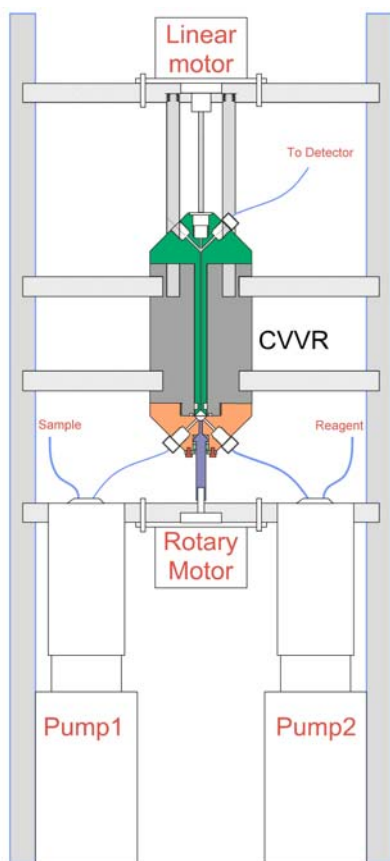


Automated Sample Processing/Analysis Device

Description

The University of North Florida is developing novel chemical sensing technologies for waterborne pollutants and toxins, for application in the areas of terrorism, environmental monitoring, and process analysis. The system is based on Flow Injection Analysis (FIA) technology providing automated sample preparation and analysis of the desired analyte or analytes. At the heart of the instrument is the Continuously Variable Volume Reactor (CVVR) (US Patent #s 6290910 and 6358745). The CVVR is a mixing chamber that can be computer controlled to have a range of internal volumes (50-1800 μL) with its contents mixed at a variety of speeds (1-300 rpm). The automation of the chamber (a replacement for the mixing coil in FIA) means that all variables in the FIA system (flowrate, injected volume, chamber volume and mixing efficiency) can be controlled by computer. Thus, the system can not only be used for a wide variety of analytes (requiring different optimum conditions) but can also accommodate samples that vary in composition. This makes the system ideal for stand-alone remote operation with either local (on-board) or remote (network) control.



Advantages

- Analysis of a wide variety of analytes
- Remote automated sample processing, analysis and reporting
- Reproducible mixing of samples and reagents (RSD of 0.2% rather than 2%)
- Adaptable to a variety of sample types
- Completely computer controllable
- Robust, rugged and versatile design

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