

*Crystallographic report***Chlorobis(tripyriddyldiamine)cadmium(II) nitrate****Kaiju Wei¹, Yongshu Xie¹, Xiaoyu Wang¹, Min Zhang¹, Qingliang Liu^{1*} and Shieming Peng²**¹Department of Chemistry, University of Science and Technology of China, Hefei, People's Republic of China²Department of Chemistry, National Taiwan University, Taipei, Taiwan

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The Cd(II) atom in [(tpda)₂CdCl]NO₃, is octahedrally coordinated to one chlorine and five pyridyl-nitrogen atoms. The coordination cations and nitrate anions are connected by multiple hydrogen bonds, affording a two-dimensional structure. Copyright © 2004 John Wiley & Sons, Ltd.

KEYWORDS: crystal structure; cadmium complex; 2D network; tripyridyldiamine**COMMENT**

The cadmium(II) atom in [(tpda)₂CdCl]NO₃ (**1**; tpda = tripyridyldiamine) is octahedrally coordinated to one chlorine and five pyridyl-nitrogen atoms, from two tpda ligands, with one pyridyl-nitrogen atom left uncoordinated. The Cd–N bond lengths of 2.312(3)–2.440(3) Å lie in the normal range.¹ The tpda amino groups, the nitrate oxygen atoms and the chlorine atoms are involved in multiple hydrogen bonds, affording a two-dimensional network (Fig. 1).

EXPERIMENTAL

1 was synthesized by the reaction of Cd(NO₃)₂ · 6H₂O, tripyridyldiamine² and KCl (molar ratio, 1:1:2) in methanol solution. The concentrated solution was left for slow evaporation of the solvent to give light-orange crystals. Intensity data were collected at 293 K on a CCD area detector. C₃₀H₂₆CdClN₁₁O₃, *M* = 736.47, monoclinic, *P*2₁/*n*, *a* = 12.294(4), *b* = 12.745(4), *c* = 19.240(6) Å, β = 99.062(5)°, *V* = 2977.0(15) Å³, *Z* = 4, *R* = 0.043 (4317 data with *I* ≥ 2σ(*I*); θ_{max} = 26.6°), *wR* = 0.095 (all 6240 data). Programs used: SHELXL-97 and ORTEP. CCDC deposition number: 236 494.

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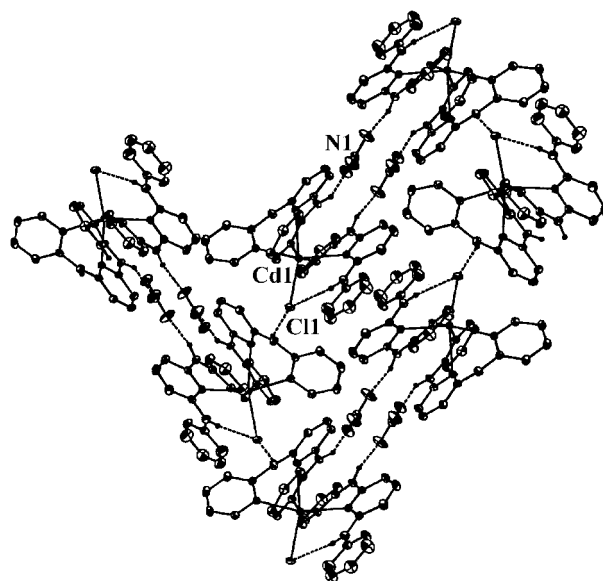


Figure 1. Two-dimensional network of **1**. For clarity, hydrogen atoms are omitted.

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