

## Structure and Reactivity of the Several Biologically Active Oxime Derivatives of Pyridinium Chloride

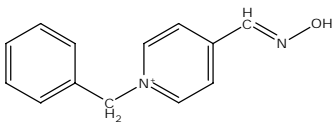
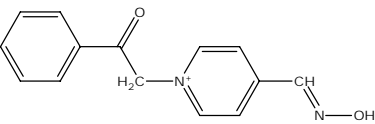
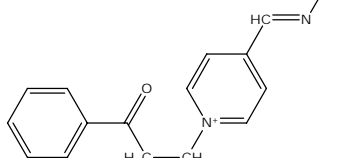
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Oximes, members of the family of aralkyl derivatives of pyridinium chloride, are known as reversible inhibitors of human blood cholinesterase. Consequently, they are efficient protectors of this enzyme upon phosphorylation by organophosphorous poisons such as pesticides and warfare agents [1]. Their biological functions and metabolizing mechanisms in living systems are usually related to their structure and chelating ability.

The reinvestigation of previously reported [2,3] coordination ability of the selected aralkyl derivatives of pyridinium cation (Table 1) to the pentacyanoferrate(II) moiety have shown considerable differences concerning their stability and reactivity in aqueous solutions. In order to clarify the differences between those otherwise similar compounds a detailed structural characterisation by means of UV-Vis, NMR (<sup>1</sup>H and <sup>13</sup>C), FT-IR and Raman is preformed.

Table 1. The examined oxime derivatives of pyridinium chloride

Name	Cation	Abbrev.
1-Benzylpyridinium-4-aldoxime chloride		BPA-4
1-Phenacetylpyridinium-4-aldoxime chloride		FEPA-4
1-Benzoyl ethylpyridinium-4-aldoxime chloride		BEPA-4

The results are correlated with their reactivity toward the aquapentacyanoferrate(II) ion, as a model of biologically important macromolecules with labile sixth coordination site, and the stability of produced complexes.

### Acknowledgement

The work was done within project financed by Croatian Ministry of Science, Education and Sport, no.108-1193079-3070.

### References

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