



Astec CLC-D and CLC-L HPLC Column Operating Instructions

The Astec CLC Columns have been conditioned with 5mM copper sulfate and is ready for use. To change to another concentration of copper sulfate, the column must be conditioned for at least one hour at 1.5 mL/minute. **Before placing the column into the system, it is good practice to pass a 5mM solution of copper sulfate through the system to insure no contamination from residual alcohol or other solvent in the system.** It is also recommended to pass a 2M nitric acid solution through the system without the column in place to clear the detector windows for maximum sensitivity.

Organic Modifiers

The Astec CLC columns will tolerate up to the following alcohol content in the presence of copper sulfate:

30% methanol
20% ethanol
15% isopropanol

pH

The most stable pH range for this column is 3.0-4.7.

Flow Rate

The column will tolerate flow rates up to 2.0 mL/minute but typical use is 1.0 mL/minute.

Sample Concentration

The linear range on the Astec CLC columns is from 1 - 50 μ L of a 5 mg/mL solution. Samples are dissolved in water.

Detection

The optimal wavelength to read the copper complex is 254nm UV.

Storage

After use the column should be rinsed with a 20% methanol in 5 mM copper sulfate solution. This can be done at 1.5 mL/minute for 15 minutes and then washed with a 5mM solution of just copper sulfate. The column can now be stored in this solution.

For laboratory use only.

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