Sparging Stones Are Not Made with a Nitric Acid Rinse - Tech Information

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Overview

Sparging stones play a critical role in gas-to-liquid applications, especially in analytical labs where consistent bubble formation and chemical compatibility are essential. A common question concerns whether these stainless steel stones undergo a nitric acid rinse during manufacturing—a treatment sometimes used in metal surface preparation.

This technical brief clarifies the manufacturing process and explains why nitric acid is not part of the procedure for MICROSOLV's ARE-Applied Research brand of sparging stones.

Manufacturing Process and Nitric Acid Use

MicroSolv stainless steel sparging stones are not manufactured using a nitric acid rinse at any stage. While nitric acid passivation is sometimes employed in other industries to remove surface contaminants or enhance corrosion resistance, it is deliberately avoided here to maintain strict control over surface chemistry and to eliminate the possibility of acid residues that may interfere with sensitive analytical workflows.

Why Nitric Acid Is Not Used

Preservation of Material Integrity
Avoiding nitric acid ensures that the native stainless-steel surface remains stable without introducing additional chemical treatments that could alter porosity or surface behavior.

Analytical Cleanliness
Many chromatography and laboratory applications require extremely low contamination risk. Eliminating nitric acid from production helps prevent the introduction of trace residues that could leach into mobile phases or sample environments.

Consistency and Reliability
By using controlled mechanical and thermal processes rather than chemical rinses, the manufacturing method preserves uniform pore size and structural consistency across each stone.

Applications

- Stainless steel sparging stones are widely used in:
- Mobile phase preparation
- Dissolved gas control for HPLC and LC-MS setups

- Aeration or degassing of aqueous and organic solutions
- Environmental and general laboratory gas-dispersion applications

Their performance does not depend on nitric acid surface treatment, making them compatible with a broad range of solvents and analytical systems.

Ordering Information

A full selection of stainless steel sparging stones, pore sizes, and product images can be accessed by c *licking HERE for ordering information and pictures of sparging stones.*

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