ION EXCHANGE RESIN ANALYSIS

Company Name	**Watersurplus**	Sample #	**RTC-33357**
Customer Name	**Craig Hall**	Date Received	**5/10/2018**
Contact #	**(815) 636-8833**	Date Analyzed	**5/14/2018**
Customer E-mail	**Chall@watersurplus.com**	Your ResinTech Rep	**Carl Galletti**
Sample Description	**ION2810207 MB**	Tech Rep E-mail	**cgalletti@resintech.com**
Reported Problem	**None Reported**	Tech Rep Phone	**(708) 261-5931**

ANALYSIS AT A GLANCE

MIXED BED RESIN

(See component analysis for additional details)

Manufacturer & Part #	**Rohm & Haas Amberjet UP1400 & UP4000**
Overall Condition	**Good**
Physical Condition	**Good – clean in appearance**
Overall Separation	**Good**
Bead Integrity	**Good**
Overall Recommendation	**Suitable for use**

SUMMARY

	Anion	Cation
Total Capacity meq/ml	1.56	2.23
Moisture % H_2O	40.2%	38.2%
Percent Broken	3%	2%

Comments

This sample was identified as **ION2810207**.

The sample was prepared for testing, and then placed into a brine solution to separate the components and observe. The components separated completely and were clean appearance. Testing indicates that the components are in very good condition both physically and chemically. Capacity and moisture results are similar to new resin. There was also no *visual* evidence of any fouling observed during pretreatments. Therefore, the analysis suggests that the mixed bed is suitable for use, and capable of performing under standard exchange deionization.

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Reported Problem	**None Reported**	Tech Rep Phone	**(708) 261-5931**

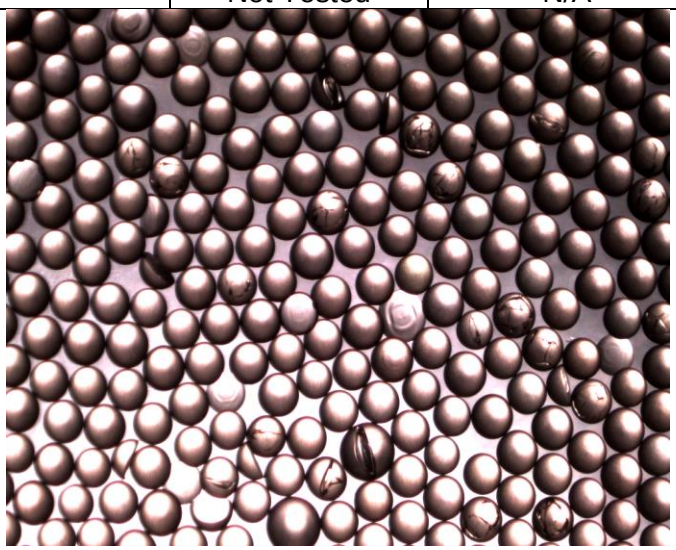
ANALYSIS AT A GLANCE

Type of Resin	**Strong Base Anion Portion of the Mixed Bed**
Manufacturer & Part #	**Rohm & Haas Amberjet UP4000**
Chemical Condition	**Good**
Moisture	**Near Normal**
Physical Condition	**Good – clean in appearance**
Bead Integrity	**Good**
External Foulants	**Low**
Internal Foulants	**Not evaluated / No visual evidence of organic fouling**
Screen Size Distribution	**Uniform particle size**
Overall Recommendation	**Suitable for use**

ROUTINE ANALYSIS

Based on Chloride Form Type 1 Gel Strong Base Anion Resin

	Results	Estimated New	% of New
Total Capacity meq/ml	1.56	1.45	99+%
Salt Splitting Capacity meq/ml	1.51	1.40	99+%
Moisture % H_2O	40.2%	43%	
Percent Broken	3%	1%	
TOC Extractables ppm	Not Tested	N/A	



Comments

See page 1 for all comments.

ION EXCHANGE RESIN ANALYSIS

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Customer E-mail	**Chall@watersurplus.com**	Your ResinTech Rep	**Carl Galletti**
Sample Description	**ION2810207 MB**	Tech Rep E-mail	**cgalletti@resintech.com**
Reported Problem	**None Reported**	Tech Rep Phone	**(708) 261-5931**

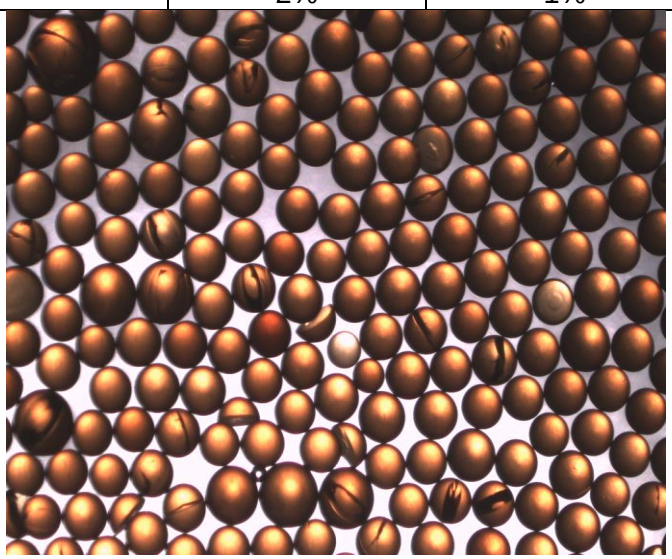
ANALYSIS AT A GLANCE

Type of Resin	**Strong Acid Portion of the Mixed Bed**
Manufacturer & Part #	**Rohm & Haas Amberjet UP1400**
Chemical Condition	**Good**
Moisture	**Normal**
Physical Condition	**Good – clean in appearance**
Bead Integrity	**Good**
External Foulants	**Low**
Internal Foulants	**Not evaluated / No visual evidence of iron fouling**
Screen Size Distribution	**Uniform particle size**
Overall Recommendation	**Suitable for use**

ROUTINE ANALYSIS

Based on Sodium Form 10% DVB Gel Cation Resin

	Results	Typical New	% of New
Total Capacity meq/ml	2.23	2.2	99+%
Moisture % H_2O	38.2%	40%	
Percent Broken	2%	1%	



Comments

See page 1 for all comments.