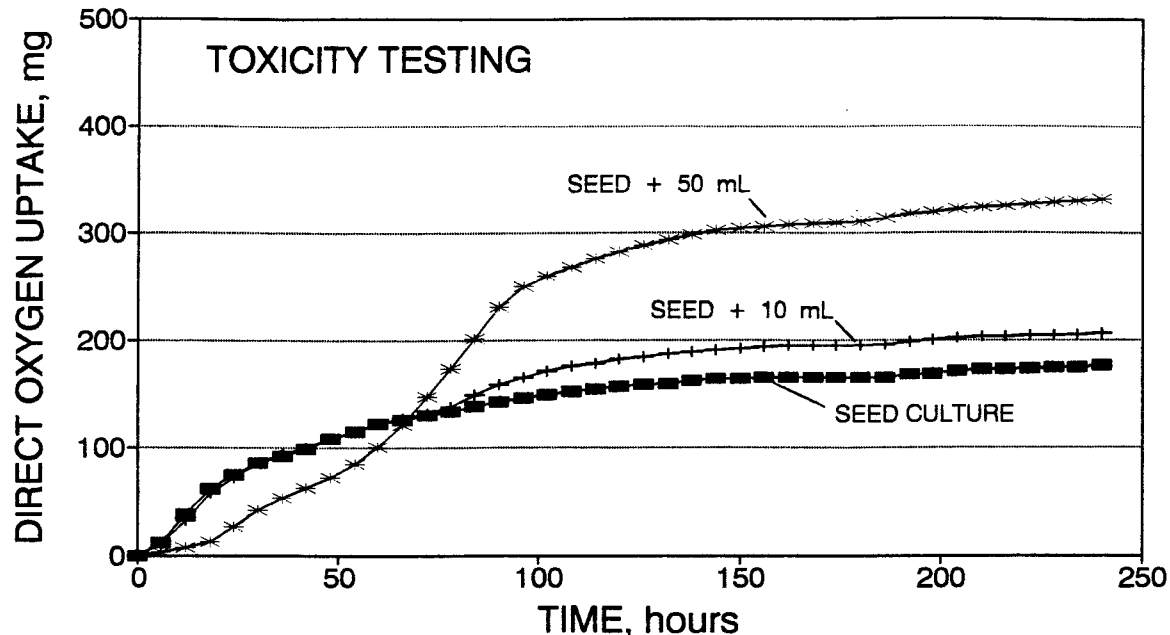


APPLICATION: TOXICITY TESTING



Waste Type: Complex alcohols

Objective: Certain constituents of the test waste were known to be biodegradable but were suspected of being toxic to aerobic biological processes when present in high concentrations. The objective was then to determine how much waste could be added to an activated sludge process before toxic impacts would be experienced.

Test Setup: 10 to 50 mL of test wastewater were added to respective respirometer reactors containing mixed liquor from the subject activated sludge process. A sample of mixed liquor was used as a CONTROL. Nutrients, minerals and buffer were added to satisfy biological requirements and TCMP was added to eliminate interference from nitrification. Oxygen uptake was measured over a ten-day test period using a CHALLENGE AER-200 respirometer.

Analysis: The 10-mL sample showed no toxic impact on the seed culture, but 50 mL caused a lag in oxygen uptake, thereby indicating slight inhibition. These tests indicated that about 5 percent by volume of industrial waste could be added to the activated sludge process without causing a negative impact.