

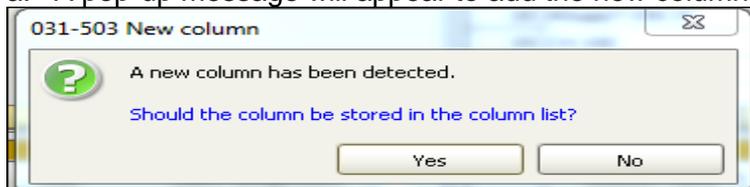
General

This document details how to configure a new column in a Metrohm IC system using MagIC Net software.

Procedure

A. Removing old column and connecting the new column

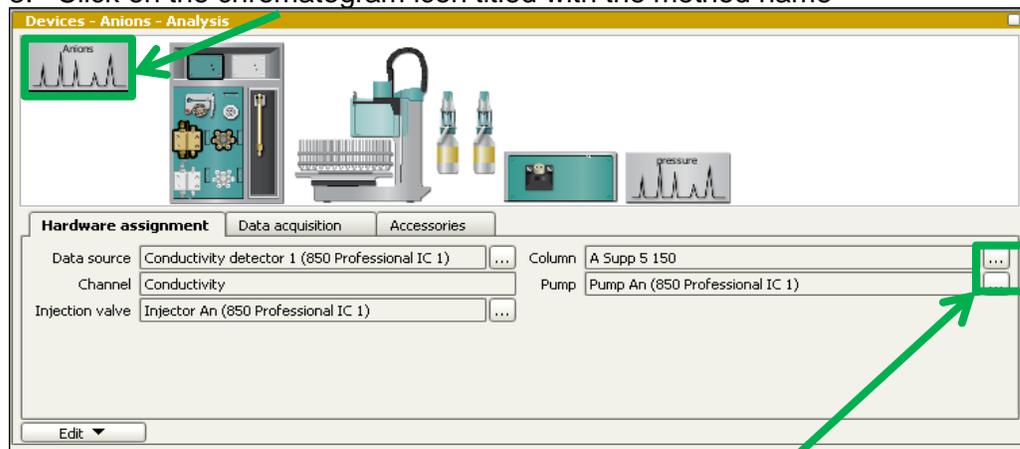
1. Stop all devices in either Manual Control or in Workplace.
2. Remove new column from packaging and remove green ferrules or screws in both ends. Metrohm recommends labeling the new column with start date.
3. Open the IC door.
4. Open the column door, if applicable.
5. Remove the old column from the column holder by pressing on the clip at the top of the holder.
 - a. Unscrew the connections to the old column. Metrohm recommends labeling the old column with end date.
 - b. Connect the new column.
6. Insert the column into the column holder.
 - a. A pop-up message will appear to add the new column to the column list. Click Yes.



- a. Enter column name and assign work start date. Click OK.

B. Updating method assignment.

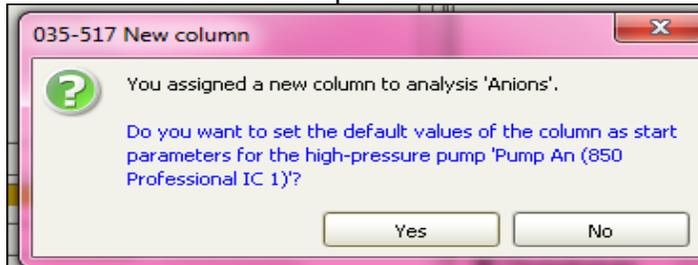
1. Click on Method button > File > open.
2. Click on the method to be used.
3. Click on the chromatogram icon titled with the method name



4. Click on the button with 3 dots to the right of column
 - a. Select the new column

How to configure a new IC column in MagIC Net

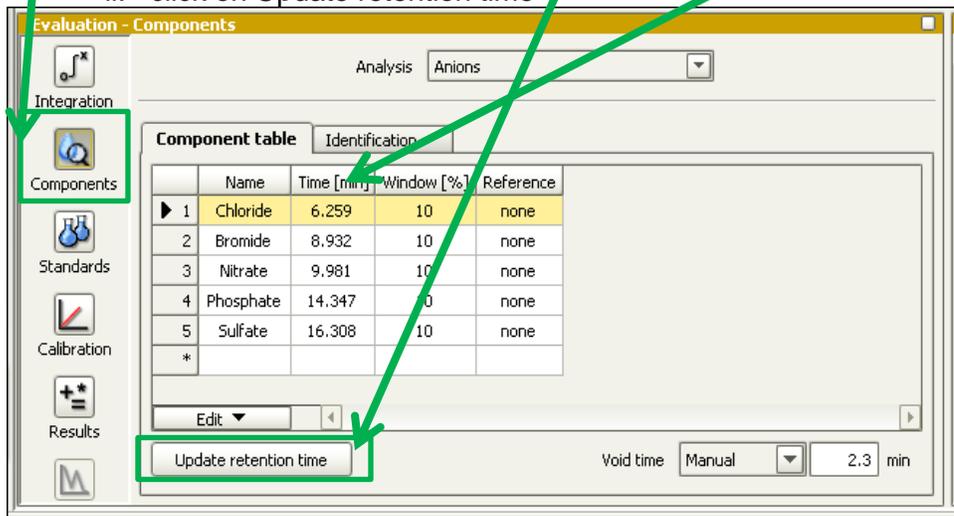
- b. Click OK
- c. A pop-up message will appear titled “New Column”.
 - i. Click Yes to set default values of the column as start parameters for the High Pressure Pump.



5. Click on high pressure pump [Anions or Cations]
 - a. Update start-up time to 5 min for column length 150mm or less and 10 mins for 250mm.
 6. Repeat these steps for additional Analysis like Pressure.
 7. Click File and Save to update the method with the new column.
 - a. Or select Save As and enter new method name.
- B. Condition the column – review column leaflet or manual for specific steps.**
1. In Manual control, click on the high-pressure pump [Anions or Cations]
 2. Purge the high-pressure pump, if system has been down for an extended time.
 3. Adjust target flow to about 20% default standard flow rate.
 - i. For example, a column with a standard flow rate of 0.7 mL/min would have an adjusted target flow of 0.2 mL / min.
 4. Click start.
 5. Allow to stabilize then increase the flow about 10% until standard flow rate.
 - i. For example, a column with a standard flow rate of 0.7 mL/min would increase by 0.1 mL/min.
 - ii. If the pressure is about 0.05 MPa, click STOP and purge the high pressure.
 8. Click on Workplace tab
 - a. Click on Equilibration tab.
 - b. Select the method with the new column assignment. If the method name was changed, then this new method **MUST** be selected; otherwise, an error pop-up message will appear titled “Column not ok – Workplace”.
 9. If an existing sample table is used, then the new method must be selected in table and saved.
- C. Verifying analyte(s) retention time**
1. After IC has been equilibrated for recommend time per column specifications with standard eluent, we recommend to perform the following:
 - a. The pressure should be evaluated for stability by comparing pressures from determinations and during equilibration.
 - b. Run 3 Ultrapure water samples to evaluate the pressure and baseline stability.

How to configure a new IC column in MagIC Net

- c. Run 3 standards [1 or 5 ppm] to evaluate baseline stability, retention time stability and accuracy per column Certificate of Analysis. Always follow QA and SOP additional column requirements.
2. If the retention times isn't stable or within acceptable range of the C of A, then equilibrate for an additional hour. Some Metrohm columns may take up to 12 hours to equilibrate using standard eluent.
3. All analytes must be identified correctly with retention times updated and saved in the current method for intelligent dilution program of an in-vial dilution Metrohm IC system, MiVDT. Failure to perform this step may prevent intelligent dilutions from being performed successfully.
 - a. Click on Method button > File > Open and select the method. This method may already be open
 - b. In the Evaluation subwindow, click on Components
 - i. change retention times or increase window [%].
 - ii. click on Update retention time



4. Click File > Save or Save As to change method name

Troubleshooting

1. If the column chip reader doesn't recognize the new column, then inspect the metal contact for corrosion. If corrosion is present, then use a Kim-Wipe with a small amount of methanol to wipe clean. This wipe should not be dripping with methanol. Wait 30 sec before trying to connect again.
2. The method must be saved to assign the new column to the method.