



RADICAL WATERS

Natural Hygiene Solutions

CATHOLYTE



electrochemically activated water

CATHOLYTE

The Green Clean Safe Detergent

Catholyte, is the generic term for the ECA solution produced from the cathode chamber in the ECA cell. Catholyte is a negatively (-) charged, anti-oxidant with the primary ingredient being Sodium Hydroxide (NaOH) at a concentration of 800-1000ppm. Specialized Catholyte generators are available with concentrations up to 3000 ppm of NaOH.

Catholyte is an alkaline detergent solution with a pH of >12.5. and a negative Oxidation Reduction Potential (ORP) of <-800mV when freshly produced. Catholyte reduces the surface tension of water and can be used as a mild surfactant.. The Catholyte solution consists of smaller water clusters that penetrate grease and grime easily, increasing its cleaning effect, making Catholyte ideal for cleaning applications to remove biofilm and food residues from processing equipment.

The Radical Waters dedicated Catholyte only ECA Generators produce Catholyte exclusively from Sodium bicarbonate (NaHCO₃). By doing so, Radical Waters avoid the production of acid water waste associated with the production of Catholyte from salt (NaCl). In addition, our specialized process developed with our OEM partner ensure that less NaHCO₃ is required to produce a similar concentration of NaOH than when using NaCl and it does so with a higher pH, this ensures no cost penalty when using NaHCO₃ instead of NaCl. This technology is exclusive to our dedicated Catholyte only Generators but can also be applied to our dual stream ECA Generators upon request.

Catholyte Applications

Catholyte has shown efficacy in the following applications:

- Water treatment - as a flocculent assisting in the precipitation of heavy metals.
- Beverage CIP (Cleaning in Place) applications – As a direct replacement of hot or cold Sodium Hydroxide. In CIP applications catholyte is used cold, and therefore saves on CIP power use.
- Household Cleaner – replaces some traditional household detergents as an eco-friendly safe cleaner.
- Animal Health – treatment of diarrhoea in calves and weaners and prevention of acidosis.
- Laundry detergent – replacing of traditional laundry detergents in hospitality.
- CIP /COP (Cleaning out of Place) in food production facilities – use alone or in mixtures to increase the effectiveness of traditional industrial Cleaners. Can also be used hot to increase effectiveness.
- Janitorial Services – use as an advanced and safe cleaning agent in hotels, schools, airports, prisons, hospitals, senior care, restrooms, waiting rooms, military bases etc.
- Carpet cleaning – safe and environmentally friendly replacement for traditional carpet cleaning products.
- Dishwashing – replacement of the detergents used in commercial dish washers.
- Anti-oxidant – to prevent browning of sliced fruit (apple slices) or vegetables (potato chips).
- Mining/drilling – improve performance of drilling fluids.
- Conveyor belt lubrication.

Benefits of Catholyte

- Production of Catholyte is cost effective, only use sodium bicarbonate, water and electricity.
- Suitable for a multitude of applications.
- Eco-friendly.
- Non-Toxic.
- On-site generation, no transportation, handling and storage of hazardous chemicals.
- Catholyte is rinse-free.



contact us today to see how catholyte could benefit you - info@radicalwaters.com

CATHOLYTE PRODUCTION

Radical Waters ECA Generators Produce Green Clean Catholyte in two ways:

1

As a primary product from the dual stream NOW ECA Generators when configured to use sodium Bicarbonate for Catholyte production.

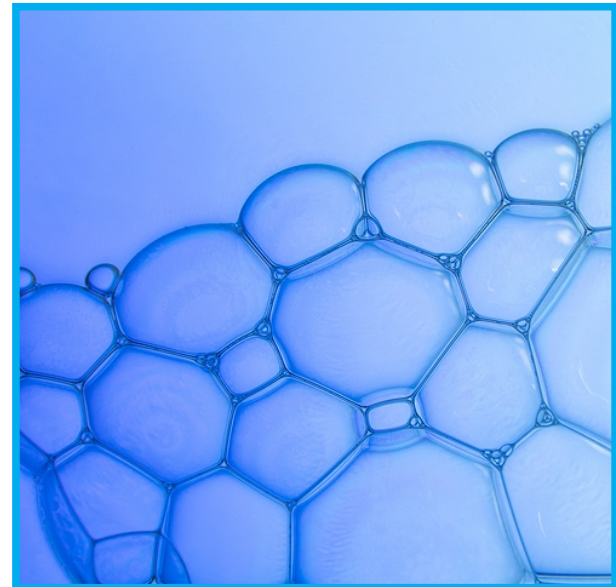
The Catholyte production from the dual stream NOW Compact/Impact devices are equal to the Anolyte production and comes in configurations of either 20, 40, 100, 200 and 300 litres per hour of both Anolyte and Catholyte production. The concentration of Sodium Hydroxide (NaOH) from these generators are normally set to ~800 ppm, but the NaOH concentration can be increased to ~ 1600 ppm should the customer so require. These units were specifically designed for use in the beverage industry. Special dual stream ECA generators are available that can produce Anolyte with an FAC of 3000 ppm and Catholyte with an NaOH concentration of 3000 ppm. These are specifically designed for CIP applications in the Food industry where higher concentrations are required to deal with fats and proteins.



2

A dedicated Compact/Impact Catholyte Generator (CG).

The Catholyte production from the NOW Compact/Impact CG Catholyte only Generators range from 20 litres an hour up to 4000 litres an hour of dedicated, Catholyte-only production. Catholyte only generators are available with Sodium Hydroxide (NaOH) concentrations as from 1000 ppm to 3000 ppm and pH > 12.5.



Radical Waters
Green Clean Catholyte
replaces toxic detergents
in your hygiene process.

