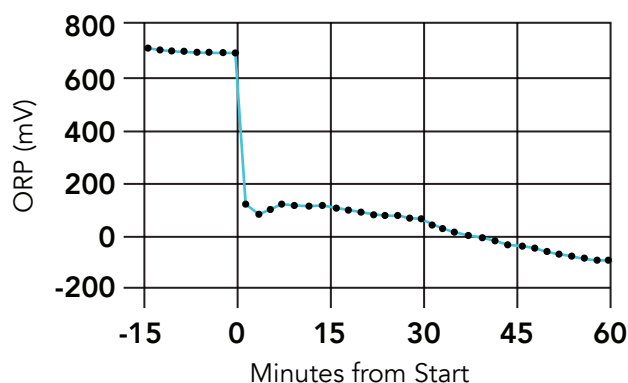


Newman Zone OS™

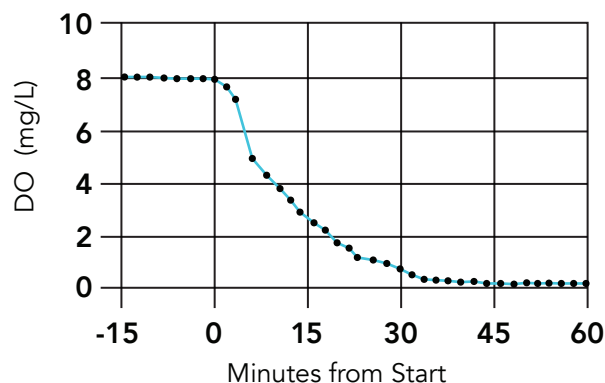
Oxygen Scavenger for Anaerobic Bioremediation

Newman Zone OS™ is a blend of food grade antioxidants, chelated ferrous iron catalyst and buffering agents used to prepare water for anaerobic injections. Newman Zone OS™ is specially formulated to quickly remove dissolved oxygen from water and create the reducing conditions necessary for successful anaerobic bioremediation. Newman Zone OS™ supports bioaugmentation cultures such as SDC-9™ and KB-1® by removing dissolved oxygen from injection water and allowing bacteria to thrive and grow.

ORP REDUCTION*



DISSOLVED OXYGEN REMOVAL*



*Tested in 1,000 Liter totes at 16° C

Application

Newman Zone OS™ comes in pre-measured pails and is added to tanks prior to filling with water. For optimal results, stirring tanks with pumps or mixers is recommended until Newman Zone OS™ is fully dissolved. Typical applications result in anoxic water within one hour and a negative ORP within two hours.

Benefits - Added Vitamin B12

Newman Zone OS™ contains 0.05 mg/liter of Vitamin B12 (as applied), a required corrinoid vitamin demonstrated to enhance growth and dechlorination performance of Dehalococcoides strains (He et al., May 2007).

Benefits - Rapid Oxygen Scavenging

Newman Zone OS™ is a cost effective way to quickly prepare anaerobic water. Due to its high concentration of antioxidants, chelated ferrous iron catalyst and buffering agents, Newman Zone OS™ is effective even in cold, highly oxidized water. Higher temperatures will result in faster oxygen removal rates.

Benefits - Supports Bioaugmentation Cultures

Laboratory microcosm studies have confirmed Newman Zone OS™ presents no toxicity or inhibition to the SDC-9™ bioaugmentation culture. Additionally, the antioxidants and chelating agents degrade to provide a rapidly available electron donor (700 mg/liter glucose equivalent).

Newman Zone OS™

Oxygen Scavenger for Anaerobic Bioremediation

Product Content

Chemical Name	Composition
Food Grade Antioxidants	70%
Food Grade Catalysts, Chelating Agents and Buffers	30%

Product Characteristics

Parameter	Unit	Specification
Appearance, packaged		White to brown powder or granules
Appearance, in solution		Dark grey to brown or yellow
Density	g/cm ³	1.0 - 1.2
pH, in solution	Standard Units	7.0 - 8.0

Packaging

Newman Zone OS™ is packaged in 1 and 5 gallon pails premeasured for 1,000 gallon (3,785 L) and 5,000 gallon (18,925 L) batches, respectively.

Storage

Newman Zone OS™ may be stored under recommended conditions for months without activity loss. Keep containers tightly closed in a cool, well-ventilated area. Keep containers sealed to avoid exposure to oxygen or moisture.

Safety

Newman Zone OS™ is comprised of food grade, non-toxic ingredients. No known hazards are associated with exposure to this product when used as directed. Nevertheless, appropriate personal protective equipment is recommended when handling this product.