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MetalZorb™

Order of Affinity

The order of affinity of the polymer for metals is influenced by solution parameters such as pH, temperature, and total ionic content. The following affinity sequence for several representative ions is generally expected.

Au^{+++}	Gold	CrO_4^{-2}	Chromium
UO_4^{-2}	Uranium	Ni^{++}	Nickel
Cd^{++}	Cadmium	SeO_4^{-2}	Selenium
Hg^{++}	Mercury	AsO_4^{-3}	Arsenic
$Au(CN)^{-2}$	Gold	Co^{++}	Cobalt
Cu^{++}	Copper	Mn^{++}	Manganese
Pb^{++}	Lead	Fe^{+++}	Iron
VO_4^{-3}	Vanadium	Ag^{+}	Silver
MoO_4^{-2}	Molybdenum	Al^{+++}	Aluminum
Zn^{++}	Zinc	Mg^{++}	Magnesium
Cr^{+++}	Chromium	K^{+}	Potassium

The high selectivity for heavy metals, and the low selectivity for alkali and alkaline earth metals (Na+, K+, Mg++, and Ca++), is especially useful for the treatment of contaminated natural waters which may contain high concentrations of these innocuous chemical species. These monovalent and divalent cations do not interfere with or compete with absorption of heavy metals, therefore allowing for maximum removal of heavy metals from contaminated waters.