

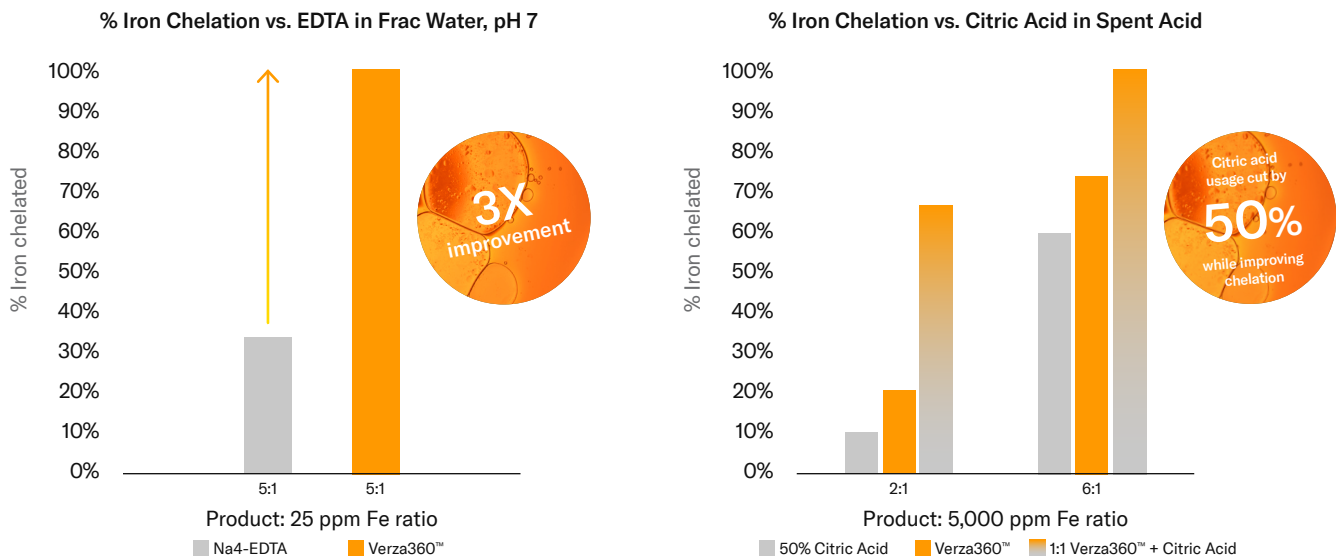
Enabling Lower Overall Frac Chemical Costs with Effective Iron Control

Hydraulic fracturing enhances hydrocarbon extraction, but contaminants such as iron in the formation can potentially clog fractures, increase operating costs, and prevent maximal production.

Verza360 is a series of multifunctional, organic acid-based chelating agents that enable high iron control and cost efficiency across the oil and gas value chain. It can be used as a complement to or replacement for traditional chelating agents, such as EDTA and citric acid.

In hydraulic fracturing applications, Verza360 can:

- ✓ Enable lower overall chemical usage and treatment costs
- ✓ Prevent “gummy bears,” formation or proppant pack damage due to iron interference
- ✓ Substitute or complement similar chemistries used in frac acid spearheads



Fe concentration determined by ICP.

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.