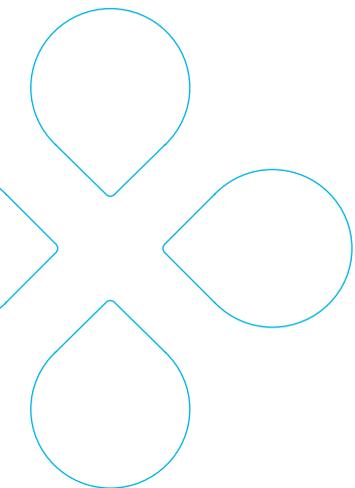


BYOWORKS

The total solution for your hygiene needs

FOCUSED ON DISINFECTION

Byoworks has been the trusted disinfection partner across diverse industries in Southern Africa for the past 12 years and are the exclusive licence holder for Byotrol plc in Sub-Saharan Africa. We manufacture a range of fit for purpose products based on Byotrol's unique technologies and internationally protected formulations.



Byotrol is dedicated to improving lives around the world by developing and commercialising market-leading, antimicrobial technologies and products

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QFS SURFACE SANITISER

(QAC FREE SOLUTION)

- THE ALTERNATIVE SOLUTION TO PREVENT ANOTHER OUTBREAK

Byotrol's revolutionary biocide technology is proven to prevent and control *Listeria* (including *L. monocytogenes*) in food factories protecting your business and your reputation.

With 24-hour residual protection, Byotrol keeps working, from cleaning session to clean session, outlasting all the leading competitors. It's easy to implement Byotrol into your business.

It's time to take control of *Listeria*!



Choosing a **QAC-free**, antimicrobial solution which has exceptional *Listeria* control helps to improve your HACCP cleaning practices.

Studies show that *Listeria* can exist even at low temperatures. Byotrol QFS, as fast-acting solution, offer efficacy against *Listeria monocytogenes* at 4°C with a >5.0 Log reduction over 30 seconds, 60 seconds and 5 minutes contact time. Additional EN 13697 conditions resulted in a >4.0 Log reduction over 30 seconds and 60 seconds at 4°C. Both these tests were done at 1% dilution.

Byotrol QFS Surface Sanitiser have been specifically formulated to offer a superior sanitising solution for the food manufacturing industry. Designed with high level efficacy against foodborne pathogens, QFS will help to control the spread of *Listeria*.

All Byotrol products provide long lasting protection against bacteria between cleans, having been tested to **BSI PAS2424** protocol, which was developed by Byotrol and the British Standards Institute in order to demonstrate long lasting efficacy against bacteria on frequently touched surfaces. Compatible with a wide range of surfaces, for use as part of interim cleans and full clean-down.



PEACE OF MIND

These products have been formulated to work in low temperatures, where traditional biocides have been less effective. In addition, Byotrol's residual efficacy provides on-going efficacy in between cleans to provide additional assurance and peace of mind.



Exceptional Antimicrobial Efficacy:

- Effective against foodborne pathogens including *Listeria monocytogenes*, *Salmonella*, *Campylobacter jejuni* and *E. coli*
- Expert *Listeria* control – proven to perform at 4°C, in addition to the standard EN 13697 test temperature of 20°C
- EN 1276 (bactericidal)
- EN 13697 (bactericidal, yeasticidal)
- EN 1650 (yeasticidal)
- EN 14476 Rotavirus, Influenza A (H1N1, Swine Flu)
- **BSI PAS 2424 to demonstrate 24 hour residual efficacy**

Added Benefits:

- Specialist solution ideal for use in the healthcare, food manufacturing and service industry
- No need to rinse after use
- Suitable for both wet and dry sites
- Economical concentrate format allows for varied use
- Taint tested by Campden BRI up to 2%
- Unfragranced

SUITABLE FOR USE ON PLASTIC, STAINLESS STEEL, TILES, FLOORS, WALLS, FRIDGES AND CONVEYOR BELTS.



B2023 QFS Surface Sanitiser: for High-Risk Food Processing Environments

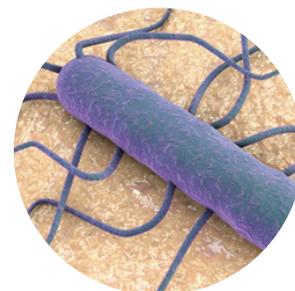
Product	QFS Sanitiser Ready-to-use	QFS Sanitiser Concentrate				
Size	500ml Trigger	1 Litre Bettex	5 Litre	25 Litre	210 Litre	1000 Litre IBC
Code	B2023-500	B2023-1	B2023-5	B2023-25	B2023-210	B2023-1000
Units per case	6	6	4	1	N/A	N/A
Box/Unit weight	3,4kg	6,4kg	21	25,3kg	218	1050
Units per pallet	400	300	84	32	4	N/A

B2020 QFS Surface Sanitiser: for Food Service and Low-Risk Environments:

Product	QFS Sanitiser Ready-to-use	QFS Sanitiser Concentrate				
Size	500ml Trigger	1 Litre Bettex	5 Litre	25 Litre	210 Litre	1000 Litre IBC
Code	B2020QFS-500T	B2020QFS-1	B2020QFS-5	B2020QFS-25	B2020QFS-210	B2020QFS-1000
Units per case	6	6	4	1	N/A	N/A
Box/Unit weight	3,4kg	6,4kg	21	25,3kg	218	1050
Units per pallet	400	300	84	32	4	N/A

IT'S TIME WE ALL IMPLEMENT A ZERO-TOLERANCE POLICY TO *LISTERIA*

Listeria has always been a serious threat to the food and beverage industry and there are existing tools and protocols in place to manage it. Yet, whilst leaders in the industry have already implemented a zero-tolerance policy to the presence of *Listeria* in their food chain, others have taken a more relaxed view. The resulting recent outbreaks indicate stricter standards should be implemented throughout the industry.



A persistent threat

With good reason, the presence of *Listeria* is considered an indicator of general facility hygiene. It also indicates the presence of *Listeria monocytogenes*. *Listeria* is persistent and can survive in many different conditions making it incredibly difficult to control. Particularly problematic to manage for ready-to-eat food manufacturers, *Listeria* is widespread in our environment throughout soil, water, animal faeces, vegetation and carried by 10% of people. It grows in refrigerator temperatures and can survive freezing, as proven in the Hungarian frozen food outbreak.

Crucially, it forms persistent biofilms on surfaces, which are resistant to cleaning and disinfection and creates reservoirs of contamination. To be managed effectively, rigorous hygiene protocols need to be implemented and enforced consistently, along with the use of an effective terminal sanitiser.



The risks of *Listeria* contamination

Symptoms of Listeriosis can take anywhere from one week to two months to show in an infected person. For most it will pass with only mild symptoms which do not require medical treatment. However, for those with weakened immune systems, or in vulnerable groups such as pregnant women, babies and the elderly, more serious infections and death is a real risk. In Europe, *Listeria* is the number one cause of death from foodborne illness, more than *Campylobacter* and *E.coli* combined. In South Africa, we are unfortunately facing a more challenging situation when looking at the numbers. The fact that we are seeing more resistant forming *Listeria* (QAC Sanitiser resistance) and the slow reporting rate means that the problem could be much greater than we are aware of.

To allow consumers and retailers to trust the quality of their food, it is vital that manufacturers are implementing a holistic approach which includes a review of cleaning protocols as well as the chemicals they are using to clean their facilities and their employee hand hygiene. Whilst there is always going to be a balance of required level of efficacy vs cost, manufacturers and retailers alike are responsible for ensuring that the food they produce is free from pathogens. **Chemical manufacturers are, in turn, responsible for ensuring their products are not just effective in a laboratory, but also fit for purpose and that their claims are rigorously supported, as many existing products and strategies simply do not deliver in 'real world' conditions.**

How Byotrol can help

Byotrol products provide exceptional *Listeria* control in factory environments as well as in laboratory conditions and have been used by some of the largest grocers and food manufacturing groups in the UK, Europe and here in South Africa, having demonstrated fast-acting and long-lasting efficacy even at low temperatures and in both wet and dry conditions.

Our disinfectants are listed on Woolworths' Approved Disinfectants List and are currently being used at more than 23 ready-meal production sites and 9 food raw material manufactures.

Byotrol products have been formulated to work in cold conditions, where traditionally biocides have been less effective and to impact the biocides in which *Listeria* may reside. Byotrol surface sanitisers and sanitising wipes are QAC-free and are effective even at low concentrations. Their residual efficacy provides on-going efficacy against *Listeria* and other bacteria in between cleans to provide additional assurance and peace of mind.

The British Frozen Food Federation (BFFF) advises changing terminal sanitisers routinely as bacteria including *Listeria* can become resistant to chemical compounds. Byotrol's surface sanitisers and sanitising wipes have been formulated with Byotrol technology, a unique combination of biocides which work together. This ensures the products are just as effective even after long-term use.

When food security is paramount, *Listeria* control needs to be made a priority. Byotrol's highly efficacious performance and long-lasting antimicrobial efficacy through its residual technology, offers a technical as well as an economic and logistical solution.

If you would like to discuss your requirements with a member of our team, please call us on 021 931 0056 or email info@byoworks.co.za

THE PRODUCT RANGE

- Highly effective and versatile products that satisfy a range of needs
- Highly effective, but softer on the environment
- All our products are water-based
- Does not contain bleach, alcohol
- Food safe accreditation (EN1276 and SANS1828 via Intertek)



ASSISTING THE FOOD MANUFACTURING AND SERVICE INDUSTRY

CHALLENGES:

- Poor hand hygiene
- Cross contamination
- Safe clean as you go solutions
- Ineffective cleaning and ineffective disinfection
- Multiple SKU's (number of products used)
- Costs of infection or contamination
- Damage to the equipment being cleaned

SOLUTIONS:

- Water-based, gentle on hands, compliance rates increase
- Long-lasting microbial control on all surfaces
- Sanitising wipes for work stations
- Disinfectants working in clean or dirty conditions
- Small range - Easier training of staff and manage usage.
- From as little as 6c per square meter
- Non-corrosive, Ph neutral products - works on all surfaces