

Flow Solution® 3100 Analyzer



- Compact
- Cost-effective
- Modular

Automated Chemistry Analyzer

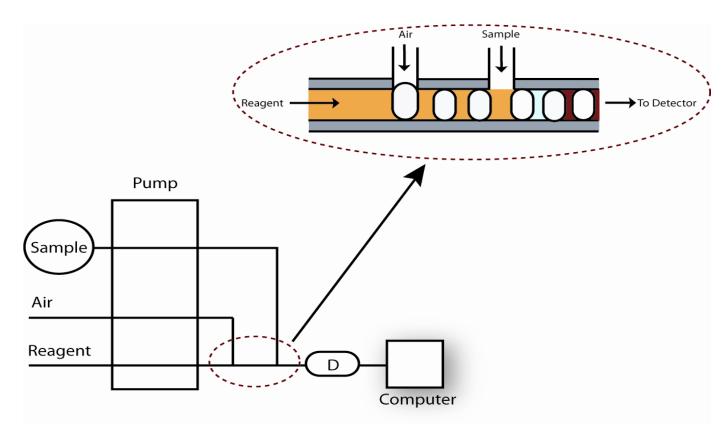






SFA-FS 3100 Analytical Technique

• Segmented Flow Analysis (SFA)

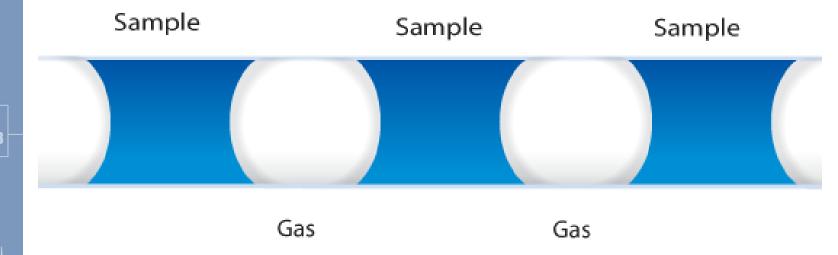






SFA Sample Segment

After segmentation within chemistry cartridge.



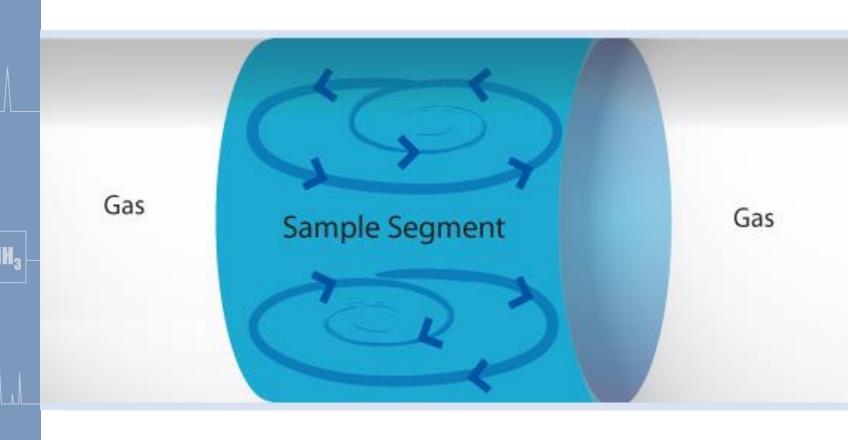
• Gas segmentation limits dispersion through tubing path







SFA Sample Segment



• 100% mixing achieved!

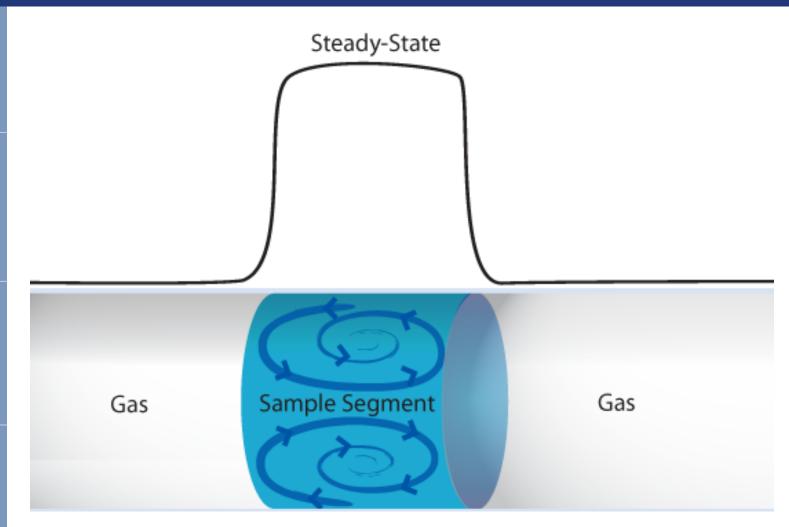






NH₃

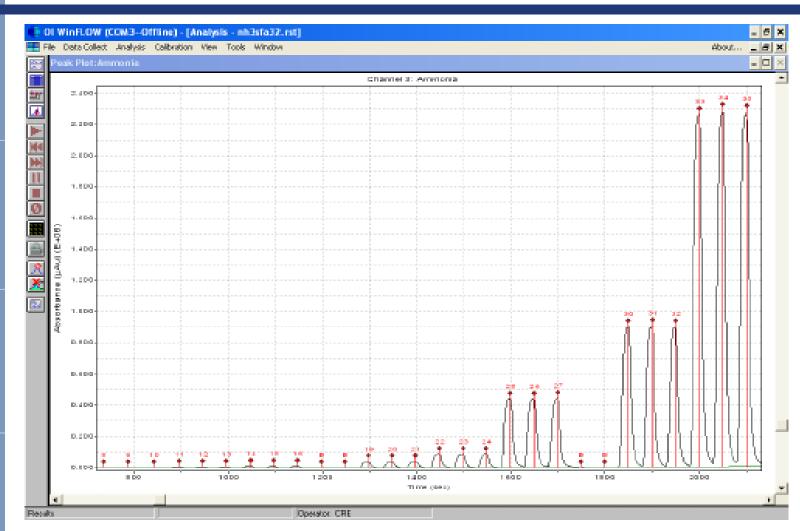
SFA Peak Shape







SFA Peaks









Advantages of SFA

- Low MDL
- Excellent Precision
- Steady state reactions
- Limited dispersion
- High throughput
- Easily expandable

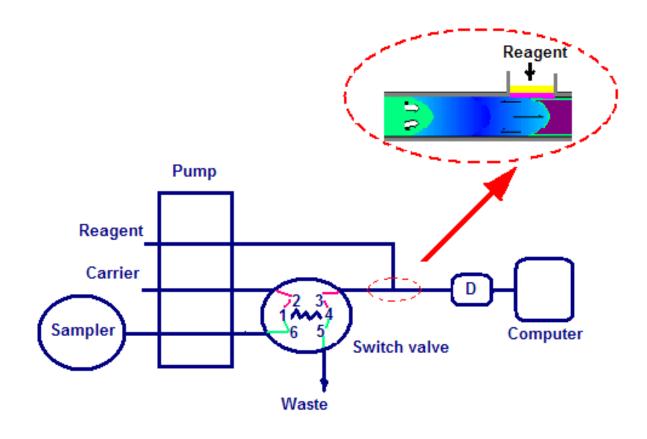




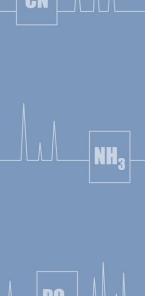


FIA-FS 3100 Analytical Technique

Flow Injection Analysis (FIA)

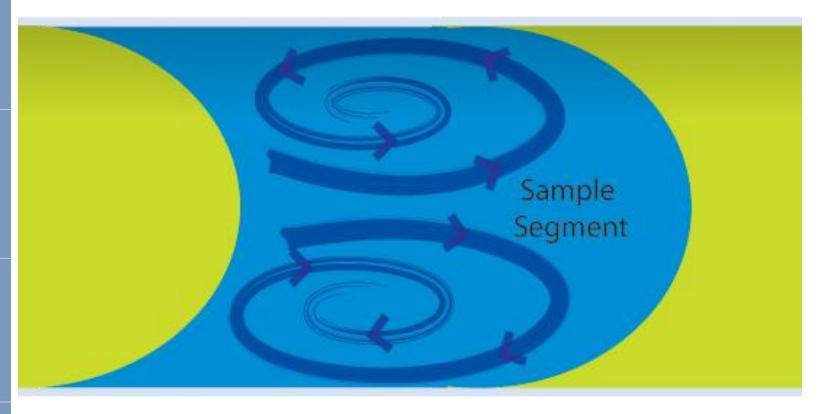








FIA Sample Segment



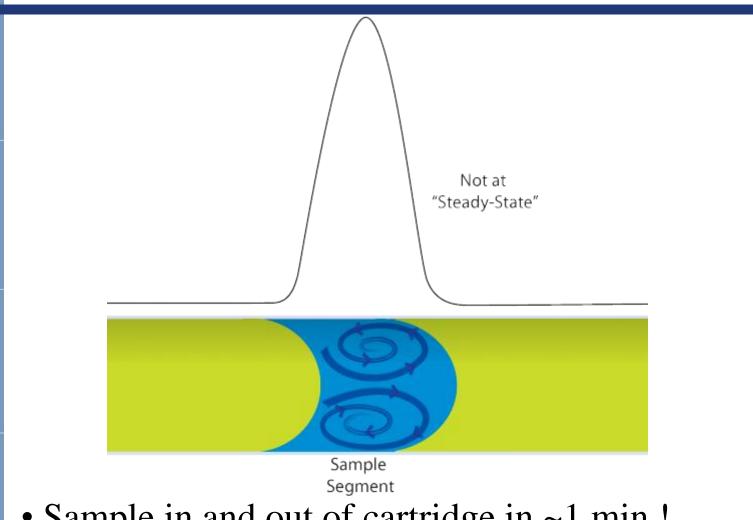
• Utilizes dispersion, tightly coiled tubing, and confluence for mixing

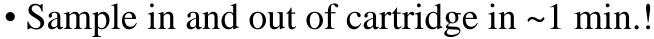






FIA Peak Shape

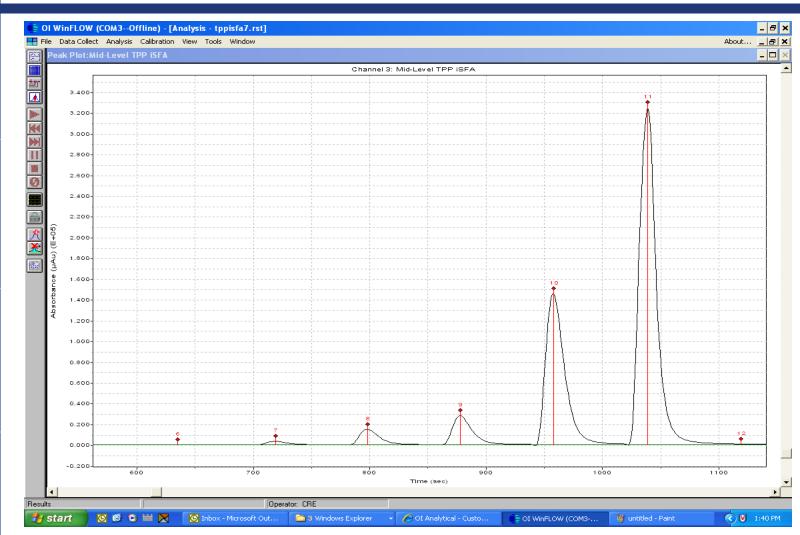








FIA Peaks







Advantages of FIA

- High throughput
- Excellent Precision
- Ease of use
- No de-bubbling
- Rapid startup and shutdown







Automated Chemistries



- Alkalinity
- Ammonia
- Chloride
- Nitrate
- Nitrite
- Total Nitrogen
 (TN & TKN)

- Phenolics
- ortho-Phosphate
- Total Phosphorus
 (TP & TKP)
- Silica
- Sulfide
- Sulfate





Sample Types



NH₃

- PO₄
- NO₃

- Brackish waters
- Drinking water
- Groundwater
- Wastewaters
- Surface water
- Limnological

- Industrial waste
- Process water
- Plating baths
- Seawater
- Soil and plant extracts













Key Features & Benefits for the FS® 3100





Precision Pump

- Robust and precise peristaltic reagent pump
- Low flow chemistries reduces waste, labor, materials, etc.
 - Less than or equal to 2 mL/min for most methods















Expanded Range™ (ER) Absorbance Detector



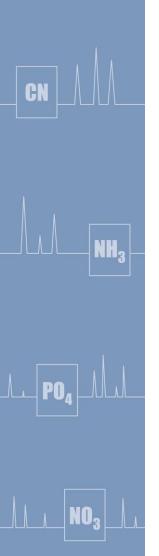
- Enables calibrations over a range of up to 4 orders of magnitude
- Reduces sample dilutions and re-runs saving valuable time and labor

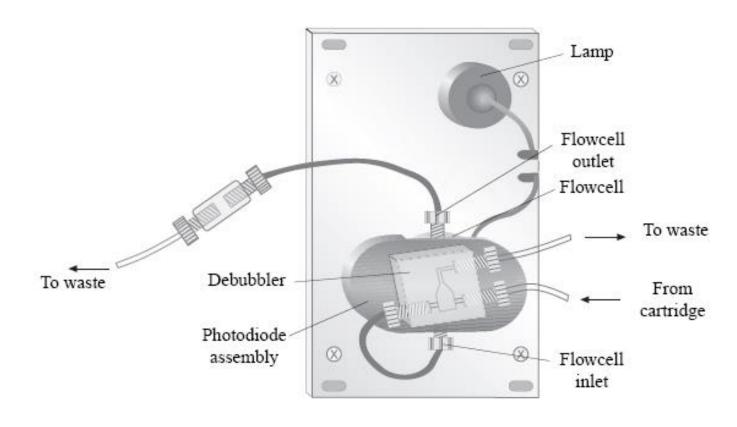






Expanded Range™ Absorbance Detector



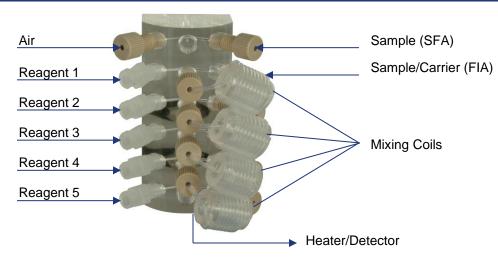


- Durable tungsten source lamp rated for 5000+ hours
- Single wavelength filter eliminates variability
- High efficiency debubbler





VersaChem Multi-Test Manifold™



- Multiple chemistries on one manifold
- Near-zero dead volume to prevent chemistry crosscontamination
- Chemistry Kits incorporate method-specific items:
 - Documented method
 - Interference filter
 - Tubing set with organizer
 - Sample loop (for FIA)

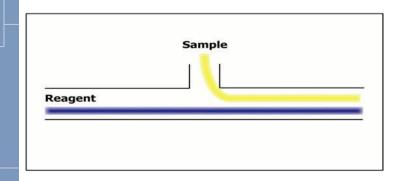


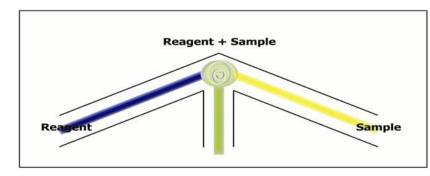




VersaChem Multi-Test Manifold™

- Accommodates all USEPA, ISO, and DIN chemistries
- Operation of FIA or SFA on the same manifold
- Ideal angular confluence point
- Efficient mixing coils











XYZ Autosamplers

- Choice of XYZ Autosamplers with circulating wash bath and integral two channel peristaltic pump
 - Model 3090 90 samples and 9 bulk standards
 - Model 3360 360 samples and 10 bulk standards















Flow IV⁺ Automated Chemistry Analyzer



- Large–scale
- Expandable
- Automated chemistry analyzer

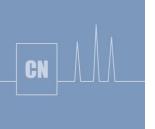
 O:I:Analytical

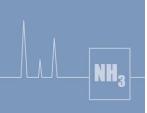


Key Features and Benefits

- SFA or FIA on one platform
- Up to six simultaneous analyses
- ER Detector
- Precision Pump
 - 24 channels
- 3360 Autosampler
 - 360 positions + 10 bulk Standards
- Expandable for in-line sample preparation













In-Line Sample Preparations



- AnionicSurfactants
- Distillations
 - Total Phenolics
 - Total Cyanide

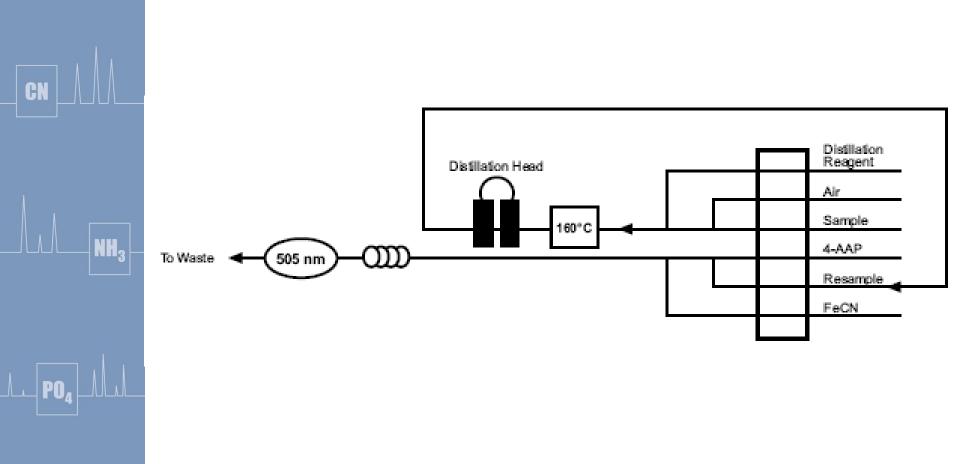
- Digestions
 - Total Cyanide
 - Total DissolvedNitrogen andPhosphorus
- Dialysis
 - Soil and PlantExtracts
 - Tobacco Extracts







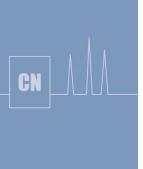
In-Line Phenol: USEPA Method 420.2







Sample Types



- Brackish waters
- Drinking water
- Groundwater
- Wastewaters
- Surface water
- Tobacco Extracts

- Industrial waste
- Process water
- Plating baths
- Seawater
- Soil and plant extracts
- Food and Beverage





For Additional Information

- Please visit our website at:
 - www.oico.com
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 - Senior Product Specialist
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