



Cleansing and disinfecting
power without skin irritation



EUROPE Office

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Introducing a cleaner chosen by moms
and dads who are concerned about their
children's future and security

- 100% super alkali ion water
- Disinfects
- Deodorizes
- No need to wipe twice
- Doesn't irritate
- Odorless
- Breaks down naturally



E-Plan supports the UN's Sustainable Development Goals (SDGs).

Product Profile



Washing away viruses is the best way to prevent infection.

e-WASH

e-WASH is produced by electrolyzing tap water.

This is accomplished using a proprietary positive ion-exchange membrane, with pure water from which impurities have been removed on the molecular level using a reverse osmosis (RO) membrane as the raw material and food additive-grade potassium carbonate as the electrolyte. The result is highly alkaline electrolyzed water with a high concentration of dissolved hydrogen.

e-WASH consists of 99.83% pure water and 0.17% potassium hydroxide.

Since it contains only a minuscule amount of dissolved potassium, e-WASH will not irritate young children's hands. The strong alkaline action provided by the large number of pH 12.5 hydrogen ions it contains delivers exceptional cleansing effects on par with synthetic surfactants, allowing it to emulsify oils and fats. Since it also provides disinfecting benefits that render noroviruses and bacteria that cause food poisoning inactive, it simultaneously delivers cleansing and disinfecting action that is critical in preventing infection.

e-WASH is a sustainable product that will not irritate your hands, even when used repeatedly on a daily basis.



- Patent No. 4967050 ("Device for Producing Electrolyzed Ion Water")
- Patent No. 6057267 ("Method and Device for Producing Electrolyzed Ion Water")
- Patent No. 6448043 ("Method and Device for Producing Electrolyzed Ion Water")

Product name: e-WASH

Applications: Disinfection, cleansing, cleaning, and deodorizing

Ingredients: Pure water (99.83%)
Potassium hydroxide (0.17%)

Product Profile



Cleansing and disinfecting with e-WASH

Blind spots associated with disinfectants

Alcohol-based antiseptics and bleach-based disinfectants are used regularly to prevent viral infection. These products will fail to deliver the intended benefits if their use is not informed by an accurate understanding of how they function.



- If the product lacks the ability to remove dirt such as the proteins that coat bacteria, it won't reach the bacteria.
- Alcohol is less effective if used on wet hands.
- Many products lose their effectiveness if exposed to UV rays or sunlight.
- Sustained use can lead to skin damage and unpleasant odors.

e-WASH is easy on the hands despite its cleansing and disinfecting power.



- Exceptional cleansing power removes the dirt and oil that cover bacteria and viruses.
- e-WASH remains an effective disinfectant when used on wet fingers.
- Spray bottle container ensures the product remains effective over the long term.
- e-WASH can be used with peace of mind, even if it will get onto baby's fingers and skin.

Safety and Peace of Mind



Choose a product that's gentle for everyone in the family since you'll be using it daily.

e-WASH offers a gentle alternative that resolves people's concerns as they disinfect surfaces on a daily basis to prevent viral infections, whether they're worried about skin irritation due to sustained use, oversensitivity to chemical substances, religious prohibitions on the use of alcohol, or the unpleasant odor of chlorine.

- 99.83% water for peace of mind
- No chlorine odor or pungent smell
- Toxicity and first aid: Outside scope of classification/not applicable
- VOC and COD regulations: Not applicable
- Patch test evaluation result: Safe product
- Concentration of potassium hydroxide: 0.17% (Industrial Safety and Health Act: Exemption for 663 listed substances and ingredients: 1%)

Safety data sheet (SDS)

The SDS communicates the product's exceptional level of safety to customers.

- Summary of toxicity and handling precautions
- GHS classifications

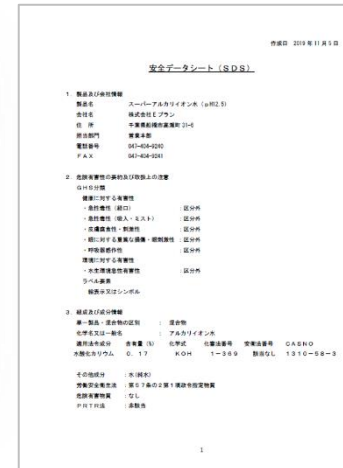
Health toxicity

- Acute toxicity (oral): Outside scope of classification
- Acute toxicity (inhalation/mist): Outside scope of classification
- Skin corrosivity/irritation: Outside scope of classification
- Serious eye damage/eye irritation: Outside scope of classification
- Respiratory sensitization: Outside scope of classification

Environmental toxicity

- Aquatic environment toxicity: Outside scope of classification

- First aid: Not applicable



Skin irritation test

This test found no signs of skin irritation on any of the 22 subjects, who included 17 women and 5 men.

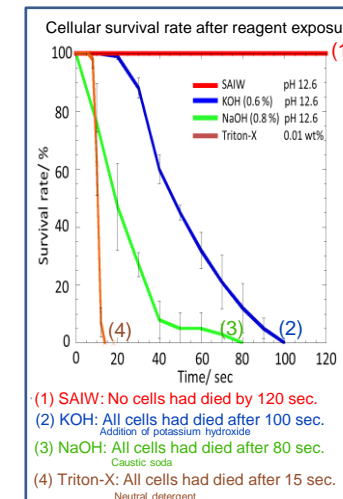
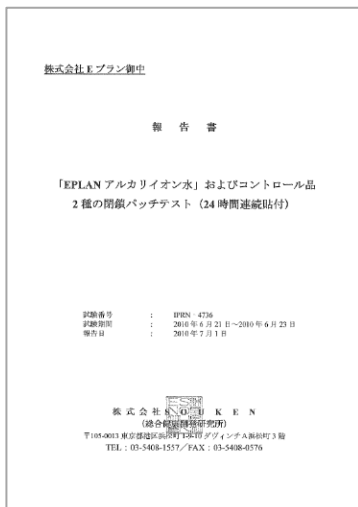
Tested product: e-WASH (pH 12.5: alkaline ion water)
Skin irritation index: 0.0 Evaluation: Safe product

A closed-method patch test that involved 24 hours of continuous application verified the safety of all tested products since their skin irritation indexes indicated safe values.

Test no.: IPRN-4736

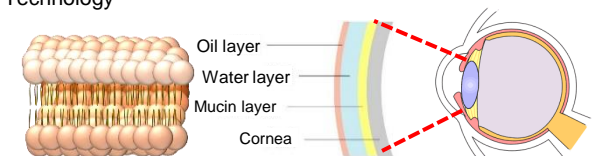
Test report: June 21 to 23, 2010

SOUKEN Co., Ltd.,
(Institute of General Health Development Co., Ltd.)



Cellular survival rate test

No dead cells were observed during eye cell testing with e-WASH. The strain of monocytic cells used was a type of white blood cell that is used in cellular testing and research, for example to elucidate the mechanisms of canceration. These cells have a two-layer cell membrane consisting of closely spaced phospholipids that closely resembles the eye's cornea (oil layer). Safety testing is carried out by dripping reagents onto these cells, which serve as a substitute for the eye's cornea (oil layer). Tohoku Institute of Technology



Cleansing power

e-WASH disinfects after powerfully cleansing viruses and bacteria concealed in dirt and oil.

Viruses and bacteria may be concealed underneath dirt and oil. When a disinfectant that lacks cleansing power or a substance such as alcohol is sprayed on top of such dirt and oil, viruses may be protected by the dirt and oil, which prevent the product from reaching them. e-WASH delivers effective disinfecting capability thanks to its powerful cleansing action.



We conducted a series of ATP wipe tests to compare the cleansing power of e-WASH with that of a typical disinfectant spray (comparison by E-Plan).



ATP wipe testing is a technique for checking dirt that is invisible to the naked eye by quantifying it. The technique is used to check the level of contamination or cleanliness of equipment in food plants and medical institutions. It is also used to check frequently-touched surfaces and proper hand-washing technique.

* It does not measure viral contamination, but rather dirt and residual material.

Refrigerator (interior) test

- Test method**
- A spray was applied twice.
 - The surface was wiped several time with a paper towel.
 - Dirt was measured by performing an ATP wipe test.



Product	Before cleansing	After cleansing	Residual rate	Judgment
Alcohol-based spray	98,999 RLU	11,565 RLU	11.68%	Fail
e-WASH	11,565 RLU	229 RLU	1.98%	Pass

Target value: Up to 499 Caution: 500 to 999 Fail: 1,000 or more
*Values provided for reference purposes.

Hand-washing test

Test method

- (1) Hands, fingers, and wrists were washed carefully using tap water. An alcohol-based product was sprayed on the hands.
 - (2) Two pumps of e-WASH (foam type) were applied. Hands, fingers, and wrists were washed carefully using tap water.
- Dirt was measured using an ATP wipe test at both steps (1) and (2).



Product	Before cleansing	After cleansing	Residual rate	Judgment
Alcohol-based spray	38,208 RLU	23,354 RLU	61.12%	Fail
e-WASH (foam type)	241,856 RLU	630 RLU	0.26%	Pass

Target value: Up to 1,999 Caution: 2,000 to 3,999 Fail: 4,000 or more
*Values provided for reference purposes.

Door handle test



Restroom doorknob test



Parking garage button test



Test method

- A spray was applied twice.
- The surface was wiped several time with a paper towel.
- Dirt was measured by performing an ATP wipe test.

Product	Before cleansing	After cleansing	Residual rate	Judgment
Bleach-based spray	2,472 RLU	514 RLU	20.79%	Fail
e-WASH	3,025 RLU	32 RLU	1.06%	Pass

Target value: Up to 199 Caution: 200 to 399 Fail: 400 or more
*Values provided for reference purposes.

Test method

- A spray was applied twice.
- The surface was wiped several time with a paper towel.
- Dirt was measured by performing an ATP wipe test.

Product	Before cleansing	After cleansing	Residual rate	Judgment
Alcohol-based spray	2,475 RLU	913 RLU	36.89%	Fail
e-WASH	1,561 RLU	107 RLU	6.85%	Pass

Target value: Up to 199 Caution: 200 to 399 or less Fail: 400 or more
*Values provided for reference purposes.

Test method

- A spray was applied twice.
- The surface was wiped several time with a paper towel.
- Dirt was measured by performing an ATP wipe test.

Product	Before cleansing	After cleansing	Residual rate	Judgment
Bleach-based spray	5,884 RLU	726 RLU	12.34%	Fail
e-WASH	4,997 RLU	141 RLU	19.42%	Pass

Target value: Up to 199 Caution: 200 to 399 Fail: 400 or more
*Values provided for reference purposes.

❶ Most typical disinfectant sprays lack cleansing power.

❷ We verified the exceptional cleansing power of e-WASH.

Disinfects



e-WASH delivers double disinfecting power that inactivates viruses and emulsifies lipid membranes.

e-WASH has exceptional disinfecting power that allows it to inactivate norovirus, a non-enveloped virus. Despite consisting of 99.83% pure water and not containing any synthetic surfactants, e-WASH is effective at emulsifying lipids, allowing it to inactivate enveloped viruses.

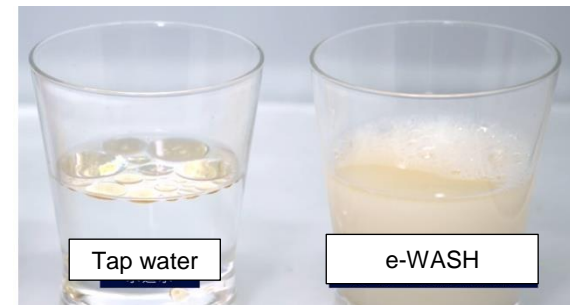
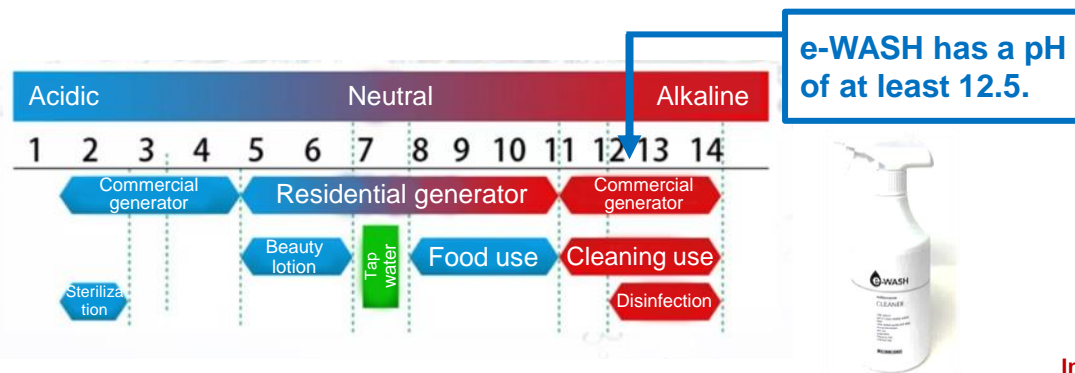
High alkalinity and oxidation-reduction potential

e-WASH, which contains no toxic chemical substances like caustic soda and which has a safe pH of at least 12.5, delivers an oxidation-reduction potential (ORP) of -800 to -200 due to its high hydrogen content and inactivation effects that exceed the range of values that is survivable by microorganisms.

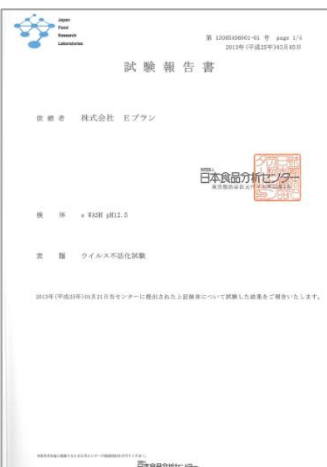
Ability to emulsify lipids

Since e-WASH is distinguished by its ability to form a stable emulsion with oils, it can be used in cleaning applications in many food plants and other production facilities.

It offers significant promise in its ability to act on lipids in enveloped viruses.



Influenza virus inactivation test in progress (We plan to report on the test results in early June 2020.)
Human herpes virus inactivation test in progress (We plan to report on the test results in early June 2020.)



Norovirus (feline calicivirus) inactivation test

Specimen: e-WASH pH 12.5

Test objective: To test how well the specimen inactivates feline calicivirus

Evaluation result of “no virus detected” after 30 sec.

Test virus	Target	log TCID ₅₀ /mL ^{*1}			
		At start	After 30 sec.	After 2 min.	After 5 min.
Feline calicivirus ^{*2}	Specimen	6.0	<1.5	<1.5	<1.5
	Comparison	6.0	-	-	5.7

--: Not tested

<1.5: Not detected

No. 13005496001-01, issued March 5, 2013

Japan Food Research Laboratories

Other third-party tests

- “Coliform Bacteria” (test report issued by Japan Food Research Laboratories) Sterilization effectiveness test No. 12029767001-01
- “Salmonella Bacteria” (Public Health Society of Miyagi Prefecture) Issued by the Public Health Society of Miyagi Prefecture on August 10, 2009
- “Canine Parvovirus” (Kitasato Research Center for Environmental Science) KRCS No. 25_1036, issued November 25, 2013
- “Radioactive Substances” (Japan Functional Food Analysis and Research Center) Receipt No. 111412 (April 7, 2011) and others

Product Supply



Eプランは持続可能な開発目標 (SDGs) を支援しています。

E-Plan supports the UN's Sustainable Development Goals (SDGs).



Introducing Minna-no-Izumi, an economical e-WASH generation system that utilizes reusable containers E-Plan Co., Ltd., is a generation system manufacturer that provides technology for purifying water using proprietary electrolysis to produce e-WASH. We sympathize with the many people who are suffering from the ravages of COVID-19 and who are unable to take sufficient steps to disinfect their surroundings and maintain good hygiene due to shortages of alcohol and other disinfectants, hand soap, and spray bottles, leading to unease and concern in their everyday lives. As people are forced to resort to highly irritating chemical substances as substitutes for disinfectants that are no longer available, we at E-Plan see our role as helping supply super alkaline ion water products like e-WASH that are capable of effective disinfecting and hygienic action without irritating the skin. By supplying such products for hygienic cleaning and cleansing use, alcohol and other products that are in short supply can reach the locations and circumstances, for example medical applications, where they are needed, properly and in suitable quantities. As a generation system manufacturer, E-Plan is supplying equipment that will play a key role by producing and supplying e-WASH in communities across Japan. In this way, more people will be able to obtain disinfecting and hygienic tools in an economic manner thanks to reduced transportation and packaging costs, allowing them ongoing access to e-WASH while reusing spray bottles and other containers. We thank customers for their understanding and hope that they will work with us to overcome the considerable barriers of habit, certification, and recognition.



Our generation stations can operate anywhere in Japan or the world where there is water and electricity.

				<p>We can design a custom model to suit your application.</p> <ul style="list-style-type: none"> ● High-capacity production models ● Storage tank-equipped models ● Residential models <p>Etc.</p>
<p>Compact model that lets the user select a pH level of 11.5, 12.5, or 13.1 for every 2 L</p>	<p>Model that can continuously generate 15 L per hour at a pH level of 12.5</p>	<p>Storage tank-equipped model that can continuously generate 15 L per hour at a pH level of 12.5</p>	<p>Model that can continuously generate 60 L per hour at a pH level of 12.5</p>	

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