

ence in the fluid flow is limited in time is detected without sample alteration from aeration, and means for providing a signal indicative of the concentration of said substance.

47. A system for communication with a fluid comprising a fluid sampler, means cooperating between said fluid sampler and the fluid to provide for transfer of the fluid therebetween, a sample chamber included in said fluid sampler, a sample control valve connected with said sample chamber, rotatable fill means in communication with said sample control valve, a probe extending into said sample chamber contacting the

fluid for detecting a substance which is diluted by pooling of samples from said fluid sampler, a plurality of storage means, means for controlling said sample control valve to an open position when said rotatable means overlies one of said plurality of storage means, and means for driving said rotatable fill means to overlie separate ones of said plurality of storage means, whereby transient characteristics in fluid samples are preserved in said separate ones of said plurality of storage means.

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