

Astoria-Pacific[™]
INTERNATIONAL

Roberta Wagner
WV Purchasing Division
2019 Washington St E
PO Box 50130
Charleston, WV 25305-0130

Enclosed please find our response to RFQ # LBS90130 for one Automated Discrete Analyzer Instrument with the Astoria® Discrete Analyzer. The Astoria® Discrete Analyzer meets all requirements of this bid with the following exceptions:

- #2 states that "vendor must be able to produce a letter from the EPA's Office of Ground Water and Drinking Water of the EPA's Alternate Test Procedure Coordinator that attests to the acceptability specifically for drinking water compliance monitoring under the National Primary Drinking Water Regulations for the particular EPA method 353.2 (Revision 2.0) only.

Please see enclosed letter from EPA that does not make this requirement necessary. This is an obvious attempt by some vendors to lock out and eliminate competitive bids from newer vendors of discrete analyzers. This requirement was eliminated in 2007 and any letters now presented are essentially out of date.

- #3 states that "the sample tray must have up to 100 positions....."

The Astoria® Discrete Analyzer offers 60 and 96-place sample trays. If indeed Astoria-Pacific is low bidder, the difference of 4 sample places would be very insignificant.

- #12 states "the instrument must be equipped with an integrated cadmium reduction column or coil for reduction of nitrate to nitrite....."

The Astoria Discrete Analyzer employs a unique system using Cadmium-lined wells for the reduction of NO₃ to NO₂. These wells are dedicated to the nitrate analysis and are regenerated on-line, in situ, by automated commands through the software.

- #13 states "instrument must employ 100% optical quality glass cuvette for precise absorbance measurements."

The Astoria® Discrete Analyzer uses a unique micro titer well system in which each well is essentially its own reaction vessel AND flow cell. The very robust and high-quality photometric system of the Astoria® Discrete Analyzer reads through the bottom of each micro titer well for accurate and precise absorbance readings. There is no carryover or cross contamination with this system since each well is dedicated to a single reaction and absorbance reading, and then disposed of.

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- #14 states "instrument detection system must employ a stationary measurement cell with a 10 mm light path.....to eliminate carryover and cross contamination."

See above exception to #13

I trust the above explanations regarding our exceptions to the bid specifications are clear and concise. In addition I have enclosed a list of some features of our instrument that sets us apart from the rest. Our service and support for our instrumentation are THE BEST, bar none, of which the West Virginia Department of Health has been experiencing for many years in the new-born screening laboratories.

Should there be any questions regarding this cover letter or bid, please do not hesitate to contact me at (321) 409-1195 or tom@astoria-pacific.com

Thank you for your consideration,



Tom Swenson
Regional Sales Manager
Astoria-Pacific, Inc.




UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

MEMORANDUM

SUBJECT: Update on Allowed Use of Modified CWA Methods

FROM:  Richard Reding, Chief
Engineering & Analytical Support Branch, EAD, OST

TO: Quality Assurance Managers
ATP Coordinators
NPDES Coordinators

DATE: June 5, 2007

OFFICE OF
WATER

I am writing to you about my Discrete Analyzer (DA) memorandum of April 2, 2007 in which I explained that Clean Water Act methods modified for use as discrete analyzers fall under the allowed flexibility of 40 CFR 136.6, and therefore need not and will not be reviewed under our Alternate Test Procedure (ATP) program. I am clarifying that it is the responsibility of the method developer or instrument manufacturer, not the user, to conduct the side-by-side comparison of the DA method with an approved Part 136 method.

We also are expanding the scope of these allowable modifications to methods modified to include the use of Segmented Flow Analyzer (SFA), Flow Injection Analyzer (FIA) or self-filling reagent vials (e.g., Vacu-vials™ or Auto-Test™ Cuvettes) that contain the same reagents as those used in the approved methods provided that these methods meet the requirements of Section 136.6. We have returned all ATP applications noting that approval is not required, and that we will not review such modifications in the future. This allowance applies only to the CWA program.

We recommend that authorities ensure that methods using these modified methods produce results equivalent to those produced by the approved methods by requiring the following documentation: Each DA, SFA, FIA or self-filling reagent vials manufacturer should provide:

- a side-by-side method comparison demonstrating similarities to and differences from the approved method(s), and
- all data comparing the performance of the modified methods to the performance of the approved methods for all the requested procedures.

The laboratory should notify the regulatory authority and/or certification program in writing of the intent to use the SIA, FIA, DA technology or reagent filling vials method for reporting data. The laboratory need not conduct a side-by-side comparison, but before using the modified method the laboratory should demonstrate proficiency by:

- making a detailed SOP available,
- performing and documenting an initial demonstration of capability,
- checking the modified method on seven separate days on the plant effluent,
- using the same reagents, reactions and determinative step as the approved method,
- demonstrating proficiency by meeting the QC specifications of the method, In cases where the reference method does not provide quality control information, the targets listed in the December 1996 Streamlining Guide (<http://www.epa.gov/waterscience/methods/guide/flex.html>) or the QC found in the ATP Protocol (<http://www.epa.gov/waterscience/methods/EPA821B98002.pdf>) should be used.
- maintaining all manufacturer's method/data and the laboratory's documentation should be available for review.

I appreciate your interest and support of our efforts to streamline the methods approval process to allow timely introduction of useful compliance technologies. If you have any questions regarding the ATP program please contact Lemuel Walker at walker.lemuel@epa.gov.

cc Lemuel Walker, CWA ATP Coordinator
Steve Wendelken, SDWA ATP Coordinator

RFQ COST SHEET

Bidders shall provide a cost for the following:

Automated Discrete Analyzer System \$ 25,000

On-site Training (3 days at installation of equipment) \$ 3,000

First Year Extended Warranty \$ 3,200

Total Cost \$ 31,200

The award will be made to the vendor with the lowest overall total cost of the equipment which meets all requested specifications and requirements. Payment will be made in arrears.

Tom Wu
Vendor Signature

5/18/09
Date

AGREEMENT ADDENDUM

event of conflict between this addendum and the agreement, this addendum shall control:

- 1. **DISPUTES** - Any references in the agreement to arbitration or to the jurisdiction of any court are hereby deleted. Disputes arising out of the agreement shall be presented to the West Virginia Court of Claims.
- 2. **HOLD HARMLESS** - Any clause requiring the Agency to indemnify or hold harmless any party is hereby deleted in its entirety.
- 3. **GOVERNING LAW** - The agreement shall be governed by the laws of the State of West Virginia. This provision replaces any references to any other State's governing law.
- 4. **TAXES** - Provisions in the agreement requiring the Agency to pay taxes are deleted. As a State entity, the Agency is exempt from Federal, State, and local taxes and will not pay taxes for any Vendor including individuals, nor will the Agency file any tax returns or reports on behalf of Vendor or any other party.
- 5. **PAYMENT** - Any references to prepayment are deleted. Payment will be in arrears.
- 6. **INTEREST** - Should the agreement include a provision for interest on late payments, the Agency agrees to pay the maximum legal rate under West Virginia law. All other references to interest or late charges are deleted.
- 7. **RECOUPMENT** - Any language in the agreement waiving the Agency's right to set-off, counterclaim, recoupment, or other defense is hereby deleted.
- 8. **FISCAL YEAR FUNDING** - Service performed under the agreement may be continued in succeeding fiscal years for the term of the agreement, contingent upon funds being appropriated by the Legislature or otherwise being available for this service. In the event funds are not appropriated or otherwise available for this service, the agreement shall terminate without penalty on June 30. After that date, the agreement becomes of no effect and is null and void. However, the Agency agrees to use its best efforts to have the amounts contemplated under the agreement included in its budget. Non-appropriation or non-funding shall not be considered an event of default.
- 9. **STATUTE OF LIMITATION** - Any clauses limiting the time in which the Agency may bring suit against the Vendor, lessor, individual, or any other party are deleted.
- 10. **SIMILAR SERVICES** - Any provisions limiting the Agency's right to obtain similar services or equipment in the event of default or non-funding during the term of the agreement are hereby deleted.
- 11. **ATTORNEY FEES** - The Agency recognizes an obligation to pay attorney's fees or costs only when assessed by a court of competent jurisdiction. Any other provision is invalid and considered null and void.
- 12. **ASSIGNMENT** - Notwithstanding any clause to the contrary, the Agency reserves the right to assign the agreement to another State of West Virginia agency, board or commission upon thirty (30) days written notice to the Vendor and Vendor shall obtain the written consent of Agency prior to assigning the agreement.
- 13. **LIMITATION OF LIABILITY** - The Agency, as a State entity, cannot agree to assume the potential liability of a Vendor. Accordingly, any provision limiting the Vendor's liability for direct damages to a certain dollar amount or to the amount of the agreement is hereby deleted. Limitations on special, incidental or consequential damages are acceptable. In addition, any limitation is null and void to the extent that it precludes any action for injury to persons or for damages to personal property.
- 14. **RIGHT TO TERMINATE** - Agency shall have the right to terminate the agreement upon thirty (30) days written notice to Vendor. Agency agrees to pay Vendor for services rendered or goods received prior to the effective date of termination.
- 15. **TERMINATION CHARGES** - Any provision requiring the Agency to pay a fixed amount or liquidated damages upon termination of the agreement is hereby deleted. The Agency may only agree to reimburse a Vendor for actual costs incurred or losses sustained during the current fiscal year due to wrongful termination by the Agency prior to the end of any current agreement term.
- 16. **RENEWAL** - Any reference to automatic renewal is hereby deleted. The agreement may be renewed only upon mutual written agreement of the parties.
- 17. **INSURANCE** - Any provision requiring the Agency to insure equipment or property of any kind and name the Vendor as beneficiary or as an additional insured is hereby deleted.
- 18. **RIGHT TO NOTICE** - Any provision for repossession of equipment without notice is hereby deleted. However, the Agency does recognize a right of repossession with notice.
- 19. **ACCELERATION** - Any reference to acceleration of payments in the event of default or non-funding is hereby deleted.
- 20. **CONFIDENTIALITY** - Any provision regarding confidentiality of the terms and conditions of the agreement is hereby deleted. State contracts are public records under the West Virginia Freedom of Information Act.
- 21. **AMENDMENTS** - All amendments, modifications, alterations or changes to the agreement shall be in writing and signed by both parties. No amendment, modification, alteration or change may be made to this addendum without the express written approval of the Purchasing Division and the Attorney General.

ACCEPTED BY:

STATE OF WEST VIRGINIA

Spending Unit: _____

Signed: _____

Title: _____

Date: _____

VENDOR

Company Name: ASTORIA-PACIFIC INC.

Signed: [Signature]

Title: REGIONAL SALES REPRESENTATIVE

Date: 5/10/09

ATTACHMENT
P.O.# LB390130

This agreement constitutes the entire agreement between the parties, and there are no other terms and conditions applicable to the licenses granted hereunder.

Agreed

Tom M 5/18/09
Signature Date

REGIONAL SALES MGR.
Title

ASTORIA-PACIFIC
Company Name

Signature Date

Title

Agency/Division

RFQ No. LB590130

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

VENDOR OWING A DEBT TO THE STATE:

West Virginia Code §5A-3-10a provides that: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than one thousand dollars in the aggregate.

PUBLIC IMPROVEMENT CONTRACTS & DRUG-FREE WORKPLACE ACT:

If this is a solicitation for a public improvement construction contract, the vendor, by its signature below, affirms that it has a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the **West Virginia Code**. The vendor **must** make said affirmation with its bid submission. Further, public improvement construction contract may not be awarded to a vendor who does not have a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the **West Virginia Code** and who has not submitted that plan to the appropriate contracting authority in timely fashion. For a vendor who is a subcontractor, compliance with Section 5, Article 1D, Chapter 21 of the **West Virginia Code** may take place before their work on the public improvement is begun.

ANTITRUST:

In submitting a bid to any agency for the state of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will convey, sell, assign or transfer to the state of West Virginia all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the state of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the state of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to the bidder.

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership or person or entity submitting a bid for the same materials, supplies, equipment or services and is in all respects fair and without collusion or fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

LICENSING:

Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agencies or political subdivision. Furthermore, the vendor must provide all necessary releases to obtain information to enable the Director or spending unit to verify that the vendor is licensed and in good standing with the above entities.

CONFIDENTIALITY:

The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/noticeConfidentiality.pdf>.

Under penalty of law for false swearing (**West Virginia Code** §61-5-3), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

Vendor's Name: ASTORIA-PACIFIC INC
Authorized Signature: TOM SWENSON (TOM SWENSON) Date: 5/10/09

ASTORIA·PACIFIC

Water and Soil Analysis

The Astoria Discrete is a highly versatile system. It is easy to operate, analyzes samples quickly and uses very little reagent.

Currently, there are twelve methods for water and soil analysis. Each method has been validated against the Astoria Analyzer, an instrument that has been used in the Environmental and Agricultural markets for decades. We have provided the method numbers of both the United States Environmental Protection Agency (U.S.E.P.A.) and the Standard Methods for water analysis in the table below; these are methods that are equivalent to those used by regulatory agencies worldwide.

Astoria® Discrete Method Summary

Method	EPA Method	Standard Methods	API Range	MDL (ppm)	Determinations per Hour
Alkalinity	310.2	403	20.0 – 200 ppm	5.5	100
Ammonia	350.1	4500 NH ₃ H	0.05 – 4.0 ppm	0.004	120
Chloride	325.1(.2)	4500 Cl E, G	1.0 - 50 ppm	0.2	50
Cyanide	335.3(.4)	4500 CN A, O	0.005 – 0.5 ppm	0.002	120
Hexavalent Chromium	N/A	3500-Cr B	0.05 – 5 ppm	0.01	160
Nitrite	353.2(.3)	4500 NO ₂ F	0.05 – 2.0 ppm	0.01	160
Nitrate+Nitrite*	353.2	4500 NO ₃ F	0.05 – 2.0 ppm	0.01	50
o-Phosphate	365.2(.3)	4500 P, E	0.05 – 2.0 ppm	0.02	180
T. Phosphorus (per.)	365.2(.3)	4500 P, B	0.05 – 2.0 ppm 0.50 – 10 ppm	0.02	133
Phenol	420.2(.4)	5530 B,D	0.10 – 2.0 ppm	0.04	70
Sulfate	375.4	4500 SO ₄ A, E	10.0 - 200 ppm	2.3	65
TKN	351.2	4500 N _{org}	0.50 – 10 ppm	0.03	70

*NOTE: Nitrate reduction by Cadmium. Also please contact your regional authority for local acceptance.

For more information, please contact an Astoria-Pacific representative in your area.

Clackamas, Oregon 97015-0830 USA

503-657-3010 800-536-3111 Fax: 503-655-7367 sales@astoria-pacific.com

www.astoria-pacific.com

ASTORIA® PACIFIC

Astoria® Discrete Specifications

Hardware

Technology	Discrete
Size	22 in D x 42 in W x 20 in H
Weight	99 lbs (45 kg)
Sample Capacity	60 or 96 place sample racks available with continuous loading
Reagent Capacity	27 positions: 15 x 15 mL bottles and 12 x 30 mL bottles
Reaction Vessel	96 standard microwells (microtiter)
Heated Reaction Vessel Plate	Ambient room temperature to 45° C (See Thermal Control below)
Refrigerated Reagent Rack	Optional Refrigerated Reagent Rack (12 – 15° C below ambient room temp.)
Optical Design	Reads absorbance in four simultaneous channels
Filter Wheel	8 filters: 340, 420, 480, 505, 540, 570, 660, 880 or custom
Linear Range	-0.2A – 2.5A
Photometric Accuracy	± (1% of the reading +0.005A from 0 to 1.5A) ± (2% of the reading +0.005A from 1.5 to 2.5A)
Lamp	Tungsten-Xenon
Sample Rate	Up to 200 tests per hour (Reaction determined by Endpoint)
Typical Reaction (Total Sample+Reagent)	Volume 320 µL or less
Direct Read From Reaction Well	Yes
Low Reagent Alarm	Yes
Low Sample Alarm	Yes
Low Wash Alarm	Yes
Waste Vessel Overflow Alarm	Yes
Standby Mode	Yes
Optimal Laboratory Environment	Ambient Temperature: 15 - 35° C; Humidity < 85%; Dust Free
Pumps	Two syringe pumps, sized: 50 µL and 2.5mL
Probe	316 stainless steel for maximum reagent compatibility, level sensing
Minimum and Maximum Volume	2 – 1950 µL
Power Requirements	100 – 250VAC, 50 – 60 Hz, 160W
Certifications	NRTL Listed, CE Marked

Software

Format	CD-ROM and Internet upgrades
Computer Requirements (Minimum)	Pentium IV or better processor; Windows XP or newer operating system 512Mb RAM, 300 Mb (minimum) free hard drive space, CD drive
Export Results (Formats available)	Excel, HTML, Text, XML
QC Functions	Store control data, QC Chart, calculate SD, QC of Reaction Wells
Calibration Modes	Absorbance, linear, non-linear and point-to-point
Self monitoring modes	Lamp, bottle volume, filters, pressure, vacuum, mechanical function, and more
Empty Well Blanking	Yes
Sample Blanking	Yes
Automated Standard Preparation	Yes
Easy New Method Development	Yes
Automated Spike Prep	Yes
Wash & Rinse (of Reaction Wells)	Automatic and user controlled (8-probe Wash Head)
End of Day Wash	Yes (Flushes and Cleans various system components)
User Defined Probe Alignment	Yes
Auto Dilution	Up to 300X
Reaction Thermal Control (Plate/Well)	37° C for API Methods (Programmable: Ambient room temperature to 45° C)
Software Access	Password protected; limited to unlimited access determined by user level

Clackamas, Oregon 97015-0830 USA

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USEPA Environmental testing validations.

The following tests were validated using EPA approved SFA technology. RSD and MDL calculations were based on 10 replicates and use of 2nd source wastewater check samples were implemented to validate the calibration curve(s). *Run files available upon request.

Alkalinity						
<i>-EPA 310.2</i>						
Concentration	<u>Discrete</u> Avg conc. (mg/L)	%RSD	MDL	<u>SFA</u> Avg conc. (mg/L)	%RSD	MDL
20 ppm	20.34	9.62	5.53	21.23	2.89	1.73
100 ppm	94.43	3.09		106.06	4.05	
200 ppm	201.22	1.12		204.77	2.82	

Ammonia						
<i>-EPA 350.1</i>						
<i>-SM 4500-NH₃ (F), (G)</i>						
Concentration	<u>Discrete</u> Avg conc. (mg/L)	%RSD	MDL	<u>SFA</u> Avg conc. (mg/L)	%RSD	MDL
0.05 ppm	0.048	8.78	0.01	0.049	3.04	0.004
0.50 ppm	0.509	5.03		0.489	0.27	
2.00 ppm	---	---		1.998	0.39	
4.00 ppm	4.080	2.78		---	---	

Cyanide						
<i>-EPA 335.3, 335.4</i>						
<i>-SM 4500-CN (E)</i>						
Concentration	<u>Discrete</u> Avg conc. (mg/L)	%RSD	MDL	<u>SFA</u> Avg conc. (mg/L)	%RSD	MDL
0.005 ppm	0.0054	6.08	0.001	0.0031	4.30	0.001
0.050 ppm	0.0518	2.00		0.0583	1.18	
0.500 ppm	0.4683	9.13		0.5160	6.21	

Nitrate						
<i>-EPA 353.2, 353.3</i>						
<i>-SM 4500-NO₃ (E), (F)</i>						
Concentration	<u>Discrete</u> Avg conc. (mg/L)	%RSD	MDL	<u>SFA</u> Avg conc. (mg/L)	%RSD	MDL
0.05 ppm	0.045	6.65	0.008	0.046	5.57	0.007
0.50 ppm	0.495	2.66		0.510	2.30	
2.00 ppm	2.084	2.46		2.031	2.98	

Nitrite						
<i>-EPA 353.2, 353.3, 354.1</i>						
<i>-SM 4500-NO2 (B)</i>						
Concentration	<u>Discrete</u> Avg conc. (mg/L)	%RSD	MDL	<u>SFA</u> Avg conc. (mg/L)	%RSD	MDL
0.05 ppm	0.055	1.80	0.003	0.056	1.27	0.002
0.50 ppm	0.472	0.85		0.504	1.61	
2.00 ppm	2.011	1.26		2.028	1.99	

O-Phosphate						
<i>-EPA 365.1, 365.2</i>						
<i>-SM 4500-P (E), (F)</i>						
Concentration	<u>Discrete</u> Avg conc. (mg/L)	%RSD	MDL	<u>SFA</u> Avg conc. (mg/L)	%RSD	MDL
0.05 ppm	0.056	10.29	0.016	0.051	2.06	0.003
0.50 ppm	0.507	1.41		0.512	0.46	
2.00 ppm	2.080	0.82		2.019	0.31	

Phenol						
<i>-EPA 420.1, 420.4</i>						
<i>-SM 5530 (D)</i>						
Concentration	<u>Discrete</u> Avg conc. (mg/L)	%RSD	MDL	<u>SFA</u> Avg conc. (mg/L)	%RSD	MDL
0.10 ppm	0.098	5.71	0.016	0.116	1.14	0.004
0.50 ppm	0.497	5.44		0.493	0.64	
2.00 ppm	2.066	4.20		2.035	0.77	

Total N						
<i>-Kjeldahl digests</i>						
<i>-EPA 351.2</i>						
<i>-SM 4500-N (C)</i>						
Concentration	<u>Discrete</u> Avg conc. (mg/L)	%RSD	MDL	<u>SFA</u> Avg conc. (mg/L)	%RSD	MDL
0.50 ppm	0.42	6.58	0.08	0.55	0.84	0.01
2.00 ppm	1.91	5.74		1.94	1.06	
10.00 ppm	10.73	5.38		9.93	1.03	

Total P						
<i>-Persulfate digests</i>						
<i>-EPA 365.1</i>						
<i>-SM 4500-P (B), (E), (F)</i>						
Concentration	<u>Discrete</u> Avg conc. (mg/L)	%RSD	MDL	<u>SFA</u> Avg conc. (mg/L)	%RSD	MDL
0.05 ppm	0.055	10.86	0.017	0.050	1.89	0.003
0.50 ppm	0.487	1.68		0.518	1.89	
2.00 ppm	2.004	0.91		1.970	0.95	

ASTORIA • PACIFIC

Enclosed you will find some literature and method data for the new Astoria® Discrete Analyzer for *high-speed and efficient nutrient analyses* and other wet chemistry tests for water and wastewater samples. I will follow up with a phone call to discuss our new instrument in more detail, but in the meantime, following are some of the features that separate the Astoria® Discrete Analyzer from the rest:

1. Our very economical reaction wells are either re-usable or disposable—the choice is yours. No need to purchase expensive, proprietary reaction vessels. Our on-board cleaning station washes and “QC’s” new and used reaction wells to assure the best performance of the instrument.
2. Our sample trays and reagent trays are so easy to load, plus the user has many options for sizes of reagent bottles and choices for sample vessels. Again, no need to purchase expensive, proprietary reagent containers or sample vessels. In addition, there are spaces for 27 reagents; 60-place and 96-place sample racks are included with the instrument.
3. The Astoria® Discrete reads directly through the reactions wells, thus eliminating troublesome peristaltic pumps and tubing.
4. The design of the Astoria® Discrete Analyzer is *very* unique, with fewer moving parts and total visibility of all processes taking place.
5. The rAPID™ software program is very intuitive and easy to use, giving the operator a unique view of the instrument’s operation as it progresses through the analyses selected. In addition, rAPID™ has all the features any analyst would expect—QC plotting of Check Standards, Proficiency Standards, Spikes, Duplicates; plus Auto-Dilution, Auto-Standards Prep-- just to name a few
6. Our instruments are backed by THE BEST service and support organization in the chemistry analyzer business.
7. All of this **is included** at a very economical price. Just call or e-mail for a price quotation.

I trust you will find this information useful and informative. For questions before I call, please do not hesitate to contact me at (321) 409-1195 or tom@astoria-pacific.com.

Regards,

Tom Swenson
Southeast Region Sales Manager

ASTORIA-PACIFIC

We are a company that designs, produces, markets and services diagnostic and analytical instrumentation and reagents to automate analytical chemistries. As the sole manufacturer of the Astoria®, Astoria®2 and Spotcheck® flow analyzers, we can measure chemical compounds in samples from clinical, industrial, food, pharmaceutical and environmental testing laboratories.

Customer satisfaction is very important to us. All company decisions are designed to ensure that every customer is receiving the correct solution and the best experience when selecting one of our instruments.

Astoria-Pacific provides complete technical support to our customers and is responsive to their needs in the US and worldwide. We are always looking for new applications to develop in order to solve problems and provide time saving solutions.



This enables us to provide unique instrumentation based on customer input and provides opportunity for growth. Our customers and the support we provide give future direction while building mutual long lasting relationships.

Our highly skilled research and development team continually seeks to improve existing methods. They are responsible for new products that will provide expanded capabilities and growth in the field of chemical analysis around the world. We look forward to exploring those new chemistry challenges and designing our services to meet your specific analytical needs.

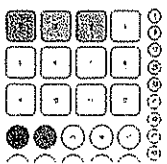
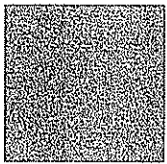
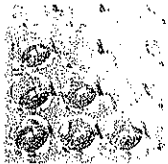
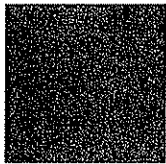
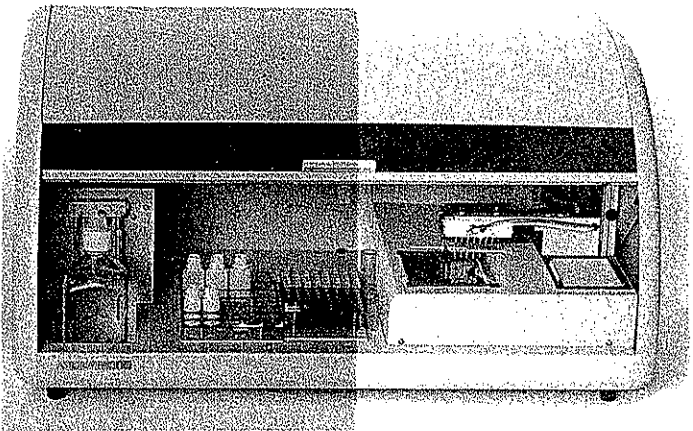


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INTERNATIONAL

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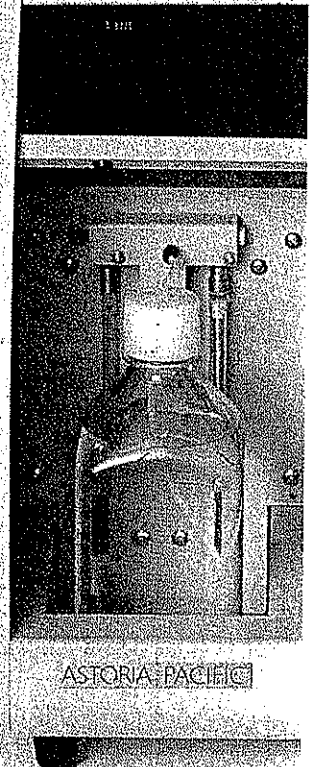
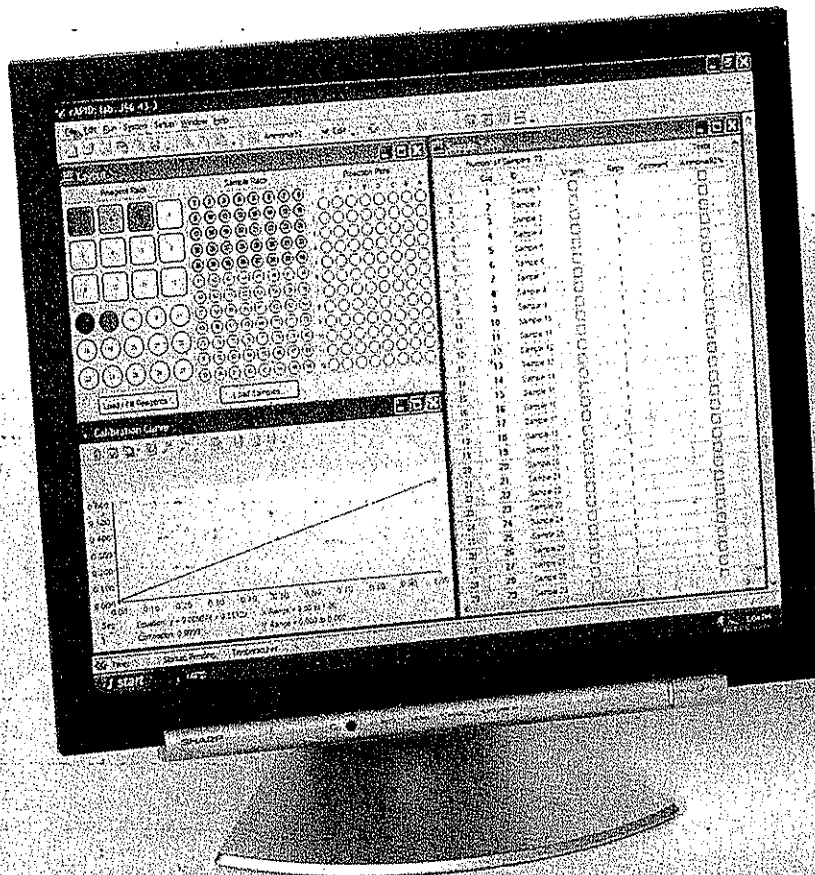
ASTORIA



ASTORIA

ASTORIA DISCRETE

Automated analysis made even easier



Easier And Less Expensive To Use

- Less time to train personnel
- Easier to maintain
- Less reagent usage
- Automatically makes calibrants from a stock standard
- Automatically dilutes out-of-range samples
- Automatically detects low levels of reagents or samples

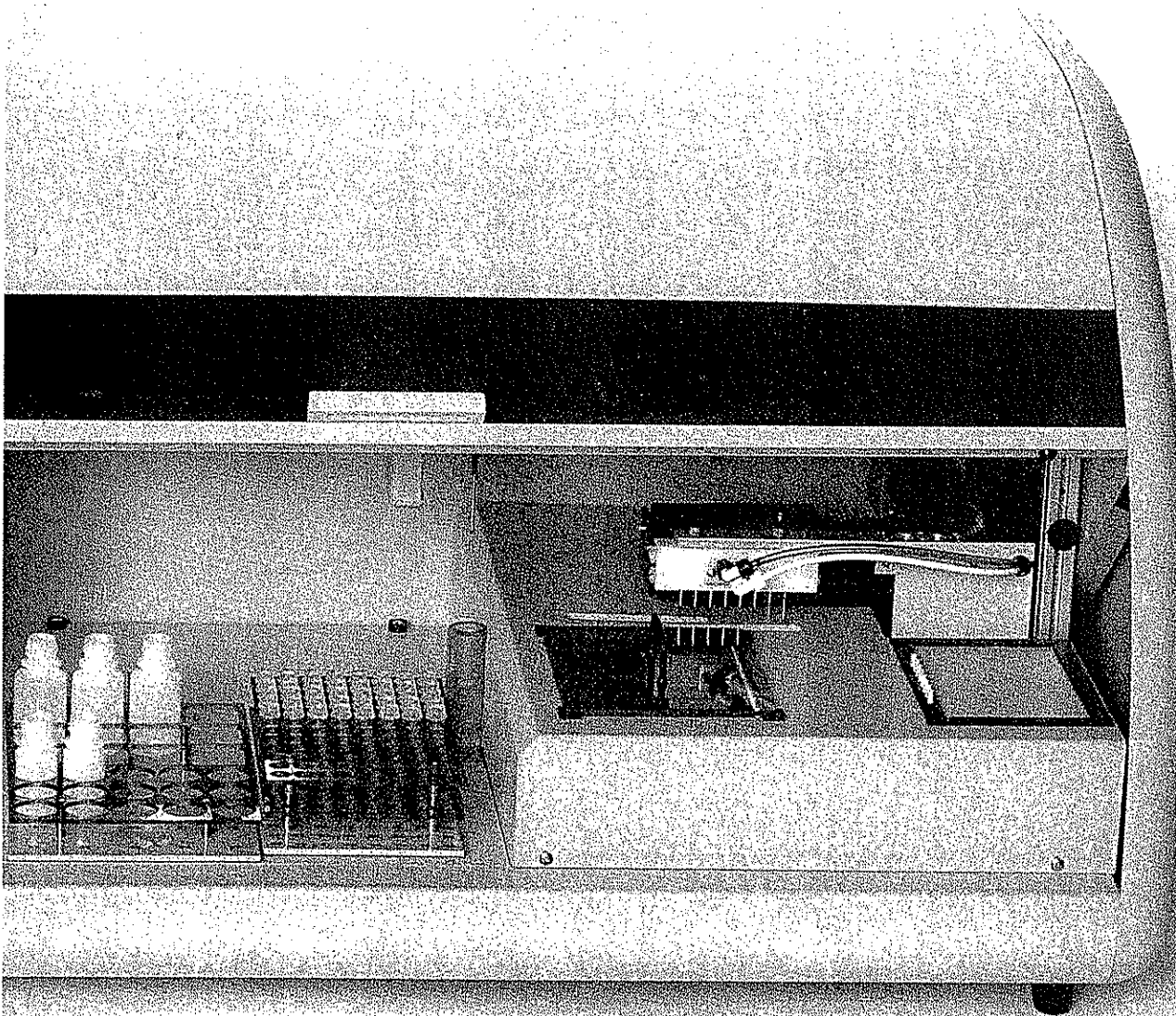


rAPID Software

This data acquisition software for discrete analysis has been designed with the operator in mind. The built-in tracking features keep the operator visibly informed of the status of each reagent, sample and reaction well.

Sample tables can be imported from LIMS; reports can be easily customized and exported to LIMS as ASCII files or spreadsheet applications.

Also, rAPID works within the WINDOWS® environment; therefore its useful features, like auto spikes, duplicates, and QC charts, are only a click away.



Analytical Applications

The Astoria Discrete is a flexible platform, offering tests that satisfy EPA, AOAC and other regulatory standards. Enzymatic methods, such as those in the wine and beverage industry, can also be performed on the Astoria Discrete.

The development of new methods through *rAPID* is a simple process, thereby increasing the future versatility of the Astoria Discrete in your laboratory

Reagent Kits

Kits for specific methods are available, manufactured to cGMP quality standards.

Features

- Dual syringes offer high precision sampling and dispensing
- Rack for 27 reagents: 15 x 15-mL bottles, 12 x 30-mL bottles
- 60 or 96 position sample racks available
- 96-place reaction plate, with temperature control
- Automatic QC of reaction wells
- Four built in detectors
- Automatic dilution and calibration preparation built in
- Separate wash stations for probe and reaction wells
- Compact, lightweight design
- Low reagent and sample usage

For more information on the Astoria Discrete, please contact us directly or through your local representative.