Precautions:

**Mobile phase:** Use only aqueous acid mobile phases. AVOID ORGANIC SOLVENTS. Samples may contain small amounts organic solvents. If there are any questions, please do not hesitate to call for more information.

**pH range:** 1-7

**Pressure limit:** Do not exceed the recommended back pressure on the analytical column with the guard column in place. Prolonged high pressure and/or flow rates may cause a void in the guard column polymer bed. Replacement of the Agilent A5211 Guard column may become necessary if the guard column back pressure is too high.

**Maximum mobile phase flow rate:** Do not exceed recommended analytical column flow rate.

**Storage solvent:**

Guard columns may be stored in mobile phase overnight. Long term storage solvent is in 0.001 N H$_2$SO$_4$. Storage in mobile phase may have corrosive effects on the guard column body and may lead to reduced capacity and/or high column backpressure. DO NOT LET THE GUARD COLUMN DRY OUT. Use guard column end plugs.
Using the guard column:

**Mobile phases:** Mobile phase of choice is dilute sulphuric at a concentration between 0.0001 and 0.05 N.

**Regeneration procedures:**

**Anion or Metal contamination:** Guard column contamination is characterized by high backpressures. Pump the guard column (inverted) with 10 mL of 0.05 N H₂SO₄. Severe contamination will require pumping in the back flush mode overnight at 0.5 mL/min. Re-equilibrate the guard column with the mobile phase.

**Organic contamination:** Use a Guard-disc to prevent contamination. To regenerate, pump 0.1 N H₂SO₄ at 0.5 mL/min overnight.

**Bacterial growth:** No regeneration procedure is available. To prevent bacterial growth, store the guard column in acidic solution and filter samples and mobile phase through 0.2 µm membrane.

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