BIO-ORGANIC CATALYST
THE POWER IN NATURE®

CASE STUDY
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Successful Cases with Catalyst and Polymers in the Country of Colombia

Dairy Farm

Successful case where the coagulant dose could be lowered, and COD decreased by implementing BOC technology.

BEFORE	
PARAMETER	**RESULT**
Initial COD	3030 ppm
Final COD	1260 ppm
% Removal	**58.4%**
Coagulant	100 ppm
Polymer	2
Initial Turbidity	760
Final Turbidity	106

Eco-Cat™ is dosed at 3.0 ppm and the wastewater sample is left in aeration for three hours.

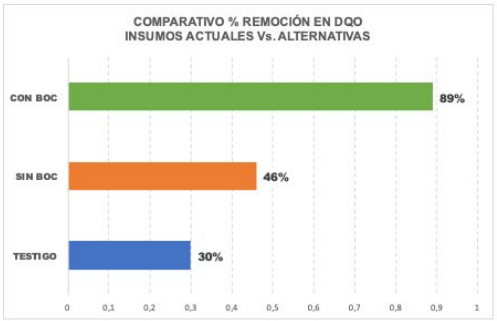
AFTER THREE HOURS - BOC	
PARAMETER	**RESULT**
Initial COD	3030 ppm
Final COD	780 ppm
% Removal	**74.2%**
Coagulant	40 ppm
Polymer	2
Initial Turbidity	760
Final Turbidity	34

The decrease in coagulant dosage was 60% and a greater removal in COD was obtained when dosing the BOC.

Successful case in a dairy industry where the treated wastewater is a mixture of domestic water, isotonic drinks and milk.

pH	5,48
TRAFLOC 2F	150ppm
TRAFLOC A-130	4ppm
TURBIDEZ NTU	41,0
DQO	965

pH	5,48
CATALIZADOR	2ppm
TRAFLOC 91B	60ppm
TRAFLOC A.12	2ppm
SST	20,0
TURBIDEZ NTU	14,0
DQO	156



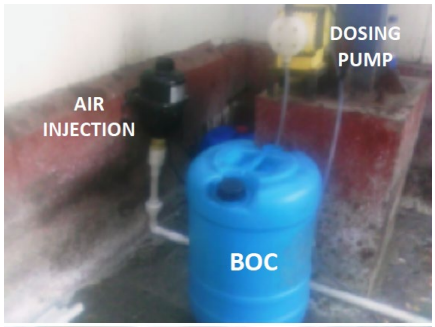
- The BOC-treated wastewater sample shows a significant decrease in coagulant and polymer dosages
- The COD and Turbidity removals for the BOC-treated wastewater sample are greater than those obtained without the dosing of the technology.

Chicken Slaughter Plant

The high consumption of coagulant and polymers was due to the excess of fats from the slaughter process, once the BOC technology dosing and air injection were implemented in the wastewater receiving tank, the chemical consumption decreased by more than 50% and the removal of turbidity in the final effluent was above 95%.

BEFORE	
PARAMETER	**RESULT**
Flow l/seg	41
Coagulant	1100 ppm
Anionic Polymer	10 ppm
Cationic Polymer	20 ppm
Initial Turbidity	1870
Final Turbidity	158

AFTER EIGHT DAYS - BOC	
PARAMETER	**RESULT**
Flow l/seg	41
BOC	**10 ppm**
Coagulant	480 ppm
Anionic Polymer	3 ppm
Cationic Polymer	11 ppm
Initial Turbidity	1870
Final Turbidity	58



Wastewater with High Albumin Content in Egg Dehydrating Industry

The need reported by the plant engineers is the high COD presented at the exit of the system; Jar evaluations are carried out, where BOC was dosed at 10 ppm, it is left in aeration for 3 hours and then coagulant and polymer dosing is carried out.

BEFORE	
PARAMETER	**RESULT**
Coagulant	1400 ppm
Polymer	10

AFTER THREE HOURS - BOC	
PARAMETER	**RESULT**
Coagulant	850 ppm
Polymer	5

COD Water entering the system

COD Water only BOC

COD Water BOC, Coagulant and Polymer

Clarification Leached From A Sanitary Landfill - NONTOX

Leachate sample taken from an oxidation pond and left in aeration for two hours with 30 ppm of NONTOX; the final results were better with NONTOX and a reduction of coagulant >35% was achieved.

BEFORE	
PARAMETER	**RESULT**
Flow l/seg	1.5
pH	8.0
Initial COD	**10480 ppm**
Final COD	**8650 ppm**
Initial Turbidity	**405**
Final Turbidity	**69.6**
Initial Chlorides	**1200 ppm**
Final Chlorides	**300 ppm**
Coagulant	**4000 ppm**
Polymer	**5 ppm**

AFTER 2 HOURS OF AERATION	
PARAMETER	**RESULT**
Flow l/seg	1.5
pH	8.0
Initial COD	**10480 ppm**
Final COD	**7350 ppm**
Initial Turbidity	**405**
Final Turbidity	**52,8**
Initial Chlorides	**1200 ppm**
Final Chlorides	**250 ppm**
NONTOX	**30 ppm**
Coagulant	**2500 ppm**
Polymer	**5 ppm**

Conclusions

- The implementation of the BOC technology dosage allows to obtain greater benefits compared to the consumption of chemical inputs, coagulant and polymers.
- The dosage of BOC technology in the presence of air, accelerates the degradation of organic matter and increases the efficiency in the treatment units (WWTP), allowing to obtain at the end of the effluent a better-quality water in the parameters COD, BOD, Fats and Oils
- In all exposed cases, there is a significant reduction in the emission of offensive odors