PrepLinc

Solid Phase Extraction Solutions Catalog

2011 Edition

J2 SCIENTIFIC

Automating Sample Preparation with J2 Scientific and the PrepLinc System

At **J2 Scientific** it is our goal to make your sample prep lab operate more efficiently by providing the most cutting edge, robust and cost effective automated equipment on the market. In creating the **PrepLinc™ Platform** we were striving to design a system that is scalable for the growing lab, is as flexible as necessary for the lab that does a bit of everything and is still simple to maintain and operate. We believe the PrepLinc embodies all these things.

With modules available for automating Solid Phase Extraction, Gel Permeation Chromatography Cleanup and Concentration the PrepLinc can take the sample after extraction and process through to analysis. Combine SPE with Concentration, combine GPC Cleanup with SPE, even concentrate a sample between two processes.   The combination of these technologies gives the user flexibility and options to significantly decrease sample handling while increasing data quality and productivity.   High powered software utilizes the features of each module to make the PrepLinc™ a complete sample prep solution.

In this catalog you will find the details about our offerings for
Solid Phase Extraction (SPE)

For more information about other PrepLinc products ask your sales representative for the following catalogs:

GPC Cleanup Solutions
SPE Water Extraction Solutions
Concentration Solutions

The **PrepLinc™ SPEi** from J2 Scientific accentuates our line of full-featured automated sample preparation instruments. The SPEi system uses positive pressure for consistent flow sample to sample and run to run. The intuitive software and range of parameters make method development easy. Converting any manual SPE method to automated takes no time. Use the SPEi as a stand-alone automated SPE system or integrate with other PrepLinc™ modules, like the AccuVap™ Evaporation module or GPC Cleanup module for a completely automated sample prep system.

- SPE for Environmental, Water, Food, Pharma and Forensics samples

- EPA Method 3535 Solid Phase Extraction

- EPA Column Cleanup Methods
     3610B - Alumina
     3611B - Alumina for Petroleum
               Waste
     3620C - Florisil
     3630C - Silica

- SPE methods from AOAC, ASTM, USDA and other agencies.

Cartridges Compatibility
Uses cartridges from 1mL to 15mL, plus many specialty and flash columns. Optional LVi Large Volume Injection for SPE discs.

Sample Capacity
System can be scaled to meet lab needs; add up to 5 column modules for processing 45 samples unattended.

Solvent Select
The ability to program up to 12 different solvents or solvent mixes in a single method

Positive Pressure
The use of positive pressure sample injection and solvent elutions is precise and repeatable. Pressure monitoring protects samples & equipment.

Reverse Elution
The only automated SPE system to offer reverse elution through any cartridge at any stage in the method.
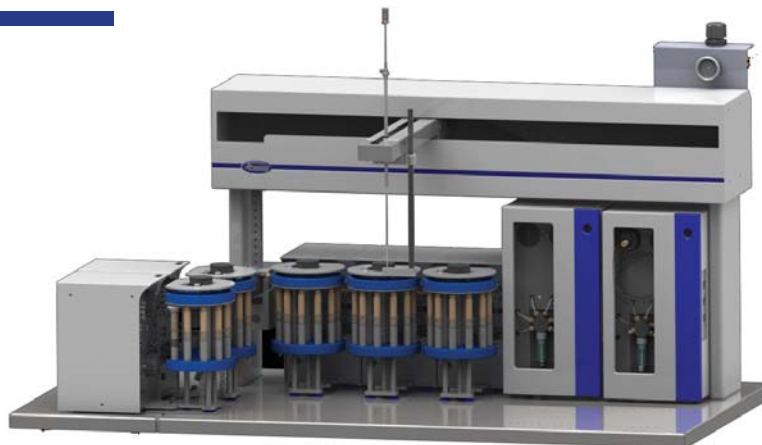

Ordering
PrepLinc SPEi System
PL9000*   **PrepLinc AS4 Autosampler with Fluidics module, Hub control module and probe wash station**
PL9050*   **PrepLinc SPEi Starter Kit, include the SPE fluidics module and one SPEi column module**
PL9055   **PrepLinc SPEi Column Module, 9-Position; add up to 4 more modules**
PL9991*   **PrepLinc Software Full License** (Details on Page 4)
PS022X*   Surge Protector, 6pos, Laboratory Grade, 15 amp
Install*   Onsite Installation & Training
Options   **See page 6**
Trays   **See page 7**
*required

SPEi Scalability/Capacity

The SPEi system can be scaled to fit the needs of the lab. Order column modules based on the number of SPE columns used per sample and the desired capacity per run.

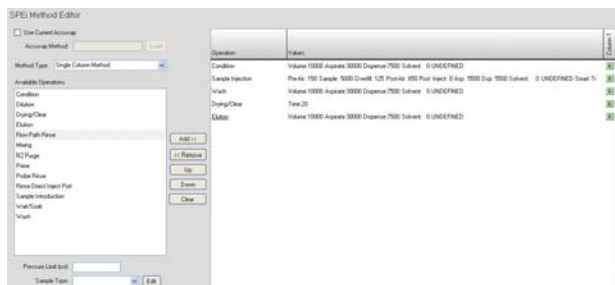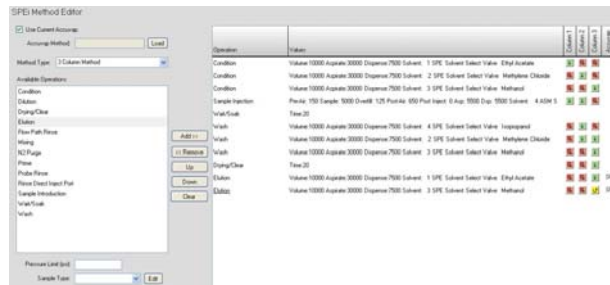| SPE Columns	Maximum capcity
Single column method	5 modules/45 samples
Two-column method	4 modules/18 samples
Three-column method	3 modules/9 samples

PrepLinc Software

Powerful software is what makes the PrepLinc SPEi System rise above the competition. A Windows-based program, it is easy to install, operate and update. Programming for all PrepLinc modules is included with the software but you only see information and options specific to the modules installed with your system. The ability to save an endless number of methods, sequences and reports makes compliance a snap.

SPE Method Editor

Create simple, single-column or complex, multi-column methods through the same intuitive method editor.

The method screen shown at left is an example of typical single column SPE method. There is one condition step, the sample is introduced to the column, a wash step, the sample is dried and then the sample is eluted.

This example method is more complicated and shows the real flexibility of the PrepLinc™ software. Three SPE columns are used for this example. Condition and wash steps are performed to move the sample through all three columns. A reverse elution is performed on one of the columns for the final collection. Both elutions are evaporated using the optional AccuVap™ and can be collected in separate vials.

PrepLinc™ Sequence Editor
- Sequences are not limited to one method, one module or one "Linc" method
- User can customize sequence as laboratory flow dictates
- Choose sample and collect tray and location for first sample; sequentially copies for additional samples, but can be edited for unique situations
- Choose priority samples
- Re-arrange, add and delete unprocessed samples after run has begun
- Change method and tray information for unprocessed samples after run has begun

SPEi System Options

PL5800   **Solvent Switching Valve** - Increases the number of different solvents available for use in a method from 3 to 12.

PL5003   **SPE Solvent Sensor** - When added to the PL5800, can sense when solvent is out and pause system.

PL5801   **Reverse Elution Valve** - Allows flow to be reversed through the SPE column for collection.

PL5802   **Solvent Bottle Kit** - includes three 1-liter safety-coated solvent/reagent bottles with vented caps.

PL5806   **Autosampler Base Extension Kit -** necessary when purchasing 4 or 5 PL9055 column modules.

PL7800   **AccuVap Inline Valve** - Required for transfer from the AccuVap directly to a SPE column; only necessary if an AccuVap has been purchased with the system, see Page 9.

PL3011X   **GPC Inline Valve** - Required for inline flow from GPC Cleanup module through SPE Column; only necessary if a GPC Cleanup module has been purchased with the system, see Page 9.

System Options

PC-KT-IPC-01   **Internal PC** for PrepLinc Software Operation; mounts in PrepLinc HUB module to save benchspace; includes a 17" (minimum) flat-panel monitor, keyboard and mouse. Fully networkable.

PC-KT-DPC-01   **Desktop PC** for PrepLinc Software Operation; includes CPU, flat-panel monitor (17" minimum), key board and mouse.

SP600   **Solvent Degasser**, Inline, 4-channel; may be necessary if lab elevation is above 3000ft and/or lab temperature is unstable and reaches temperatures above 70 degrees F.

PL0800   **Accessory Tray**; mounts on top of autosampler to provided additional space for module and solvent bottles.

PS3001X   **Uninterruptible Power Supply** for PrepLinc with Smart Shutdown control, 2200VA, 110V

AK015   **PrepLinc Tubing and Fitting Kit**; a variety of extra supplies for your system

PL-Manuals   **Manual Set**, Hardcopy in binder; Hardware Installation and Software Installation & Operation Users Guides for all PrepLinc Modules and Options. Electronic copies of manuals are included with all PrepLinc software at no charge.

PL-Toolkit   User Tool Kit, set of tools necessary for basic maintenance on any PrepLinc Module

Recommended Spare Parts

A068-00   Injection Port; recommend at least 1, up to 1 per column module

F00323   Injection Port Seals; recommend 1 per column module

PL5803   Kit, Solvent Line Tubing & Frits, Includes tubing & Frits for 5 Lines; Recommend one per solvent

PR1137X   Probe, AS4; recommend 1

BV8010   Syringe, 5mL, ZDV, recommend 1

FR440   Solvent Line Replacement Frits; recommend three if PL5800 is not purchased; recommend one per solvent line if PL5800 is ordered up to 12.

SPE Columns & Adapters

SPE Columns

J2 Scientific offers a variety of common SPE columns. Custom packings can also be provided. Contact Customer Care for a custom pack quote.
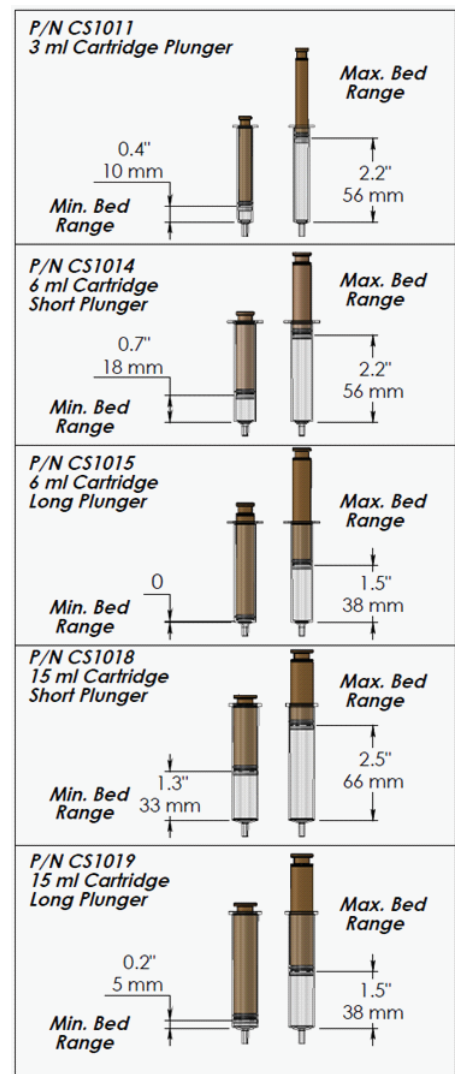
CS0110-PK	Cartridge, Carbon, 6mL Polypro tube, 50um frit, 400mg, Pack of 25
CS0152-PK	Cartridge, Alumina, 6mL Polypro Tube, 1g, Pack of 25
CS0151-PK	Cartridge, Alumina, 15mL Polypro Tube, 11g, Pack of 25
CS0200-PK	Cartridge, Silica, Multi-Bed, 6mL Polypro Tube, 44 Acid, Pack of 25
CS0201-PK	Cartridge, Silica, Multi-Bed, 6mL Glass Tube, 44 Acid, Pack of 25
CS0205-PK	Cartridge, C18, 6mL Tube, 1g, Pack of 25
CS0211-PK	Cartridge, Sodium Sulfate, 6mL Glass Tube, 0.5g, Pack of 25
CS0212-PK	Cartridge, Florisil, 1% Deactivated, 4mL Glass Tube, 2g Pack of 25
CS0214-PK	Cartridge, Sodium Sulfate, 6mL Polypro Tube, 0.5g, Pack of 25
CS0215-PK	Cartridge, AG 1-X8, 6mL Polypro Tube, 1g, Pack of 25
CS0220-PK	Cartridge, Alumina, 15mL Polypro Tube, 5.3g, Pack of 25
CS0900-Special	Cartridge, SPE, Special Pack; call for quote

SPE Column Plungers & Adapters

For most applications it is beneficial to use SPE Column Plungers. They reduce or remove the space at the head of the SPE bed. This allows for precise control of sample addition and mobile phases to the column bed resulting in more predictable elution's, lower solvent consumption, and typically better recoveries. Using the SPE Plungers to remove the headspace will reduce
variability in pressure and elution volumes from column to column. The plungers are also important to reduce or remove the possibility of mixing phases, especially when sample sizes and elution volumes are small.

J2 Scientific offers plungers to fit most standard 3 ml, 6ml and 15 ml columns. The 3 ml plunger will work with most 3 ml columns and bed lengths. In both the 6 ml and15 plungers we offer 2 sizes to work with a range of bed lengths and still have the ability to be installed in the SPE Column module (Image 1). The figures to the right show the part numbers and the bed lengths that they will work with.

CS1007	Adapter, short, 15mL SPE Tube, each
CS1008	Adapter, multi, 1-15mL SPE Tubes, each
	-Must have 15mm space above sorbent in 3mL column
	-Must have 20mm space above sorbent in 6mL column
	-Must have 25mm space above sorbent in 10/15mL columns
	-If space not available, must use individual adapers or plungers
CS1009	Adapter, short, 6mL SPE Tube, each
CS1010	Universal Plunger Removal Tool
CS1014X	SPE Plunger Assy, 6mL, 2.2"L
CS1015X	SPE Plunger Assy, 6mL, 3.1"L
CS1018X	SPE Plunger Assy, 15mL, 2.0"L
CS1019X	SPE Plunger Assy, 15mL, 3.1"L
CS1020X	SPE Column Plunger Starter Kit
	-Contains 3 each of CS1007, CS1009, CS1011X, CS1014X, CS1015X, CS1018X and CS1019X

P/N CS1011
3 ml Cartridge Plunger
Min. Bed Range 0.4" 10 mm
Max. Bed Range 2.2" 56 mm

P/N CS1014
6 ml Cartridge Short Plunger
Min. Bed Range 0.7" 18 mm
Max. Bed Range 2.2" 56 mm

P/N CS1015
6 ml Cartridge Long Plunger
Min. Bed Range 0
Max. Bed Range 1.5" 38 mm

P/N CS1018
15 ml Cartridge Short Plunger
Min. Bed Range 1.3" 33 mm
Max. Bed Range 2.5" 66 mm

P/N CS1019
15 ml Cartridge Long Plunger
Min. Bed Range 0.2" 5 mm
Max. Bed Range 1.5" 38 mm

Trays and Glassware

PrepLinc Trays

The user should select trays to hold sample vials and trays to hold collect vials as required per their method. The autosampler can sample out of or collect into any of the vials that are recommended for the trays listed below. Vials are determined based on the volume of the sample and collect fractions. It can also be helpful to choose a sample tray that holds a vial from the prep process prior to GPC Cleanup and to choose a collect tray that hols a vial that will be used in the next prep process after GPC Cleanup (usually concentration).

Part No.	Description	Vials offered by J2 Scientific
RK1401	Tray, PL, 16mm OD, 60-Position	for use with BV16100T-CS, BV16114-CS and BV16150-CS
RK1402	Tray, PL, 25mm OD, 30-Position	for use with BV25200-PK and BV25140
RK1404	Tray, PL, 38mm OD, 14-Position	for use with BV38200 and BV38140
RK1406	Tray, PL, TurboVap 200mL Tube, 10-Position	for use with BV45817X-Ea
RK1407	Tray, PL, TurboVap 60mL Tube, 24-Position	
RK1408	Tray, PL, 50mL Centrifuge Tube, Tapered, 24-Position	
RK1409	Tray, PL, 60mm OD, 24-Position	for use with BV60140
RK1410	Tray, PL, Boiling Flask, 250mL, 29mm Joint, 6-Position	
RK1411	Tray, PL, Boiling Flask, 1 Liter, 29mm Joint, 4-Position	
RK1412	Tray, PL, Boiling Flask, 1 Liter, 32mm Joint, 4-Position	
RK1413	Tray, PL, Boiling Flask, 250mL, 32mm Joint, 6-Position	
RK1414	Tray, PL, 17mm OD, 65-Position	
RK1415	Tray, PL, Round Bottle, 250mL, 8-Position	for use with BV044
RK1416	Tray, PL, Round Bottle, 125mL, 10-Position	
RK1351	Tray, PL, 1 Liter Bottle, 3-Position	
RK1352	Tray, PL, 1 Liter Bottle, 2-Position	
RK1353	Tray, PL, IChem, 27-Position	for use with BV060
RK1332	Tray & Stand, GC Vial, 36-Position	for use with BV023 and BV023-A
RK1281	Tray & Stand, GC Vial, 72-Position	for use with BV023 and BV023-A

Vials/Glassware

BV16100T-CS	Vial,Disposable,Threaded, 16 x 100	Case of 1000
BV16114-CS	Vial, 16x114mm, Tapered	Case of 125
BV16150-CS	Vial, 16x150mm Culture Tube	Case of 1000
BV20125-CS	Sample Vial, 20x125mm	Case of 500
BV25200-PK	Vial, 25 x 200 mm	Pack of 48
BV25140	Vial, 25 x 140 mm, Conical	Each
BV38200	Vial, 38x200mm, Collect	Each
BV38140	Vial, 38 x 140 mm, Conical	Each
BV45817X-EA	TurboVap Tube, 200mL, 1mL tip	Each
BV60140	Vial, 60 x 140 mm, 300mL, Conical	Each
BV044	Bottle, 125 mL, Amber	Pack of 12
BV023	Vial, 2ml, 12 X 32 mm,Snap Ring	Pack of 100
BV023-A	Vial, 2ml, 12x32 mm,Snap, Amber	Pack of 100
BV060	Vial, I-Chem, 60mL	Case of 72
BV1L	Bottle,Glass,1Liter, Safety Coated	Each
BV960mL	Bottle, Boston Round, 960 mL	Case of 12

Caps/Septa

BV016	Cap, Open Top, 16mm, Pack of 144	for use with BV16100T-CS, BV16114-CS, BV16150-CS
BV020	Cap, Open Top, 20mm, Pack of 144	for use with BV20125-CS
BV022	Cap, Snap-On, 2mL, Pack of 100	for use with BV023 & BV023-A
BV026	Cap, Snap-On, Pre-Slit, 2mL, Pack of 100	for use with BV023 & BV023-A
BV015	Septa, PTFE/Silicone, 13mm, Pack of 100	for use with BV016
BV016T-PK	Septa, PTFE Disc, 13mm, Pack of 100	for use with BV016
BV021T-PK	Septa, PTFE Disc, 20mm, Pack of 100	for use with BV020
BV024T-PK	Septa PTFE/Silicone, 24mm Cap, Pack of 100	for BV060 and BV044
BV007	Cap with Probe Hole, 38mm	for use with BV38200 & BV38140
BV008	Cap with Probe Hole, 25mm	for use with BV25200 & BV25140
BV009	Cap with Probe Hole, 60mm	for use with BV60140

PrepLinc SPEi with AccuVap

Adding an **AccuVap™ Concentration Module** to your PrepLinc™ SPEi Cleanup System eliminates the need for a separate bulk evaporation step. Choose from two models: AccuVap™ Inline or AccuVap™ FLX. Both offer concentration of solvent directly from another process (GPC or SPE), but the FLX also allows offline concentration.

Unlike other semi-automated evaporation systems, the AccuVap™ will automatically solvent exchange and quantitatively transfer your sample to a GC vial ready for analysis. Powerful software controls heat and vacuum at every stage of the process to protect analyte recoveries. Programmable heated rinses eliminate carryover.

- Save time and improve results.
- Free up lab technicians and decrease sample handling.
- Adding the AccuVap™ to your PrepLinc™ system will really automate your world!

Evaporation Chamber
Enclosed evaporation chamber with three programmable zones for heat and vacuum.

Vacuum Control
Control vacuum settings for each chamber zone, and for each stage to fine tune evaporation of solvent mixes

Endpoint
Choose momentary dryness or adjustable endpoint as the concentration endpoint. Add a standard or a keeper solution.
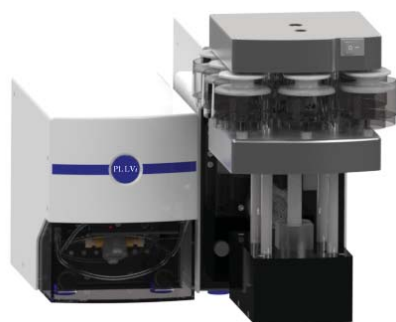
Exchanges
Program multiple solvent exchanges, adjusting heat and vacuum as the mix of solvent changes.

Transfer
Transfer portion of sample if quantitated in chamber or entire sample with rinses. Air purge of transfer lines.

See the PrepLinc Concentration Solutions Catalog for Ordering Information

PrepLinc LVi SPE Modules

The **LVi Large Volume Injection SPE Kit** is optimized for SPE extractions on large volume samples. Specialized SPE column modules accommodate water extraction discs, as well as, standard SPE columns. The precision of the LVi pump module gives the necessary control of sample introduction to the extraction media and lets you choose priorities for flow vs. pressure. When combined with an optional standard column module, secondary cleanup or drying steps can be performed.

Flow Control
Pump module gives consistent sample flow rates up to 50 mL/min.

Pressure & Flow
Choose Flow Rate Priority for flow-critical methods. Choosing Pressure Priority adjusts flow as pressure changes. *Coming Soon!*

Probe Depth
Select probe depths for sample pickup to avoid sediment. And select probe depth for bottle rinse to maximize recoveries.

Cartridges
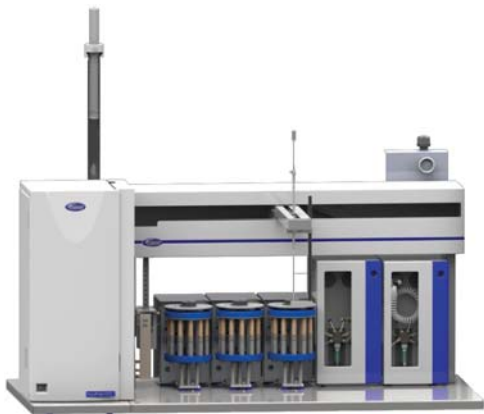Compatible with a wide variety of water extraction cartridges and discs.

Tray Options
Capacity up to 24 1L samples or 12 2L samples.

See the PrepLinc LVi Water Extraction Solutions Catalog for Ordering Information

PrepLinc SPEi with GPC CleanupModules

The combination of PrepLinc™ **GPC Cleanup** and **SPEi modules** creates the ultimate sample cleanup and prep system. This configuration gives the user cleanup options for any matrix/analyte situation. The powerful PrepLinc software allows programming for GPC Only, GPC with inline SPE and SPE Only methods.

- S19 / §64 LFGB Method
- Dioxin Cleanup (Method 1613)
- GPC Cleanup collect fraction inline with florisil, silica and alumina SPE columns
- Cleanup with SPE column prior to injecting on GPC column
- GPC Cleanup collect fraction concentrated on AccuVap™ and eluted through an SPE column

Septum Piercing
A standard feature on all PrepLinc™ systems. Allows both sample and collect vials to be capped to eliminate contamination and evaporation.

Direct Inject
Injecting the entire sample onto the column eliminates data factoring and is essential for lowering detection limits

Probe Options
Probe depths that are user programmable and probe Smart Track keep contact with the sample to a minimum. Programmable rinse volumes and solvents eliminate cross-contamination.

Cartridges Compatibility
Uses cartridges from 1 mL to 15 mL, plus many specialty and flash columns.

Positive Pressure
The use of positive pressure sample injection and solvent elutions is precise and repeatable. Pressure monitoring protects samples & equipment.

See the PrepLinc GPC Cleanup Solutions Catalog for Ordering Information

Instrument Services

Decrease the time to get your system fully integrated into your lab routine and protect your investment long-term with these recommended service from J2 Scientific

Installation/Training   Highly recommended on each automated system; at your site; includes training
Extended Warranty   Extends the standard 1 year manufacturers warranty an extra year
Service Contracts   Protect your investment from year 3 and beyond; includes discounts on parts and onsite labor. Labor at J2 is free!
PM/Service Visit   Pre-purchase Preventive Maintenance visits to ensure your systems performance. Substitue the PM visit for a service call, if necessary.

Call Customer Care for an Quote/Estimate for any of the above.

Contact J2 Scientific

For sales information and quotes
Toll-free   866-292-0472   sales@j2scientific.com
                 573-214-0742
Fax   573-214-0474

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