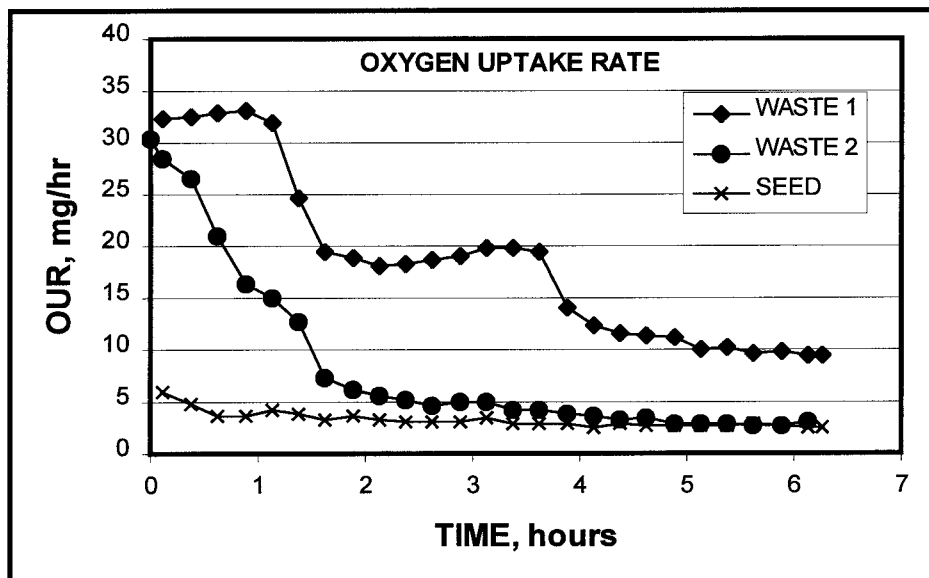


## Chemical Production Wastewater



OUR measurements were made for two waste streams from a chemical production plant. The fingerprint for Waste 1 indicated the presence of three major groups of organic constituents. The first group of readily biodegradable organic constituents is oxidized at maximum kinetic rate through about one hour of contact. Oxidation of a second group of constituents causes the OUR to increase through about 3.5 hours of incubation. This increase in OUR is caused by growth of microorganisms during the oxidation reaction. Oxidation of a third group of constituents – in this case thought to be nitrification – extends beyond six hours of contact. The test was terminated before the reaction was complete. The OUR fingerprint for Waste 2 shows a sharp biodegradation peak for readily biodegradable organics followed by a small plateau between one and 1.5 hours. The fact that the OUR for Waste 2 returned to endogenous within five hours indicates that the biodegradation reaction was essentially complete.