



CLEANROOM

ECOLAB®

LIFE SCIENCES CLEANROOM SOLUTIONS

A comprehensive approach to cleaning, disinfection and decontamination

Trusted by Companies Like Yours Around The World

Ecolab Life Sciences supports pharmaceutical manufacturers by delivering a comprehensive, programmatic approach to contamination control, cleaning, disinfection and decontamination.

Our end-to-end solutions help you have safer products and processes, reduce risks, meet regulatory requirements, support compliance initiatives, and realise operational efficiencies and cost savings.



Support and Insight in All the **Key Areas**



CLEANING, DISINFECTION & DECONTAMINATION

Beyond identifying the right chemistry - our innovative manual and automated cleaning, disinfection and decontamination products and site-specific programs help manage risk and improve process efficiency.



VALIDATION SUPPORT

Navigate the complex validation processes and change controls through optimisation based on environmental and economic targets, and assistance with validation efficacy project management.

Our Validex Program provides methodology advice and validation; and expertise in microbiology, standards and processes.



TECHNICAL LAB SUPPORT

Customers are supported with a variety of laboratory testing to identify the right cleaning procedure for their specific processes, soils and products.



SITE SURVEYS

Ecolab offers technical visits and site-survey services from our International Register of Certificated Auditors (IRCA) accredited technical team.



REGULATORY & SCIENTIFIC INSIGHTS

The Ecolab team includes dedicated experts and knowledge of the regulations and regulatory environment to help ensure compliance with cGMP, assure product safety and quality, and help implement validations that meet regulatory expectations.



CUSTOMER TRAINING

Ecolab can deliver on-site training programs to ensure that best practices are understood and implemented correctly to meet the quality and safety standards at customer facilities.

Cleanroom Cleaning & Disinfection Solutions

ALCOHOLS

Sterile and filtered alcohols.

- ▲ **Klercide & Klerwipe 70|30 IPA** Blended with WFI
- ▲ **Klercide 70|30 Pharma Ethanol** Blended with WFI
- ▲ **Klercide & Klerwipe 70|30 Denatured Ethanol** Blended with WFI

Ready-to-use options are ideal for residue removal and both small and large surface disinfection. Impregnated pouch and mop wipes are ideal for cleaning and disinfection of small and large surfaces.

SUITABLE FOR USE IN GRADE A, B, C & D CLEANROOMS





The Right **Chemistry** for Every Cleanroom

BIOCIDES

Routine and rotational sterile biocides provide effective control of microbial contamination. Available in ready-to-use, concentrates and pouch and mop wipe formats.

▲ **Klercide & Klerwipe Low Residue Quat** Blended with WFI

Low concentration quaternary ammonium compound with a minimal residue profile that requires less rinsing than standard quats, reducing workload and increasing efficiency.

▲ **Klercide Sporcidal Active Chlorine**

Rotational sporicide with a broad spectrum of activity specifically formulated to control microbial contamination including difficult bacterial spores.

▲ **Klercide & Klerwipe Sporcidal Enhanced Peroxide**

Enhanced blend of 1.5% hydrogen peroxide. Ready-to-use safer rotational sporicide for small and large surfaces.

▲ **Klercide & Klerwipe Sporcidal Low Residue Peroxide**

Blended with WFI or DI

Very low residue blend of high grade 6% hydrogen peroxide and either Water for Injection or deionised water. A rotational sporicide with very low residues for small and large surfaces.

SUITABLE FOR USE IN GRADE A, B, C & D CLEANROOMS

Cleanroom **Cleaning & Equipment** Solutions

RESIDUE REMOVAL & CLEANING SOLUTIONS

Ready-to-use and concentrate solutions that provide effective hard surface cleaning and residue removal.

▲ Klercide & Klerwipe Neutral Detergent

▲ Klercide WFI Quality Water

Enable cleaning with Klercide Neutral Detergent. WFI Quality Water can be used for residue removal and chemistry dilution in critical areas.

SUITABLE FOR USE IN GRADE A*, B, C & D CLEANROOMS & UNCLASSIFIED AREAS *except concentrates





The **Klercide Pressurised Spray System** is designed for use with Klercide biocides. It is a fully autoclavable system with excellent maneuverability for ease of use.

Cleanroom **Cleaning & Equipment** Solutions

CLEANING EQUIPMENT SOLUTIONS

Successful application of cleaning and disinfection products is key to ensuring effective microbial control.

We offer a range of dry wipes, mopping systems and assorted tools for cleaning and disinfection of all areas of the cleanroom and adjacent areas.

The autoclavable mop wipe frames are especially suitable for cleaning walls and floors. Options include a fully stainless steel system as well as a lightweight option for ease of use up high.



Inspired Cleanroom Innovations

Our constant search for improvements to cleaning and disinfection in cleanrooms has generated new innovations, a selection of which is highlighted on the following pages.

But we don't stop there - every day our teams conduct research that helps keep our customers ahead of regulatory requirements and manufacturing safe products.

Dedicated Global Technical Consultants help ensure customers produce safe, compliant products and partner to continuously and measurably improve operational efficiency.

With **19** technology and research centers employing **1,600** research and development associates worldwide, Ecolab is committed to innovation.

The **Challenge** with Current Ready-to-Use Applications

KEY



Health
& Safety



Cost of
Use



Product
Quality



Regulatory
Compliance

Poor

Marginal

Good



STANDARD AEROSOLS

Can pose a safety risk due to higher volatile content release and may result in an overall budget increase given their disposal costs.

CONVENTIONAL TRIGGER SYSTEMS

Do not form a closed system and are unable to prevent air from being drawn back into the bottle, posing a risk of contaminating the contents during use. This puts compliance at risk due to potential loss of sterility and increases in-use cost as product cannot be used beyond a single session.



The **Solution:** The Validated SteriShield Delivery System



The unique combination of bag in the bottle design and patented trigger system provides a validated and closed system and ensures contamination cannot enter the bottle during use.



CLOSED SYSTEM

No air suck back ensures sterility



VALIDATED SYSTEM

In use shelf life of three months



VARIABLE SPRAY PATTERN

Ensures optimum surface coverage



REDUCED VOLATILE CONTENT

Safer compared to aerosols

WHAT MAKES THE **TRIGGER** SO EFFECTIVE?

- ▶ A patented precision engineered trigger head to ensure that air is not drawn back into the bottle
- ▶ A variable rotating nozzle to deliver the desired spray pattern as required
- ▶ A unique venting system, fitted with 'duck billed valve', to ensure **ONLY** one way venting during irradiation

WHAT MAKES THE **BOTTLE** SO EFFECTIVE?

A bottle with dual layers:

- ▶ A rigid outer bottle to provide structural stability
- ▶ An inner flexible bag protects its contents and creates a post-dispensing vacuum in which remaining liquid is stored and allows complete dispensing of the product

See how it works [here](#)



A Minimal Residue Solution You Can Rely On

With regulators focusing more on residues and their implications within cleanrooms, it is important to have a strategy and process in place to control the problem of residues from cleaning and disinfection products.

Ecolab can help implement a validated method, combined with products and best practices to help reduce residues and ensure audit readiness.

By minimising initial residues and their build up over time, a scientifically developed method of residue management forms part of a holistic contamination control approach.



COMPLIANCE

- ▲ Visually demonstrate that the facility's cleaning and disinfection processes are under control
- ▲ Help decrease the risk of inspectors citing a lack of cleanliness and prevent a further deep dive into associated processes



OPERATIONAL EFFICIENCY

- ▲ Create more time for other functions with fewer SOPs
- ▲ Shorten downtime and additional costs associated with disinfection and residue removal



SAFETY

- ▲ Reduce the likelihood of slips and trips from residue build up on floors
- ▲ Lower residue levels mean lower exposure to product chemistry
- ▲ Reduce the risk of foreign particulate contamination from the disinfection process



The **Solution** for **High Grade Areas**



Effective at lower concentration, Klercide Low Residue Quat leaves **LESS RESIDUE** after the **FIRST APPLICATION** compared to all other products tested.*

Results in **LESS ACCUMULATIVE RESIDUE**.
Less residue leads to **LOWER FREQUENCY** of rinsing.

Has **LOWER SURFACE TENSION** than other formulations, reducing the amount required to achieve **BETTER SURFACE CONTACT** and contributing to residue management.*

Klercide™ **Low Residue Quat** **THE MINIMAL RESIDUE BENEFIT**

A ready-to-use disinfectant, Klercide Low Residue Quat provides a minimal initial starting residue as well as a significant reduction in the accumulation of residues. This makes it ideal for high grade cleanrooms and critical manufacturing areas.

[View Product comparison](#)



* DATA ON FILE

The **Assurance** of Validated Cleanroom Manufacture and Secure Supply

Ecolab provides global manufacturing and supply, ensuring product availability to meet your validation obligations and maintaining continuity in your manufacturing process.

QUALITY SYSTEMS & BASIC GMP PRINCIPLES

We use quality raw materials from approved sources and employ systems designed in a similar way to those of our customers.

AUDITED

Our manufacturing sites have had successful ISO and internal EH&S program audits as well as being successfully audited and approved by our leading pharmaceutical customers.



MANUFACTURED IN CLEANROOMS FOR CLEANROOMS

Ecolab offers dual capability manufacturing and cleanroom product offering in our state-of-the-art facilities located in Greensboro, NC and Baglan, UK.

GREENSBORO
North Carolina, USA

CERTIFICATIONS
ISO 9001:2015



BAGLAN
Wales, UK

CERTIFICATIONS
ISO 9001:2015
ISO 14001:2015



Throughout our Baglan manufacturing process, we apply the strictest procedures to ensure our product is shipped to the exacting standards you require.



Raw materials and packaging from approved sources



On-site blending tanks



On-site WFI production



Grade A-C cleanrooms



Double and triple bag capabilities

About **Ecolab**

A trusted partner at nearly three million customer locations, Ecolab (ECL) is the global leader in water, hygiene and infection prevention solutions and services. With annual sales of \$12 billion and more than 44,000 associates, Ecolab delivers comprehensive solutions, data-driven insights and personalized service to advance food safety, maintain clean and safe environments, optimize water and energy use, and improve operational efficiencies and sustainability for customers in the food, healthcare, hospitality and industrial markets in more than 170 countries around the world.

Our **Assurance**

Ecolab is committed to providing exceptional service, total plant solutions and unsurpassed industry expertise to help you achieve your business goals.

Our breadth of resources and integrated business model ensure consistency across your operations. We look forward to the opportunity to partner with you on your transformation journey.

For more information please speak to your account manager or visit: **www.ecolab.com/lifesciences**

