

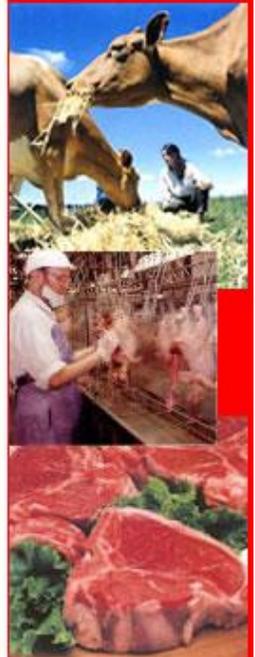
Solutions for Meat Processing

An Introduction to Our Products and Their Applications

Scotmas Limited
Splyaw Road
Kelso,
Borders, TD5 7EH
Scotland

Tel +44 (0)1573 226901
Fax +44 (0)1573 226026
Email enquiries@scotmas.com
Web <http://www.scotmas.com>

Scotmas Food Hygiene
Water Treatment . Hygiene . Environmental Care





About Scotmas

Building on our many years of experience in water treatment, hygiene and environmental care in the food industry – We are delighted to introduce our latest range of products for the meat processing industry.

Based on powerful, yet environmentally safe biocides and hygiene products, Scotmas bio-security programmes are capable of obtaining longer shelf life and improved product quality at the processing plant.

Our company is focussed on providing the best quality service and support to the Industry. For further information, please do not hesitate to call, or visit us on the web at:

<http://www.scotmas.com>

The Scotmas Product Range

As part of our commitment to the Meat Processing market, Scotmas have developed a range of products designed to combat bacterial infection, extend shelf life, and improve overall product quality. The following pages outline the use of our products in various parts of the industry.

Cidox™	Chlorine Dioxide for use in the processing plant. Applied at low levels to wash water using our innovative range of dosing equipment. Careful attention to processing plant water quality ensures long shelf life, and a high quality product
Hysol™	Low toxicity, general area sanitisers used on farm, lair-rage and in the processing plants, as part of a comprehensive CIP / Bio-security regime
Hysan™	Highly effective range comprising sanitising fogs for use as alternative to formaldehyde – as well as personal care and surface wipe ranges
BK WWT™	Comprehensive range of waste water bio-augmentation products designed to enhance environmental compliance standards for processing plants
Hybrite	Comprehensive range of heavy duty detergents with concentrated formulations to reduce costs and improve cleaning efficiency with corrosion inhibitors. Designed to complement our range of sanitisers.

Scotmas products are also used in a number of areas associated with Meat Production and Processing. For information on our programmes for Dairy, Pig, Beef and Lamb Production, please see our separate booklet.

Farm to Plate Hygiene Solutions

Scotmas Products are used throughout the industry from the farm-gate through to the processing plants and retail environments. Application of Scotmas products at key control points in the HACCP regime will ensure the highest final product quality:

Hoof to Hook Hygiene



The quest for high quality meat products begins at the Farm, with animal food, welfare and haulage, all Quality Assured. To maintain this high standard of quality production, through to the Supermarket shelf and end consumer, it is important to maintain excellent hygienic conditions from off loading the livestock into collecting yard too processing line, chilling rooms and haulage containers, as this is required by law. Our Hysol detergent/sanitiser product is used to disinfect and clean pens, equipment and all other hard surfaces during turn-arounds, removing the need for two stage cleaning and disinfection of soiled areas.

Our Hysan range of personal care products ensure that operators handling the meat do not transmit bacteria and viruses to the surface. Products include hand and surface wipes, as well as an alcohol free hand sanitising gel that does not cause skin drying and chaffing.

Processing Plant



Scotmas products are designed to be integrated into the most rigorous HACCP regimes. We have designed powerful techniques that can be used at key control points in order to reduce bacterial loading to well within acceptable levels, while reducing wastewater output.

Our staff have a number of years experience in this field, and are able to assist in the design and implementation of appropriate monitoring systems where required.

The meat processing industry has the potential for generating large quantities of solid wastes and waste water with a biochemical oxygen demand (BOD) of 600 milligrams per litre (mg/l). BOD can be as high as 8,000 mg/l, or 10-20 kilograms per metric ton (kg/t) of slaughtered animal; and suspended solids levels can be 800mg/l and higher. In many cases, offensive odours may occur.

The amounts of wastewater generated and the pollutant load depend on the kind of meat being processed. For example, the processing of the gut has a significant impact on the quantity and quality of wastewater generated.

The wastewater from a slaughterhouse will contain blood, manure, hair, fat, feathers, bones and nitrogen, as well as pathogens like salmonella and shigella bacteria, parasite eggs, and amoebic cysts. Rendering is an evaporative process that produces a condensate stream with a foul odour. It is vital that the most stringent hygiene programme controls infection, reduces wastewater and eliminates foul odour.

Scotmas Precision Dosing Equipment

Our Cidox chlorine dioxide precursor is normally used to treat all water used within the processing plant. Cidox is applied through an efficient, low cost Scotmas dosing system that removes the need for an expensive ClO₂ generation system, and allows the smallest plants to benefit from this powerful biocide.

There is a large selection of dosing pumps, from the Alpha range to the Bravo range. This gives us the ability to meet the variation in processing plant water consumption. Chlorine dioxide is a particularly powerful water biocide, and will assist in reducing bacterial counts throughout the plant.



High Grade Detergents



Our Hybrite detergent range is ideally suitable for initial wash down of all operational equipment involved in the stunning and slaughter, hide removal/dehairing, evisceration, trimming and boning processes.

Hybrite detergent is also used for initial wash-down of cooling stores and transport containers. We can further recommend this product for fleet care, in conjunction with our wax and shine additive that puts the finishing touches to a professional job.

Because of the high concentration and inclusion of corrosion inhibitors, greatly reduced amounts of product are required to shift stubborn fat, blood and animal tissues that fix and adhere to areas with difficult access, while giving extended life of equipment and stainless steel surfaces.

Most processing plants will dismantle guards and removable parts of equipment improving access to all exposed contaminated surfaces.

With speed and efficiency of cleaning and sanitising being a priority, our products will deliver the required results, while reducing down time and wastewater.

Hysol Sanitisers



Our Hysol range of detergent sanitisers removes the need for separate cleaning and disinfection stages during the CIP process.

Applied through a pressure washer, or through spray-line header tank systems, this powerful yet low toxicity disinfectant/sanitiser will ensure superb results with minimal turn-around times.

Hysan liquid is also used for fogging applications in chillers and cold rooms, providing excellent biocidal results.

Hysan has also been formulated into a range of personal care products suitable for use throughout the plant. These products contain no added

alcohol, which can cause skin chaffing and operator discomfort after frequent use.

For final rinses, our Aquabon product provides an excellent long-term biocidal action. Aquabon is a natural product that is suitable for use in organic products. Aquabon's citrus action will help to maintain product quality until consumption.

The combination of Scotmas hygiene products in the processing plant allows for an effective response to HACCP requirements of the most demanding customers. Other products from the Scotmas Building Services range may be used in the plant to combat common problems such as odour control, washroom hygiene and drain, wastewater maintenance.

Transport

Our Hysol DS range is particularly useful in transport applications, including crate and vehicle washing. The high efficiency of the combined detergent sanitiser ensures that great results can be achieved in a short space of time. Hysol is environmentally friendly, with the primary breakdown products being Oxygen and water.

Retail

Scotmas have a specific range of products for food hygiene in retail environments that will ensure your product reaches the consumer in prime condition. For further details on this range, please contact Scotmas.

Cidox

Effective Water Treatment for Processing Plants

The benefits of chlorine dioxide water treatment in processing plants have been well known for many years. The high capital cost of generation equipment has restricted its use to only the largest plants. Now, Cidox technology from Scotmas allows chlorine dioxide to be applied in a safe and easy to use form, suitable for the smallest operator

Water is one of the biggest single raw materials used in the processing system, and its quality is of great importance to prevent contamination of the food product. Water will always carry bacteria. Without proper treatment, the bacteria will grow in water storage tanks and pipe work to infect the water passing through. The use of contaminated water in the food processing plant can spread contamination across a whole batch.



Too many processing plants still rely on the application of chlorine or similar ineffective biocides in process water, or worse – take no additional treatment measures and rely on external factors to control what is undoubtedly the second most important raw material in any processing plant.

Scotmas pioneered the use of simple, cost effective chlorine dioxide dosing systems in the early 1990s, and have continued in this market leading position to date. Our Cidox chlorine dioxide product has been specifically designed for use in processing plants in conjunction with our state of the art range of dosing equipment.



Automatically applying low levels of Cidox to process water will ensure that bacterial contamination is reduced within the plant, making HACCP compliance easier to achieve.

While the use of high levels of chlorine and similar products is being restricted in a number of jurisdictions due to the risks of carcinogenic by-products, ClO₂ use in the food industry has gone from strength to strength as processors seek an effective, modern alternative

Recommended Application Rates		
General Background Treatment	1 – 1.5 ppm ClO ₂	Use Scotmas Alpha or Bravo automatic dosing systems
Final Product Spray/Rinse	1.5 - 3 ppm ClO ₂	

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Hysol

Complete Cleaning and Sanitation

Our new Hysol range is designed for use where an all in one detergent sanitiser is required – yet the highest standards of biocidal effectiveness are required. Hysol offers an effective clean & fast turn around times in a safe and easy to use product

Concept

Hysol is formulated around a source of peracetic acid – a powerful sanitizer that is extremely environmentally friendly, and has no hazardous breakdown products. The unique formulation of Hysol eliminates handling problems, and ensures an extremely efficient cleaning and biocidal effect.

Hysol is effective against a wide variety of organisms, and has been demonstrated to remain effective even in soiled conditions. Scotmas provide Hysol compound in a number of forms:

Boot Bath



Use as a non-toxic, non corrosive boot bath / foot dip in areas around the holding pens and processing plant. Supplied with a dye to show user when recharge is necessary

General Sanitiser

Hysol may be used as a stand-alone sanitiser to achieve excellent results in CIP and general cleaning applications. Supplied as 2 part liquid or powder that can be supplied with adaptors for use in conjunction with existing CIP equipment where required



Detergent / Sanitiser

All the power of Hysol Sanitiser with the added benefit of a powerful detergent action to remove soiling. Use of Hysol detergent/sanitiser increases CIP turn around times without compromising the cleaning or biocidal effect

Recommended Application Rates		
Powder Hysol	Dissolve 600 grams Hysol Powder in 10 litres warm water to give a concentrate containing 2000 ppm PAA	Dilute concentrate 4-10% in power washer to apply (50-200ppm PAA)
Liquid Hysol	Mix two-part liquid concentrate to activate product	Apply concentrated solution at 0.25 – 1% in power washer (50-200ppm PAA)

Consult Scotmas for details of application rates for a variety of tasks

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Hysan

The Complete Sanitiser and Deodoriser

Hysan is a powerful combination of chlorine dioxide and quaternary compounds designed for use in fogging applications and end-of-day clean downs. Hysan is bactericidal, fungicidal and sporicidal, used as a direct replacement for dangerous gluteraldehyde and formaldehyde treatments

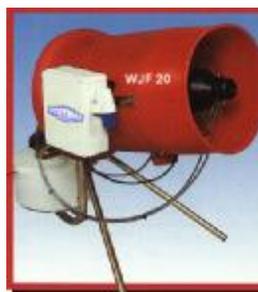


Hysan is a broad spectrum sanitiser and deodoriser suitable for hard surface disinfection and fogging applications.

The ever increasing risk being posed by airborne spores and viruses means that more sites than ever before are incorporating a sanitising fog into their hygiene regime. While Gluteraldehyde and Formaldehyde based products have traditionally been used in this

area, Environmental and Health & Safety concerns have led to their discontinuation in a number of jurisdictions.

Hysan is bactericidal, fungicidal and sporicidal, as well as being a highly effective deodoriser. Hysan can be relied upon to give the best possible results, both in the processing plant and the chill store/cold room for periodic disinfection, as part of your CIP regime.



Hysan is best used in conjunction with our Wanjet® range of fogging systems, which may be provided in hand-held, mobile tripod, or fixed mount versions

When achieving best results from hard surface cleaning, prior to fogging. Use between 5 and 20% dilution of Hysan Super Concentrate. Hysan Hard Surface Wipes or our Hysol range of combined detergent/sanitiser.

Recommended Application Rates		
Fogging of Fish Holds, Vehicles, Processing Areas, Cold Rooms and Equipment	5% Hysan Super Concentrate in Fogger	Fog all areas in a methodical order, i.e. Top to Bottom , paying particular attention to corners and behind equipment
Liquid Hard Surface Sanitiser	5% to 20% Solution of Hysan Super Concentrate	Apply solution manually with trigger spray or with mop. Consider use of Hysan Wet wipes where appropriate

All the above are General Guidelines only. Dose rates may vary according to your individual requirements. Always follow Health & Safety guidelines when fogging chemicals and wear a respirator with organic filter. Remove or cover all foodstuffs prior to commencing work. Hysan should only be used on surfaces or equipment that have been physically cleaned. Consider use of our Hysol combined detergent / sanitizer in soiled areas.

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Hysan Personal Care

Maintenance of good operator hygiene is an essential part of bio-security and hygiene programs on both the farm and processing plant.

Scotmas personal care products are built on the powerful properties of our Hysan sanitiser, and are extremely user friendly. Scotmas offer a range of products, including hand soap, sanitising gel, and wipes.



Hysan Biocidal Soap

Hysan Biocidal Hand Soap is one of the most powerful germicidal hand cleaners available. Specifically formulated to provide effective germicidal activity at a level which will ensure adequate protection against some of the most dangerous bacteria, including Salmonella. In laboratory tests 99% of the test micro-organisms were killed in less than 15 seconds.

Hysan Biocidal soap is extremely effective against a Gram Positive and Gram Negative bacteria yet remains mild enough to be used on the face and other parts of the body with complete confidence without depleting the skin's natural protective barrier.

Hysan Hand Gel

Used as a follow-up to Hysan Soap, or as a stand-alone hand sanitiser in between washing, Hysan Gel contains a powerful sanitizer yet does not have the harsh chaffing and drying effects of alcohol based sterilising scrubs. The active molecules in Hysan Gel spread rapidly, penetrating easily into skin folds and pores, quickly destroying germs and sources of infection. This fast acting broad-spectrum hand gel requires no water, and provides protection for up to 4 hours with the added benefit of a skin softener to leave operators hands soft and supple

Hysan Wipes

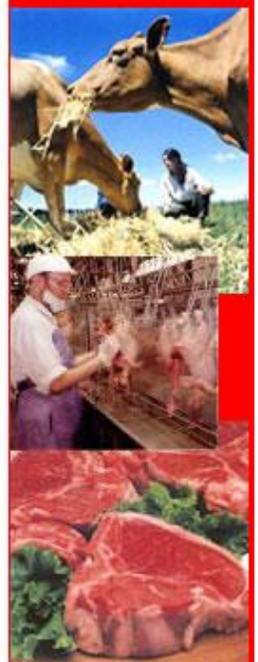


Hysan wipes provide an ideal complement to CIP and general hygiene regimes. Hysan disposable wipes are available for a number of areas:

- Quick Drying Wipe for Equipment Cleaning
- Hard Surface Wipe
- Hand Sanitising Wipe

Hysan wipes for the food industry are provided with a tough non-woven fabric that will withstand the most heavy duty use before disposal

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BK WWT

Effective Waste Water Treatments

Increasing environmental legislation means that more plants are closely monitoring effluent discharges, and take closer care of internal waste water treatment systems. BK WWT microbes are designed for natural bio-augmentation in activated sludge, biodisc, trickle filters and other popular waste water treatment systems.

BK WWT Microbes are specially selected by Scotmas to boost the natural microbe population in your plant. Scotmas select specific strains of microbe according to your site requirements – including temperature, pH and size considerations. In the case of processing plants, our products contain a high proportion of grease and fat digesting microbes that will help to break down materials associated with high BOD in effluent.



BK WWT Microbes can be manually applied during plant start up, or as a reseeded dose after “toxic shock” or cold weather destroys the efficiency of the natural microbes in the system. Plants that struggle to comply with discharge consent levels often use BK WWT Microbes in conjunction with one of our automatic dosing systems to provide continuous bio-augmentation in order to improve efficiency. This process ensures that the right microbes are always present in the system, and can assist in reducing discharge levels, and make substantial savings on your effluent costs.

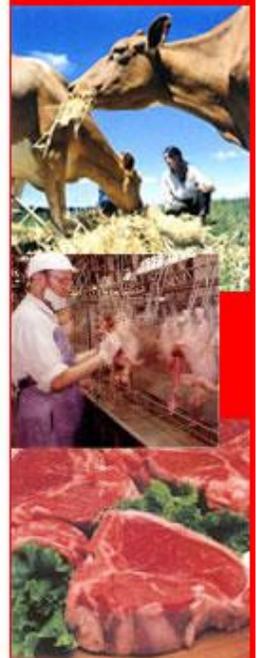
For plants running normally, but facing particular problems in a single aspect of effluent (e.g. High BOD or Suspended Solids), our microbiologists can advise on a specific program that will assist in bringing the plant back into compliance. We currently work with a number of consultants who will be able to provide a tailored program of on-site assistance should this become necessary.

The efficiency of any waste water treatment system is affected by high concentrations of toxic biocides, detergents and soaps in the waste water stream. The Scotmas range of biocides and sanitising products have been specifically designed to limit the effect on downstream waste water treatments, and do not produce chlorinated organics and other compounds that are difficult to biodegrade. Scotmas hygiene products are the ideal partner to ensure excellent efficiency in your waste water treatment plant.

Recommended Application Rates		
Plant Start up / Reseed	Consult Scotmas	Apply seeding dose manually to system for one week, then taper down
Continual Treatment	5-10 kg / week based on 500 m ³ flow per day	Apply manually, or via automatic doser to incoming water stream

Use above as a guide only. Exact dosage recommendations are dependent on a site survey and analysis of your current discharges by our specialist team, who will devise a treatment strategy customised to your need

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Spylaw Road
Kelso, Borders
TD5 8DL
Scotland

T +44 (0)1573 226901
F +44 (0)1573 226026
E enquiries@scotmas.com
W <http://www.scotmas.com>

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