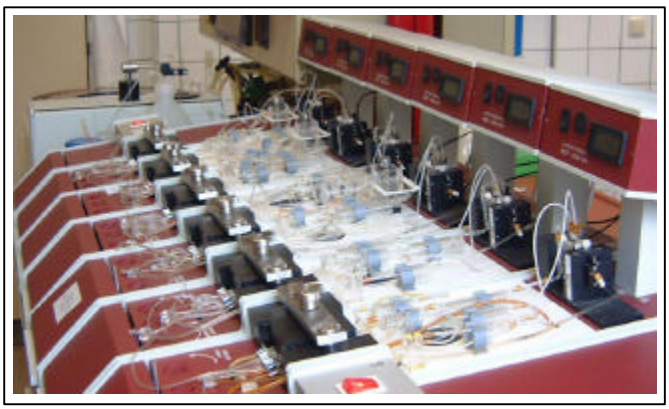
Technique	Concept, Application	Specific Advantages
CFA	• Specific method on each analysis manifold • typical 3-4 module / methods • Expandable up to 12 simultaneous analytical methods • Usually applied for higher sample throughput and limited number of methods to be automatized	• Unbeatable analysis capacity by simultaneous determination of all applicated methods • Unique possibility of quality diagnosis, resulting from the use of the segmented flow technique • High intensity, high repeatable mixing of reaction solutions in each stages of the automated procedure • Complicated and individual sample preparation and reaction procedures can be applied on the analytic manifold • Outstanding small running costs, using standard laboratory reagents • Countless number of available and approved methods, resulting from world-wide use of CFA over decades

Continuous-Flow Analysis (CFA)

CFA is also known as Segmented Flow Analysis (SFA), to outline against FIA technique. Existing ISO standards define: "*Methods using flow analysis are automatizing wet chemical procedures and are therefore particularly suitable for processing large sample series... One differentiates between flow injection analysis (FIA) and continuous flow analysis (CFA).*"

Continuous Flow Analysis is the traditional technique. We give favour to CFA as it provides valuable advantages for the practical routine work in typical fields of flow analysis application.

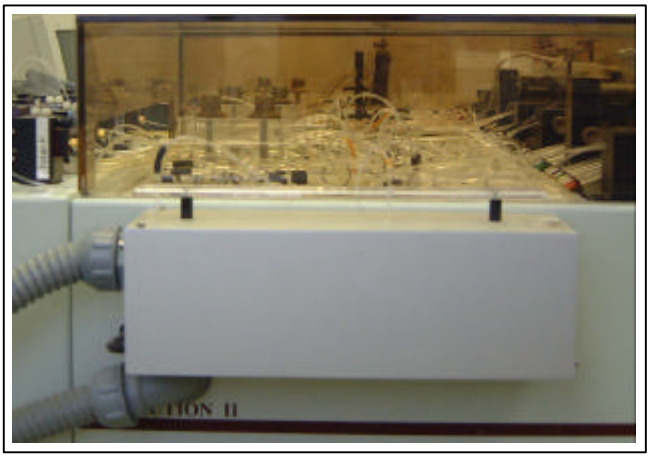


How works CFA Analysers ?

Each sample or calibrant, taken on the autosampler, is splitted to flow into the different manifolds for simultaneous determination.

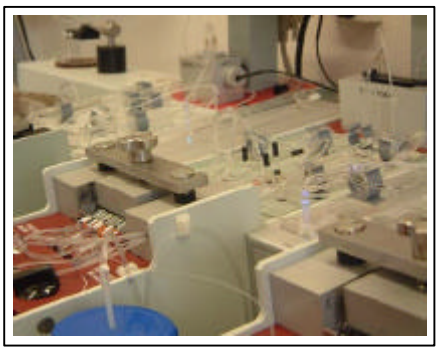
The aspiration of the next following sample after 60 seconds gives an analysis frequency of 60 samples per hour. A sequence of 90 seconds will result in 40 samples per hour throughput. The aspiration of blank water in between is included in this interval.

The number of samples/h multiplied by the number of simultaneous determinations gives the number of analysis per hour on the CFA analyser.

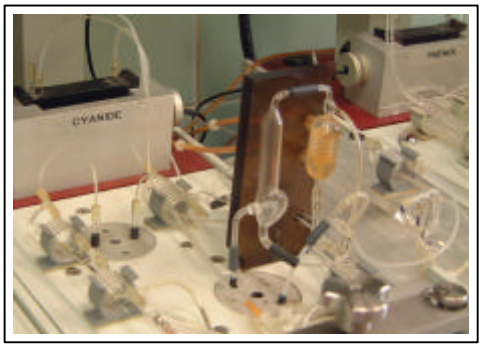


The segmentation of the CFA assures best separation between successive samples, also for time consuming preparation steps on the analyser or after long delay for slow reactions. Consequently CFA provides better safety against any memory effect.

Today's newcomers in the application of Segmented Flow technique in most cases justify their decision upon the efficiency of integrated sample preparation procedures. The time savings from the omission of manual digestion of organic P or N compounds, of manual distillation for Cyanide, Phenolindex or Fluoride guarantees the profitability of investment.



Well experienced users of CFA on the other hand purchase new analysers to renew their instrumentation after a working life of 15 years or more.



The PC based system control and data handling applies specific user-friendly software, comprising over 20 years of experience in CFA data handling, along several operating systems. Consider, that automatically documentation of original analysis data, integrated QM procedures and computerised calculation and reporting results in additional time savings against manual analysis procedures.

Technical Data of a CFA Analyser:

- Segmented flow techniques Macroflow or Microflow
- Autosampler serial 52/104 positions or XY sampler 240 (300) positions
- Multichannel proportioning pump with 12/48 positions, segmentation by air or N2
- Individual method 'manifolds' for dilution, mixing, incubation, dialysis, distillation, UV digestion, hydrolysis, a.o.)
- Individual filter colorimeter for each analysis manifold, mono or bichromatic
- Flowcell 10-50 mm ligthpath, debubbling or bubble gating
- Sophisticated electronics for colorimeter and system control
- PC station with CFM software and printer