

OPTIMUM SAFETY FOR YOUR PRODUCTS



- Multifunctional Cosmetic Ingredient – Sensiva® SC 50
- Preservatives for Cosmetics & Toiletries – Euxyl®
- Agar Dip-Slides – Mikrocount®
- Disinfectant Cleaner – Grotanol®



Schülke & Mayr – Your Partner in Hygiene and Preservation

Our History

– from disinfection to preservation

Schülke & Mayr was founded in 1889 by Rudolf Schülke and Julius Mayr – two pioneers focused on innovations, coupled with the desire to spread „modern“ hygiene for the benefit of mankind. They developed the first branded disinfectant, LYSOL, which saved countless people from the cholera epidemic in Hamburg in 1892. In 1913 Schülke & Mayr introduced the first branded and patented disinfectant to the consumer market – SAGROTAN.



Rapidly the logo „S&M“ became the symbol for disinfection – both in Germany and far beyond its borders. From disinfection to preservation was only a small but important step in the history of the company. In 1924 Schülke & Mayr introduced the first branded preservative for industrial applications, for example for the preservation of animal glue.







Since 1996, Schülke & Mayr belongs to the French group of Air Liquide. Despite the integration into a global concern, Schülke & Mayr remains very much a mid-sized, stand alone company, with its own R&D, production and marketing. Today our speciality is preventing and controlling microbial contamination.

Our Competence

– specialist in preventing and controlling microbial contamination

For each of our core segments we offer a distinct range of disinfectants, preservatives and multifunctional additives. In addition, we support our customers with a comprehensive concept of Microbiological Quality Management (MQM), all relevant lab services and application advice. Since we also manufacture a large number of registered medical products we produce according to Good Manufacturing Practice (GMP).

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

		Foundation of the company by Rudolf Schülke & Julius Mayr in Hamburg. Presentation of the first ever branded disinfectant in the world – Lysol		Successful combating of the Hamburg cholera epidemic with Lysol		Schülke & Mayr issues its own series of postage stamps for the export business in German East Africa
1889			1892		1892	



Our Philosophy

– continual improvement of products, processes and services

As a producer of chemical disinfectants and preservatives, Schülke & Mayr feels particularly committed to safeguard health, to protect the environment and to ensure safety at work. Our company philosophy is based on a total quality concept, which defines not only the quality of a product or service in the traditional sense, but also encompasses all aspects that have an influence on the business process and its individual phases. For us, Total Quality Management is a never ending process and the various certificates are not objectives, but only additional proof of the way we work.

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



	Market launch of Sagrotan, the world's first household disinfectant.	Introduction of a disinfectant to combat tuberculosis pathogens		First chemical-technical preservative for glues: Grotan	Introduction of an antiviral disinfectant
1913	1920	1924	1950		

Microbiological Quality Management

Microbiological Quality Management

– Protecting the environment
and your products

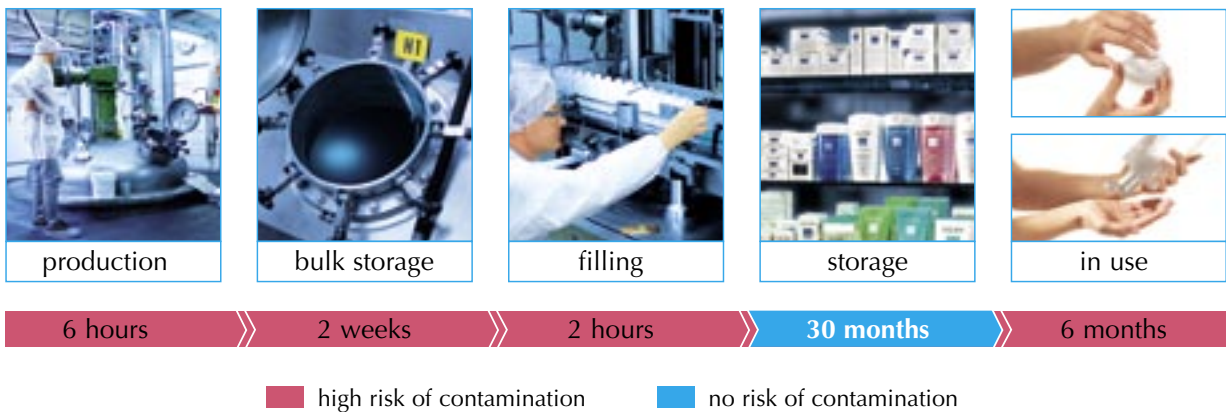


We are convinced that controlled and responsible use of disinfectants and preservatives is the only way to ensure the sustainable protection of man, materials and the environment. Schülke & Mayr not only manufactures preservatives and disinfectants, but also offers Microbiological Quality Management as an holistic approach to achieve hygienically-sound products. On request we 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. Are you interested in taking a concerted approach to preventing microbiological contamination and safeguarding your products and processes? We will be pleased to support you.



LIFE CYCLE OF A COSMETIC PRODUCT



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

	Introduction of Parmetol preservatives for paints, glues, etc.		Introduction of the first preservative for cooling lubricants: Grotan BK	First aldehyde-based disinfectant	First patented preservative for water-based emulsion paints: Parmetol A 23
1960		1960		1965	1970



Euxyl® – Preservation according to your needs

There are a number of factors to consider when choosing a preservative for your formula – different ingredients in the formula, pH value, type of packaging, countries where the product will be sold, and company policy – to name a few.

The large number of possible microorganisms, different packaging and storage conditions, and the enormous diversity of raw materials used in cosmetics and toiletries require demands that cannot be met by just one substance used at an acceptable dosage.

With the Euxyl® product line, Schülke & Mayr has developed a wide range of multicomponent preservative systems. The optimum combination of different active substances provided by these products offers broad spectrum efficacy, reduces the potential of adverse toxicological findings, provides handling advantages, and, last but not least, offers cost savings.

Product benefits:

- ❑ Broad, balanced spectrum of effect against bacteria, yeast and moulds
- ❑ Liquid formulations
- ❑ Easy and safe to use
- ❑ Effective over wide pH-ranges



	Gigasept – the first HBV-effective disinfectant		Introduction of Grotamar 71, a biocide for diesel fuels		First Schülke & Mayr preservative for cosmetics: Euxyl K 100
1975		1976		1978	

Preservatives for Cosmetics & Toiletries

	EU-INCI-declaration	US-INCI-declaration	pH-range
Euxyl® PE 9010	Phenoxyethanol, Ethylhexylglycerin	Phenoxyethanol, Ethylhexylglycerin	< 12
Euxyl® K 100	Benzyl Alcohol, Methylchloroisothiazolinone/ Methylisothiazolinone *)	Benzyl Alcohol, Methylchloroisothiazolinone/ Methylisothiazolinone	< 8
Euxyl® K 145	2-Bromo-2-Nitropropane-1,3-Diol, Methylchloroisothiazolinone/ Methylisothiazolinone *)	Water, 2-Bromo-2-Nitropropane-1,3-Diol, Methylchloroisothiazolinone/ Methylisothiazolinone	< 8
Euxyl® K 300	Phenoxyethanol, Methylparaben, Butylparaben, Ethylparaben, Propylparaben, Isobutylparaben	Phenoxyethanol, Methylparaben, Butylparaben, Ethylparaben, Propylparaben, Isobutylparaben	< 8
Euxyl® K 400	Phenoxyethanol, Methyldibromo Glutaronitrile	Methyldibromo Glutaronitrile, Phenoxyethanol	< 8
Euxyl® K 446	2-Bromo-2-Nitropropane-1,3-Diol, Methyldibromo Glutaronitrile, Dipropylene Glycol	2-Bromo-2-Nitropropane-1,3-Diol, Methyldibromo Glutaronitrile, Dipropylene Glycol	< 8
Euxyl® K 500	Aqua, Diazolidinyl Urea, Sodium Benzoate, Potassium Sorbate	Diazolidinyl Urea, Sodium Benzoate, Potassium Sorbate	< 7
Euxyl® K 600	Propylene Glycol, Aqua, Formic Acid, Iodopropynyl Butylcarbamate, Polyaminopropyl Biguanide	Propylene Glycol, Formic Acid, Iodopropynyl Butylcarbamate, Polyaminopropyl Biguanide	< 8
Euxyl® K 700	Phenoxyethanol, Benzyl Alcohol, Potassium Sorbate, Aqua, Tocopherol	Phenoxyethanol, Benzyl Alcohol, Potassium Sorbate, Tocopherol	< 5.5
Euxyl® K 701	Phenoxyethanol, Benzoic Acid, Dehydroacetic Acid, Ethylhexylglycerin	Phenoxyethanol, Benzoic Acid, Dehydroacetic Acid, Ethylhexylglycerin	< 6
Euxyl® K 702	Phenoxyethanol, Benzoic Acid, Dehydroacetic Acid, Aqua, Ethylhexylglycerin, Polyaminopropyl Biguanide	Phenoxyethanol, Benzoic Acid, Dehydroacetic Acid, Ethylhexylglycerin, Polyaminopropyl Biguanide	< 6
Euxyl® K 727	Phenoxyethanol, Methyldibromo Glutaronitrile, Methylchloroisothiazolinone/ Methylisothiazolinone *)	Methyldibromo Glutaronitrile, Methylchloroisothiazolinone/ Methylisothiazolinone, Phenoxyethanol	< 8

*) Active ingredients without auxiliaries. For full INCI-declaration kindly contact us.



max. temperature during production	use	use-concentrations		
		acc. S&M recommendation	acc. EU-Cosmetics Directive	acc. CIR (USA)
120 °C	Leave-on products	0.50 – 1.00 %	max. 1.10 %	max. 5.50 %
	Rinse-off products	–	max. 1.10 %	max. 5.50 %
40 °C	Leave-on products	0.05 – 0.10 %	max. 0.21 %	max. 0.10 %
	Rinse-off products	0.05 – 0.15 %	max. 0.21 %	max. 0.21 %
40 °C	Leave-on products	0.05 – 0.15 %	max. 0.30 %	max. 0.15 %
	Rinse-off products	0.05 – 0.30 %	max. 0.30 %	max. 0.30 %
80 °C	Leave-on products	0.50 – 1.00 %	max. 1.39 %	max. 6.90 %
	Rinse-off products	0.50 – 1.00 %	max. 1.39 %	max. 6.90 %
80 °C (max. 4 hours)	Leave-on products	–	not to be used	max. 0.125 %
	Rinse-off products	0.05 – 0.15 %	max. 0.50 %	max. 6.25 %
80 °C (max. 4 hours)	Leave-on products	–	not to be used	max. 0.27 %
	Rinse-off products	0.03 – 0.15 %	max. 1.10 %	max. 1.09 %
80 °C (max. 4 hours)	Leave-on products	0.50 – 1.50 %	max. 2.50 %	max. 2.50 %
	Rinse-off products	0.20 – 1.00 %	max. 2.50 %	max. 2.50 %
40 °C	Leave-on products	0.50 – 1.50 %	max. 5.25 %	max. 0.29 %
	Rinse-off products	there is no efficacy with anionic surfactants	max. 5.25 %	max. 0.29 %
80 °C (max. 4 hours)	Leave-on products	0.50 – 1.50 %	max. 3.20 %	max. 5.30 %
	Rinse-off products	0.50 – 1.50 %	max. 3.20 %	max. 5.30 %
80 °C (max. 4 hours)	Leave-on products	0.40 – 1.20 %	max. 1.25 %	max. 6.30 %
	Rinse-off products	0.40 – 1.20 %	max. 1.25 %	max. 6.30 %
80 °C (max. 4 hours)	Leave-on products	0.20 – 1.00 %	max. 1.35 %	max. 6.70 %
	Rinse-off products	0.20 – 1.00 %	max. 1.35 %	max. 6.70 %
40 °C	Leave-on products	–	not to be used	max. 0.30 %
	Rinse-off products	0.05 – 0.15 %	max. 0.60 %	max. 0.60 %

Preservatives for Cosmetics & Toiletries

	INCI-declaration (EU and US)	pH-range	max. temperature during production	use	use-concentrations		
					acc. S&M recommendations	acc. EU-Cosmetics Directive	acc. CIR (USA)
S&M Phenoxyethanol	Phenoxyethanol	< 12	stable	Leave-on products	max. 1.00 %	max. 1.00 %	max. 5.00 %
				Rinse-off products			
S&M Methylparaben	Methylparaben	< 8	80 °C	Leave-on products	max. 0.40 %	max. 0.40 % (acid) for 1 ester, max. 0.80 % (acid) for mixture of esters	max. 25.00 %
				Rinse-off products			
S&M Ethylparaben	Ethylparaben	< 8	80 °C	Leave-on products	max. 0.40 %	max. 0.40 % (acid) for 1 ester, max. 0.80 % (acid) for mixture of esters	max. 1.00 %
				Rinse-off products			
S&M Propylparaben	Propylparaben	< 8	80 °C	Leave-on products	max. 0.40 %	max. 0.40 % (acid) for 1 ester, max. 0.80 % (acid) for mixture of esters	max. 25.00 %
				Rinse-off products			
S&M Butylparaben	Butylparaben	< 8	80 °C	Leave-on products	max. 0.40 %	max. 0.40 % (acid) for 1 ester, max. 0.80 % (acid) for mixture of esters	max. 5.00 %
				Rinse-off products			
S&M Parabenmix 2	Phenoxyethanol, Methylparaben, Ethylparaben, Propylene Glycol	< 8	80 °C	Leave-on products	0.5 – 1.30 %	max. 1.40 %	max. 7.00 %
				Rinse-off products			
S&M Isothiazolinone	Methylchloro-isothiazolinone/ Methylisothiazolinone ¹⁾	< 8	40 °C	Leave-on products	max. 0.05 %	max. 0.10 %	max. 0.05 %
				Rinse-off products	max. 0.10 %		max. 0.10 %
S&M Bronopol	2-Bromo-2-Nitropropane-1,3-Diol	< 8	40 °C	Leave-on products	max. 0.10 %	max. 0.10 %	max. 0.10 %
				Rinse-off products			

¹⁾ Active ingredients without auxiliaries. For full INCI-declaration kindly contact us.

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

	S&M disinfectant against HBV/HIV		Development of formaldehyde-free disinfectants, e. g. Antifect, Gigasept FF		Introduction of Octenisept, a mucous membrane and wound antiseptic	Schülke & Mayr celebrates its one hundred year anniversary
8	1985		1986		1989	1989

Plant Hygiene Support

Mikrocount®

– A 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. Two dip-slides, Mikrocount® Combi and Mikrocount® TPC, provide every operation with individual means of rapid and reliable hygiene controls. These dip-slides can be used for testing raw materials, for in-process controls during the production process and for quality control of finished cosmetic products. Mikrocount® dip-slides enable simple sampling and evaluation of the results, even by personnel without any microbiological training.

Product benefits of Mikrocount® Combi:

- Control of raw materials, intermediate and finished products
- Separate evaluation of bacteria, yeast and moulds on different agar surfaces

Product benefits of Mikrocount® TPC:

- Control of surfaces, e.g. production line and packing materials
- Agar neutralises disinfectants and preservatives
- Evaluation of total germ count on one agar surface



Grotanol® SR 1

– A Disinfectant Cleaner for Production Plants

Ensuring reliable product quality also includes a regular cleaning and disinfection of the production plant. Grotanol® SR 1 is an alkaline disinfectant cleaner which provides a good immediate effect at a low use concentration.

Use / Use concentrations:

- Production plants, circulating systems and equipment: 10 – 30 g/kg (1 – 3 %) in aqueous solutions
- Use biocides safely. Always read the label and product information before use.

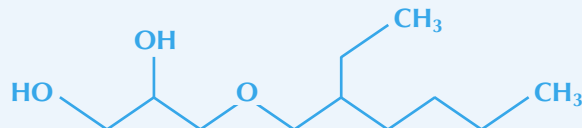
Product benefits:

- Excellent cleaning and disinfectant effect
- Broad, balanced spectrum of effect against bacteria, yeast and moulds
- Good immediate effect
- Anti-corrosive properties
- Removes biofilms

	Introduction of aldehyde-free disinfectants, e. g. Terralin and Lysetol AF		Introduction of Sensiva SC 50, a skin care additive and deodorant active		Patented cosmetic preservative based on organic acids: Euxyl K 702
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Multifunctional Additive

Ethylhexylglycerin



Ethylhexylglycerin is a glycerol monoalkylether of defined structure and high purity. It is very stable, e.g. against hydrolysis and elevated temperature, and compatible with cosmetic ingredients. It is a crystal-clear, colourless liquid with a slight characteristic odour.

Ethylhexylglycerin is globally approved for use in cosmetic products. It is commercially available under the brand name Sensiva® SC 50.

Sensiva® SC 50

– A Deodorant Active



Body odour arises when sweat, odourless itself, is decomposed by microorganisms. From the sweat contents, the sebum and skin cell residues, the germs, primarily gram-positive bacteria, form substances which have an unpleasant odour. Sensiva® SC 50 reliably inhibits the growth and multiplication of odour-causing bacteria, while at the same time not affecting beneficial skin flora.

Sniff tests have proven Sensiva® SC 50 to be effective in deodorants, giving good protection against unpleasant body odour up to 24 hours after the last application.

Product benefits:

- ▣ Effective against odour-causing gram-positive bacteria
- ▣ Gentle to skin
- ▣ Practically odourless and colourless
- ▣ Liquid

Use / Use-concentrations

- ▣ 0.3 – 1.0 % for aerosol sprays, pump sprays, roll-ons, sticks
- ▣ The use of Sensiva® SC 50 as an ingredient for deodorants is protected by patent

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



Schülke & Mayr becomes a subsidiary of the Air Liquide Group

1996



Move into the new offices

1998

111
Years

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

2000



Sensiva® SC 50

– A Multifunctional Cosmetic Ingredient

Product benefits:

- ▣ Emollient and mild humectant
- ▣ Improves skin feel without „stickiness“ after application
- ▣ Deodorant active with additional skin care properties
- ▣ Solubiliser for perfume oils or other ingredients
- ▣ Excellent compatibility with other cosmetic ingredients
- ▣ Enhancer for standard preservative systems

Use / Use-concentrations

- ▣ 0.5 – 1.0 % for leave-on products
- ▣ The use of Sensiva® SC 50 as a skin care additive is protected by patent

Sensiva® SC 50 versatile and multifunctional additive for cosmetic and personal care products. It can be used in a wide variety of different types of cosmetic products such as deodorants, sun care products, baby care products or face creams. As an emollient and mild humectant it improves skin feel. Furthermore, it can solubilise perfume oils or other ingredients and may help them stay on the skin longer.

Sensiva® SC 50 lowers the surface tension in aqueous systems which may help to improve the antimicrobial efficacy of certain alcohols and glycols.



Patented cosmetic preservative based on
Phenoxyethanol and Ethylhexylglycerin:
Euxyl PE 9010



Also for the future the aim is: growth and
competence throughout the world ...
Schülke & Mayr, your partner for preservation
and hygiene in the 21st century



Rinse-off



Leave-on



Wet-wipes



Deodorants



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