# RESIN SAMPLE ANALYSIS FORM

| | CLIENT INFORMATON |
|---|---|
| NAME | |
| COMPANY | |
| EMAIL | |
| PHONE NUMBER | |
| ADDRESS | |
| CITY, STATE ZIP | |
| END USER/ INDUSTRY | |

| SAMPLE | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| SAMPLE ID | | | | | |
| RESIN TYPE | | | | | |
| RESIN BRAND | | | | | |
| RESIN MODEL NUMBER | | | | | |
| APPLICATION | | | | | |
| AGE OF SAMPLE | | | | | |
| REGENERATED OR EXHAUSTED | | | | | |

***If a service problem exists, list the specific problem in the space below:***

## STANDARD ANALYSIS INCLUDES:

☑ Capacity, moisture, bead integrity, microscopic photo, and visual evidence of foulants

## ADD-ON OPTIONS*:

☐ Metals Assay
☐ Total Organic Carbon (TOC)
☐ Iron Fouling
☐ Exhaustion or Kinetics Profile
☐ Site Composition (% Regeneration)
☐ Particle Size Distribution

## REASON FOR ANALYSIS:

☐ General / PM
☐ Annual Inspection
☐ Age Concern
☐ Unusual Appearance
☐ Service Problem
☐ Unusual Odor

*Additional fees apply.

Revision 1.0



RESINTECH® INC.
INNOVATIONS IN ION EXCHANGE

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## WHY TAKE SAMPLES?

It is important to take resin samples and have them analyzed at regular intervals in order to avoid issues with system reliability, poor water quality, excessive chemical use, and other possible problems. Regular analysis not only helps identify potential fouling and need for cleaning but can also be used to track the normal aging of resin as an aid to scheduling resin replacement and preventing catastrophic failures.

## HOW OFTEN SHOULD SAMPLES BE TAKEN?

Softeners and other salt form ion exchangers (systems regenerated with sodium chloride) should be analyzed when new and again after each two to three years of service. Demineralizer resins and other resins regenerated with acid and/or caustic should be analyzed when new and again every one to two years of service. Resins that are stored for more than a year before use should be reanalyzed before use to verify they have remained in good condition. Sample frequency should be increased for resins that are used in critical service, resins used in waste treatment, for systems that have known fouling potential, and for resins that are nearing the end of their useful lives.

Whenever possible, retain a small (500 mL) sample of all new resins for possible future comparison or analysis.

## HOW MUCH SAMPLE IS REQUIRED?

For routine testing of salt form resins (cation or anion resins regenerated with sodium chloride), a minimum of 250 mL of resin is required. It is better to send >500 mL in case an analysis needs to be repeated. For resins regenerated with acid or caustic larger samples are needed; 500 mL is the minimum required and 1 liter is recommended. For mixed bed or layered bed samples even larger samples are needed; 1 liter minimum and 2 liters recommended. If special analysis and/or cleaning trials are requested, please discuss volume requirements with ResinTech Laboratory ahead of time.

## HOW ARE SAMPLES TAKEN?

It is important to take a representative sample of the resin that reasonably reflects the average condition of the entire bed. Samples scooped from the top of a resin bed often result in a misleadingly poor analysis while samples taken from the bottom of a resin bed provide an overly optimistic analysis.

A simple way to retrieve a core sample of resin is with a thin-walled plastic tube or PVC pipe, about 1 in. in diameter. A recommended sampling procedure is as follows: Before taking the sample, drain the bed (preferably a freshly regenerated bed) until the water level drops just beneath the resin level.

Slowly force the tube through the resin bed, taking care not to damage the distributor or gravel subfill. When the bottom of the vessel is reached, stopper or cap the tube and withdraw it slowly. A device known as a grain thief can also be used to take “core” samples at various depths within a resin bed.

For mixed beds, a representative sample can be taken from the resin slurry during the mixing step.

Sometimes, when it is difficult or impossible to take a sample from the vessel itself, the resin can be removed to a sack, bin, or other container and sampled externally, then the resin can be returned to the vessel.

For difficult or unique systems, consult ResinTech Technical Support for help in devising a sample procedure.

## HOW ARE RESIN SAMPLES SHIPPED?

Most resin samples should be shipped moist with the free liquid poured out. However, regenerated resin samples, especially hydroxide form anion resin and H/OH mixed beds are best shipped covered with water to minimize potential exhaustion of the anion component with atmospheric carbon dioxide. For samples shipped in water, fill the sample container completely with water to minimize head space.

Each sample container should be clearly marked with a waterproof label and tightly sealed. Plastic containers are highly recommended over glass. Metal containers are generally not suitable.

Ship samples and completed request form to:

**ResinTech, Inc.**
**Attn: Resin Testing Laboratory**
**1801 Federal Street**
**Camden, New Jersey 08105**

Include a copy of the Resin Sample For Analysis form with shipment. When filling out the analysis request form, please write as much of the following important bits of information as possible:

- Name and address of the plant
- Name and telephone number of the contact person
- Number of the unit sampled and the date the sample was taken
- Condition of resin: Exhausted or Regenerated
- Type of service (softening, two-bed deionization, etc.)
- Resin type and the manufacturer’s designation, if known
- Date the resin was installed or rebedded
- Whether or not resin has been added as makeup for losses
- Nature of the plant problem

To check on receipt of sample or status, contact:

**GREG KNOETTNER**
*Technical Support*
**856.336.6860**
**gknoettner@resintech.com**

**NOTE:** Typical turn around time for a standard analysis is one week, however “rush” analysis can be provided in most cases within three business days. Call for availability. Additional fees will apply.