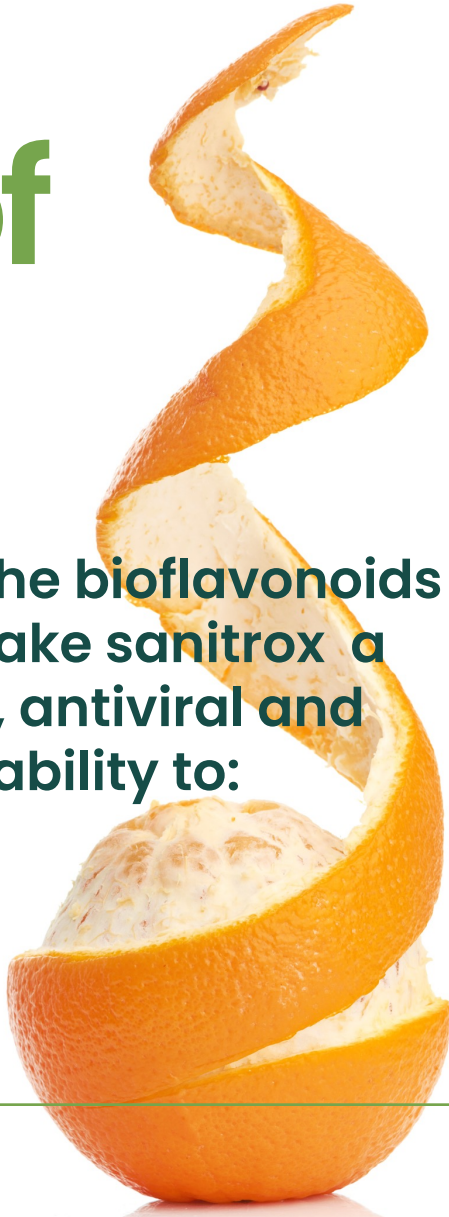
the role of the organic fruit acids.



- Removal of Ions (e.g. Calcium ions in hard water areas) has been shown to increase the effectiveness of the bioflavonoids.
- Chelating with solution species – to prevent deactivation of bioflavonoids. Also removes dissolved Iron which bacteria need to thrive and grow.
- Necessary to control Ph – to control Hydrogen Ion activity to promote maximum bioflavonoid activity
- Help maintain shelf life

mode of action.

The combination of the bioflavonoids and organic acids make sanitrox a potent antimicrobial, antiviral and antifungal to due its ability to:



- Bind with bacterial cell walls to effect extracellular and soluble proteins through hydrogen bonding which the bacteria and viruses need to survive
- To disrupt the microbial membranes including cell wall polypeptides and membrane-bound enzymes
- The bioflavonoids (hydroxylated phenols) have been shown to be toxic to microorganisms as they effect enzyme inhibition.
- The bioflavonoids have been found to stimulate macrophages which have an indirect negative effect on infections

product benefits.



- Broad-spectrum of antimicrobial activity; against gram-positive, gram-negative bacteria, viruses, moulds, yeast and fungi
- Powerful natural antioxidant and anti-inflammatory properties
- Break down biofilm to reach pathogenic organisms
- Non-hazardous to operators and the environment:
 - Non-toxic, non-carcinogenic, non-mutagenic, non-allergenic and non-corrosive.
 - Dermatologically tested – suitable for use on sensitive skin
- Non-tainting and does not change the flavour of any food or product
- Odourless and colourless (at specified concentration)
- Stable even when exposed to light and non-volatile
- Effective even in the presence of organic matter, i.e. biofilm
- Fast-acting with long residual effect
- Unique action – the destruction of micro-organism cell walls

product features.

- Manufactured using only naturally derived, plant based ingredients
- Completely biodegradable, safe and eco-friendly
- Easy to handle: non-harmful to humans, animals & the environment
- Does not contain any allergic substances
- Does not contain any synthetic fragrances or colourants
- Not tested on animals
- GMO free
- Effective in very low concentration (in water)
- Food Safe, all ingredients have GRAS numbers

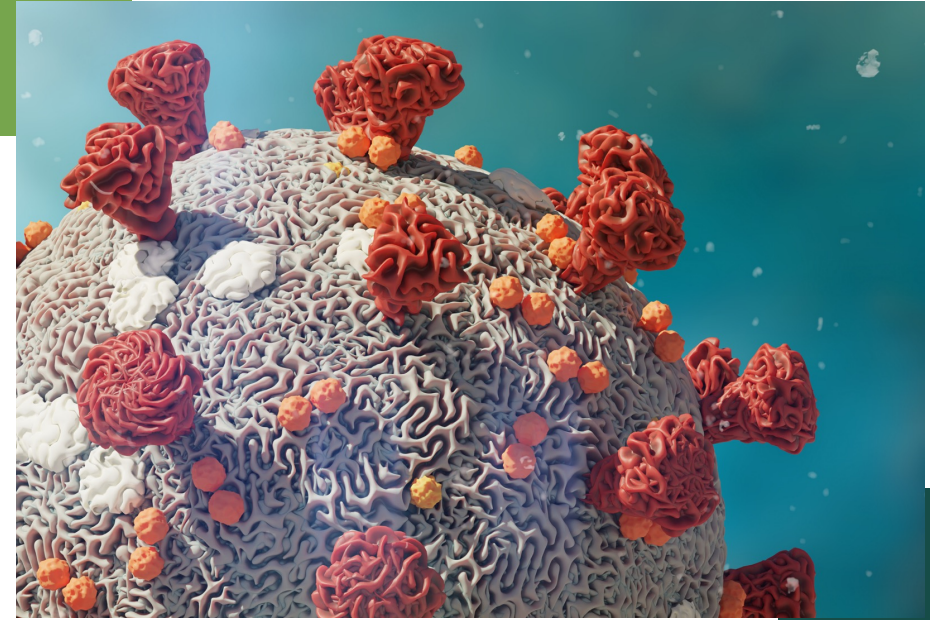


The background of the slide is a microscopic image of several orange, rod-shaped bacteria with long, thin, white flagella. The bacteria are set against a dark blue background. A semi-transparent light green rectangular box is positioned on the left side of the image, containing the text 'testing against pathogens.' in a bold, sans-serif font. The word 'testing' is in dark blue, while 'against pathogens.' is in a medium green color. The period at the end of the sentence is a small orange dot.

testing
against
pathogens.

pathogens tested to date.

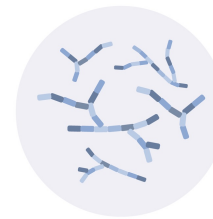
We've tested sanitrox against various bacteria, yeast, fungi, viruses and protozoa. Sanitrox has been certified against the following:



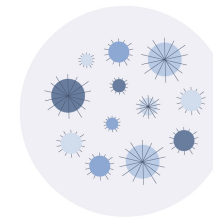
CLASSIFICATION OF MICROORGANISMS



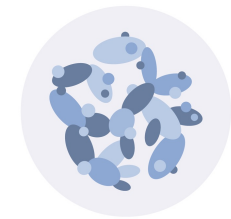
BACTERIA



FUNGI



VIRUSES



YEAST

protecting against bacteria.

- *Campylobacter jejuni*
- *Diploia natalensis*
- *Escherichia coli*
- *Geotrichum candidum*
- *Klebsiella pneumonia*
- *Lactobacillus pentoceticus*
- *Legionella pneumophila* (NCTC 11192)
- *Listeria monocytogenes*
- MRSA (clinical strain)
- *Mycobacterium fortutium* (NCTC 8573)
- *Proteus vulgaris*
- *Pseudomonas aeruginosa* (ATCC 15442)



protecting against yeast & fungi.

- Aspergillus flavus
- Aspergillus niger
- Aspergillus terreus
- Botrytis cinerea
- Candida albicans
- Candida glabrata
- Chaetonium globosum
- Cladosporium
- Collectotricum sp.
- Fusarium sp.
- Mucor sp.
- Penicillium sp.
- Penicillium digitatum
- Penicillium funiculosum
- Penicillium italicum
- Penicillium roqueforti
- Phomopsis orl
- Pullularia pullulans
- Pythium sp.
- Trichophyton interdigitale
- Trichophyton mentagrophytes

protecting against **viruses** & **protozoa.**

- Human Rhinovirus
- Influenza A
- Human Immunodeficiency Virus (HIV)
- Urbani SARS (Covid 2)
- African swine fever
- Avian influenza
- Foot & mouth disease
- Gumboro virus
- Novovirus
- Herpes virus type 1 & type 2

- Herpes zoster
- Hepatitis A & B
- Newcastle Disease
- Histomonas meleagridis
- Giardia lamblia
- Entamoeba histolytica
- Blastocystis hominis

All of the pathogens/viruses are tested at independent laboratories. Certificates and reports available on request.

patented biotechnology.

Sanitrox biosciences has a number of worldwide patents covering its technology for different applications:

- Misting & Decontamination
- Coating of materials and surfaces
- Impregnation of Cellulose materials
- Food Preservation
- Water Purification





main uses
for sanitrox.



Product category	Main applications
Decontaminants and food ingredients	Fruits, vegetables, beverages, fish, meat, poultry
Crop treatment: nutrient synergists & Phyto-elicitors	Fruits, vegetables, vines, cereals, flowers, hydroponics, household plants
Animal feed and drink additives	Swine, poultry, fish, beef
Surface cleaners and sanitisers	Office facilities, medical environments, restaurants, schools, household use
Personal care: actives and ready-to-use products	Creams, lotions, shampoos, soaps, gels, deodorants
Healthcare: actives and ready-to-use products	Food supplements, skincare, dental care, pharmaceuticals etc.



thank you for reading

together let's protect our people
and reduce our risk, minimising
our carbon footprint along the way.

neil@bioshieldsystems.com
077767 278 279

brought to you by  **bioshield**
protecting people, reducing risk