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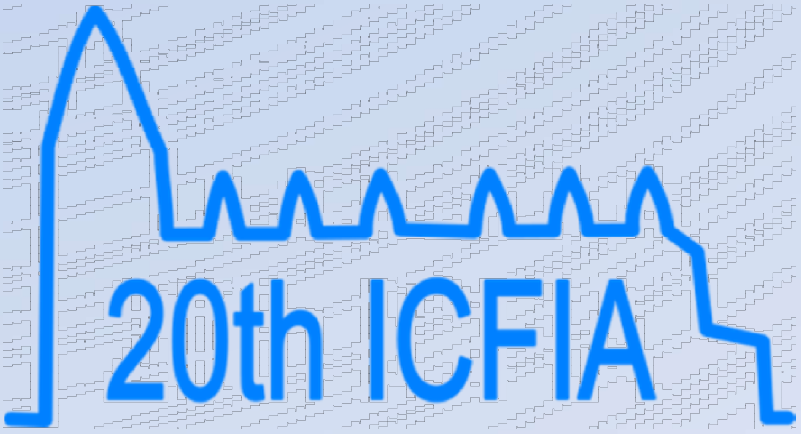

1P21

Primary amines in natural waters: Sequential injection methodology for its fluorescent detection

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Amines are organic bases of low molecular weight containing a basic N atom The number of constituents (alky or aryl groups) bonded to the N atom determines whether the compound is a primary, secondary or tertiary amine. They are often present in biological and environmental samples. The source of amines in the environment can be biological or anthropogenic. Due to the broad range of its use and consequently release in the aquatic environment, the determination of its concentration is particularly important.

Due to difficulties of using absorption-based assays, several fluorescent assays have been developed for amino acid determination, one of them based on the derivatisation with fluorescamine. Fluorescamine (4-phenylspiro(furan-2(3H),1''-(3'H)-isobenzofuran)-3,3'dione) was first described by Undenfriend et al in 1972 [1] and is a compound that is nonfluorescent itself but reacts with primary amino groups to form a highly fluorescent compound.

In the present work, a simple sequential injection system for amine screening based on the fluorescent detection using fluorecamine as derivatisation reagent is described; the developed system will be applied to natural waters.

References

[1] S. Udenfriens, S. Stein, P. Bohlen, W. Dairman, W. Leimgruber, M. Weigele, Science 178 (1972) 871

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