

Table 2.13 Carriers in blood plasma

Metal ion	Free M	Carrier	Basis of selectivity
Iron (and manganese)	10^{-16}	Transferrin	Phenolates bind M^{3+} octahedral complex
Copper	10^{-14}	An albumin	Ionized peptide $>N^-$ binds Cu^{2+} in tetragonal complex
Zinc	10^{-8}	An albumin	N(S) donors in tetrahedral geometry bind Zn^{2+}
Cobalt (as vitamin B_{12})	$<10^{-10}$	Carrier protein	The B_{12} sidechains are recognized
Calcium	10^{-3}	Phosphoproteins (when needed)	Weak binding for most metals
Magnesium, sodium potassium, (calcium)	$10^{-3}-10^{-1}$	None	Freely circulating as ions