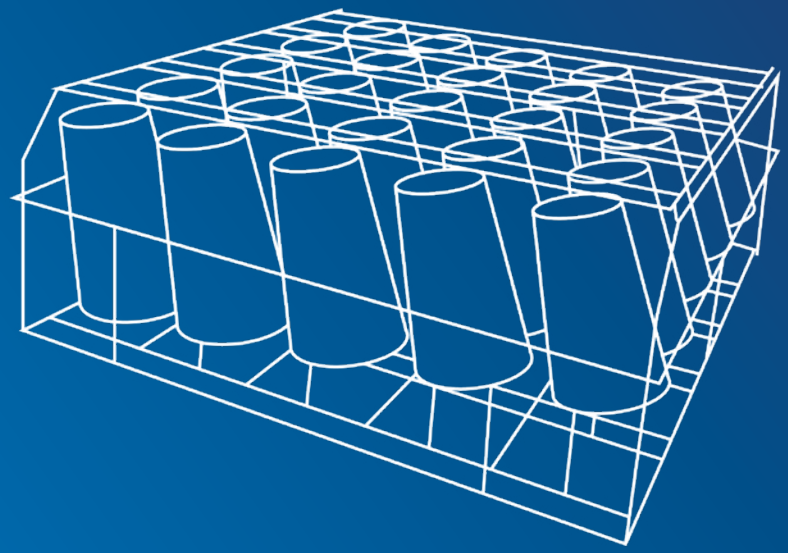


REUSABLE WARE HYGIENE GUIDE

BACKGROUND

INTRODUCING REUSABLE WARES INTO FOODSERVICE OPERATIONS

WHY ARE CLEANING REUSABLES DIFFERENT?

WHAT CAN ECOLAB DO TO HELP?

WHY ECOLAB?

There is an estimated 15 Billion kg of plastic entering the marine environment every single year.[1]

Plastic cutlery, plates, food containers, cups and beverage containers are in the 10 most commonly found single-use plastic items on European beaches, alongside fishing gear, **which represents 70% of all marine litter** in the EU.[1]

Single use plastic waste threatens ocean & marine species health, contributes to climate change and also ends up in the food chain.

The average human consumes an estimated 5g of microplastic per week. **That's about the same amount of plastic as a credit card.[2]**

[1] Wikipedia, Ocean Conservancy, Earth Day, SLO Active
[2] Meta study – university of Newcastle

Did you know?

It's estimated that

less than 1%
of single-use drink cups get recycled

even if put in a recyclable waste bin[3].

This is because a lot of the cups are made from mixed materials, making them more difficult to recycle. The majority that aren't recycled go to landfill and could take hundreds of years to breakdown.

The challenges associated with single-use plastics has led to the European Commission releasing a proposal for a new Packaging and Packaging Waste Directive which would see up to **80% of beverages** and **40% of food** (not consumed on premises but purchased from foodservice operators) being served in reusable containers by the end of the next decade.[4]

As a result of this EU Directive, some individual EU member states are starting to change their packaging laws and regulations, leading to foodservice operators needing to offer reusable wares as an alternative to single-use wares now.

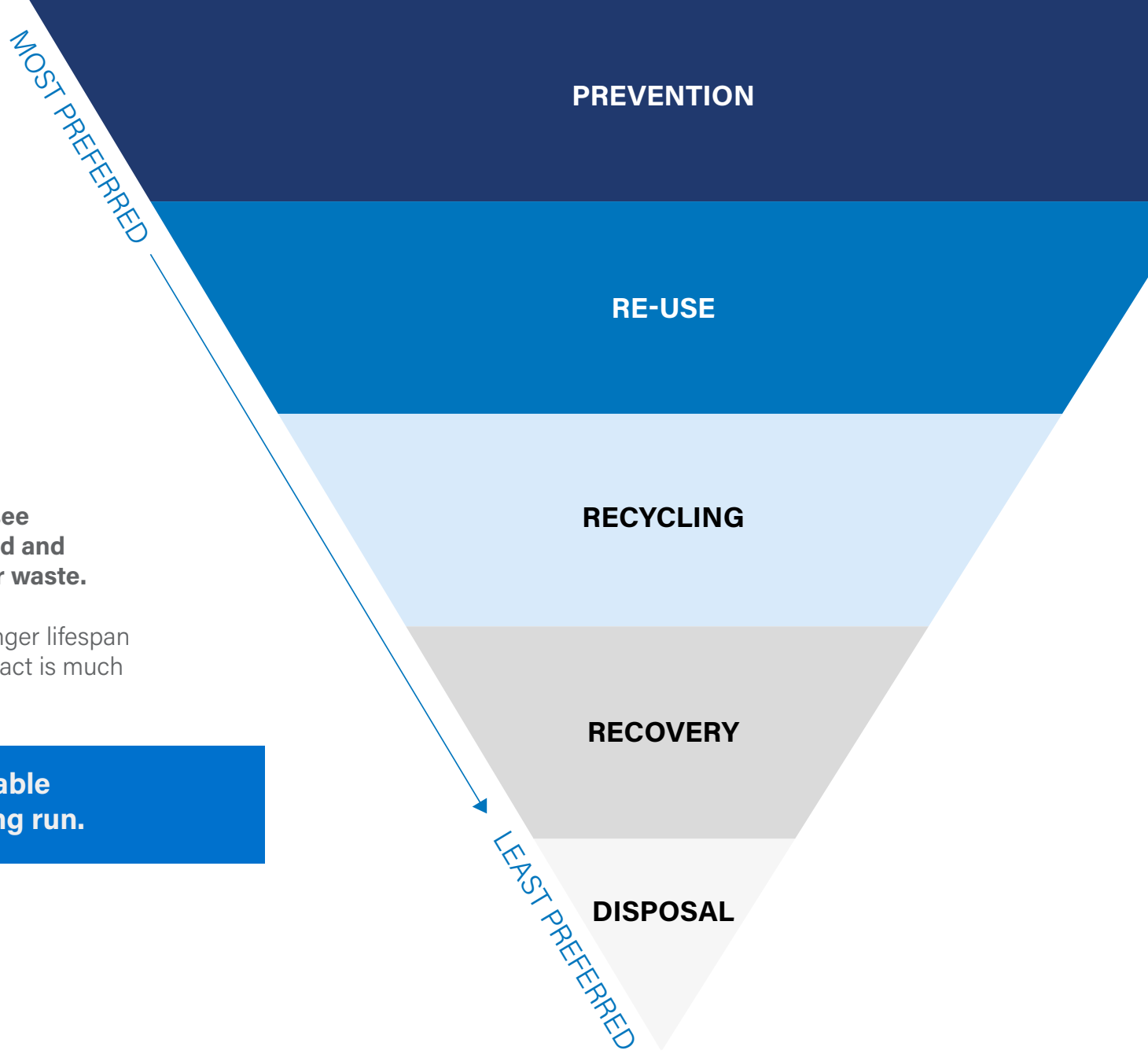
[3] https://www.independent.co.uk/
[4] https://ec.europa.eu/

Waste pyramid

The waste hierarchy tool is used in the evaluation of processes that protect the environment alongside resource and energy consumption, from most favourable to least favourable actions. On the diagram, you will see that after Prevention (which is difficult for food and drink), Re-use is the most preferred action for waste.

Because reusable cups and containers have a longer lifespan than disposables, their overall environmental impact is much less, as is the volume going to landfill.

Foregoing single-use and using a reusable container is more sustainable in the long run.



It takes the same amount of energy and thus CO2 output to manufacture 12 single use cups as it does to make 1 reusable cup.

As long as a reusable cup is used more than 12 times, it becomes a more sustainable option.

If an item isn't hygienically clean and safe to use, then it's not reusable.

This is why cleaning reusable wares is one of the most critical factors for not only maintaining the lifespan of your containers and actually making reusable wares a sustainable option, but also ensuring food safety.

This is where Ecolab brings extensive know-how and expertise to the table to help you successfully implement sustainable solutions to ensure clean and safe reusables in your operation.

	PRODUCTION ENERGY (KWH)	WEIGHT (G) OF FINAL MATERIALS	WEIGHT (G) LIKELY TO BE SENT TO LANDFILL AFTER USE
100 MIXED MATERIAL, SINGLE USE CUPS	14.58	969	959
REUSABLE CUP LASTING 100 USES	1.75	75	75

[5]

A reusable cup used 100 times requires **88% less energy** and related CO2 output in production and results in a **waste reduction of up to 92%** compared to 100 single-use cups.

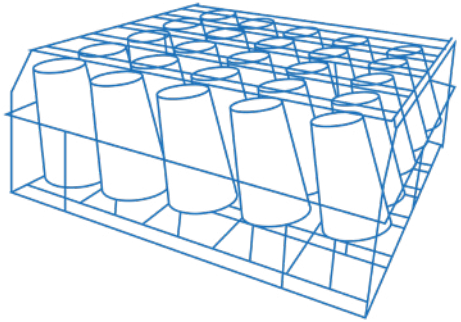
[5] limepack 2023. Based on only 1% of single use plastic cups being recycled (source - independent.co.uk)

Introducing Reusable wares into foodservice operations:

Choosing the correct type of ware for your operation

How are the reusable wares collected

How to clean the reusable wares



Choosing the correct type of ware and how they are collected will purely depend on the type of operation and food/ beverages you'll be serving. However to find out more about what ware types would be suitable for your operation read our guide here.

Why are cleaning reusables different?

Depending on the types of materials used, there are additional risks associated with cleaning reusables in comparison to traditional ware.
The primary challenges are the likelihood of food safety risks associated to heavily contaminated wares, difficulty in cleaning and drying and a shortened lifespan of the ware.

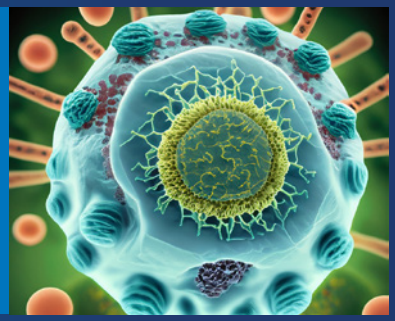
A few examples of what can cause these challenges are:

Untailored products, heat and incorrect procedures can not only hinder the cleaning & hygiene performance, but also impair appearance, induce stress cracks and cause surface damage of some reusable wares. This leads to discolouration and smell retention resulting in repeated, continuous rewash or disposal of the ware.

Drying plastics after washing is more difficult and can take longer, so a specific solution is required to prevent residual moisture that could subsequently lead to re-germination.

Did you Know?

Microorganisms from stagnant water can cause all kinds of problems if consumed, including respiratory problems, nausea, cramping, diarrhoea and infections.



What can Ecolab do to help?

Ecolab provides dedicated support and expert guidance to ensure your hygiene operation for reusable wares is sustainably optimised, minimising risks, maximising safety whilst prolonging the life of the ware and reducing overall costs.

Ecolab Reusable Ware Program

Expertise & Ongoing Support

Our team of dedicated territory managers are the warewashing industry experts and they can help guide you on the uncertainties of reusable wares. They can determine the best approach to ensure your cleaning teams always safely follow the right procedures, use the right products for the right type of materials and achieve the right results.

The Right Products & Equipment

You will need to ensure that you are using the right products and equipment for the material of your reusable ware.

For example, plastics made from acrylonitrile butadiene styrene (ABS) are alkali-sensitive and cannot cope with the conditions created by deep cleaning with highly alkaline products. So if you're not sure about the materials or products, this is where Ecolab can help support and guide you to ensure the correct products are used on your reusable materials.

Ecolab's Clear Dry PL rinse aid product was specially developed for use on plastic ware and as part of the reuseable ware program, can help to reduce drying requirement by up to 28%[6].

Having the right rinse product can help speed up the drying time, improving efficiency and along with the right procedures help to prevent residual moisture on the ware and causing food safety and reputation risks.

At Ecolab we have a comprehensive portfolio of products that can be tailored depending on the type of reusable ware used and we can provide the most suitable products for your operation.

[6] Based on testing ClearDry PL versus traditional rinse aid at 0.3ml/L concentrate.

Optimised Processes & Procedures

As part of the support from our team of warewashing experts, they will guide your teams to ensure the best procedures are undertaken when cleaning the reusable wares. Having the correct warewashing procedures in place combined with the products and ongoing support will ensure:

- Optimised performance
- Maximised efficiency
- Minimised operational costs
- Prolonged life of ware
- Increased sustainability
- Reduced food safety risks

The Value Impact of Ecolab's Reusable Program

Alongside minimising repurchase costs of reusable wares, reducing potential food safety risks and enhancing customer experience helping to support your brand reputation, the Ecolab reusable ware program could help to deliver impactful operational and sustainable value to your operation:

ENERGY	WATER	CO2	PLASTIC WASTE [7]
2530	21600	660	20.6
kWh	L	Kg	Kg
Equivalent to  houses in a day	Equivalent to  bathtubs	Equivalent to  trees in a month	Equivalent to  2L bottles

[7] Based on 200 racks per day using a combination of the Apex program and Clear Dry PL Rinse aid. Based on: Average house using 30 kWh energy per day. 80L bathtubs. 1 tree absorbing 13.9Kg CO2 per month. Standard 2L plastic bottle weighing 0.042Kg

Why Ecolab?

For 100 years, we have been developing warewashing products and programs to solve customer problems through the powerful combination of sound science and on-site, expert service.

Since Ecolab's inception, it has grown into a global company helping to solve some of the world's most pressing challenges: ensuring clean water, safe food, abundant energy and healthy environments.

We work behind the scenes at nearly 3 million customer locations throughout the world to solve operational challenges, reduce environmental impact and protect brands. Our 47,000 associates deliver comprehensive science-based solutions, data-driven insights and world-class service to advance food safety, help maintain clean and safe environments, optimise water and energy use.

We've improved operational efficiencies and sustainability for customers in more than 170 countries

If you would like to understand better how prepared your operation is for the future of Reusable wares, check the following list.

- [ ] I'm uncertain whether I need to change my operations when switching to reusables
- [ ] I realize the reusable wares are not dry after wash
- [ ] I have challenges to remove stains and smell from reusables wares
- [ ] I don't know how to hygienically store reusables wares
- [ ] I can't switch to reusable wares, since I don't have a warewash machine
- [ ] I'm afraid the investment in reusable wares is cost intense

If the answer to any of these questions is yes, please reach out to your Ecolab representative.