

PRESS RELEASE



Atomic Energy Council, EY

ADD : No.80, Sec. 1, Chenggong Rd., Yonghe
City, Taipei County 234, Taiwan (R.O.C.)

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TEL : (02)22322073

FAX : (02)82317833

A new and effective industrial wastewater purification method

The Institute of Nuclear Energy Research has developed a highly effective, low-cost, and practical SPO-degradation reagent

In line with the government's green environmental protection policy to find appropriate wastewater management solutions, protect the environment, and improve the quality of life, the Institute of Nuclear Energy Research (INER) of the Atomic Energy Council, Executive Yuan, has established numerous wastewater treatment technologies. Most recently, INER developed a new and highly effective SPO-degradation reagent to treat wastewater generated by various industries.

Tests have shown that INER's new SPO-degradation reagent eliminates total organic carbon (TOC) in wastewater more effectively than other wastewater treatment methods. At present, high-tech industrial wastewater treatment relies on imported technologies, including raw materials and equipment, which are expensive and take up a lot of space. INER's new technology boasts low degradation reagent consumption, the equipment can be designed and manufactured in Taiwan, the system is easy to operate, it requires little space, and it can effectively reduce TOC levels to below 100 ppb. This fast and simple method to treat toxic organic wastewater meets environmental laws and regulations' wastewater disposal standards (BOD<30 ppm, COD<100 ppm). In addition, depending on the operational conditions and the reagent concentrations, used test chemicals may be recycled to reduce cost.

For example, the equipment and operational costs to treat organic wastewater with a TOC content of 1000 ppm is about half that of currently employed methods. This technology offers a low-cost, fast, and effective solution for the treatment of the large quantities of organic wastewater generated in industrial processes in Taiwan's high-tech industry and general industry, including the electronics, chemical, pharmaceutical, and surface treatment industries. Moreover, it does not produce a secondary waste problem. INER has already set up and successfully tested the effectiveness of a demonstration system that treats 20 liters of organic wastewater per hour. Because Taiwan's science and technology industry is experiencing rapid growth and has a great need for organic wastewater treatment, it is hoped that the development of new technologies will help lower wastewater treatment costs for Taiwanese industries and guarantee environmental quality and long-term development.