Synthesis and Characterization of Metal Carbonyls $[M(CO)_6(M = Cr, Mo, W), Re(CO)_5Br, Mn(CO)_3Cp]$ with 2-Hydroxy-1-napthaldehyde Ethanesulfonylhydrazone (nafesh)

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Z. Naturforsch. **58b,** 1124 – 1127 (2003); received December 18, 2002

Five new complexes, $M(CO)_5$(nafesh) (M = Cr (**1**), Mo (**2**), W (**3**)), $Re(CO)_4Br$(nafesh) (**4**) and $Mn(CO)_3$(nafesh) (**5**) have been synthesized by the photochemical reaction of metal carbonyls $M(CO)_6$ (M = Cr, Mo, W), $Re(CO)_5Br$, and $Mn(CO)_3Cp$ with 2-hydroxy-1-napthaldehyde ethanesulfonylhydrazone (nafesh). The complexes have been characterized by elemental analysis, EI mass spectrometry, FT-IR, ^1H NMR spectroscopy. The spectroscopic studies show that nafesh behaves as a monodentate ligand coordinating *via* imine N donor atom in $M(CO)_5$(nafesh) (M = Cr, Mo, W) and $Re(CO)_4Br$(nafesh) and as tridentate ligand in $Mn(CO)_3$(nafesh).

Key words: Hydrazone, 2-Hydroxy-1-napthaldehyde Ethanesulfonylhydrazone, Metal Carbonyls