

## **The Regularity of retention of Molybdenum Heteropoly Acids of Silicon and Phosphorus.**

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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-C<sub>18</sub>, detection  $\lambda=310$  nm). The using eluent contained: acetic buffer, sulphuric and perchloric acids (pH-regulators); TBAB (ion-pair reagent). The optimal conditions of determination silicon and phosphorus in combined presence are:

**1. Eluent : 60% AcN; 0,1 M acetic buffer (pH=4.0), 0,8+1.2 mM TBAB**

**2. Detection:  $\lambda=310$  nm.**

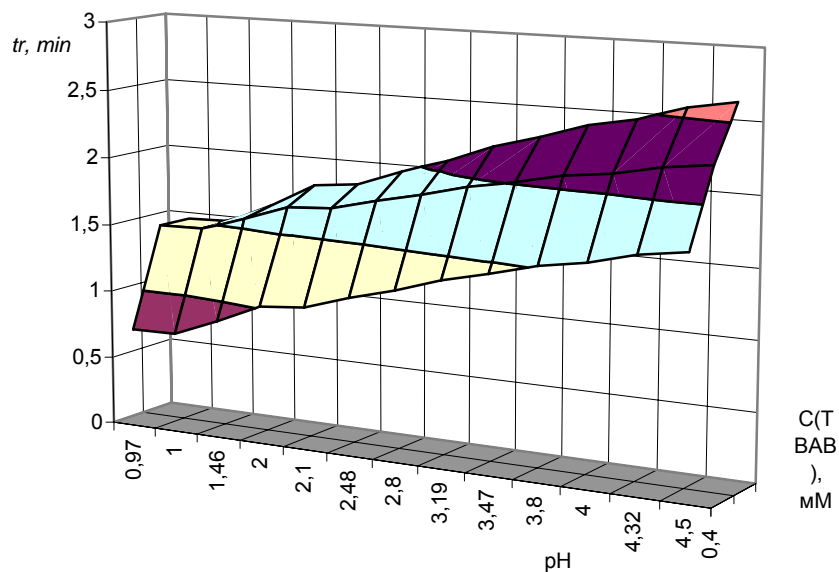


Fig.19. The influence pH and TBAB concentration on retention time of MSA. (eluent: 60% acetonitrile, 0.1 acetic buffer, HCl 3.94 g/l Na<sub>2</sub>SO<sub>4</sub>, C<sub>Si</sub>=1 mkg/ml).

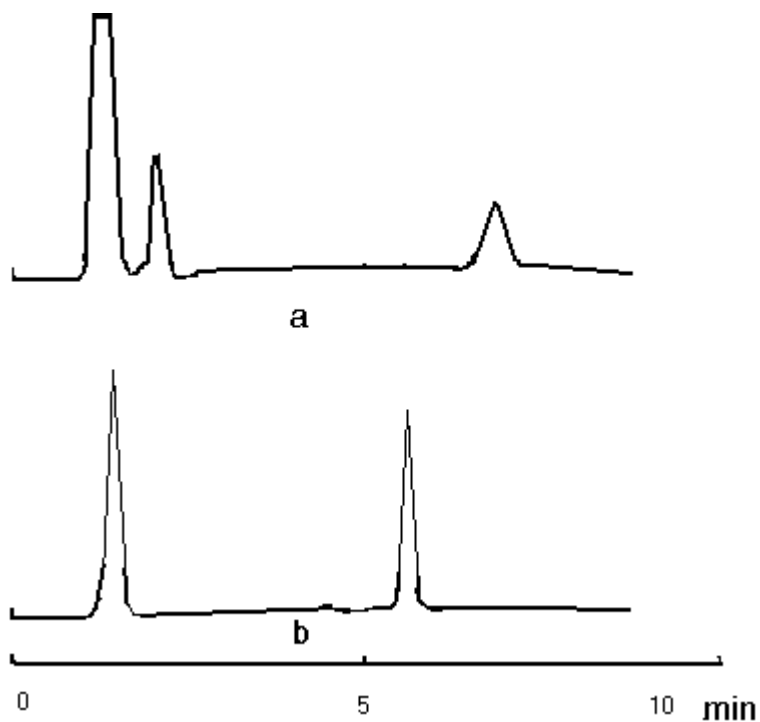


Fig.23. The chromatograms of MSA and MPA, formed in solution ( $V_{a.p.}=25$  ml  $C_{MSA}=3$  mkg/ml,  $C_{MPA}=6$  mkg/ml), (a) and syntesid (b) ( $C_{MSA}=3$  mkg/ml,  $C_{MPA}=6$  mkg/ml; eluent: 60% acetonitrile, H<sub>2</sub>SO<sub>4</sub> 3.94 g/l Na<sub>2</sub>SO<sub>4</sub>,  $\lambda=310$  nm; column - Mightysil RP-18 150×4.6 mm,  $\varnothing$  5mm). Conditions of concentrating: 100 ml water solution D=20+50, 1 M H<sub>2</sub>SO<sub>4</sub>;  $2,5 \cdot 10^{-4}$  M TBAB,  $C_{M_0}=4,6 \cdot 10^{-2}$  M, glass wool was used as sorbent (1 g); ion-associates GPA with TBAB were resorpted by AcN then water was added (H<sub>2</sub>O:AcN=1:1). The volume of concentrate was 2÷4 ml.

