

**Electro Processors**  
**Presents**  
**Electrolytic**  
**Water & Waste Water**  
**Treatment Systems**

# **GO GREEN WITH ELECTRO PROCESSORS**

**GENERATES LESS GREEN HOUSE GASES**

**DOES NOT DEplete ATMOSPHERIC OXYGEN**

**EMITS LOW CARBON**

**CONSERVES WATER**

**CONSERVES ENERGY**

**CONSERVES CHEMICALS**

**Electrolytic Process of  
Water Treatment is  
Chemical Free  
Non Biological**

## Electrolytic Process

Electrolysis Is A Technique Involving The Passage Of Electricity Through Water Or Effluent To Be Treated.

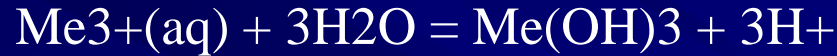
The Electric Current Destabilizes Dissolved And Colloidal Particles And Alters The Charge On Suspended Matter Permitting Electro coagulation, agglomeration, Electro flotation and Their Removal.



## **ELECTRO COAGULATION :**

### **Reactions at the electrodes in Electro coagulation :**

Reaction at the anode :



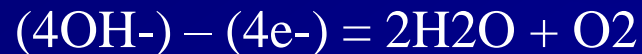
Reaction at the cathode :



## **ELECTRO FLOTATION :**

### **Reactions at the electrodes in Electro flotation :**

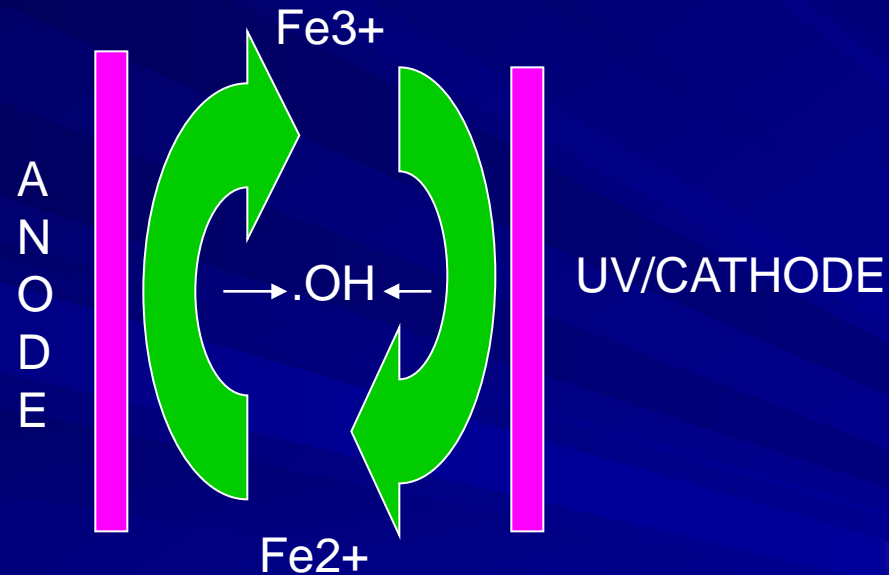
Reaction at the anode :



Reaction at the cathode :



## ELECTRO ADVANCED OXIDATION



GENERATES POWERFUL OXIDIZING  
HYDROXYL RADICAL ( $\cdot OH$ )

## Special Features of the Electrolytic Process

- Generate less green house gases
- Does not deplete atmospheric oxygen
- Emits low carbon
- Non biological
- Accelerated start up
- Start & stop at will
- Packaged modular in construction
- Noiseless operation
- Compact plant with small foot print
- Environmental, operator and user friendly
- Custom designed
- Easily expandable
- System designed for continuous or batch operation
- Can be retrofitted in the existing facility

## Functions Of Electrolytic Process

### Removes :

- Organics
- Suspended Solids
- Turbidity
- Algae
- Odor
- Fats, Oil And Grease
- Heavy Metals
- Colour &
- Disinfects Water



## Applications Of Electrolytic Process for Water Treatment

- Raw Water
- Swimming Pool
- Sewage Water
- Cooling Tower &
- Effluent (wide ranging waste streams)

# ADVANTAGES OF THE ELECTROLYTIC TREATMENT TECHNOLOGY

- 01. NO AERATION.
- 02. NO BLOWERS.
- 03. NO DIFFUSORS.
- 04. NO DIFFUSORS TO CLOG.
- 05. NO LOSS OF PERFORMANCE.
- 06. NO NEED TO MAINTAIN MLSS.
- 07. NO NEED TO MAINTAIN Ph.
- 08. NO NEED TO MAINTAIN TEMPERATURE.
- 09. NO NOISE.
- 10. NO CIVIL WORKS.
- 11. NO CHEMICALS.
- 12. LOW GREEN HOUSE GASES.
- 13. DOES NOT DEplete ATMOSPHERIC OXYGEN .
- 14. ENVIRONMENTAL FRIENDLY.
- 15. OPERATOR FRIENDLY, NO SKILL REQUIRED.
- 16. ACCELERATED START UP.
- 17. START & STOP AT WILL.
- 18. TOXICITY TOLERANT .
- 19. MODULAR IN CONSTRUCTION.
- 20. COMPACT, SMALL FOOT PRINT.
- 21. PORTABLE.

## Disadvantages Of Chemicals - I

### Alum {Al<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub>.18H<sub>2</sub>O} :

Has only 5% Active Coagulant. Rest contributes to increase in Salinity, Conductivity, Acidity and TDS. 10 ppm of Alum when added to Zero Alkalinity water at pH 7 reduces its pH to 3.2, making it acidic. It adds Sulphate Anions in water increasing Sulphidity and TDS.

### PAC {Al<sub>2</sub>(OH)<sub>5</sub>Cl} :

Has only 5% Active Coagulant. Rest contributes to increase in Salinity, Conductivity, Acidity and TDS. 10 ppm of Alum when added to Zero Alkalinity water at pH 7 reduces its pH to 4, making it acidic. It adds chloride anions in water increasing its TDS.

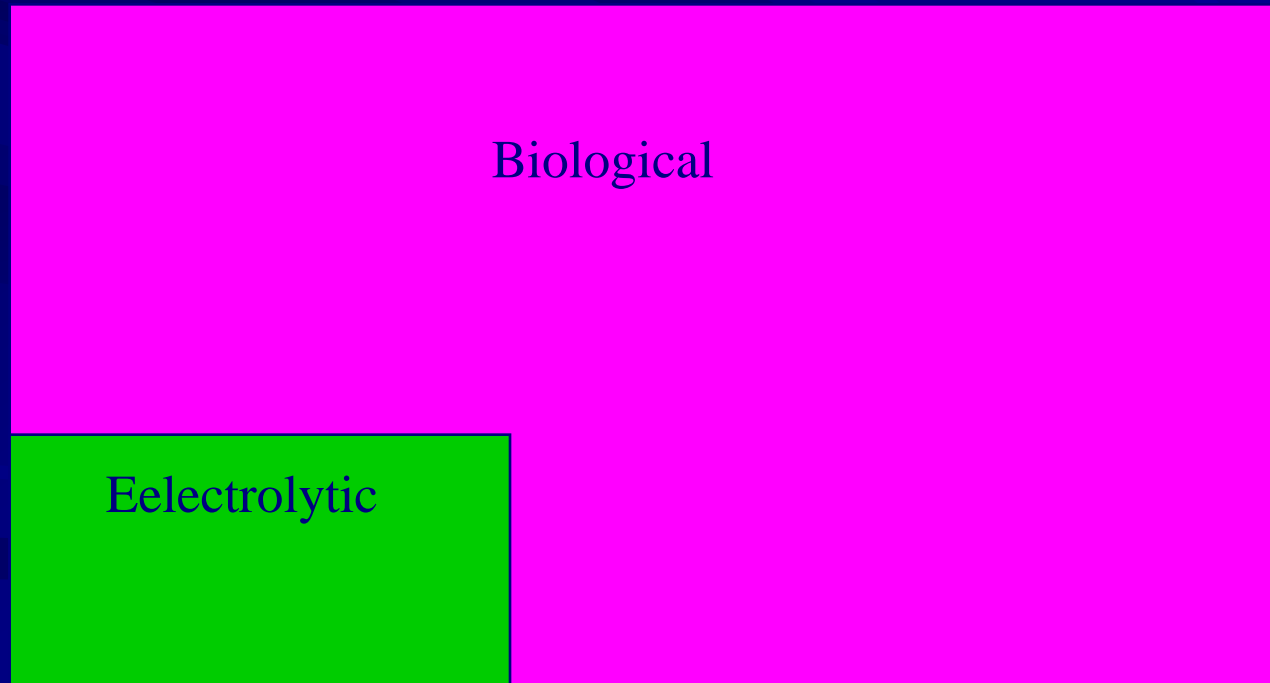
## Disadvantages Of Chemicals - II

Chemical Treatment removes one type of Contaminant and introduces another. Alum and PAC increases acidity and Total Dissolved Solids. To increase the Efficiency of Coagulation and to Neutralize the increase in Acidity, Alkaline Chemicals are needed, which again contributes to increase in Total Dissolved Solids and thus increases Chemical Constituents in water that we drink. These Chemicals have only 5% of Active Coagulants in them, rest contributes to increase in Acidity and Total Dissolved Solids.

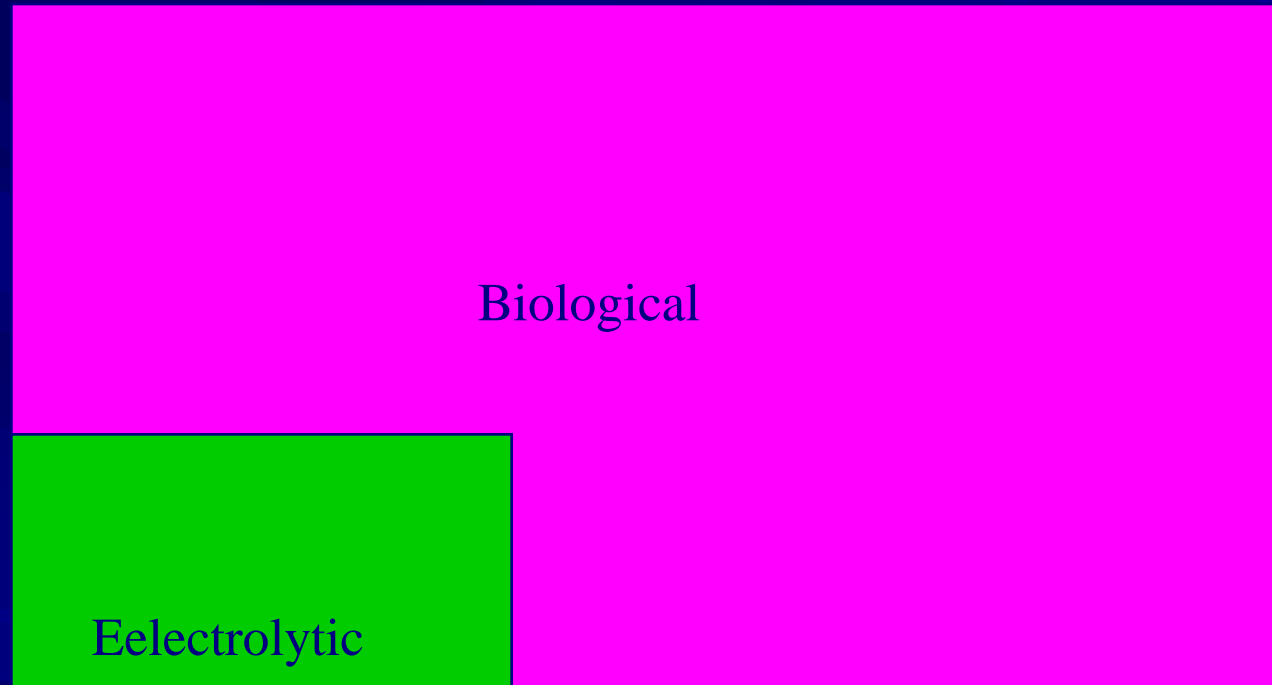
Elemental chlorine is hazardous not only in transportation, storage and handling, but in its elemental form generates disinfecting by products which are generally known as DBPs.

Chemical requirement assessment needs skill manpower and analytical laboratory. In addition these chemicals have to be procured, multi transported and stored in large quantities. Chemical handling, preparation equipments and Dosers are needed till it reaches its destination.

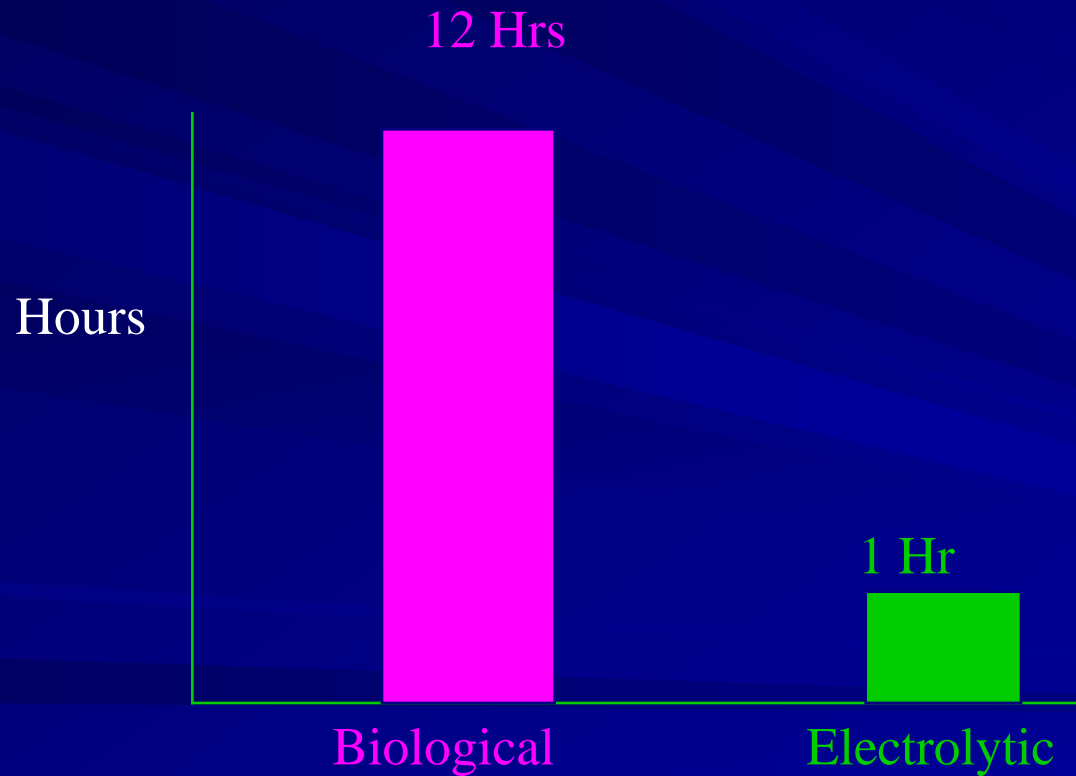
# Space required



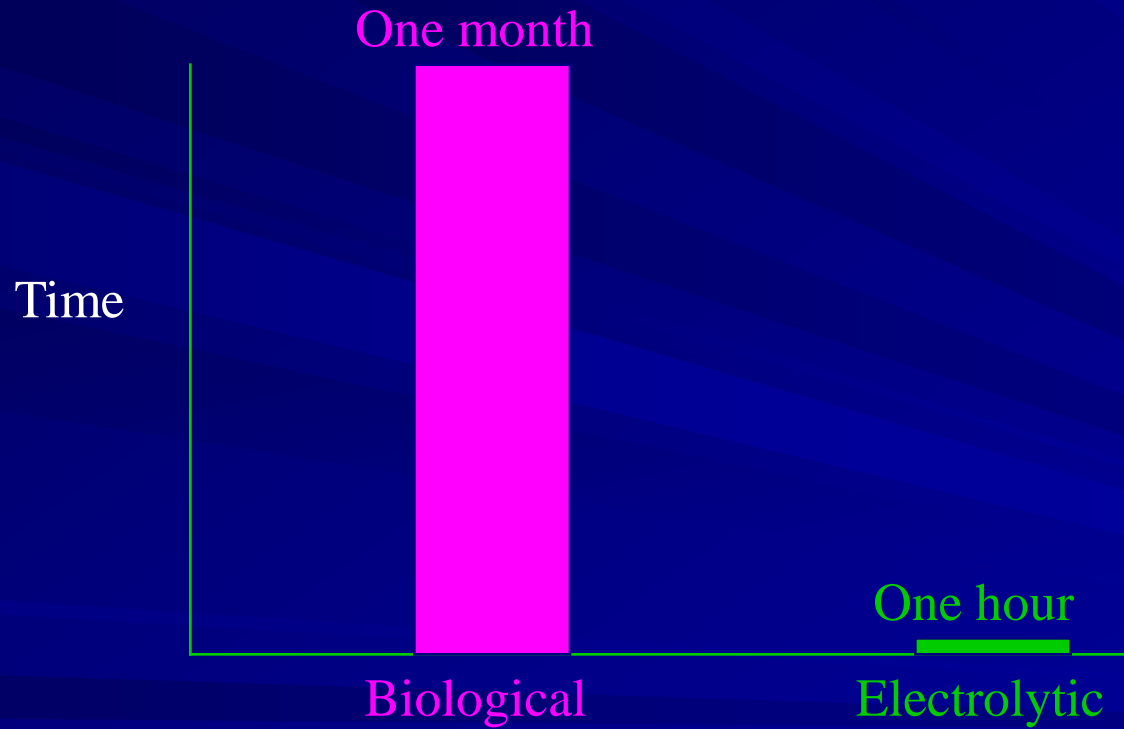
# Civil Works



# Residence & reaction time

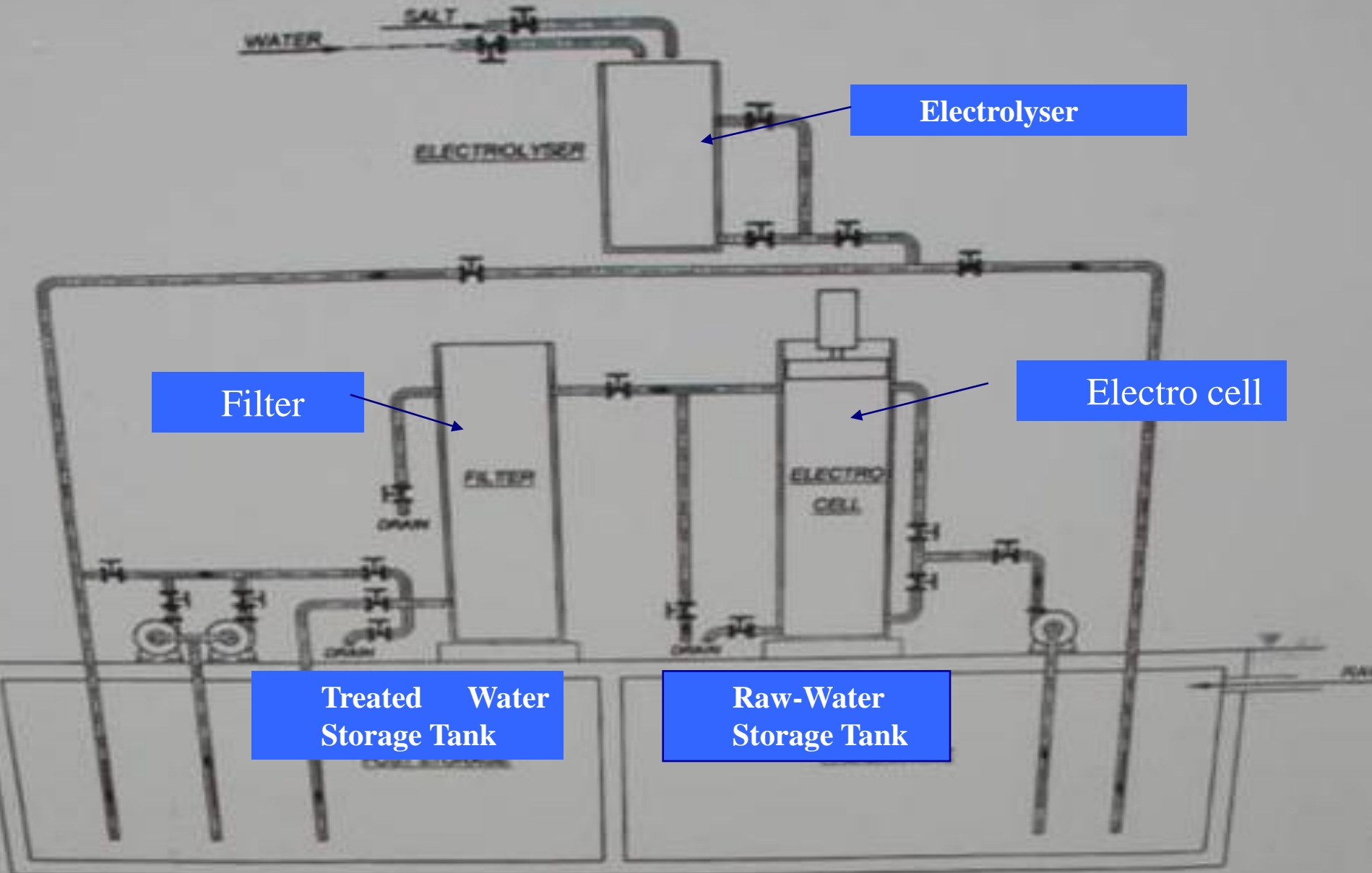


# Start up time





# Sewage Water Treatment Plant – Block Diagram



## About The Promoter

**Mr. H.H. Madhani**, a Graduate Engineer in the faculty of Electrical Engineering with Post Graduation in Business Management has 30 years of Industrial Experience in the Continuous Process Industries.

With the years of Experience and Knowledge gained in Continuous Process Industries had a Vision to Treat Water with Non Conventional Electrolytic Processes and Technology, that is Non Biological and Free of Chemicals. He developed various Electrolytic Processes to treat contaminated water using the processes of Electro Coagulation, Electro Flocculation, Electro Floatation, Electro Ionization and Electro Chlorination.

He is founder of the company and has done Extensive Research in Developing the Technologies and Processes and Implementing them to solve Water Problems.

## About The Company

**Electro Processors** is a Technology Leader since 1994 in Design, Engineering, Manufacture & Installation of a comprehensive range of Water and Effluent Treatment Systems based on the novel process of Electrolysis. Electrolytic treatment processes and technologies are Non Biological and environmental friendly. Its an emerging technology with potential to take on the challenge to treat non biodegradables and toxic contaminants in waste water.

Applications stretch over a wide range from drinking water , pool and Spa, cooling tower, domestic sewage, hospital waste water, hotels and laundry waste water to Effluent Treatment deployable in a wide range of Industries including Dairy, Textile, Dyes and Intermediates, Pharmaceutical, Polyester and Synthetic Fibre products, Pulp and paper, Engineering to name a few.

We have gained expertise in Electrolytic processes including Electro Oxidation, Electro Coagulation and Flocculation, Electro Floatation, Electro Ionization and Electro Chlorination to enable a comprehensive solution offered under one roof. The products and Performance offered matches solutions desired by the end users. We adhere to Design, Engineering and Manufacturing Processes and Quality Assurance Standards.

## About The Company

### Contact

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**Electrolytic Sewage Water Treatment Plant,**  
**Vascon Mari Gold, Kalyaninagar ,Pune- 50,000 Lit/day**



Electro Processors

**Electrolytic Sewage Water Treatment Plant,**  
**Vascon Mari Gold, Kalyaninagar ,Pune- 50,000 Lit/day**



**Electro Processors**



**Electrolytic Sewage Water Treatment Plant,**  
**Vascon Eves Garden, Baner Road ,Pune- 50,000 Lit/day**



Electro Processors





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