

**I think  
I need  
RSA  
Glass  
Vials**



**IRSA** **Reduced  
Surface  
Activity  
Glass** <sup>TM</sup>

**A new generation of glass  
reduces the interaction  
of analytes and the glass**

# The **IRSA** Reduced Surface Activity Glass <sup>TM</sup> **Advantage**

## Is your data at risk due to the reactivity of your autosampler vials?



- Detect low abundance analytes normally adsorbed by glass
- Prevents pH changes in vials before injection even hours later
- Prevents sample hydrolysis that can occur in your vials
- No meniscus when water is used as the main solvent
- Not Coated

Advanced Quality (AQ<sup>TM</sup>) vials and inserts manufactured with RSA Glass<sup>TM</sup> have reduced surface activity due to the elimination of the layer of silica that results when vials are normally manufactured and many of the surface metals that contaminate analysis and have detrimental effects on your results.

When using ordinary borosilicate glass autosampler vials and inserts, sample diluents (such as water) can de-protonate the many hydroxyl groups on the wall of your vial which produces a negative charge on the glass. The "acidic" functionality of these silanols has been known to cause adsorption of basic compounds, change the pH of the sample solution and/or hydrolyze some susceptible compounds making them undetectable. The surface metal contaminants can cause precipitation, chelation or other changes in your samples while in the vial.

With RSA Glass<sup>TM</sup> vials and inserts there is virtually no "loss to the vial", no "pH shifting" or other problems thus making your analysis more reliable, lot to lot, run to run and day to day. Avoid frustration of unreliable data.

***RSA<sup>TM</sup> autosampler vials and glass inserts are manufactured without using any coating of any type making them an excellent choice for LC, LCMS, GC and GCMS compared to coated vials for many applications.***

# Compare RSA™ vials to your vials.

The data table below illustrates the power and usefulness of RSA™ glass vials for chromatography. The data colored green in the chart shows how typical glass vials on the market today will adsorb basic compounds. When your analytes are in low abundance, ordinary glass vials can greatly skew your data. Vials made with RSA™ glass will provide more reliable data and not skew the data.

**Methodology Synopsis & Analysis:** a test solution was placed in 3 sets of vials named (N1, N2 & N3) from each of the brands listed. The starting concentration of the test compounds was 5ug/ml. After standing in the vials for four hours, the final concentration of the analyte, as determined by HPLC, is reported for each group. The percent loss was calculated and is reported (% Loss) as well. The difference in the results between RSA™ glass vials and the others is one indication of the benefits of using RSA™ glass.

A second illustration of the benefits of RSA™ glass vials, is shown below and is colored red. This data shows leading vials on the market today may change the pH of your samples due to their surface chemistry where RSA™ glass does not.

**Methodology Synopsis & Analysis:**

*Methodology Synopsis & Analysis: DI water (pH 5.45) was placed in the same brands of vials as previously stated and several pH data points were taken at the start and randomly during a 4 hour test period. The data reported below in red is the ending pH readings from this Test. This simple test and other more extensive tests have shown that RSA™ glass vials do not cause any changes in the pH of the sample Solutions during the test period. Market leading vial can cause changes by more than 1.25 pH units.*



## Adsorption & pH Change Comparison To Market Leaders

	N1	N2	N3	AVG	% LOSS	pH
<b>Starting Points</b>	287.8	287.0	286.1	287	0.00	5.45
<b>RSA Glass</b>	283.5	287.2	287.21	286	0.35	5.50
<b>MicroSolv Brand</b>	234.9	235.2	239.1	236	17.62	6.15
<b>Basik Vials</b>	157.7	158.7	159.9	159	44.64	6.0
<b>Brand F</b>	114.3	223.2	57.3	132	54.14	6.65
<b>Brand N</b>	168.8	149.9	146.5	155	45.96	6.94

Green = Sample Adsorption Test

Red = pH Change Test

**STARTING POINTS:** Adsorption Test; 5ug/ml Chlorhexidene in water; pH Test; DI Water pH 5.45.

**RSA™ GLASS VIALS:** Reduced Surface Activity Glass Vials.

**MICROSOLV™ BRAND VIALS:** our leading line of autosampler vials and inserts on the market today. Made with pharmaceutical grade glass.

**BASIK™ BRAND VIALS:** our popular brand of economy autosampler vials for when quality issues are mostly limited to fit and form.

**BRAND "F":** a leading brand of autosampler vials resold by many laboratory supply dealers.

**BRAND "N"** is the leading brand of autosampler vials sold through dealers and private labeled by some of the largest instrument companies.

Don't risk your data due to poor reproducibility from the reactivity of your autosampler vials! Reactivity of your vials may initiate unwanted investigations, lost time and poor results. Use autosampler vials made with RSA Glass to insure you don't get frustrated



9512C-0CV-RS



9502S-02N-RS



9532S-0CV-RS



9512C-0CV-T-RS



9212S-0CV-T-RS



9509S-WCV-AQ-RS



9512S-0CV-RS



9532C-0CV-RS



9509S-WAV-RS

### INSERTS – AQ™ BRAND 100/PACK

9502S-02N-RS Inserts, 6x29mm, 200ul, w/attached plastic springs.

### VIALS – AQ™ BRAND 100/PACK

9509S-WCV-RS 2ml vials, clear 9mm screw top w/ write on patch.

9509S-WAV-RS 2ml vials, amber 9mm screw top w/ write on patch.

9512C-0CV-RS 1.5ml vials, clear, Max Recovery center draining snap top.

9512S-0CV-RS 1.5ml vials, clear, Max Recovery center draining 9mm screw tops.

9512C-0CV-T-RS 1.2ml, MRQ™ vials snap top.

9512S-0CV-T-RS 1.2ml, MRQ™ vials 9mm screw top.

9532C-0CV-RS Vials w/ 300ul fused insert, snap tops.

9532S-0CV-RS Vials w/ 300ul fused insert, 9mm screw tops.

### SCREW CAPS – AQ™ BRAND

9509S-10C-B Caps, light blue w/ fitted ultra pure silicone/PTFE septa. 100/pack

9509S-10C-B-M Caps, light blue w/ fitted ultra pure silicone/PTFE septa. 1000/case

9509S-30C-B Caps, light blue w/ preslit fitted ultra pure silicone/PTFE septa. 100/pack

9509S-30C-B-M Caps, light blue w/ preslit fitted ultra pure silicone/PTFE septa. 1000/case

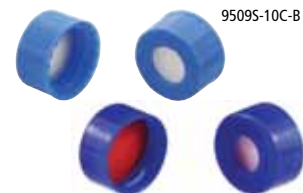
### SNAP CAPS – MICROSOLV BRAND

9502C-10CB Caps, blue w/ silicone/PTFE septa. 100/pack.

9502C-10CB-M Caps, blue w/ silicone/PTFE septa. 1000/case.

9502C-30CB Caps, blue w/ preslit silicone/PTFE septa. 100/pack.

9502C-30CB-M Caps, blue w/ preslit silicone/PTFE septa. 1000/case.



9509S-10C-B

9502C-30CB

### EASY PURCHASE PACKS – AQ™ BRAND 100/PACK

9509S-1WAP-RS 2ml amber write on vials and light blue AQR screw caps w/ silicone/PTFE septa.

9509S-1WCP-RS 2ml clear write on vials and light blue AQR screw caps w/ silicone/PTFE septa.

9509S-3WAP-RS 2ml amber write on vials and light blue AQR screw caps w/ preslit silicone/PTFE septa.

9509S-3WCP-RS 2ml clear write on vials and light blue AQR screw caps w/ preslit silicone/PTFE septa.

9512C-1MP-RS 1.2ml clear MRQ™ vials and blue snap caps w/ silicone/PTFE septa.

9512C-3MP-RS 1.2ml clear MRQ™ vials and blue snap caps w/ preslit silicone/PTFE septa.

9532S-1CP-RS 300ul fused insert vials and light blue AQR screw caps w/ silicone/PTFE septa.

9532S-3CP-RS 300ul fused insert vials and light blue AQR screw caps w/ preslit silicone/PTFE septa.

9512S-1CP-RS 1.5ml Max Recovery Vials, clear and light blue AQR screw caps w/ silicone/PTFE septa.

9512S-3CP-RS 1.5ml Max Recovery Vials, clear and light blue AQR screw caps w/ preslit silicone/PTFE septa.

9512S-1MP-RS 1.2ml MRQ™ Vials, clear and light blue AQR screw caps w/ silicone/PTFE septa.

9512S-3MP-RS 1.2ml MRQ™ Vials, clear and light blue AQR screw caps w/ preslit silicone/PTFE septa.