DISSOLVED INORGANIC PHOSPHATE

Manual spectrophotometric method

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Dissolved Inorganic Phosphate has been quantified according to the Strickland and Parsons (S&P) procedure (1972). 0.8 mL of reagent 1 and 3.2 mL of reagent 2 were added to 40 ml sample. After 30 min, the absorbance was measured with a 8 mL-volume 10 cm-path length-cell at 880 nm using a CECIL™ 1011 spectrophotometer. The reagent blank was prepared by adding 0.8 mL of reagent 1 and 3.2 mL of reagent 2 to 40 mL DW.

All reagents were prepared with pro analysis Merck™ Reagent Grade chemicals and with Milli-Q™ high purity demineralised water (DW). All utensils were washed with 10% hydrochloric acid and rinsed three times with DW.

. *Reagent 1*: The ascorbic acid solution was prepared by dissolving 9 g l(+) $C_6H_8O_6$ (ref. 1.00127.0250) in 170mL DW. The reagent can be stored at 4 .C for several days.

. *Reagent 2*: The molybdic reagent was prepared by mixing 250mL H_2SO_4 (2.5 M) followed by addition of 75mL of $(NH_4)_6Mo_7O_{24}{\cdot}H_2O$, 40 g/L (ref. 1.01182.1000) and 23mL of $K(SbO)C_4H_4O_6$. $0.5H_2O$, 3 g/L and 52mL of DW. The mixed reagent can be stored at 4 .C for several days.

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References :

Strickland J. D. H. and Parsons T. R., « A practical handbook of seawater analysis », Bull. 167, 1972, 49-55.