
Magnetic properties of cobalt(II) nitrate complex with 14-membered tetraazamacrocycle

Substance

Cobalt(II) nitrate complex with 14-membered tetraazamacrocycle; $[\text{Co}(\text{L})(\text{NO}_3)_2]$

Gross Formula

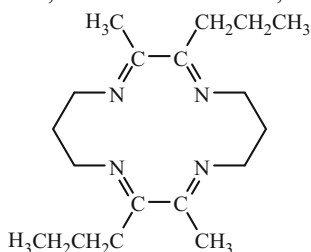
$\text{C}_{18}\text{H}_{32}\text{CoN}_6\text{O}_6$

Properties

Molar magnetic moment

Structure

$[\text{Co}(\text{L})(\text{NO}_3)_2]\text{NO}_3$; L = 14-membered tetraazamacrocycle obtained by reaction of 2,3-hexanedione and 1,3-diaminopropane



Data

T [K]	χ_g [10^{-6} emu/g]	χ_M [10^{-6} emu/mol]	p_m OR μ_{eff} [μ_B]	Θ_p [K]	Method	Remarks
RT	–	–	4.23	–	Gouy	Octahedral

T : Temperature

χ_g : Specific susceptibility

χ_M : Molar susceptibility

p_m, μ_{eff} : Effective magnetic moment per molecule

Θ_p : Paramagnetic Curie constant (Weiss constant)

Additional Remark

(i) Higher values of μ_{eff} may be due to large orbital contribution

Reference

R.N. Prasad, M. Mathur, J. Indian Chem. Soc. **80**, 803 (2003)