

ACO®

Active Catalytic Oxidation of Organic Pollutants

ACO® is available in 5 and 20 litre drums, in 2 versions:

- ACO®bio, for fish systems
- ACO® for chlorinated systems

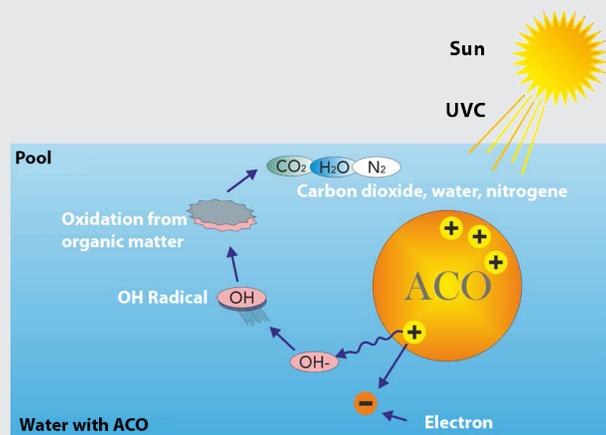


What is ACO®?

ACO® is an Active Catalytic Oxidiser that works by harnessing the natural energy of UV light from the sun to catalyse the formation of free radicals to increase the RedOx potential in the water.

Free radicals are the active ingredients of ozone. They oxidise just like chlorine to remove pollutants but do not form noxious disinfection by-products. ACO® is not consumed in the process, it just makes what happens naturally much more efficient.

In chlorinated systems ACO® also protects chlorine from photolysis by sunlight and makes it last three times longer in outdoor facilities. ACO® does the same as cyanuric acid, but instead of reducing oxidation capacity, ACO® increases the oxidation potential of the water.



The more the sun shines, the cleaner the water!



ACO® → no pinniped eye irritation → no cetacean pulmonary irritation → no walrus skin irritation.

Your advantages at a glance

- ✓ **Fish-Friendly Water Treatment** – with ACO®bio for all outdoor biological systems.
- ✓ **Clearer water** – Catalysis of natural UV oxidation of organics in the pool reduces the load on all other filtration equipment..
- ✓ **Healthier water** - In chlorinated systems oxidation by free radicals reduces production of toxic disinfection by-products such as trichloramine, chloroform and cyanogen chloride.
- ✓ **High efficiency** - ACO® extends the half-life of chlorine and peroxide by over 300 %, giving you substantial chemical savings



ACO® → no problem is too large :-
 Perfect for all outdoor Aquatic Zoo animal exhibits!

Use energy from the sun to oxidise organics with no noxious by-products.

How does ACO® work?

Short-wavelength, energy-intensive ultra-violet rays from the sun are converted by ACO® into longer wavelengths. When this energy is released it splits water molecules producing free radicals (hydroxyl radicals and oxygen radicals). These are even more powerful than ozone and can oxidise organic pollutants such as urea and organo-chloramines completely back to carbon dioxide (CO₂), water (H₂O) and nitrogen (N₂) so, no harmful disinfection by-products, just clean safe water and no trichloramines in chlorinated systems

Fish Systems

In biofiltered fish and mammal systems ACO®bio offers similar benefits to ozone use. The natural oxidation capacity generated is similar to that found in surf, rapids or mountain streams and is therefore very safe for the animals. It is equally well suited to external zoo exhibits as to fish ponds and outdoor aquariums.

Chlorinated Systems

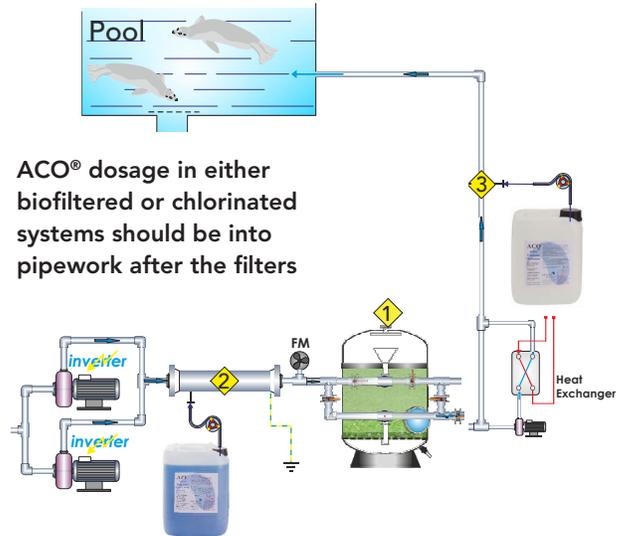
Chlorine is protected by conversion of the short-wavelength UV light to a longer wavelength.

When ACO® is dosed into the water UV from sunlight helps to reduce chlorine demand and reduces the formation of trichloramine and harmful by-products such as chloroform and cyanogen chloride that are hundreds of times more harmful than combined chlorine.

ACO® is a cationic flocculant, and in combination with APF®, you get a double stage flocculation of both positively and negatively charged particles for even better organics removal.

Less organics → lower chlorine demand → less chlorine consumption → less Disinfection By-Products (DBP's):

How to use ACO®?



- 1 Filtration with AFM®
- 2 Coagulation and flocculation with APF® and ZPM
- 3 Catalytic oxidation with ACO®

Dosage rates

In animal systems ACO® is best dosed continually using a peristaltic pump (Dryden Aqua flocculation pump) after the AFM® filter. The dosage rate, depending on load, is 1 fl.oz. per 15,000 gallons of filtered turnover.

We recommend that dosage be doubled during the first month of treatment. Using this amount, ACO® will take from six to eight weeks before the full effects are apparent.

Who is Dryden Aqua?

We are a Scottish marine biological company founded in 1980 primarily to serve the aquaculture industry and AFM was developed specifically for aquaculture and aquarium use. Our unique knowledge combination and detailed understanding of biological as well as physio-chemical reactions has since enabled us to develop into other markets where sustainable water treatment processes can make a difference.

Our passion however remains in the aquaculture and aquarium industries which provided the foundation for our commitment to conservation and sustainable technology. Our mission is to help make the world a better place by providing solutions that save lives in developing countries, improve overall public health around the world and have a positive environmental impact on our ecosystem.

