

Errata

Re: STEREOCHEMICAL CHANGES DURING OCTAHEDRAL SUBSTITUTION REACTIONS

by R. D. ARCHER, *Coordin. Chem. Rev.*, 4 (1969), 243–272

Page 251, lines 6 and 7 should read:
that the higher entropies imply an incipient if not actual trigonal bipyramid,
whereas
the lower entropies are associated with an incipient tetragonal pyramid, or at
least

Page 251, line 14 should read:
group *trans* to the leaving group had unshared electrons and the four groups *cis*

Page 254, line 34 should read:
with the chloro ligand in the trigonal plane has 4,000 cm⁻¹ (about 11 kcal.) less

Page 255, Table 4 should read:

TABLE 4

ANTIBONDING EFFECTS FOR SEVERAL COBALT(III) COMPLEXES AND INTERMEDIATES

Complex	<i>d</i> -orbital antibonding energies (kK) ^a	Total spin-paired <i>d</i> ⁶ antibonding effect (kK) ^b
<i>cis</i> -[Co(en) ₂ Cl ₂] ⁺	2, 2, 4, 23, 23	16
{Co(en) ₂ Cl} ²⁺ tetragonal pyramid Cl in plane	0, 2, 2, 15, 23	8
{Co(en) ₂ Cl} ²⁺ trigonal bipyramid Cl at xy coordinate	0, 2, 9, 11, 21	22 ^c
{Co(en) ₂ Cl} ²⁺ trigonal bipyramid Cl in axial position	2, 2, 9, 9, 21	26 ^d
<i>cis</i> -[Co(en) ₂ Cl(H ₂ O)] ²⁺	$\frac{1}{2}$, 2, 2 $\frac{1}{2}$, 22, 23	10
<i>trans</i> -[Co(en) ₂ Cl(H ₂ O)] ²⁺	0, 2 $\frac{1}{2}$, 2 $\frac{1}{2}$, 22, 23	10

^a Calculations based on angular parameter model^{55,56} used for ML₆ species by Yatsimirskii^{34,35} as modified⁵² to allow for complexes with nonequivalent ligands. kK = 1000 cm⁻¹ = 2.86 kcal/mole. Parameters based on spectral data tabulated by Wentworth and Piper⁵⁷, but using nomenclature of Yatsimirskii^{34,35}. Δσ(en) = 23 kK; Δπ(en) = 0 kK; Δσ(Cl) = 23 kK; Δπ(Cl) = 8 kK; Δσ(H₂O) = 21 kK; Δπ(H₂O) = 2 kK.

^b Calculations assume electrons are paired in lowest energy orbitals.

^c If intermediate is ground state triplet, intermediate total antibonding effect = 24 kK – (pairing energy).

^d If intermediate is ground state triplet, intermediate total antibonding effect = 26 kK – (pairing energy).