

The Chromatographic Determination of Silicon and Phosphorus in the Form of molybdenum heteropoly acids.

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The chromatographic behavior of molybdenum heteropoly acids of silicon(MSA) and phosphorus (MPA) in form ion-associate with tetrabutylammonium bromide (TBAB) was researched in IP HPLC (Si-C₁₈ , detection $\lambda=310$ nm). The conditions of determination with preliminary concentrating were optimized. The technique of determination of silicon and phosphorus in combined presence was developed. The thresholds of detectability are $1,1\pm 0,3$ (Si) and $6 \pm 1,2$ (P) mkg/l. The calibrate diagram are linear in interval (0,01÷0,1) mkg/l (silicon) and (0,02÷0,15) mkg/l (phosphorus). The technique was used for analyses of pure water .

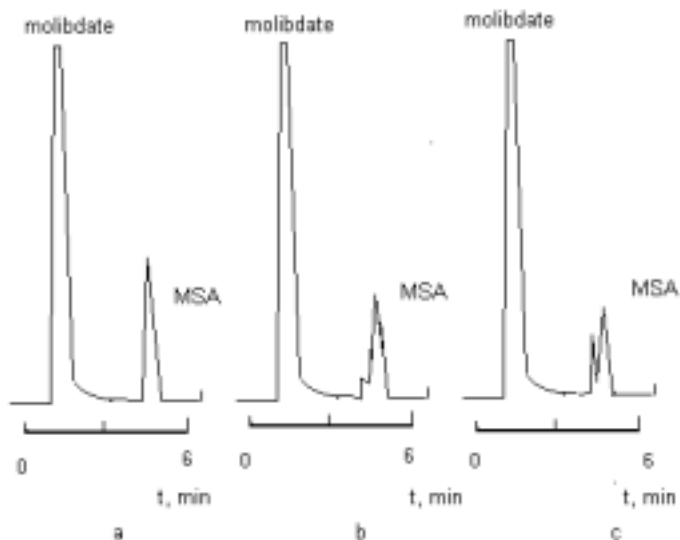


Fig. 15. The influence acetonitrile in sample on the form of picks of α -MSA. . 40% acetonitrile (a), 50 % acetonitrile (b), 70 % acetonitrile (c) (eluent: 60% acetonitrile, 0.8 mM TBAB, 0.1 acetic buffer, 3.94 g/l Na_2SO_4 pH=4.00, $C_{\text{Si}}=1$ mkg/ml).

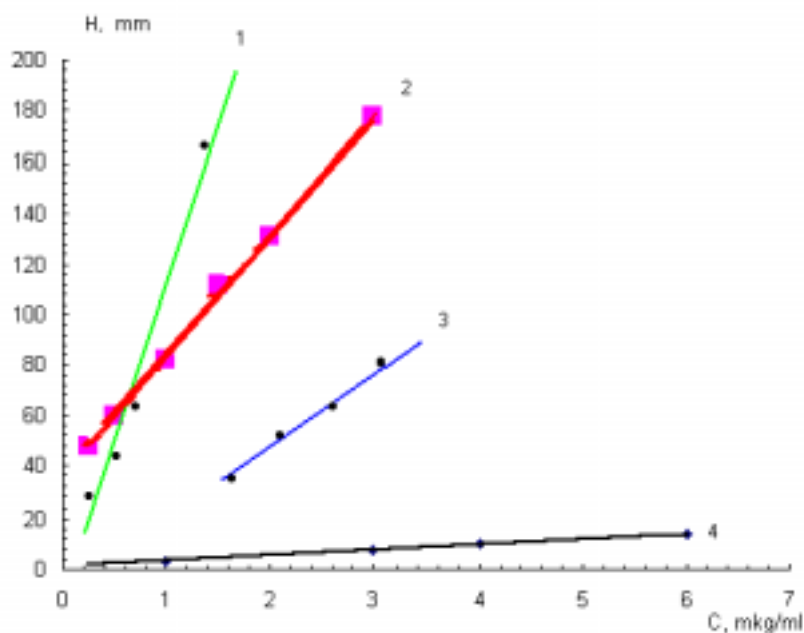


Fig.18. The calibrating dependence picks height from concentration silicon(1,2) and phosphorus (3,4) in concentrate (1,3) and in aqueous solution (2,4). (eluent: 60% acetonitrile, 0.8 mM TBAB, 0.1 acetic buffer, 3.94 g/l Na_2SO_4 pH=4.00).