



## Pinnacle PCX Site Requirements

- The minimum bench top space required for the Pinnacle PCX system is approximately 32H x 16W x 20D inches (81 x 41 x 51 cm), both doors fully opened, with bottles and electrical connections in place. The Pinnacle PCX weighs approximately 67 lbs (30kg) for simplex systems, and approximately 77 lbs (35kg) for duplex systems. The minimum bench space does not include the HPLC system. The total space requirement depends on the brand and model of HPLC. For most cases, it is best to place the LC pump and injector system on the left side of the Pinnacle PCX, and the detector on the right.
- In addition to the power outlets required for the HPLC system, one grounded outlet will be needed.
- Nitrogen is required to pressurize the reagent reservoir(s). The Pinnacle PCX requires gas pressure of 45-75 psi (3-5 bar) at the gas inlet. An adaptor from the gas regulator to 1/8 inch OD tubing is required. To minimize oxidation of the TRIONE ninhydrin or OPA reagent, use oxygen-impermeable tubing for the entire gas supply line (Saran or metal). *Note:* If TRIONE is to be used for Reagent 1, Nitrogen must be used to prevent out-gassing.
- A waste container should be provided for the waste lines from the Pinnacle PCX and the HPLC detector.

## Pinnacle Control Software Computer Requirements

For the Installation, we strongly recommend installing the USB cable.

Use of the network connection is optional at the user's discretion.

The computer must have:

- Microsoft Windows XP, Vista, or Windows 7 operating environment
- Minimum of one USB port, Network Card, or Network router
- Available Memory: Minimum 10 Mb

## HPLC System Requirements

*Important!* If the system will be used for amino acids, glufosinate, glyphosate, polyamines, or diquat & paraquat analysis, be aware that the column regenerant is strongly alkaline. Any polymers or other materials in the HPLC pump, injector, needle seat, and detector must be compatible. For example, the standard rotor seal in Rheodyne injector valves is Vespel polyimide, which is not recommended at pH >9; a Tefzel or PEEK rotor seal must be installed.

- For all application, the pressure rating of the detector flow cell must be > 110 psi (7.5 bar)

### **For Amino Acid Analysis**

#### ***Pump***

- Minimum ternary gradient elution
- Piston wash capability is preferable

#### ***Injector***

- Tefzel or PEEK rotor seal for injector valve
- Tefzel or PEEK needle seat if it is an autosampler

#### ***Detector***

- UV/Vis if using TRIONE
- FLD if using OPA

### **For Glyphosate Analysis**

#### ***Pump***

- Minimum binary gradient elution
- Piston wash capability is preferable

#### ***Injector***

- Tefzel or PEEK rotor seal for injector valve
- Tefzel or PEEK needle seat if it is an autosampler
- For water samples, at least 200ul injection

#### ***Detector***

- FLD detection required

### **For Carbamate Analysis**

#### ***Pump***

- Minimum binary gradient elution

#### ***Injector***

- For water samples, at least 200ul injection

#### ***Detector***

- FLD required

### **For Chromium VI Analysis**

#### ***Pump***

- Non-metallic HPLC or IC

#### ***Injector***

- 1000ul injection loop per official method.

#### ***Detector***

- UV/Vis required

For all other applications, review the method notes for chemistry requirements.

### **HPLC Relay Requirements**

For HPLC systems other than Agilent 1100, or 1200, the Software and system must be capable of sending a relay signal to an external piece of equipment to achieve synchronization.

- Chemstation version 9.0 or higher is needed for Agilent 1100 or Agilent 1200. Pinnacle PCX software will communicate with Chemstation directly – no relay connection is needed.

Any machine that drives this relay input shall provide a relay contact pair that is electrically isolated from all other electrical devices. The relay signal must have:

- Relay detection voltage      24 +/- 2V
- Relay detection current      Approximately 1 mA

All of the requirements must be met and the HPLC must be in working condition before the Installation can take place. If any of the site requirements are not met or the HPLC is not working, then the Installation must be rescheduled until the requirements are met and the HPLC is in working condition.

All of the requirements have been met and the HPLC is in working condition:

Sign and date: \_\_\_\_\_

Name: \_\_\_\_\_

Company: \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

Please send a signed copy back to  
Fax: (650) 968-0749 or  
Email: [support@pickeringlabs.com](mailto:support@pickeringlabs.com)