



Products of reactions between ReX_3 ($\text{X} = \text{Cl}, \text{I}$) and N-heterocyclic compounds - structural and spectroscopic studies.

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Investigations of products of reactions of rhenium(III) chloride and rhenium(III) iodide with N-heterocyclic compounds were carried out, which revealed the formation of two sorts of complexes: (I) $[\text{Re}_3\text{Cl}_6(\mu\text{-Cl})_3\text{L}_3]$ $\{\text{L} = \text{pyridine (py)}, \text{pyrazine (pyz)}, \text{pyridine 1-oxide (NOpy)}\}$ (**1–3**) and (II) *trans*- $[\text{ReO}_2\text{L}_4]\text{I}$ ($\text{L} = \text{py}, 3\text{-methylpyridine (3-Mepy)}, 4\text{-methylpyridine (4-Mepy)}\)$) (**4a–6c**). The structural studies of the first series (I) revealed that each complex comprises of trinuclear rhenium(III) core bridged by three μ -chlorido ligands with attached six terminal chlorido and three N-heterocyclic ligands. The products of the second kind are mononuclear rhenium(V) *trans*-dioxidocomplexes. All complexes were characterized by the single crystal X-ray diffraction, NMR, IR, FIR, UV–Vis spectroscopy, ESI-MS spectrometry and elemental analyses.

Słowa kluczowe

Trinuclear complex, Oxidocomplex, Rhenium, Structure, Synthesis

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