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## **Supplementary Matterial**







**Fig.** SI1 The pH dependence of the <sup>1</sup>H chemical shifts of V<sup>V</sup>-trihyat complexes formed in solution.  $C_V = 4.0 \times 10^{-1}$  $30^{3}$  M, L : M = 1, I = 0.20 M KCI. The samples contain 10% D<sub>2</sub>O. Type 1 hydrogen marked with  $\circ$  (left axis) and type 2 with  $\blacktriangle$  (right axis).

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**Fig.** SI2 A) Concentration distribution curves of V<sup>V</sup>-trihyat complexes formed in solutions with  $c_V = 2.6 \times 10^{-4}$  M and L:M=~1, calculated by using the stability constants listed in Table 1 together with the observed 35 absorbance at = 360 nm. B) The molar absorbances at the same conditions, in the pH range 10-12.

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