

SCAVSOL™ — IRON CONTROL IN HIGH PH WATERS

Solugen's goal is to understand the oilfield's economics in order to apply the right chemistries to meet our clients' needs. Solugen's proprietary product, ScavSol™, is specifically designed to chelate iron and remediate iron sulfide over a wide pH band compared to today's alternatives.

ScavSol, a manufactured BioChelate™, chelates iron at both high and low pH and forms covalent bonds with iron to produce highly desirable water-soluble and non-reactive molecules. Preventing issues with precipitated solids, the product meets the needs of the industry by providing a more robust iron control solution that can be economically applied and meet a lower environmental profile standard over existing technologies. It does not contain sulfates, which have led to additional concerns of sulfate scale, and has a nutrient for microbiological activity to convert sulfate into a reactive sulfide species. ScavSol is used during the production process and reduces interface pad (iron sulfide), corrosion, as well as scale, while also improving water quality.

High pH and THPS Don't Mix

ScavSol chelates iron when tetrakis (hydroxymethyl) phosphonium sulfate (THPS) — a dual function chemistry common to the oil and gas industry, fails in the presence of triazine, a hydrogen sulfide scavenger with high pH, during water production. In acidic environments (low pH), THPS can dissolve iron sulfide and prevent its formation by creating a water-soluble iron phosphine II complex. However, the challenge for THPS is that pH changes can be influenced by the introduction of other fluids, manmade chemical additives, and more. When this happens and fluids reach a more basic state (high pH), it renders THPS ineffective as a chelant.



Iron Sulfide, An Industry Issue

Iron sulfide scale is a common by-product of oilfield fluids that reduces efficiencies in oil, gas, and water production. Iron sulfide can also increase further damage to oilfield process equipment as a catalyst for pitting corrosion. Traditionally, oilfield operators have relied on common chelation products to remediate and control iron sulfide, and even now they continue to experience residual effects when using these products. ScavSol is specifically designed to chelate iron and remediate iron sulfide over a wide pH band, whereas others cannot, and it does so at a lower cost while also being safer to use and reducing impact to the environment.

Founded in 2016, Solugen is a specialty chemicals manufacturer and the world's first and only producer of bio-based chemical peroxide solutions. Our team of experts applies green chemistry principles to redesign the production of common chemicals and formulate innovative, cost-efficient commercial and industrial solutions that are also environmentally friendly.