eBook

Powering Your Performance

Emerging Trends and Challenges in Warewashing – and How they Impact You, Your Staff and Your Customers

A 10-MINUTE READ

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Everywhere It Matters.™

Contents

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The Pillars of Restaurant Success

There are many considerations the foodservice industry faces every day – foot traffic, food safety and public health, escalating operational costs, technology advancements and channel disruption. But at the end of the day, the success of your restaurant hinges on three things:

Delighted Guests

Delivering consistently outstanding guest experiences from end to end – from the food itself, to the service, to the aesthetics of the environment.

Optimized Operations

Streamlining front- and back-of-the-house workflows to increase productivity, minimize labor costs and boost the bottom line.

Protected Reputations

Mitigating risks – food safety violations, foodborne illness, pest issues, etc. – that can devastate your brand.

Finding Opportunities for Improvement

There are countless factors playing roles in the three pillars of restaurant success, and that translates into endless opportunities to make changes and improvements to support your success. With limited time and resources, restaurant success depends on making sure your attention is focused on the right areas of opportunity.

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Warewashing: A Critical Factor in All Three Pillars of Success

Your wares are one of the most fundamental aspects of your restaurant: the canvas for your guests' dining experiences and a key component in almost every back-of-house workflow. This makes warewashing one of the most common pain points in a restaurant – and a critical factor in all three pillars of restaurant success:

Delighted Guests

How do we ensure clean and shining wares that literally set the table for an outstanding guest experience?

Optimized Operations

Streamlining front- and back-of-the-house workflows to increase productivity, minimize labor costs and boost the bottom line
How do we maximize warewashing efficiency (streamlining staff workflows and minimizing resource usage)?

Protected Reputations

How do we keep up with warewashing best practices to meet restaurant code, food safety requirements and other risk mitigation best practices?

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Ecolab Research: Uncovering Emerging Trends & Challenges in Warewashing

Warewashing has always been a pain point for restaurant operators and managers. Yet the particular challenges continue to evolve along with the changing demands and technologies in today's restaurants. To better understand the specific warewashing needs of our customers, Ecolab conducted in-depth research and collected robust data directly from hundreds of restaurants around the globe.

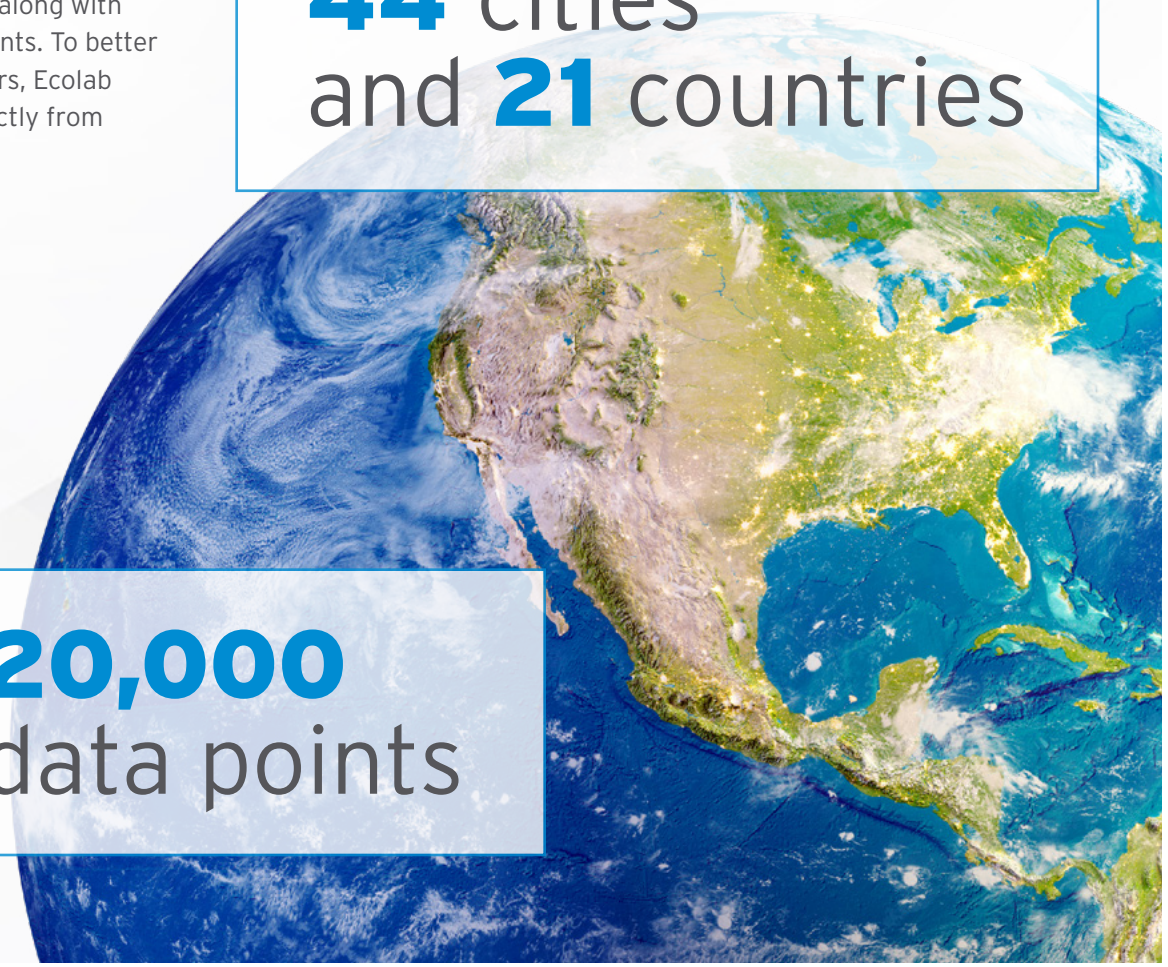
Research Methodology

Ecolab visited over 300 foodservice environments across 44 cities and 21 countries to conduct customer surveys. During these surveys, we collected over 20,000 data points and 2,000 pictures from kitchens around the world.

At each location, we collected data to better understand:

1. The **percentage** and **cause** of wares that were "not ready for service" after being washed
2. Kitchen **operations** and **procedures**, including rate of rewashing and hand-polishing
3. Water **usage** in the dish machine

44 cities and **21** countries



20,000 data points

Key Findings: Trends Driving Warewashing Challenges

1 Lower-Water Dish Machines

Twenty years ago, the average dish machine used 1.5–2.0 gallons of water per rack. Today, this has decreased to less than 1.0 gallon per rack on average.

	20 YEARS AGO	TODAY
Water Use	**1.5-2** gal/rack	**1.0** gal/rack or **LESS**
Diets	**More** grains, some protein	**Higher**-protein diets

2 Higher-Protein Diets

Consumers are eating more protein today than ever before. This means there's a higher concentration of food soil on wares.

Protein was prevalent on 71% of wares collected and analyzed in the United States and Canada

3 Increased Manual Washing

Only 35 percent of wares were ready for service, requiring staff to spend valuable time and energy rewashing or hand polishing wares.

Hand-polishing was required for 47% of wares

Rewash was required for 19% of wares

Warewashing Challenges Around the Globe

In addition to the three universal trends, Ecolab found unique challenges in different geographic regions:

NORTH AMERICA	EUROPE	ASIA PACIFIC	LATIN AMERICA
Need for energy efficiency and reduced packaging waste Lower-water machines resulting in higher food soil concentrations in the tank **High rate of hand polishing:** **30-60%** **of accounts surveyed hand-polish glassware and flatware**	Very low water dish machines, often causing **excessive foaming** and **higher** food soil concentrations in the tank	High rate of manual procedures both before and after machine washing: **69%** **of accounts hand-wash ware prior to machine wash** **74%** **of accounts hand-wipe ware after machine wash to speed up dry time** Lower detergent concentration in the dish machines causing higher food soil concentrations	High rate of manual procedures both before and after machine washing: **80%** **of accounts hand-wash ware prior to machine wash** **53%** **of accounts hand-wipe ware after machine wash with towel soaked in sanitizer** High repair rates for dish machines

Better Warewashing: A Checklist

After confirming these customer pressures, we set goals for developing a solution that would target the toughest protein soils in a variety of procedural and water conditions including poor procedures, low water, hard water and total dissolved solids (TDS).

We gathered a team of approximately 40 technical experts from 10 countries to apply their knowledge to develop a new and innovative warewashing solution with key requirements:

Customer Must-Haves for Warewashing Innovation

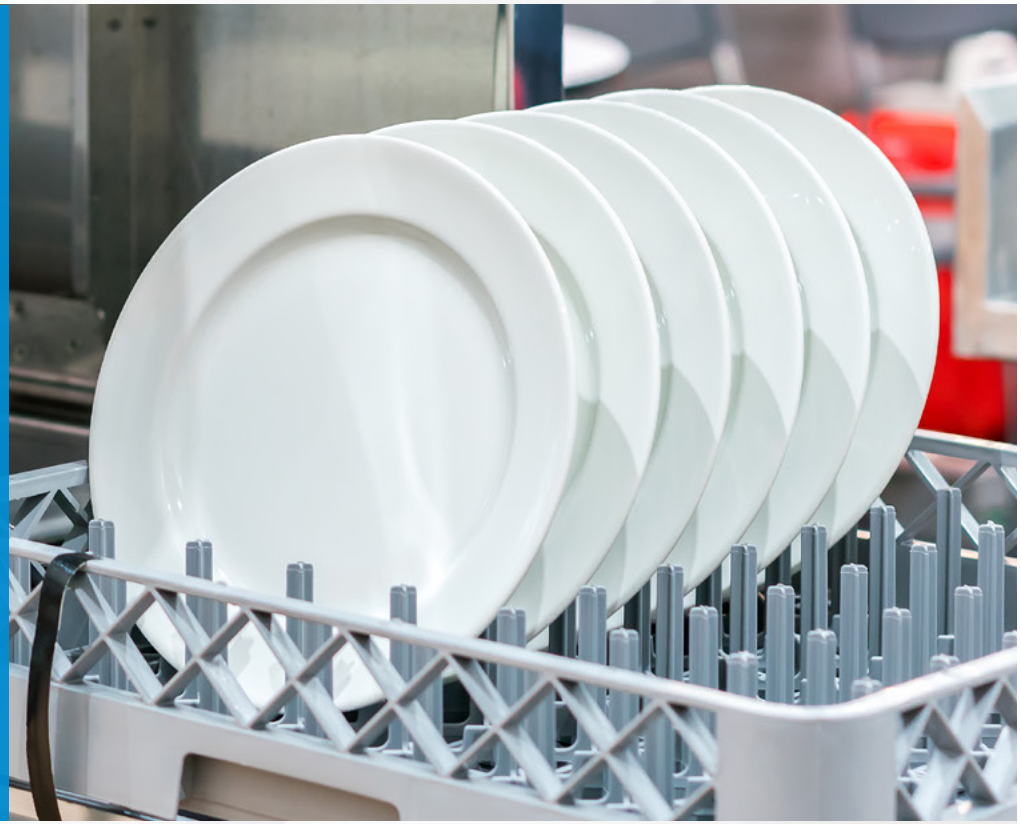
- **Breaks down** tough soils (protein, starches)
- **Minimizes impact** of poor procedures
- **Considers** changing water usage in the dish machine
- **Addresses** varied local water conditions and procedures
- **Improves** equipment protection
- **Addresses** changing diets
- **Helps maintain** a clean, healthy environment and reduce food safety risk

Trends to Action: Solving Your Toughest Warewashing Challenges

SMART**POWER**™

The trends we were seeing in the foodservice industry led us to take action to solve your toughest warewashing challenges. Each step of Ecolab's warewash product development has been built on meeting the dynamic needs of customers – from evolving a powder detergent to the development of solids that are safe to touch. This ebook documents our latest innovation in warewashing: the SMARTPOWER™ Program.

With a combination of innovative chemistry, actionable insights and Ecolab's personalized service, the SMARTPOWER™ program is designed to handle your toughest warewashing challenges, streamline your operations and deliver the best results at the lowest total cost.



Testing and Perfecting New Warewashing Chemistry

This Ecolab team of experts spent two years formulating and testing the new chemistries based on these requirements. Throughout this process, they developed over 12 new lab methods to analyze and evaluate the formulations' performance, followed by extensive field testing in 200 locations across the globe. These locations included a broad range of soil loads, water conditions and procedures.

SMART**POWER**™ Innovation by the numbers

RESEARCH
40 technical experts from **10** countries

284 foodservice environments assessed in **44** cities across **21** countries
20,000 data points and **2,000** photos collected

DEVELOPMENT
2 years of formulation
12+ lab methods

10,000 data points
100+ process runs
850,000 pounds of test product

TESTING
2 years of field testing with varied **soil loads, water conditions** and **procedures**

200 customers locations
North America: **81**
Europe: **51**
Asia Pacific: **54**
Latin America: **14**

Smarter Chemistry

Chemistry

SMARTPOWER™ chemistry works by breaking down and suspending food soils so they do not reattach to dishes, and attacks the toughest soils with a patent-pending combination of surfactants, enzymes and polymers.

CHALLENGE	SOLUTION	IMPACT
Food deposits (e.g., protein, fats/oil) and build-up, stains	**SMARTPOWER™ Detergent and SMARTPOWER™ Detergent Heavy Duty**	Removes carryover soils and hazy appearances, and eliminates dark stains
Water impact (low water, hard water, total dissolved solids)	**SMARTPOWER™ Rinse Additive & SMARTPOWER™ Rinse Additive Heavy Duty**	Reduces filming, spotting and dry time
Baked-on protein and starches	**SMARTPOWER™ Presoak**	Reduces carryover soils in flatware and pots and pans
Tough food soils	**SMARTPOWER™ Manual Detergent**	Provides aggresive grease-cutting power with a pleasant user experience
Growing food safety risk	**SMARTPOWER™ Sanitizer**[1]	EPA-registered broad-range sanitizer helps maintain a clean and healthy kitchen environment and reduce food safety risk

[1] EPA Reg. No. 5389-20

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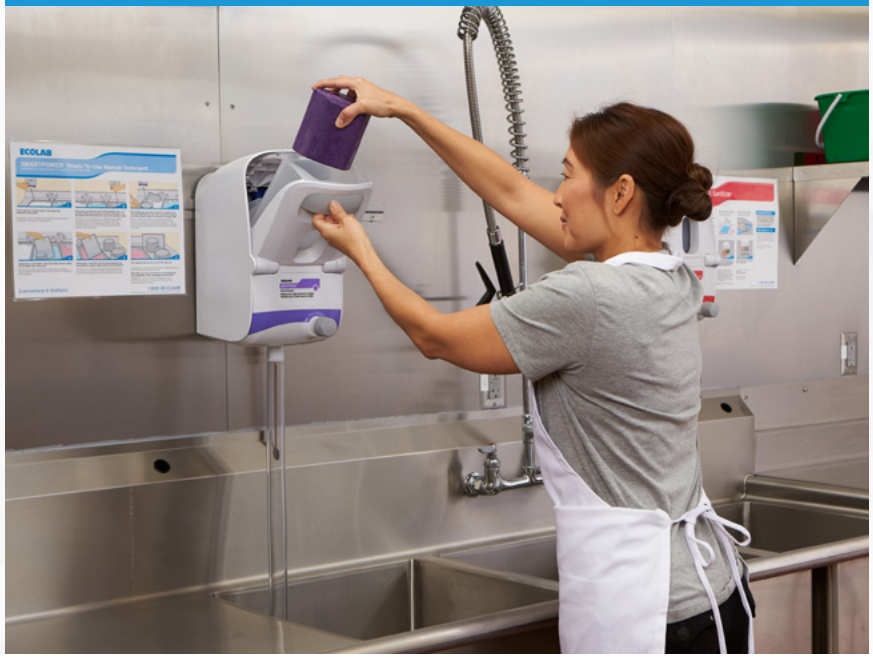
Designed for Sustainable, Safe and Superior Performance

In addition to attacking the toughest soil challenges, SMARTPOWER™ was developed to be safe to touch, biodegradable, non-corrosive and 99.7 percent phosphate-free. No personal protective equipment (PPE) is required when handling, and each product is specifically color-coded, so the right chemistry is always in the right dispenser.



Eliminate unsafe chemical spills with solid, non-caustic chemistry

Easily handle and store compact, lightweight blocks that don't require personal protective equipment

Avoid errors with color-and shape-coded chemistry blocks

Achieve GHS and OSHA compliance

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Actionable Insights for the Connected Kitchen

In addition to the powerful chemistry, the SMARTPOWER™ program was developed with cloud-connected technology, collecting constant data to deliver actionable insights and improve customers' procedures by driving efficiencies in their operations.

Key Performance Indicators (KPIs) identify variances in efficiency and food safety metrics, with probes to measure wash and rinse temperature, low detergent, rinse aid, and sanitizer levels and wash tank change compliance.

Alarms indicate when action is needed and alert the dish machine operator to concerns that need attention – including low temperature, refill product and wash tank change alerts.

Data-Driven Training & Service

The robust data collection capabilities of SMARTPOWER also drive customized training and service, and help identify cost-saving and operational efficiency opportunities:

- **Daily Summary & Trends:** The status screen includes a dish machine summary and daily detailed trends, covering warewashing performance metrics like how many racks have been washed outside of normal operation.
- **Targeted Training:** Trends and outliers indicate opportunities to provide additional staff training, including language-free videos with instructions on warewashing best practices.
- **Predictive Support & Service:** Actionable insights provided by SMARTPOWER technology enable Ecolab service technicians to monitor warewashing operations to identify and anticipate service needs.

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Powering Your Performance

Powerful chemistry, actionable insights and personalized service combined together deliver what you need most – delighted guests, optimized operations and protected reputations.

SMARTPOWER™ helps restaurants achieve:

One-pass washing and reduction in hand-polishing by addressing protein build-up on wares.

Improved performance in challenging water conditions

Cleaner machines and fewer breakdowns.

Decreased impact of improper procedures, including temperature, product usage and wash tank change outs.

Reduction in rewash, combined with visibility into operations, allows our customers to save on labor and utilities, and operate a more sustainable restaurant.

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SMART**POWER**™ Impact by the Numbers

LABOR

Reduce labor costs by
$152,000
eliminating **15,200 hours** annually

Save up to
912,500
racks run every year[1]

UTILITIES

Save
$12,800
each year by conserving up to **912,500 gallons** of water[2]

Save
$15,050
each year by reducing energy usage by **15,050 therms**

SUSTAINABILITY

Use SMARTPOWER™ products that are
100%
phosphate-free and **99.7% phosphorus-free**

Reduce up to
12,500
pounds of plastic waste disposal every year[3]

[1] Based on 50-unit chain running 500 racks per day and assuming 15 percent rewash. Testing proved 61 percent reduction in rewash, resulting in 10 percent reduction in overall racks washed daily. | [2] Based on 50-unit chain running 500 racks per day and reducing racks by 10 percent. | [3] Versus five-gallon plastic pails, based on 50-unit chain running 500 racks per day. | Results may vary based on your specific set of circumstances.

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The Promise of SMARTPOWER™

Restaurant operators and managers face a number of headwinds. Cost pressures are increasing and new challenges are emerging as diets change and water needs to be used more resourcefully. Restaurants must juggle these growing pressures while remaining focused on achieving the three core pillars of restaurant success: delighting guests, optimizing operations and protecting their reputation.

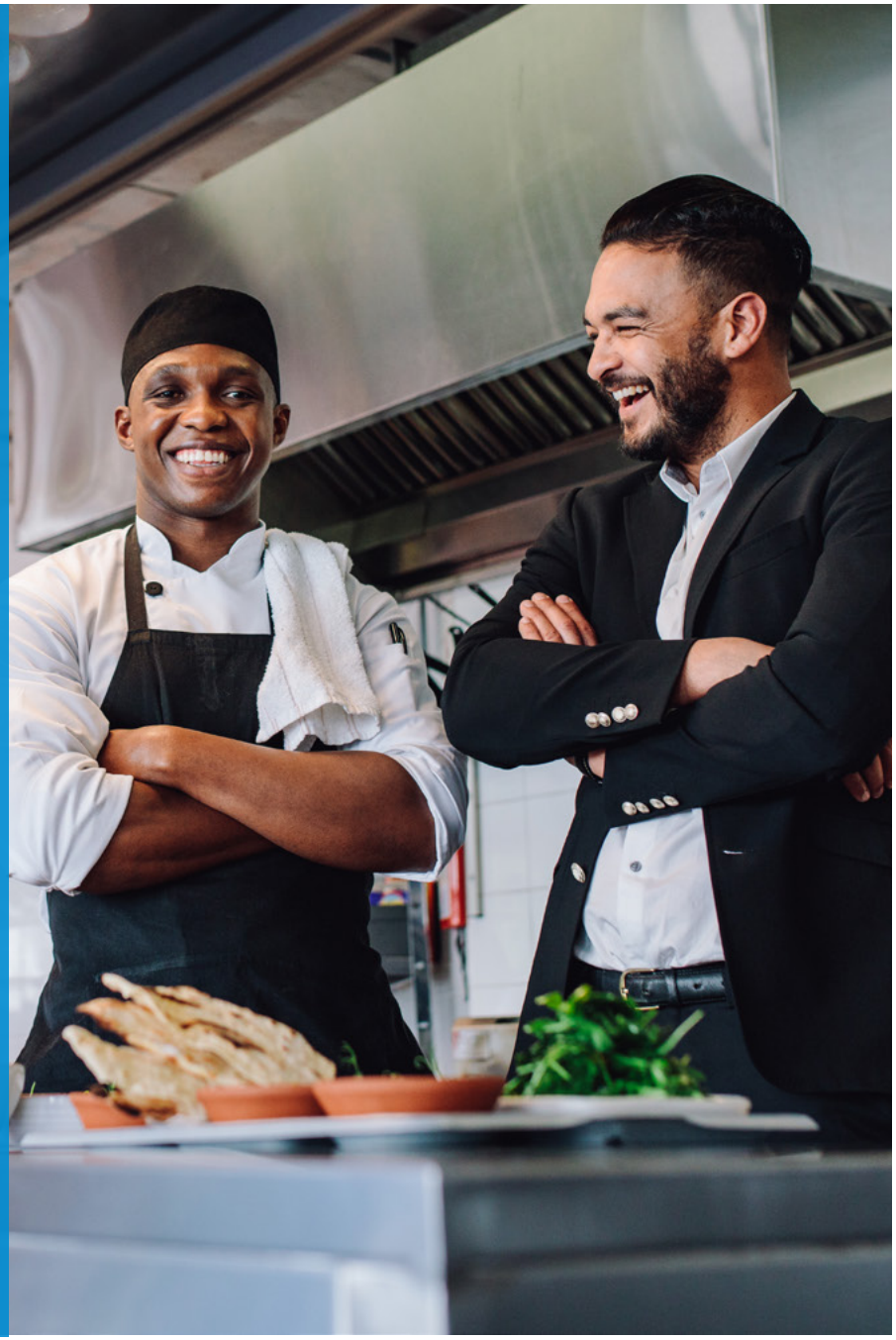
SMARTPOWER™ was developed to specifically address emerging challenges and support critical success factors. The SMARTPOWER™ program – coupled with actionable insights and our personalized service – powers your restaurant's performance and helps drive your business' success.

1. Our patent-pending SMARTPOWER™ chemistry removes excess proteins and food soils from dishes, allowing plates to shine like new, and glasses to have a spot-free shine.

2. Our SMARTPOWER™ digital warewashing technology collects data on racks and procedures, and has language-free training videos to minimize the impact of employee turnover and poor procedures to help reduce the number of racks washed.

3. Our team of more than 5,000 global field associates partner with you to deliver the best possible results at the lowest total cost.

To learn more about the SMARTPOWER™ program and the personalized service of Ecolab, call 1.800.35.CLEAN or visit www.ecolab.com/SMARTPOWER



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