

## POLYTOX® RAPID TOXICITY TEST TECHNICAL DATA SHEET

FOR USE IN: Determining the biological decomposability or toxicity of wastewater to a sewage treatment facility.

### DESCRIPTION

**POLYTOX®** is a blend of specialized microbial cultures in an easy-to-use kit, designed to provide a simple, rapid test for measuring the toxicity of wastewater to biological systems within 30 minutes, without the use of expensive instrumentation.

### WASTEWATER TREATMENT

The biological processing of organic waste in industrial and municipal wastewater streams has long been known. Although these biological systems typically utilize microorganisms to effect biochemical decomposition of the organic waste, the processing plants may differ in the method in which the microorganisms are cultivated.

A variety of test procedures have been developed for analyzing the quality of sewage for the purpose of determining the toxicity of the sewage, for determining the total chemical content in the sewage, and to determine the oxygen consumption rate of the microorganisms in that sewage. By and large, many of the analytical processes have involved the utilization of complicated equipment or have taken a substantial amount of time in order to complete the test and obtain meaningful results. In many cases, because of the time required to obtain the results, sufficient time has not been provided to take the appropriate action with respect to the handling of the incoming sewage. As a result, the plants in many cases were rendered inactive.

An attractive solution to analyzing the quality of wastewater is **POLYTOX®**. This process is capable of providing analytical information with respect to the toxicity of incoming sewage to a waste disposal plant, the quantity of organic component in the sewage, and the type of toxic material in a particular system in a quick and efficient manner.

By utilization of a specially prepared bacterial culture and through the measurement of dissolved oxygen content, one can achieve several advantages which have not been available with prior processes. Some of these advantages include:

- a rapid biological test for determining the toxicity of a wastewater sample
- a rapid, reproducible, biological test for determining the toxicity of a specific chemical as a function of its concentration in water
- a rapid method of assessing the toxicity of acidic or basic solutions of various specific chemicals, and organic and inorganic compounds to bacteria
- a rapid method of determining the effects of pH, temperature or a dissolved gas such as H<sub>2</sub>S, NH<sub>3</sub>, and CO<sub>2</sub> on bacteria

### **POLYTOX®**

- Is **EPA** recommended
- Is free of nitrifying microorganisms
- Has been marketed since 1984
- Is always a stocked item
- Orders are shipped within 24 hours of receipt

**SPECIFICATIONS**

Form: Buff to brown.  
 Contents: 8.0 grams of a specialized blend of microbial cultures, growth stimulants and pH buffer.  
 Container: Polyfoam mailer containing 20 clear, polystyrene vials.  
 Storage: Store sealed in dry place at room temperature (20°C). Do not freeze or refrigerate.  
 Expiration: For best results, use within three months of receipt.  
 Caution: Avoid inhalation and contact with eyes, skin, and clothing. Wash thoroughly after handling. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician. Flush skin with water. Wash clothing before reuse.

**DIRECTIONS FOR USE**

**POLYTOX®** is a granular, free-flowing, dehydrated powder which must be rehydrated before use. Do not allow **POLYTOX®** to become wet or moist before use. Always store in a dry area, preferably at room temperature (20°C). Do not store in a chemical cabinet.

**IMPORTANT:**

For best results, toxicity tests should meet the following conditions:

<u>Sample Pretreatment Parameters</u>	<u>Optimum</u>	<u>Minimum</u>	<u>Maximum</u>
pH	7.00	6.50	7.50
Dissolved oxygen, ppm	8.00	7.00	9.00
Temperature, °C	20	18	22
Toxic metals, ppm (e.g. hex. chromium)	0	0	1

**PACKAGING**

20 vials/unit

**OTHER LABORATORY PRODUCTS**

<u>Name</u>	<u>Function</u>
POLYSEED®	BOD Seed Inoculum
POLYSEED-NX®	CBOD Seed Inoculum – Inhibits Nitrification

For more information contact:

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