

## Astoria micro-Segmented Flow Analyser



This is the flag ship model of Astoria-Pacific's Industrial Division. The system's six-channel digital detector is ideal for laboratories (i.e. Oceanography, Tobacco, etc.) that want to test four to six parameters from a single sample. Using micro-Segmented Flow Analysis, the Astoria Analyzer follows the modular design layout (pictured above):

- 311 XYZ Sampler,
- 322 Auxiliary Pump (for sampler wash),
- 302D Micro pump (peristaltic pump),
- 303A Cartridge Base, with room for up to six chemistries
- 305D Digital Detector.

For the research and development of new methods, the Astoria Analyzer makes a good platform because the layout of the system makes the change-out of cartridges easier, the six channels of the 305D allow for extra channels that can be used for reference signals, and optional detectors (fluorometer, UV, and Flame) can be plugged into the system as well.

Furthermore, unlike other segmented flow analyzers (SFA), the Astoria's analysis rates are twice as fast ... and only use a tenth of the reagent. In other words: a standard SFA may run at 45 samples per hour and use 450 mL of reagent, while the Astoria will run at 80 - 90 samples per hour and only use 50 mL of reagent!

Of course the savings on reagents are only a small part of what the analyzer will do for your laboratory; after all, since it uses SFA, the Astoria will attain levels of detection that are equivalent to or even lower than any other system. For instance, take a flow injection system that has a post-distillation cyanide method with a working range of 0.005 - 0.5 mg/L--although these are impressive numbers, the Astoria beats it by a factor of 10, with a working range of 0.0005 - 0.50 mg/L as CN (PN 305-A111-A01).

Additionally, the Astoria Analyzer offers a variety of techniques that have made SFA so powerful in the past, present ... and future to come. For example, In-Line Dialysis, In-Line Distillation and In-Line UV Digestion are options allowing customers to quickly analyze samples that would otherwise require additional sample prep. Phenol, Cyanide and TDN are examples of methods that the lab could automate this way.

## Modules for the Astoria micro-Segmented Flow Analyser

### 311 XYZ Sampler



The 311 is a versatile random access sampler. Many of its features include: a Travelling Wash Pot that ensures consistent inter-sample bubbles between samples and wash; a separate standards/calibrant rack that reduces time spent on pouring standards; the use of different sizes of sample cups and sample racks; use with an optional diluter that can automatically dilute off-scale samples and allow the user to create standards/calibrants online.

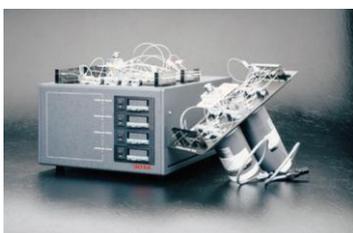
### 322 Auxiliary Pump

The 322 Auxiliary Pump is primarily used as the wash pump for the 311 XYZ Sampler. However, even if you do not have an Astoria or Astoria2 analyzer, the 322 can be used as a stand-alone peristaltic pump for other uses in your laboratory.



### 302D Micro-pump, computer controlled

The 302D is the "heart" of the Astoria Analyzer. Essentially, it is a peristaltic pump with 36 pump tube positions, with an option to upgrade it to 42 pump tube positions. This pump can be computer controlled, allowing for the operator to adjust pump speed as well as making use of some of the timed-events features of FASPacll.



### 303A Cartridge Base

The 303A Cartridge Base is basically where you set your analytical cartridges on. Also, when your chemistry needs heat greater than room temperature, the 303A can be fitted with heat bath controllers that have easy-to-use touch-button controls.



### 305D Digital Detector

The 305D Digital Detector is the primary interface between the [Astoria](#) Analyzer and the [FASPacll](#) data acquisition software. Many of the 305D features include: expanded range detection (i.e. 0.0005 - 5 mg/L Post-Dist. Cyanide), thereby reducing the need for an optional diluter module; six digital detectors for multiple analyses, including one analogue input for an external detector; and compact, measuring only 24 cm High x 15 cm Wide x 43 cm Deep!

### **312 Diluter Module**



The optional 312 Diluter Module is an optional unit designed to run with the 311 XYZ Sampler. Samples with concentrations greater than even the expanded range capabilities of the 305D detector can be re-run with user-defined parameters. Also, the operator can have the 312 create standards/calibrants on-line with the assistance of the "Calibration Wizard" in FASPacll.

### **315 UV/Vis Detector**



The optional 315 UV/Vis detector uses either a deuterium lamp or tungsten lamp to measure UV or Visible wavelengths respectively. This detector is a good choice for Breweries monitoring Bitterness (in UV configuration plugged into an Astoria or Astoria2) or labs monitoring vitamins in Fortified Flour Extracts (i.e. two fluorometers and one 315 visible detector running through a 350D A/D Module).

### **321 and 306A Fluorometers**

The optional 321 and 306A Fluorometers are plug-in analogue detectors. They are primarily used in Astoria-Pacific's Clinical Division; however, the Industrial Division also makes use of fluorometric detectors in Beer, Seawater, Vitamin, Histamine and other markets.

### **309 Flame Photometer**

Plug-in the optional 309 Flame Photometer for such Agricultural tests as Calcium, Potassium and Sodium.