



Vitech's Acid Replacement Technologies: Cost Effective, Safe, Environmentally Friendly



Solutions to Replacing Traditional Acids

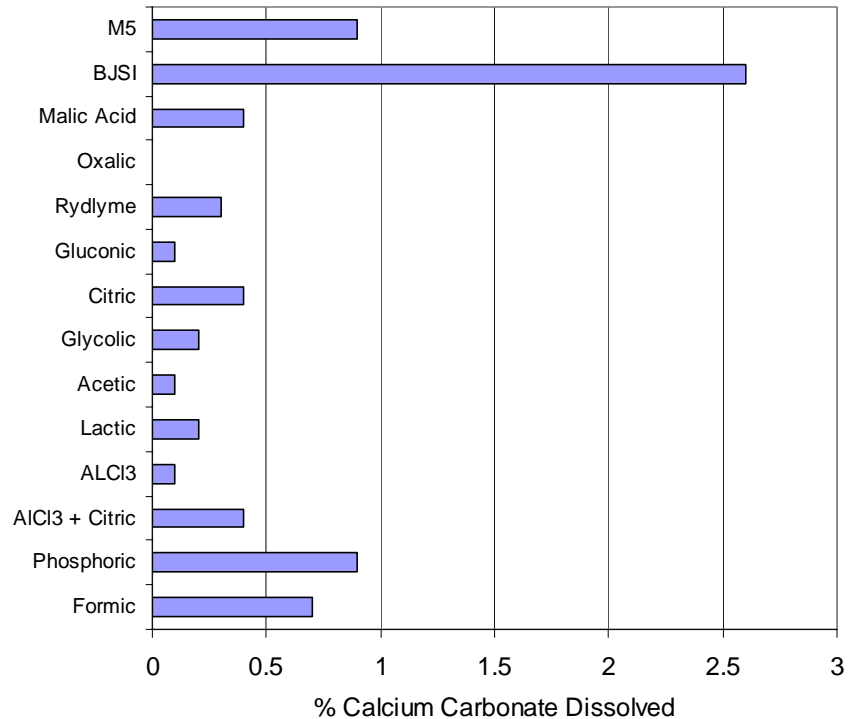
With the cost and supply issues of phosphoric acid, many customers are forced to examine other alternatives.

Vitech offers a range of acid replacement technologies that offer cost, performance and environmental advantages versus phosphoric acid and many other traditional acids.

BJS-I

- A cost-effective replacement for phosphoric acid and many traditional acids
- Approximately 2 times more effective than phosphoric in dissolving calcium carbonate
- Classified as a mild skin irritant
- Phosphate free and contains no VOCs
- Can be shipped DOT non-regulated for U.S. ground shipments

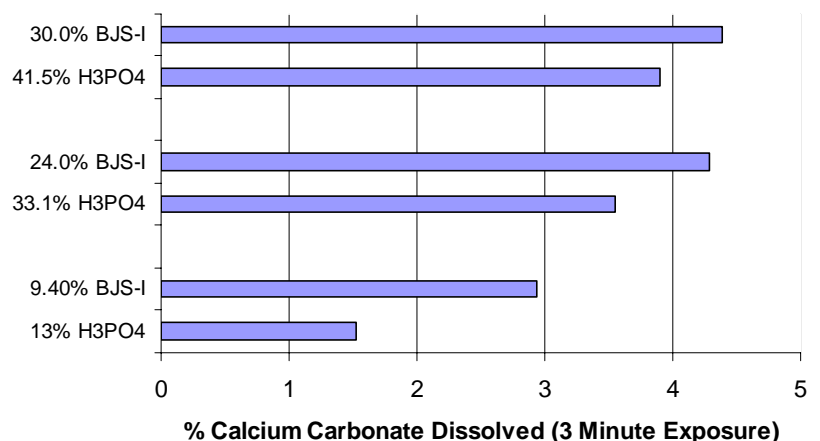
Calcium Carbonate Dissolving Properties of Acids
(3 Minute Exposure using 200g of 5% Active Solution)



Primary Applications for BJS-I:

tub and tile, grout cleaners, bowl cleaners, descalers / delimers, concrete preparation and etch products, acid stains, pool & spa, pH adjustment, boat hull cleaners

Comparison of Calcium Removal
BJS-I vs. Phosphoric Acid (85% active)



Calcium carbonate solubility test conditions: 200g products, for 3 minutes. BJS-I supplied as is. Phosphoric acid supplied as is (85%).

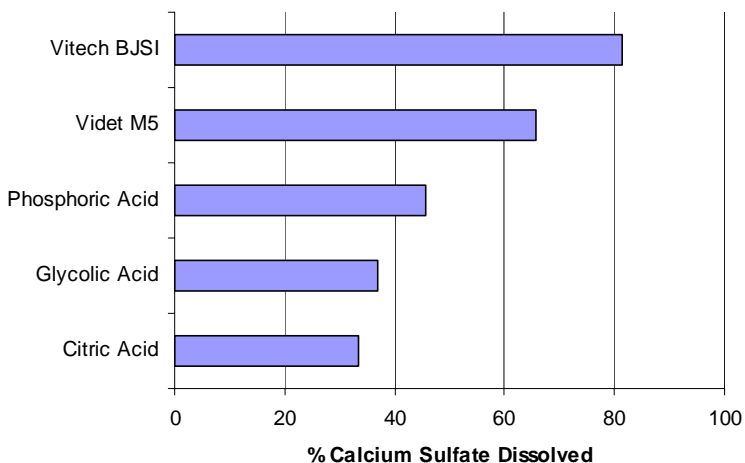
M5

- Odorless, colorless, low foaming
- Classified as a non-skin irritant
- Can be shipped via air, sea or ground as a non-regulated material
- Safe on most metals including aluminum, polished aluminum, copper and stainless steel
- Phosphate free and contains no VOCs
- Ship non-regulated for air, ground or marine

Primary Applications:

food & dairy (beerstone and milkstone), Clean-In-Place (CIP), tub 'n' tile cleaners, coffee pot descalers

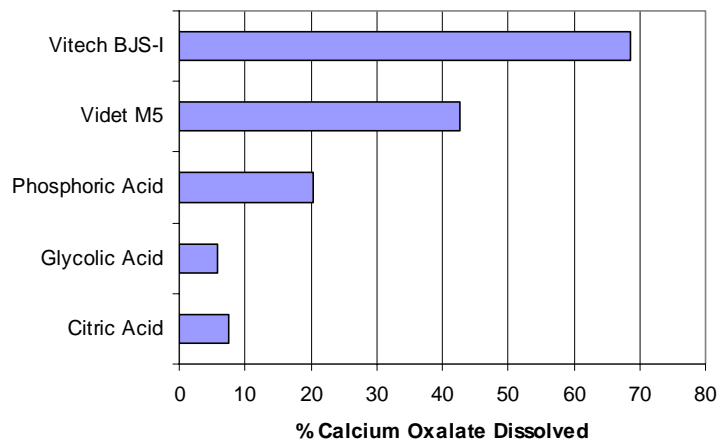
Calcium Sulfate Dissolving Properties of Acid (5 Minute Exposure - 50g of 5% Active Solution)



An M5 based formulation is ideal for cleaning beerstone and milkstone.



Calcium Oxalate Dissolving Properties of Acid (5 Minute Exposure - 50g of 10% Active Solution)



ATS

- Replacement for traditional acids used in 2-step acid presoaks and wheel cleaners
- Can be shipped DOT non-regulated for U.S. ground shipments
- Classified as a mild skin irritant
- Phosphate free and contains no VOCs

Primary Applications:

2 step acid pre-soaks, wheel cleaners

Vitech's range of offer formulators a wide range of opportunities to achieve cost and performance advantages as a replacement for phosphoric acid. Our application laboratories can assist in meeting your formulation needs.



Vitech International Inc.
www.vitechinternational.com
Tel: 1-800-796-1896

The descriptions, data, information and/or statements contained herein are based upon our research and/or of others and are believed to be accurate. No guarantee of their accuracy is made however, and unless expressly stated in a written contract, the product (s) discussed herein are sold without conditions or warranties expressed or implied. Readers are advised to make their own tests to determine the suitability of any products or formulations described herein for their particular purposes. Nothing contained herein shall be construed as a recommendation to use or as a license to operate or to infringe on any existing patent. In no case shall the descriptions, data, information and/or statements contained herein be considered a part of our terms and conditions of sale. Further, the reader acknowledges that the descriptions, data, information and/or statements furnished by Vitech International Inc. herein are given gratis and Vitech International Inc. assumes no obligation and will not be liable for any losses, injuries or consequential damages, direct or indirect, which may result from the use of or reliance on any information contained herein, or results obtained therefrom, as such is being given and accepted at your risk.