The complexes \( \text{cis-}[\text{Pd}(\text{PMSA})_2\text{Cl}_2] \), \( \text{cis-}[\text{Pt}(\text{PMSA})_2\text{X}_2] \), \( \text{trans-}[\text{Pt}(\text{PMSA})_2\text{I}_2] \) and \( [\text{Pt}(\text{PMSA})_4]\text{Cl}_2 \) (PMSA = N-3-pyridinylmethanesulfonamide; \( \text{X} = \text{Cl}, \text{Br}, \text{I} \)) have been synthesized and characterized by elemental analysis, molar electric conductivity, IR and \(^1\text{H}\) NMR spectra. A detailed assignment of the IR spectra (4000-150 cm\(^{-1}\)) of the complexes, supported by an approximate normal coordinate analysis, has been performed. The complexes are of square-planar type and the PMSA ligand is coordinated via the pyridine nitrogen atom.