



KIRKMAYER™
CANADA ADVANCED ECA TECHNOLOGY
A Division of Kirkmayer Industries OÜ



Recommended Salt

Importance of Using High-quality Pure Salt

Using high-quality, pure salt is critical for Kirkmayer HOCl generators because impurities directly affect safety, performance, and equipment life. For **Kirkmayer-type electrochemical activation (ECA) generators**, the salt must be non-iodized and low in calcium, magnesium, and sulfate so that the HOCl-rich solution remains stable and non-irritating while the electrolytic cell runs efficiently.

Protects the Electrodes and Cell

Hard-water impurities such as calcium and magnesium form scales on the electrodes, which reduce the effective surface area, increase resistance, and force the generator to draw more current for the same output. Over time, this scaling shortens the life of the precious-metal-coated electrodes and makes the unit less efficient, requiring more frequent acid cleaning and risking premature failure.

Maintains HOCl Stability and Kill Power

Sulfate, calcium, and magnesium ions also accelerate the decay of available chlorine (HOCl) once the solution leaves the generator, so the disinfectant loses potency faster in storage. With purer salt (especially “water-treatment” grade or **Kirkmayer-specified salt**), the HOCl decay rate can drop dramatically, which means more consistent microbial kill-power and fewer dosing adjustments.

Reduces Operating Costs and Downtime

High-purity salt lowers both salt and power consumption because the electrolytic reaction runs more efficiently and with less parasitic side-reaction. It also greatly extends the interval between electrode cleanings. **For Kirkmayer class ECA systems: better salt means lower maintenance, longer uptime, and a more predictable HOCl output for your applications.**

Recommended Purity Salt Levels

For **Kirkmayer-type HOCl generators**, the key specification is high-purity, non-iodized sodium chloride (NaCl) with very low levels of calcium, magnesium, and sulfate; In practice, operators and engineers treating similar electrochemical HOCl generators recommend using at least 99.5–99.8% pure NaCl, with the following impurity limits as a strong guideline.

Recommended Purity Targets

- **Total NaCl purity:** ≥ 99.5 – 99.8% (essentially “water-treatment” or “pool/industrial-grade” salt, not food table salt).
- **Calcium + magnesium:** total less than 30 mg/kg (≈ 30 ppm) in the salt itself, to minimize scaling and keep 3% brine hardness below roughly 3 mg/L.
- **Sulfate (SO_4^{2-}):** less than about 2000 mg/kg (≈ 0.2 wt %) in the salt; higher sulfate accelerates HOCl decay and can worsen precipitation around the electrodes.

Why These Levels Matter for Kirkmayer HOCl Generators

- At or below 30 mg/kg of combined Ca^{2+} and Mg^{2+} , most similar electrochemical-activation systems show little electrode scaling over many months of operation, which is exactly what **Kirkmayer-class ECA generators** need to preserve expensive coated electrodes and avoid frequent acid pickling.
- Keeping sulfate under 2000 mg/kg helps maintain HOCl stability so the solution does not lose available chlorine rapidly in storage, which is important for uses like sanitation, disinfection, and food-contact applications.

Recommended Brands



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.

