

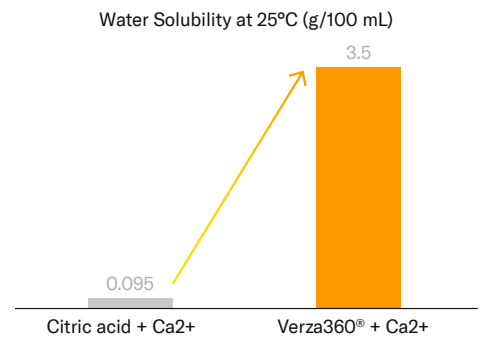
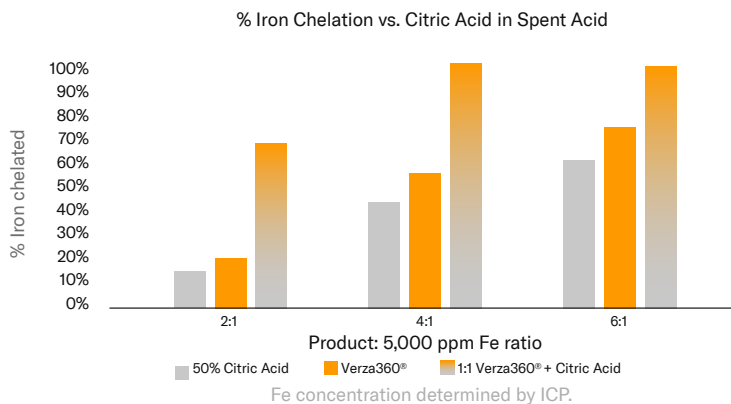
Boosting Iron Control to Enhance Acidizing Performance

Acidizing boosts well production by enhancing formation permeability, but metal contaminants like iron can potentially cause costly blockages that reduce productivity.

Historically, citric acid has been the common choice for iron control in acidizing fluids in order to mitigate formation and equipment damage caused by iron interference. However, Verza360[®] is a formidable alternative to citric acid with a suite of benefits that improve cost, performance, and manufacturing footprint.

When used in acidizing applications, Verza360[®] can:

- ✓ Boost iron control over wide pH range
- ✓ Mitigate acid-oil sludge formation
- ✓ Increase workover efficiency and efficacy
- ✓ Achieve higher calcium carbonate solubility than citric acid
- ✓ Substitute or complement other organic acid-based carrier fluids like acetic acid
- ✓ Enhance acid stimulation penetration vs. HCl or HCl/HF alone given slower reactivity rate
- ✓ Reduce corrosivity of acid formulation and improve compatibility with carbon steel vs. citric acid



Up to **50%** reduction in citric acid while improving iron chelation

Over **30X** more soluble in water than calcium citrate

For a complete case study or additional information on our Verza360 product line, visit solugen.com/oilandgas or contact us at energysolutions@solugen.com. Pricing available upon request.