

QUESTIONS UNLOCK KNOWLEDGE



Frequently Asked Questions When Considering Purchasing a HOCl Hypochlorous Acid Generator!

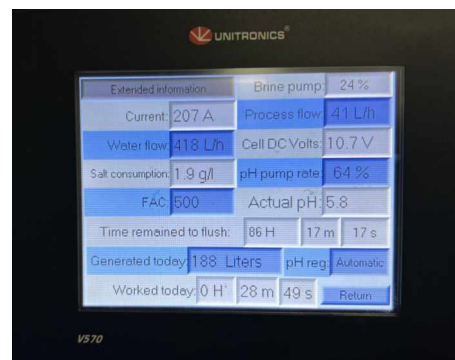
1. Performance and Output of HOCl Hypochlorous Acid On-Site System Generators

Q: What concentration (ppm) and pH does the generator produce, and is it adjustable?

A: All Kirkmayer HOCl Hypochlorous acid On-Site System Generators can be pre-calibrated without adjustment 50 ppm: 100 ppm: 200 ppm: 300 ppm: 400 ppm: 500 ppm. The pH can be manually adjusted between 3 ~ 8 pH. Both the ppm and pH is controlled through our PLC

Q: How consistent is the output from batch to batch (how is it monitored or controlled)?

A: All Kirkmayer HOCl Hypochlorous acid On-Site System Generators produce very consistent pure HOCl with extremely low salt 1.6 ~ 2.2 g/liter of Anolyte. The Kirkmayer PLC provides ease of accurate monitoring throughout the generation process.



Q: What is the production capacity per cycle and per day (liters or gallons)?

A: Kirkmayer makes available a wide selection of stock designed **HOCl Hypochlorous acid On-Site System Generators** capable of producing 5 liter's /hr. ~ 1200 liters /hr. We can scale up meeting client requirements in both output and FAC requirements. If there is a need then we can design a system that is client specific ... just inquire?

Q: How long does a cycle take to produce usable HOCl Hypochlorous acid Solution?

A: Kirkmayer HOCl Hypochlorous acid On-Site System Generators are engineered to produce slightly acidic to neutral anolyte directly in the cell, so stability is achieved inline, not by a long post-reaction wait. Once the system is pre-set to a specific pH and ppm and turned on. It will take about 15 ~ 20 minutes to produce stable HOCl. The system is calibrated to specific amps, flow rate and brine requirements to meet and to reach the desired set points for pH and ppm.

Q: How stable is the HOCl Hypochlorous acid solution after generation (shelf life under normal storage)?

A: HOCl Hypochlorous acid solution from Kirkmayer generators (electrolytically generated anolyte) provides very stabilized HOCl, typically lasting 4 ~ 6 months and longer under normal storage before significant degradation (e.g., 25 ~ 40% loss of free chlorine).

Key Stability Factors: HOCl Hypochlorous acid solution decomposes via disproportionation and reaction with organics/impurities, accelerated by heat, UV light, high pH (>6.5), and air exposure; Kirkmayer's output (pH ~4-6, 200-500 ppm) is optimized for this but still fragile without additives.

Shelf-Life Expectations HOCl Hypochlorous acid solution:

Storage Conditions	Expected Shelf Life	Notes
Cool (4~10°C), dark, airtight opaque bottle	4~6 months to 25~40% potency	Ideal for fresh generator output; test ppm monthly
Room temp (15~25°C), minimal light, sealed	2~3 months	Average "normal storage" scenario
Poor (warm >30°C, light-exposed)	2~6 weeks	Rapid breakdown; avoid

2. Safety, Compliance, and Certifications of HOCl Hypochlorous Acid Solution

Q: Is the generated HOCl Hypochlorous acid solution compliant with local regulations for its intended use (surface disinfection, food contact, wound care, etc.)?

A: YES - Kirkmayer HOCl Hypochlorous acid On-Site System Generators are classified by the U.S. EPA and Health Canada as pesticide devices under FIFRA (40 CFR 152.500), not pesticides themselves, so they do not require EPA or Health Canada registration if the generated solution is used onsite without antimicrobial claims on labels.

No pre-market registration needed for most generators producing HOCL from salt/water electrolysis, if output stays onsite (e.g., same facility)

HOCl Hypochlorous acid solution 200 ppm or Less:

Kirkmayer HOCl Hypochlorous acid On-Site System Generators producing HOCl at 200 ppm HOCl or less do not require Health Canada or EPA registration of the solution under FIFRA, if it's generated and used onsite (same facility) without transport or sale.

No pesticidal claims on device labels; solution can be used onsite as a cleaner/sanitizer without EPA reg # or Health Canada DIN (Drug Identification Number)

Selling HOCl ≤200 ppm as a cosmetic (e.g., skin mist, toner for soothing/hydration) does not require a cosmetic notification number in Canada or the U.S. however compliance hinges on avoiding drug-like claims and meeting basic labeling/safety rules.

Canada (Health Canada Cosmetic Regulations)

HOCl ≤200 ppm qualifies as a cosmetic if positioned for cleansing/moisturizing (not "disinfects wounds" or "kills germs"). No notification number needed - voluntary Cosmetic Notification Form (CNF) recommended but not mandatory; file within 10 days of first sale for tracking.

US (FDA Cosmetic Rules)

No pre-market registration/notification for cosmetics; FDA doesn't require cosmetic numbers or safety testing (your responsibility). Label truthfully: principal display panel (product name/function), ingredient list, net quantity, distributor info - no antimicrobial claims.

Non-Therapeutic Claims Allowed: At HOCl ≤200 ppm avoids OTC drug classification if no therapeutic intent (e.g., "treats acne" triggers FDA drug rules)

Claims That Require Registration: All claims regarding therapeutic, wound cleansing and disinfectant claims for virucidal, sporicidal and bactericidal require proper registration. You cannot market or sell these types of HOCl solution products without first obtaining proper registrations. Please consult Health Canada and EPA for registration approvals

CFIA Letter of No Objection (LONO): CFIA requires a “No Objection Letter” for sanitizers on food contact surfaces, even if no DIN is needed for basic sanitizer claims (vs. full disinfectant claims).

CFIA vs. Health Canada Roles

Health Canada issues DIN for products with antimicrobial claims (e.g., "kills bacteria).

CFIA evaluates residues/safety for food premises: Submit product specs (name, CAS, % wt, label) to Bureau of Chemical Safety for MRL review; if acceptable (e.g., low Cl2 residue post-rinse), they issue a No Objection Letter and list it as acceptable.

HOCl Use	Registration Needed?	Details
Food contact sanitizer (no kill claims)	CFIA No Objection Letter (LONO)	≤200 ppm no rinse required
Disinfectant claims on food surfaces	DIN EPA+ CFIA acceptance	Full Health Canada / EPA review; generator output needs testing
Cleaners (no sanitize claims)	None	Label as "cleaner" only no CFIA submission

HOCI Hypochlorous acid On-Site System Generators ~ Specific Status

Q: What safety features are built in (overheat protection, leak detection, alarms, interlocks)?

A: Kirkmayer HOCI Hypochlorous acid On-Site System Generators have several built-in alarms providing system protection **every step throughout the generation process**. These built-in alarms protect the system as well as notify the user that a fault has occurred. The system generator will not operate until the fault has been corrected and acknowledged by the user.

Examples of Built-in Alarms:



Q: Are there SDS, validation reports, and microbiological efficacy data available?

A: YES - Kirkmayer HOCI Hypochlorous acid On-Site System Generators have many microbiological efficacy data reports available as well as SDS Data Sheets for its generated solution. For more in-depth information please reference our **"TECHNOLOGY"** tab under our Home Heading of our website.

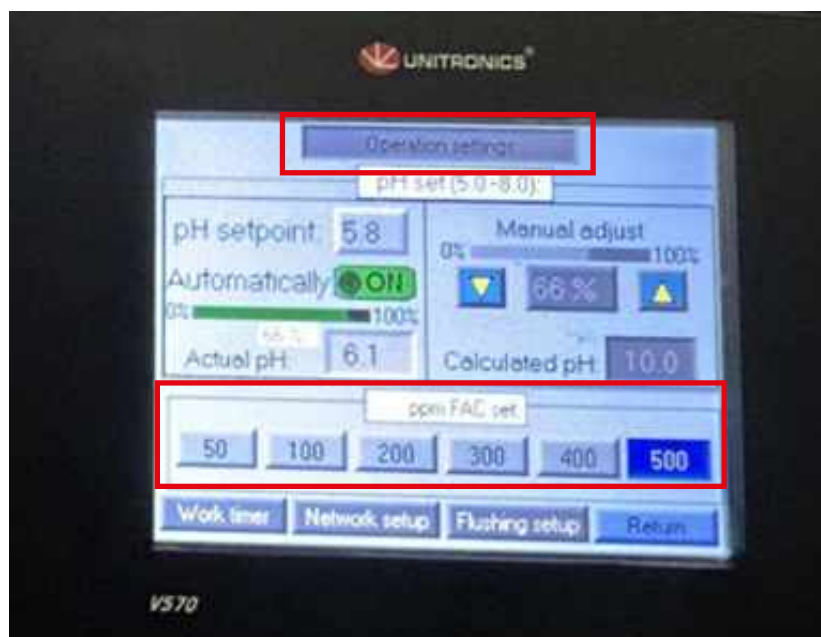
3. Applications and Use Case for HOCI Hypochlorous acid On-Site System Generators

Q: Is this unit designed for home, commercial, healthcare, or industrial use?

A: YES - Kirkmayer offers a wide selection of **Onsite HOCI Hypochlorous acid Generators** with varying outputs for use most applications. For more in-depth information please reference our **"SYSTEM GENERATORS"** tab on our website.

Q: Can the same generator support multiple applications (surface disinfection, fogging, hand sanitation, water treatment)?

A: YES - Kirkmayer Onsite HOCI Hypochlorous acid Generators are designed to meet the needs of any HOCI application requirement. As an available option to the client our system generators can be designed with certain ppm set points to make it easy to provide HOCI generated solution to meet various disinfection and sanitation requirements.



Full PPM Option Examples

Q: Are there recommended or compatible accessories (tanks, dosing pumps, foggers, spray systems)?

A: YES - Kirkmayer Canada can recommend and or make available several high quality and professional accessories such as tanks, testing equipment, fogging device's, dosing pumps and spray devices. For more information, please reference our "GENERAL INQUIRY" tab on our website.

4. Inputs and operational requirements

Q: What water quality is required (tap, RO, distilled; max TDS/hardness)?

A: Kirkmayer Canada recommends that you provide us with a recent water analysis (within 12 months) noting the water source either from a municipal or well source. Once we receive the water analysis then we can best recommend the appropriate necessary water treatment components such as (Carbon Filters, RO, Water Softener and inline filters) that would provide the best incoming water source to the system. This is a crucial first step to maximize the ultimate performance of the system generation of solution.

Q: What type and grade of salt is required, and how much per batch?

A: Kirkmayer Canada recommends a high-grade purity salt. The following brands have performed extremely well with our **Kirkmayer Onsite HOCl Hypochlorous acid Generators**.

Examples of High-Grade Purity Salt – RECOMMENDATIONS

Sifto Crystal Plus 20 kg Water Softener Salt



Sifto Crystal Plus is a 99.9 +/- % high-purity, evaporated salt product designed for efficient use in Kirkmayer Onsite HOCl Hypochlorous acid Generators.

Key Specifications

Weight and Packaging: 20 kg (44 lb) bag with dimensions approximately 57 cm x 38 cm x 10 cm.

Form: Compacted, corrugated-shaped pellets for maximum hardness, easy dissolution, and to prevent bridging, mushing, or channeling.

Certifications: Meets NSF/ANSI/CAN 60 standards for safety and purity; made in Canada from 100% natural ingredients.

Purity and Features: It contains 99.8% pure evaporated salt, producing high-purity brine that minimizes maintenance. The included Resin Clean formula cleans resin beads, inhibits rust buildup and stains, and extends softener life by reducing iron scale and residue.



Cargill CMF® Brand Granulated Salt is a reduced calcium magnesium salt designed for efficient use in **Kirkmayer Onsite HOCl Hypochlorous acid Generators**. Also recommended for use in a variety of food-processing applications, including baking, seasoning and prepared mixes. Also used in non-food applications such as textile dyeing, as a carrier or chemical bulking agent in household and personal care products. Contains no additives.

Packaging: 50 lb. poly lined paper bag

Key Specifications

Product Certifications Cargill CMF salts meet USDA, FDA and Food Chemicals Codex for food use. Cargill CMF salts are certified Kosher for Passover (OU-P) by the Orthodox Union.

Allergen Status: In accordance with the 2004 USA Food Allergen Labeling and Consumer Protection Act (FALCPA), no allergen declarations are required for this product.

Storage and Shelf-Life: Salt products will not spoil or support pathogenic growth. Please see the following information regarding shelf life and storage conditions:

Shelf Life: 5 years when stored in optimal conditions.

Storage Conditions: To improve caking resistance, product should be stored in ambient condition and in a dry, covered area at humidity below 75%.



Morton Culinox 999 Salt designed for efficient use in **Kirkmayer Onsite HOCl Hypochlorous acid Generators**. Morton Culinox 999 Salt is high purity, food grade granulated salt that is cubic in structure. Higher purity helps assure consistent saltiness intensity. Brine treatment, crystallizing technique, and post-crystallizing washing substantially reduces calcium, magnesium, iron, copper and other heavy metals, sulfate and carbonate impurities. The product contains no additives.

Key Specifications

Weight and Packaging: Unit Dimensions (50 lb Bag):

Net weight (lb): 50

Gross weight (lb): 50.5

L x W x H (in): 24x13x3

Cube (ft³): 0.5.

Certifications: Culinox 999 Salt complies with Food Chemicals Codex tolerances and federal cGMP standards.

Additives

Culinox 999 Salt contains no additives.

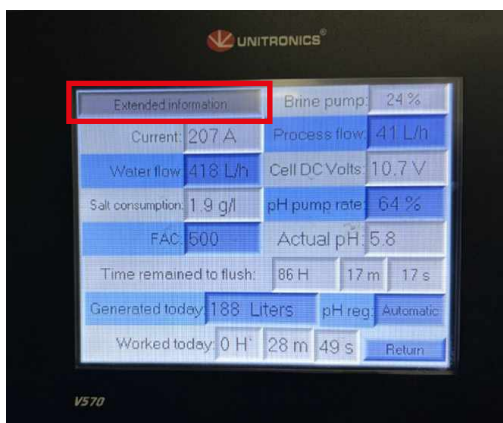
Q: What are the electrical requirements (voltage, phase, amperage, plug type)?

A: Electrical requirements for Kirkmayer Onsite HOCL Hypochlorous acid Generators vary depending on the unit output per liter. Ranges from 110v ~ 400v and 1~3 phase while operating at 50Hz / 60Hz. The electrical supply cord and plug may have to be changed out to meet North American requirements.

Q: Is there real-time monitoring of pH, ORP, and/or ppm, or is it just timer-based?

A: Yes - Kirkmayer HOCL Hypochlorous acid Generator Systems come with a variety of add-on options: Full pH; pH & ORP Sensors and Full range ppm

PLC Screen in “Operating Settings” Mode - Shows Current Status



Q: Does the system need dedicated plumbing, drainage, ventilation, or space constraints?

A: Yes - Depending on the size of the system. Once the system has been chosen, we will be able to provide the exact unit measurements, advice on the proper location, type of ventilation required and plumbing required.

5. Build Quality and Technology

Q: What cell/electrode technology is used (material, expected lifespan)?

A: Our Patented REACTRINA® TECHNOLOGY incorporates components with a unique architecture that makes it revolutionary. Unlike other cylindrical coaxial cells, which today are the most common and widely distributed on the market, our cell has been optimized, conceived, and developed with a special anode geometry that has allowed us to integrate a double electrodes (anode-cathode) cooling system. For more in-depth information please reference our "TECHNOLOGY" tab under the Home Heading of our website.

Q: Is the design modular for easy replacement of key components?

A: Yes - **Kirkmayer Onsite HOCl Hypochlorous acid Generator Systems** are not only built tough and outperform other brands, but they are also built with simplicity in mind. The key component is the costliest component. At **Kirkmayer** we have designed this patented cell technology so the inner cell membrane can easily be replaced without a costly cell replacement unlike all other cells. This feature alone will save you thousands of dollars. For more information regarding our design and technology, please reference our "TECHNOLOGY" tab under our Home Heading as well as our "SYSTEM GENERATORS" tab on our website.

Q: What Cell Technology that is currently in the market that one should be aware of and often comes with issues?

A: Round Cell Technology: If the cell uses a "THREADED END CAP" at both the Anode and Cathode ends of the cell often encounters these issues:

- Cracked End Caps caused by overheating of the cell
- Etched Threads caused by overheating resulting in a complete costly cell replacement
- These cells are more prone to cause severe overheating when system requirements are such that its use requires high volume production drawing more amperage. As more current is drawn into the cell, heat is displaced to the two weakest areas being the end caps where the cells are threaded to accommodate the End Caps. Overtime the End Caps will crack causing system failure.



Examples of Round Cell Technology and Cracked End Caps

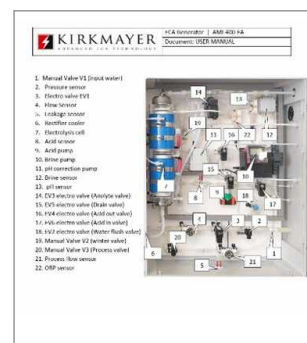
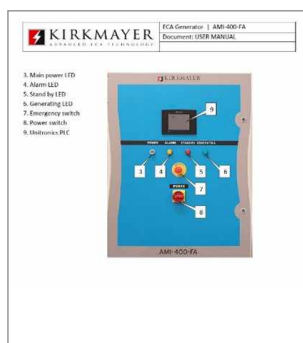
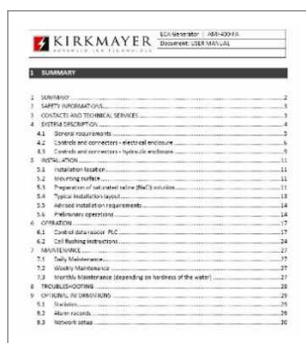
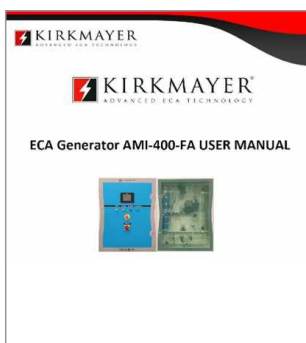


6. Installation Training, and Usability

Q: Is professional installation required, or can it be self-installed?

A: Our Kirkmayer HOCI Hypochlorous acid Generator Systems can be self-installed. A complete user and installation manual is made available for each specific system model with every system purchased. Professional installation can also be made available with one of our qualified technical Kirkmayer team. We can provide you with a cost for this service.

Example of our AMI 400 User Manual - Each System has its own dedicated User Manual



7. Maintenance, Service, and Consumables

Q: What routine maintenance is required (cell cleaning, filter changes, calibration)?

A: All Kirkmayer HOCI Hypochlorous acid Generator Systems require proper maintenance to be carried out as outlined in the USER MANUAL. It is IMPERATIVE that proper maintenance on a regular basis to maintain the system performance! Please consult the User Manual.

7 MAINTENANCE

7.1 Daily Maintenance

- Check if volume of NaCl in the brine container is adequate for the output required for that day;
- Check the generator to see if there are any obvious problems, i.e. leakages;
- Check the flow indicator for adequate flow through the generator;
- Check if the current meter indicates the working current according to the setting

7.2 Weekly Maintenance

- Carry out daily maintenance schedule;
- Check Anolyte quality measuring pH, ORP and active chlorine of freshly generated Anolyte; Take sample from Anolyte container

Monthly Maintenance (depending on hardness of the water)

- Carry out weekly maintenance;
- Carry out cell flushing procedures;
- Check all power connections if they might have gone loose. Tighten them up. Clean them from rust as well, if any;
- Ones in 3 month check pH sensor readings, in case of small error reading calibrate sensor using sensor transmitter manual. In case of big error reading replace sensor;
- Periodically ones in 2(two) year open PLC box and replace PLC memory battery this preventing data lost. Battery type is CR 2450N .



7.3 Maintenance on pumps

- Check input filters every 1.000 hours, clean its using water
- Check not air penetrates in input line tight connectors.

Example of our ROUTINE MAINTENANCE noted in our AMI 400 User Manual - each system has its own dedicated User Manual.

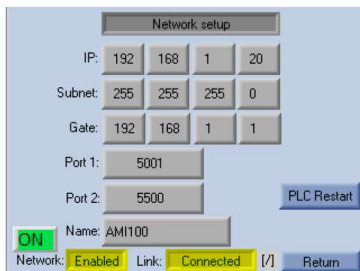
Q: How often do electrodes or major parts need replacement, and what do they cost?

A: All Kirkmayer HOCl Hypochlorous acid Generator Systems are built to last many years without major replacement parts issues providing regular maintenance is carried out as noted in the user manual that comes with your system. We offer additional “Coated Cell” options that extends the cell life and should be considered at the time of purchase. We have designed our cells to allow for a quick cell membrane replacement rather than a complete cell replacement. The cost of this membrane replacement is fraction of the cost of a new cell. Should a cell malfunction it is most likely just the cell membrane that needs replacing. Additionally, we offer the best warranty in the industry.

Q: Is remote diagnostics or monitoring available?

A: Yes - All Kirkmayer HOCl Hypochlorous acid Generator Systems have the capability to be remotely monitored. The internet option should be considered at time of purchase as it cannot be added after the unit has been built and shipped. Once the network has been successfully connected you will be able to remotely monitor and run the system generator with a good Wi-Fi connection **anywhere in the WORLD!**

9.3 Network setup



To setup network: Connect network cable into network socket on unit.

Ask from local network administrator or you Internet provider for available IP address, subnet mask, default gateway and available ports.

If unit need remote access outside of local network, then Internet router must set to port forwarding to PLC IP address.

PLC support 2 ports it means what when 2 ports set then 2 PC or PC and smartphone can connect to PLC simultaneously.

If only one port set, then only one PC or smartphone can connect to PLC at time.

Press name button and type desired PLC network name 8 characters max. PLC network name also mean as network PLC access password.

After setup all network parameters press PLC restart button to reload it with new settings.

To connect and remote unit from PC two programs can be used.

1. Remote Access V9.8.10 View and control a PLC directly from PC, via local or remote connection:

https://unitronicsplc.com/Download/SoftwareUtilities/RemoteAccess_9_8_10.exe

2. Remote Operator V1.0.71 Simultaneously view and operate the HMI panels of multiple PLCs in multiple locations:

<https://unitronicsplc.com/Download/SoftwareUtilities/Remote%20Operator%20Version%201.0.71.zip>

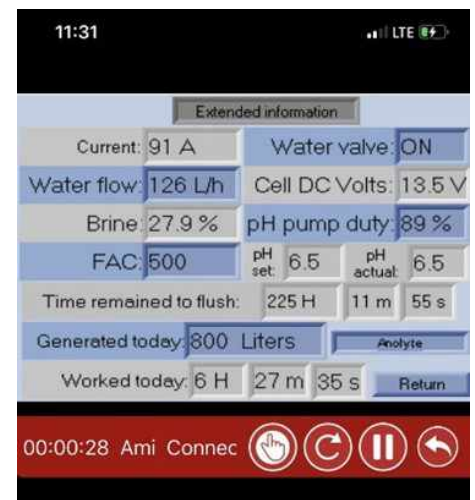
3. For Android smartphone look Unitronics' Remote Operator in Google play

Link - <https://play.google.com/store/apps/details?id=com.unitronics.remoteoperator>

For Apple IOS smartphone look app store Unitronics' Remote Operator

Link - <https://itunes.apple.com/us/app/unitronics-remote-operator/id1063107386?mt=8>

Example of our NETWORK SETUP noted in our AMI 400 User Manual - each system has its own dedicated User Manual.



Example of our NETWORK SETUP noted in our AMI 400 User Manual - each system has its own dedicated User Manual.

Remote Access Anywhere in the WORLD!

Q: Is there a Kirkmayer Canadian | U.S. division that can provide local service, billing and support, and what are response times?

A: Yes - Kirkmayer Canada is a division of Kirkmayer Estonia and services North America providing a localized representation to service OEM replacement parts, technical support and billing in Canadian and U.S. Currency.

For more in-depth information please reference the “GENERAL INQUIRY” tab on our website.

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Your Leader in On-Site HOCl Hypochlorous Acid Generators

KIRKMAYER is a leading global provider of electrochemically activated solution (ECA) generators, delivering first-rate HOCl systems. Our mission is to design and build electrolytic cells that are more reliable, efficient, and durable than conventional ECA and HOCl generators available on the market today.



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