

What are the advantages and disadvantages of acid washing RSA vials - FAQ

Should You Acid Wash Autosampler Vials?

Understanding the Risks and Limitations of Acid Washing

Acid washing is sometimes used to reduce surface activity in standard borosilicate autosampler vials by attempting to remove surface silanols (Si–OH groups). However, this practice has both **limited benefits** and **notable drawbacks**, particularly when using high-sensitivity techniques like LC-MS.

Why Acid Washing Is Unnecessary for RSA™ Vials

RSA™ (Reduced Surface Activity) vials are manufactured using a proprietary process that eliminates surface silanols and avoids the formation of sodium borate or silicate residues. As a result:

- No acid washing is required
- Surface activity is already minimized
- Vials are LC-MS ready out of the box

Potential Disadvantages of Acid Washing Standard Vials

1. Contamination Risk

Acid washing can introduce trace contaminants such as:

- Chloride and sodium ions
- Residual acids or surfactants
- Trace metals from reagents or containers

2. Inconsistent Results

Manual washing procedures can vary in effectiveness, leading to:

- Vial-to-vial variability
- Incomplete removal of reactive sites
- Unpredictable adsorption behavior

3. Time and Resource Intensive

Acid washing requires:

- Specialized reagents and safety protocols
- Additional rinsing and drying steps
- Cleanroom or low-contamination environments to avoid recontamination

Conclusion

For laboratories requiring high reproducibility, low background contamination, and minimal sample interaction—particularly in LC-MS workflows—RSA™ vials offer a superior alternative to acid-washed standard vials. They eliminate the need for post-

processing and reduce the risk of introducing new contaminants.

Click [HERE](#) for RSA Vials ordering information.



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MicroSolv Technology Corporation

9158 Industrial Blvd. NE, Leland, NC 28451

Tel: (732) 380-8900

Fax: (910) 769-9435

Email: customers@mtc-usa.com

Website: www.mtc-usa.com