

schülke -+

In-can preservation for household products

Optimum protection for your products



the plus of pure
performance

Your Partner in Hygiene and Preservation

schülke -+

For over 115 years our business philosophy has had an unwavering focus: hygiene & preservation

Schülke & Mayr GmbH is a chemical and pharmaceutical company. Our products and services protect people and materials against infection and contamination.

Today, more than ever, germs cross borders. Their existence is dangerous, but not as dangerous as the underestimation of their threat to people and material. Taking precautions plays a special role – preventing contamination and infections is far easier than combating them.

schülke is fighting diseases and contamination before they emerge. For this we offer innovative technologies, highly effective products and expert support services.

Our company philosophy is based on a total quality concept that not only considers the quality of our products in the sense of effective product formulas, but one that encompasses a vast array of dimensions; such as:

- workplace safety
- environmental management and
- leadership and cooperation in our quality concept

The demand for total quality at schülke creates more than economic success. This concept is responsible for a sustainable contribution to the environment and society.

To realise this total quality concept our company values focus on:

Partnership

Not only in our daily cooperation, but also in the long term, we want to be a dependable partner for our customers worldwide.

With expert customer advice and an all-encompassing support service, we ensure that the interests of all parties are satisfied. This also applies to our relations with suppliers and other business partners.

Initiative

Forward thinking and taking action is a major factor of our success. We have to recognise the challenges of the future in order to be able to offer timely solutions. The desire for innovation also ensures our future competitiveness and the company's success.

Reliability

Reliability is a prerequisite for successful cooperation as it creates trust, and trust is the basis of long-term partnerships and sustainable success.

Our goal is the continual improvement of products, processes and services in order to ensure economic success, customer satisfaction and corporate social responsibility.

More than a century of competence in preservation and hygiene ...



1889 |

Foundation of the company by Rudolf Schülke & Julius Mayr in Hamburg.
Presentation of the first ever branded disinfectant in the world – lysol®



1892 |

Successful combating of the Hamburg cholera epidemic with lysol®

Special Additives International

– our expertise from preservation to multifunctional additives



Household

Most cleaning products found in households today are water-based systems. These products are prone to microbiological build-up. To be safe for consumers to use, they require the protection of preserving agents. With the parmetol® and grotan® ranges, schülke offers products to preserve a wide range of household applications.



Personal Care

Our euxyl® brand provides numerous preservative blends for the cosmetic industry. These optimised combinations of active substances offer broad spectrum efficacy, keeping cosmetic products free of microbial growth.

Our sensiva® brand includes versatile, multifunctional skin care additives for personal care products. With their unique properties, they are suitable for use in a wide range of cosmetic applications; including creams, lotions and deodorants.



Coatings and Building Materials

The prevention of microbiological degradation of products containing water is one of the most important challenges now and in future.

schülke provides modern types of formulated in-can preservatives to protect your products under the brand names parmetol® and grotan®. Furthermore, with distinctive dry film preservatives we keep coated surfaces free from growth of fungi and algae and help to avoid material destruction and visible disfigurement.



Metalworking fluids

Microbiological spoilage of water-mixed metalworking fluids is one of the biggest threats for quality assurance, work and process safety in the mass production of metal parts; for example in the automotive industry. With the grotan® product line, schülke offers the metalworking industry a complete range of tailor-made biocides for all possible applications; such as preservation of metalworking fluid concentrates, post treatment of water mixed metalworking fluids and micro-biocidal system cleaners.



MQM

We support our customers with a comprehensive concept of Microbiological Quality Management (MQM) including lab services, application advice, plant audits and training programs for employees. It is not only a matter of eliminating the risk of infections for people, but also of protecting products and equipment from contamination.



1892 | Schülke & Mayr GmbH issues its own series of postage stamps for the export business in German East Africa



1913 | Market launch of sagrotan®, the world's first household disinfectant.

1920 | Introduction of a disinfectant to combat tuberculosis pathogens

Microbiological Quality Management



MQM – protecting the environment and your products

We are convinced that controlled and responsible use of disinfectants and preservatives is the only way to ensure the sustainable protection of man, materials and the environment. schülke not only manufactures preservatives and disinfectants but also offers Microbiological Quality Management as a holistic approach to achieve hygienically-sound products.

On request we can conduct a thorough Hygiene Audit of your operation, train your staff in hygiene practices, provide advice on factory design and compile detailed hygiene plans for your organisation.

If you are interested in taking a comprehensive approach to preventing microbiological contamination and safeguarding your products and processes then we will be pleased to support you.

Life cycle of an aqueous product



▶ high risk of contamination
▶ no risk of contamination

More than a century of competence in preservation and hygiene ...



1924 |
First chemical-technical preservative for glues: grotan®

1950 |
Introduction of an antiviral disinfectant



1960 |
Introduction of parmetol® – preservatives for paints, glues, etc.

In-can preservation

parmetol® and grotan® – balanced preservation systems

There is a number of factors to consider when choosing a suitable preservative for your product – different ingredients, pH value, compatibility, legal approvals and climate conditions – to name a few.

The large number of possible microorganisms, different packaging and storing conditions, and the enormous diversity of raw materials imposes demands that cannot be covered by just one microbial active used at an acceptable dosage.

With the comprehensive parmetol® and grotan® product line, schülke has developed sophisticated multi component preservative systems to sufficiently protect your products. The optimum combination of selected active substances offers sustainable preservation for all kinds of water based formulations used in household products.



For the optimized use of parmetol® and grotan® in-can preservatives under economical and ecological aspects and for cost savings schülke offers comprehensive technical support services under the MQM concept.



Product benefits of parmetol® and grotan® at a glance:

- broad, balanced spectrum of efficacy against bacteria, yeast and mould
- liquid, stabilised formulations
- easy handling, safe application
- sustainable effectiveness even at higher pH values and temperatures
- compliance with today's and future legal requirements, e.g. BPD, REACH, Detergents Regulation, etc.



1960 |
Introduction of the first preservative for cooling lubricants: grotan® BK

1965 |
First aldehydebased disinfectant

1970 |
First patented preservative for water-based emulsion paints: parmetol® A 23

Product range of household preservation systems

Based on N-/O-formals

- parmetol® A 26** – in combination with CMI/MI for cost effective protection

- parmetol® DF 12*** – in combination with CMI/MI and OIT for cost effective preservation and enhanced fungicidal efficacy

- parmetol® DF 35** – in combination with CMI/MI for sanitation and demanding formulations

- grotan® TK 5** – cost effective preservation with head space protection

- grotan® TK 5 plus** – in combination with OIT with enhanced effectiveness against fungi

Without N-/O-formals

- parmetol® A 28** – based on Bronopol and CMI/MI for universal and effective preservation

- parmetol® A 28 S** – based on Bronopol and CMI/MI with reduced risk of contact allergy

- parmetol® K 20** – based on CMI/MI with special stabilising system

- parmetol® K 60** – based on CMI/MI and OIT with enhanced fungicidal effectiveness

- parmetol® SL 60** – based on Glutaraldehyde and CMI/MI with head space protection

Without N-/O-formals and CMI/MI

- parmetol® N 20** – based on Bronopol and OIT with a broad spectrum of efficacy, especially against *pseudomonades spec.*

- s&m Bronopol** – bactericidal efficacy, especially against *pseudomonades spec.*

More than a century of competence in preservation and hygiene...



1975 |
gigasept® – the first
HBV-effective disinfectant



1976 |
Introduction of grotamar 71®,
a biocide for diesel fuels



1978 |
First Schülke & Mayr GmbH
preservative for cosmetics: euxyl® K 100

Without N-/O-formals and CMI/MI

parmetol® D 11 – based on BIT for good protection even at a high pH

parmetol® MBX – based on BIT / MIT and Amine with immediate effect including longterm protection

grotan® BA 21 – based on BIT and Amine with enhanced effectiveness even at a high pH

further products on request...



* only available outside EU

1985 |
S&M disinfectant
against HBV/HIV



1986 |
Development of formaldehyde-free
disinfectants, e. g. antifact®, gigasept® FF



1989 |
Introduction of octenisept®, a mucous
membrane and wound antiseptic

Preservatives for household products

Overview of in-can preservatives for household products

Product	Fields of application / use-concentration (%)											Techn. properties	
	Washing-up liquids	Liquid detergents	Liquid detergents, highly alkaline	Liquid laundry detergents	Liquid laundry fabric softener	Liquid scouring cleansers	Window cleaners	Wet wipes	Wax emulsions	Shoe polishes	Enzyme containing cleansers	pH-range for application	Max. manufacturing temperature
parmetol® A 26	0.05 – 0.15	0.05 – 0.20		0.05 – 0.20	0.05 – 0.10	0.05 – 0.20	0.05 – 0.20	0.05 – 0.20	0.05 – 0.25			3 – 9.5	40 °C*****5
parmetol® A 28*1	0.03 – 0.10	0.03 – 0.15		0.03 – 0.15	0.03 – 0.08	0.05 – 0.15	0.05 – 0.15	0.05 – 0.10	0.03 – 0.15		yes	3 – 8.5	40 °C*****5
parmetol® A 28 S	0.03 – 0.15	0.03 – 0.20		0.03 – 0.20	0.03 – 0.10	0.05 – 0.30	0.05 – 0.15	0.10 – 0.30	0.03 – 0.30		yes	3 – 8.5	40 °C*****5
parmetol® D 11	0.10 – 0.30	0.10 – 0.40	0.10 – 0.30	0.10 – 0.30	0.10 – 0.20	0.10 – 0.40	0.10 – 0.30		0.10 – 0.30		yes	3 – 11	100 °C
parmetol® DF 12**2								0.10 – 0.30		0.10 – 0.30		3 – 9.5	40 °C*****5
parmetol® DF 35	0.03 – 0.10	0.03 – 0.15	0.03 – 0.15	0.03 – 0.15	0.03 – 0.08	0.05 – 0.15	0.05 – 0.15	0.05 – 0.15	0.03 – 0.15			3 – 10	40 °C*****5
parmetol® K 20***3	0.05 – 0.15	0.05 – 0.20		0.05 – 0.20	0.05 – 0.10	0.05 – 0.20	0.05 – 0.20	0.05 – 0.10	0.05 – 0.20		yes	3 – 8.5	40 °C*****5
parmetol® K 60	0.01 – 0.04	0.01 – 0.04		0.01 – 0.04	0.01 – 0.04	0.01 – 0.04	0.01 – 0.04	0.01 – 0.04	0.01 – 0.04		yes	3 – 8.5	40 °C*****5
parmetol® MBX	0.10 – 0.20	0.10 – 0.20	0.10 – 0.40	0.10 – 0.40	0.05 – 0.20	0.10 – 0.40	0.10 – 0.20	0.10 – 0.20	0.10 – 0.40		yes	3 – 10*****6	80 °C
parmetol® N 20	0.10 – 0.20	0.10 – 0.20		0.10 – 0.20	0.10 – 0.20	0.10 – 0.20	0.10 – 0.20	0.10 – 0.20	0.10 – 0.20	0.10 – 0.30	yes	3 – 8.5	60 °C
parmetol® SL 60	0.05 – 0.30	0.05 – 0.30		0.05 – 0.30	0.05 – 0.10	0.05 – 0.30		0.05 – 0.30	0.05 – 0.30			3 – 8.5	40 °C
grotan® BA 21****4	0.10 – 0.20	0.10 – 0.20	0.10 – 0.20	0.10 – 0.40	0.05 – 0.20	0.10 – 0.40	0.10 – 0.20	0.05 – 0.20	0.10 – 0.40		yes	3 – 11*****6	100 °C
grotan® TK 5	0.05 – 0.15	0.05 – 0.15	0.05 – 0.15	0.05 – 0.15	0.05 – 0.10	0.05 – 0.15	0.05 – 0.15	0.05 – 0.15	0.05 – 0.15			3 – 12	60 °C
grotan® TK 5 plus	0.05 – 0.15	0.05 – 0.15	0.05 – 0.15	0.05 – 0.15	0.05 – 0.15	0.05 – 0.15	0.05 – 0.15	0.05 – 0.15	0.05 – 0.15			3 – 11	60 °C
s&m Bronopol	0.02 – 0.10	0.02 – 0.10			0.02 – 0.10		0.02 – 0.10		0.02 – 0.10		yes	3 – 8	40 °C

Environmental information

Our preservatives contain only biodegradable components. Dilutions of our preservatives do not normally interfere with the operation of waste water treatment plants. The canisters and drums used by schülke are made of polyethylene (HDPE) and are labelled accordingly. The 1000 kg containers are covered by a return scheme that ensures collection of the used containers free of charge and appropriate reuse all over Europe. The labels are made of PE. schülke packaging materials contain no PVC and can be recycled. Dispose of this material and its container at hazardous or special waste collection point. For further information please ask for our detailed environmental report.

Use biocides safely. Always read the label and product information before use.

Actives (INCI names)									Product
Dimethylol Glycol	Tetramethylol-glycoluril	Chloromethyl-isothiazolinone	Methylisothiazolinone	2-Bromo-2-nitropropane-1,3-diol	Benzisothiazolinone	Octylisothiazolinone	Glutaral	Laurylamine Dipropylene-diamine	
○		○	○						parmetol® A 26
		○	○	○					parmetol® A 28 ^{*1}
		○	○	○					parmetol® A 28 S
					○				parmetol® D 11
	○	○	○			○			parmetol® DF 12 ^{**2}
○		○	○						parmetol® DF 35
		○	○						parmetol® K 20 ^{***3}
		○	○			○			parmetol® K 60
			○		○			○	parmetol® MBX
				○		○			parmetol® N 20
		○	○				○		parmetol® SL 60
					○			○	grotan® BA 21 ^{****4}
○									grotan® TK 5
○						○			grotan® TK 5 plus
				○					s&m Bronopol

^{*1} Pursuant to Directive 67/548/EEC, end products sold in Europe with concentrations > 0.13 % must be labelled with the "R43" mark and hazardous labelling "Xi" (irritant).

^{**2} Contains a special fungicide, making it particularly suitable for use in products that are susceptible to mould, such as wet wipes and shoe creams with sponge applicators. Only available outside EU.

^{***3} Pursuant to Directive 67/548/EEC, end products sold in Europe with concentrations > 0.10 % must be labelled with the "R43" mark and hazardous labelling "Xi" (irritant).

^{****4} Large quantities of anionic substances may lead to decreased efficacy.

^{*****5} Up to 60 °C, depending on pH value.

^{*****6} Short period during processing pH 12

Wet Wipes

The need for preservation in wet tissues

Wet tissues are an excellent source for the growth of bacteria, yeast and mould.

Environmental requirements e.g. from the EU detergent directive to use only biodegradable detergents increase the susceptibility of the wet tissues to microbial infection.

The demands for flushable wipes and the increased use of natural fibres make mould growth with its easily visible staining more likely. To ensure product and consumer safety, the addition of preservatives is necessary.



Hard surface wipes

By the increasing use and applications of wet wipes the world market is steadily growing. For cleaning of numerous surfaces, such as flooring, desktops or electrical appliances wet wipes consider as an important category of household products. The preservation of household products is regulated in the European Union under the EU-Biocidal Product Directive (BPD 98/8/EC). The parmetol® and grotan® ranges are particularly effective for the preservation of household products including wet wipes.

With regards to legal requirements, specific technical demands as well as marketing aspects. parmetol® A 26 and parmetol® A 28 S are especially recommended for these applications. Particularly parmetol® A 28 S, a combination of CMI/MI and Bronopol, has shown excellent results in practice. The low use concentration combined

with a low salt content prevents the formation of residues, it can even be used in wipes for window cleaning.

Requiring a halogen free preservation system grotan® BA 21 is recommended. grotan® BA 21 exhibits the sophisticated synergistic effect of Benzisothiazolinone, whereas Laurylamine Dipropylendiamine provides reliable preservation. It is particularly effective, because wipes are normally formulated free of anionic surfactants.

Also parmetol® MBX, a new and innovative combination, contains the synergistic active ingredient Laurylamine Dipropylendiamine, which boosts the efficacy of Benzisothiazolinone and Methylisothiazolinone significantly. It is a modern and environment-friendly in-can preservative, which fulfills the criteria for most eco-labels.

Biocides for hard surface wipes

Product	Actives (INCI names)						in-can preservative [%]	pH-range
	Chloromethylisothiazolinone	Methylisothiazolinone	Dimethylol Glycol	2-Bromo-2-nitropropane-1,3-diol	Benzisothiazolinone	Laurylamine Dipropylendiamine		
parmetol® A 26	○	○	○				0.05 – 0.20	< 9.5
parmetol® A 28 S	○	○		○			0.10 – 0.30	< 8.5
grotan® BA 21					○	○	0.05 – 0.20	< 11
parmetol® MBX		○			○	○	0.10 – 0.20	< 10

More than a century of competence in preservation and hygiene...

100
Years

1989 |
Schülke & Mayr GmbH celebrates
its one hundred year anniversary



1991 |
Introduction of sensiva® SC 50,
a skin care additive and deodorant active



1991/ 92 |
Introduction of aldehyde-free
disinfectants, e. g. terralin® and lysetol® AF

HACCP – the tool for process design helping to reduce microbiological contamination

Within the scope of MQM, schülkes quality management system, we can offer you; an analysis and documentation of your hygiene status, in house-training, a critical analysis of new production lines as well as the supply of detailed hygiene plans, which are services offered within the scope of schülke's internal "MQM" – microbiological quality management – we are additionally capable of carrying out the HACCP-concept on your premises.

What is HACCP?

HACCP is a system that relies on process controls to minimize safety risks in the food processing industry, it can be easily adapted to the production of waterborne household products.

The acronym HACCP stands for 'Hazard Analysis Critical Control Point'. It is useful to think of HACCP as a preventative MQM safety system, and not a traditional quality control inspection system.

HACCP is not 'zero risk' and does not eliminate the possibility of a hazard getting into the product. Rather, HACCP attempts to decrease that possibility to an acceptable level.

The concept is applied throughout your production facilities and consists of analysing risks as well as detecting critical points. Furthermore, measures are formulated and determined.

In detail the HACCP-concepts encompasses:

- Detection of critical points regarding safety of your products
- Definition of the limits for these points
- Implementation of a procedure to ensure the continuous observation of the determined points
- Development of actions to be carried out in case of divergence
- Analysis of the suitability of your current system to ensure and maintain product safety
- Documentation of all of the above mentioned measures

Have we attracted your interest? Please do not hesitate to contact us anytime.

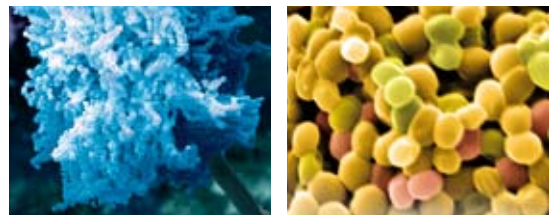
HACCP history

HACCP is not a new system; in the 1960s the Pillsbury Company developed the concept whilst working with NASA and the US Army Laboratories to provide safe food for space expeditions. The HACCP system has been implemented throughout the world e.g. Europe, Canada, Australia, New Zealand, and the USA and is considered a highpriority program under Codex Alimentarius; the world food standards authority.

How does HACCP work?

Significant hazards for a particular product are identified after reviewing of all the processing steps with the use of scientific information. The steps at which these hazards can be controlled are then identified and critical limits, such as process temperatures and hold times at key process steps are set. Monitoring procedures are also implemented to evaluate conformance with these critical limits.

Should the process fall outside these limits, pre-planned corrective actions are taken to prevent the potentially defective product from entering the commercial stream. In addition, the HACCP system relies on extensive verification and documentation to assure that food safety has not been compromised during any step. Thus HACCP provides a structure for assessing risks identifying what could go wrong, and for putting the controls in place to minimize such risks.



1992 |

Patented cosmetic preservative based on organic acids: euxyl® K 702



1996 |

Schülke & Mayr GmbH becomes a subsidiary of the Air Liquide Group

Principles of HACCP

The seven principles of HACCP are:

Principle 1: Conduct a hazard analysis. Potential hazards associated with a product are identified, along with measures to control those hazards.

Principle 2: After evaluating all processing steps, determine the critical control points (CCPs). CCPs are the points in a production and processing at which significant hazards can be controlled or eliminated.

Principle 3: Establish critical limit(s) for each CCP. Each CCP must operate within specific parameters to ensure the hazard is being appropriately and effectively controlled.

Principle 4: Set up systems to monitor each CCP. Monitoring involves defining how the CCPs will be assessed, performing the monitoring at the appropriate time intervals, determining who will perform the monitoring and finally maintaining the proper monitoring records.

Principle 5: Establish corrective actions. When a critical limit is not met (a process deviation), proper actions must be taken. These can be both short- and long-term corrective actions. Appropriate records must be maintained.

Principle 6: Establish verification procedures. Verification is used to confirm that the system is working properly and that procedures outlined in the HACCP plan are being followed.

Principle 7: Record-keeping and documentation. This includes all records required in the various parts of the HACCP plan, as well as other key records such as sanitation logs, supplier agreements, and shipping documents.

Process Analysis according to the HACCP System

Before beginning the analysis of the process, careful examination of the product/process to be evaluated is necessary. In the following, some, but not necessarily all, examples of the type of information necessary to draw up a work plan are listed.

- all raw materials used (microbiological, chemical and physical data)
- ground plan and layout of the plant
- sequence of all steps in the process (including sequence of the addition of raw materials and intermediate products)
- time/temperature history of all raw materials, intermediate products and end products including potential delays
- discharge conditions for liquids and solids
- return/re-treatment loops of the products
- design features of the plant (including empty areas)
- environmental hygiene
- routes of potential mutual contamination
- isolation of areas with a high/low risk
- conditions of storage and sale
- instructions for use for the user

More than a century of competence in preservation and hygiene ...



1998 |
Move into the new
office in Norderstedt

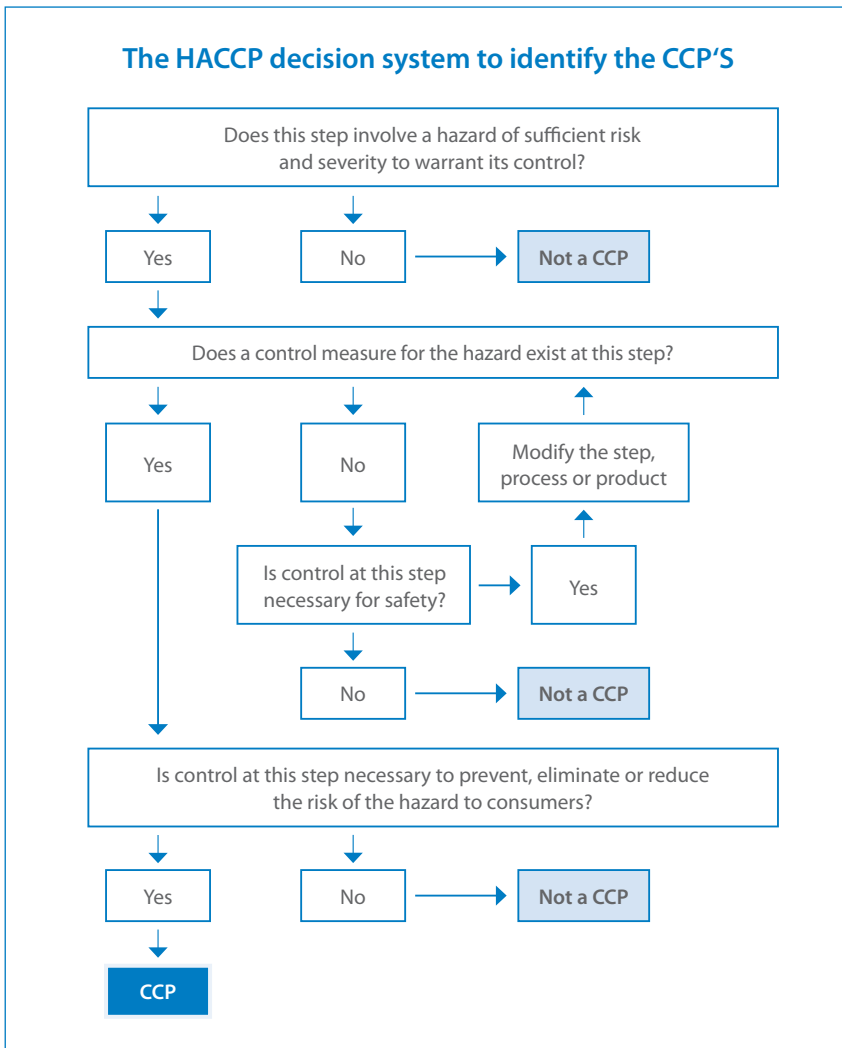


2000 |
Schülke & Mayr GmbH: 111 years young
and represented in more than 60 countries



2000 |
Market launch of grotan® OX,
a new biocide for coolants

Identification of CCP's



For identifying the CCPs it is necessary to use the decision tree as shown in the graph. Monitoring methods must be able to detect a loss of control at a CCP. Ideally a monitoring system should detect this in real time, so that corrective measures can be taken in order to restore control over the process before the product has to be removed from the line or be rejected. In order to guarantee product safety, the CCPs must be monitored by microbiological controls and confirmed.

However, microbiological examination is not the most suitable method for controlling the CCPs as extremely time-consuming. An effective HACCP programme will make use of continuous monitoring of physical measurement values (e.g. time and temperature parameters) and/or chemical values (e.g. pH, level of preservative) for ensuring product quality.

Practical Example

In the following table the possible hazards with the proposed measures, monitoring measures and corrective measures are shown on the example of the filling.

Step in the process	Hazard	Control measures	Target level and tolerance	Monitoring procedure	Corrective measures
Filling	Contamination by residual rinsing water	Regular sanitation with grotanol® 3025 in accordance with the hygiene plan	Compliance with hygiene plan	Check production/cleaning protocol	Staff training
	Contaminated packaging material	Storage upside down	No visible dirt or condensing water	Visual check	Improve storage quality and/or revise contract with suppliers



Plant Hygiene Support

mikrocount® – the convenient hygiene monitoring system



In addition to production hygiene measures, quality assurance concepts require routine hygiene monitoring during the production process and documentation of the results. The dip slide,

mikrocount® combi provides every operation with individual means of rapid and reliable hygiene controls. The dip slide can be used for testing raw materials, for in-process controls during the production process and for quality control of finished products.

The mikrocount® combi dip slide enables simple sampling and evaluation of the results even by personnel without any microbiological training.

product benefits of mikrocount® combi:

- fast, safe and easy
- control of raw materials, intermediate and finished products
- separate evaluation of bacteria, yeast and moulds on different agar surface

cultura® – the versatile small incubator

The cultura® incubator is compact and versatile enough for almost any laboratory or manufacturing setting. The built in tray has room to hold up to 18 mikrocount® combi dip slide samples. A transparent door allows for viewing of the contents without removing samples from the incubator.

The adjustable temperature is pre-set by the manufacturer to maintain 30 °C an optimum temperature for incubating mikrocount® dip slides. Results for bacteria are available after 24 to 48 hours. The detection of yeast and moulds takes slightly longer (72 hours).

product benefits:

- compact enough to use almost anywhere
- easy temperature adjustment
- designed for use with mikrocount® combi



More than a century of competence in preservation and hygiene ...



2004 |
Patented cosmetic preservative based on
Phenoxyethanol and Ethylhexylglycerin: euxyl® PE 9010



2007 |
Introduction of sensiva® SC 10,
a versatile skin care additive

grotanol® SR 2 – the reliable system cleaner



Ensuring reliable product quality also includes a regular cleaning and microbiological sanitation of the production plant. grotanol® SR 2 is a mild alkaline system cleaner (pH 10) which provides a good immediate effect at a low use concentration in combination with mechanical cleaning.

product benefits:

- excellent cleaning effect
- broad, balanced spectrum of effect against bacteria, yeast and moulds
- fast acting
- extremely low use concentration
- excellent material compatibility
- low foaming

use / use concentrations:

- production plants, circulating systems and equipment: 2.5 – 7.5 g/kg (0.25 – 0.75 %) in aqueous solutions

grotanol® 3025 – the formaldehyde-free sanitiser

grotanol® 3025 is a low-foaming, formaldehyde-free sanitising concentrate based on aldehyde compounds. grotanol® 3025 has a balanced spectrum of effect against bacteria and fungi. grotanol® 3025 is intended for use in the cosmetic industry for microbiological sanitizing of surfaces, plant and apparatus. Use-solutions of grotanol® 3025 can be stored for several months.



product benefits:

- formaldehyde-free
- broad spectrum of effect
- low-foaming, therefore also suitable for plant sanitization in pumped circulation
- can be rinsed off without leaving residue (if rinsing is necessary)
- neutral pH value
- extensively tested material compatibility
- miscible with alkaline, anionic and non-ionic cleaning agents in the dilution for use

use / use concentrations:

- production plants, circulating systems and equipment: 5 – 15 g/kg (0.5 – 1.5 %) in aqueous solutions

Use biocides safely. Always read the label and product information before use.



2007 |
Market launch of euxyl® K 220, an innovative preservative based on MIT and Ethylhexylglycerin

schülke →

2007 |
Our future: growth and competence throughout the world...
schülke, your partner for preservation and hygiene in the 21st century



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