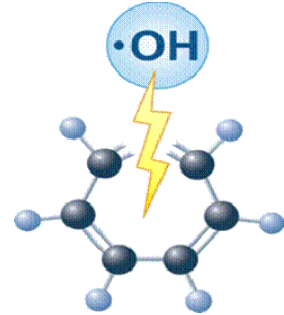


CHEMICAL ULTRAVIOLET WASTEWATER TREATMENT

Light's Advanced Oxidation process destroys dissolved organic contaminants in contaminated water. In these processes, a proprietary high-powered, medium pressure lamp emits high energy UV radiation through a quartz sleeve into the contaminated water. Oxidizing agents, Hydrogen peroxide and Ozone are added to the contaminated water and is activated by the UV light to form oxidizing species called hydroxyl radicals, via:



The hydroxyl radical reacts with the dissolved contaminants, initiating a rapid cascade of oxidation reactions that ultimately fully oxidize (mineralizes) the contaminants. The success of the system is based on the fact the rate constants for the reaction of organic compounds with the -OH radical under the presence of UV light is 1,000-1,000,000 more effective than the effect of the oxidizing agent alone.



The purpose of all Chemical Ultraviolet Technology, is to produce hydroxyl radicals (-OH), which is a highly reactive oxidizing agent that reacts with and destroys most organic pollutants in water. There are a variety of advanced oxidation approaches commercially available. Each has a scope of wastewater treatment applications that it is best suited for. Light Environmental Inc. offers full-scale treatment systems employing different chemical ultraviolet processes. The two most important factors affecting flow rates are the level of contamination and the ease with which the target contaminant can be oxidized.

There are several other factors that affect flow rates so in our experience the best way to determine possible project flow rates is to submit a sample to our lab for analysis. This empirical approach enables Light Environmental Inc. to deliver the most efficient recommendations for treatment applications, customizing solutions to specific client requirements.

Key Benefits of Chemical UV Wastewater Treatment

- On-site destruction treatment technology
- No phase transfer required, thereby eliminating secondary handling
- Efficient for a wide range of contaminants types and concentrations including chlorinated alkenes, aromatics, phenols, PAHs, PCBs, Alcohols, and Ethers,
- Low maintenance and operating requirements
- Quiet and unobtrusive equipment
- Can be carried out at ambient temperature and pressure

Learn More

To learn more about our Chemical Ultraviolet Solution or any of our other wastewater solutions, please visit our web site at www.lightenvironmental.com or call our Corporate Sales Office at: 1-816-537-9190.

We look forward to providing your next wastewater solution.

LIGHT ENVIRONMENTAL, INC.

27404 E. OUTERBELT ROAD GREENWOOD, MISSOURI 64034 (816) 537-9190 FAX (816) 537-9113 WWW.LIGHTENVIRONMENTAL.COM

KANSAS CITY LOS ANGELES BEIJING HO CHI MINH CITY