

data_General
_audit_creation_date '2009-01-15'
_audit_creation_method 'by CrystalStructure v3.5.1'
_audit_update_record ?

#=====

=

PROCESSING SUMMARY (IUCr Office Use Only)

_journal_date_recd_electronic ?
_journal_date_from_coeditor ?
_journal_date_accepted ?
_journal_coeditor_code ?

#=====

=

SUBMISSION DETAILS

_publ_contact_author_name 'Dr.M.Cgdem Sayil'
_publ_contact_author_email 'sayil@istanbul.edu.tr'
_publ_contact_author_fax 'ENTER FAX NUMBER'
_publ_contact_author_phone 'ENTER PHONE NUMBER'
_publ_contact_letter
;
ENTER TEXT OF LETTER
;
_publ_requested_journal 'ENTER JOURNAL NAME HERE'
_publ_requested_category 'CHOOSE FI FM FO CI CM CO or AD'
_publ_requested_coeditor_name ?

#=====

=

TITLE AND AUTHOR LIST

_publ_section_title
;
ENTER SECTION TITLE
;
_publ_section_title_footnote

;
ENTER FOOTNOTE TO TITLE OF PAPER

;
loop_
_publ_author_name
_publ_author_footnote
_publ_author_address
'Tavman, Aydin' .
; Istanbul University
Faculty of Engineering
Department of Chemistry
34320 Avcilar-Istanbul
Turkey

;
'Sayil, Cigdem' .
; Istanbul University
Faculty of Engineering
Department of Chemistry
34320 Avcilar-Istanbul
Turkey

;
_publ_section_synopsis

;
ENTER SYNOPSIS

;

#=====

=

TEXT

_publ_section_abstract

;

ENTER ABSTRACT

;

_publ_section_comment

;

ENTER TEXT

;

_publ_section_references

;

ENTER OTHER REFERENCES

Rigaku/MSC and Rigaku Corporation. (2003).
CrystalStructure.
Single Crystal Structure Analysis Software. Version 3.5.1.
Rigaku/MSC, 9009 New Trails Drive, The Woodlands, TX, USA 77381-5209.
Rigaku, 3-9-12 Akishima, Tokyo 196-8666, Japan.

Watkin, D.J., Prout, C.K. Carruthers, J.R. & Betteridge, P.W. (1996)
CRYSTALS Issue 10, Chemical Crystallography Laboratory, Oxford, UK.

Carruthers, J.R. and Watkin, D.J. (1979), Acta Cryst, A35, 698-699

```
;  
_publ_section_figure_captions  
;  
ENTER FIGURE CAPTIONS  
;  
_publ_section_exptl_prep  
;  
ENTER COMPOUND PREPARATION DETAILS  
;  
_publ_section_exptl_refinement  
;  
ENTER SPECIAL DETAILS OF THE REFINEMENT  
;
```

#=====

=

data__AydinTavmanEBB2HClson

#=====

=

CHEMICAL DATA

_chemical_formula_sum	'C16 H16 Cl2 N4 '
_chemical_formula_moiety	'C16 H16 Cl2 N4 '
_chemical_formula_weight	335.23
_chemical_melting_point	?

#=====

=

```

# CRYSTAL DATA
_symmetry_cell_setting      triclinic
_symmetry_space_group_name_H-M  'P -1'
_symmetry_space_group_name_Hall  '-P 1'
_symmetry_Int_Tables_number    2
loop_
_symmetry_equiv_pos_as_xyz
  'x,y,z'
  '-x,-y,-z'

```

#-----

```

_cell_length_a      7.13500
_cell_length_b      9.6299(1)
_cell_length_c      15.3340(7)
_cell_angle_alpha    80.67(2)
_cell_angle_beta     79.66(2)
_cell_angle_gamma    68.395(11)
_cell_volume         958.33(10)
_cell_formula_units_Z      2
_cell_measurement_reflns_used    4181
_cell_measurement_theta_min      2.7
_cell_measurement_theta_max      25.0
_cell_measurement_temperature    294

```

#-----

```

_exptl_crystal_description    'block'
_exptl_crystal_colour         'colorless'
_exptl_crystal_size_max       0.40
_exptl_crystal_size_mid       0.30
_exptl_crystal_size_min       0.10
_exptl_crystal_density_diffn   1.162
_exptl_crystal_density_meas    ?
_exptl_crystal_density_method  'not measured'
_exptl_crystal_F_000          348.00
_exptl_absorpt_coefficient_mu  0.339
_exptl_absorpt_correction_type multi-scan
_exptl_absorpt_process_details

```

;

Higashi, T. (1995). Program for Absorption Correction.

Rigaku Corporation, Tokyo, Japan.

;

_exptl_absorpt_correction_T_min 0.885
_exptl_absorpt_correction_T_max 0.967

#=====

=

EXPERIMENTAL DATA

_diffn_ambient_temperature 293.1
_diffn_radiation_type 'Mo K\alpha'
_diffn_radiation_wavelength 0.7107
_diffn_measurement_device_type 'Rigaku RAXIS-UNKNOWN'
_diffn_measurement_method \w
_diffn_detector_area_resol_mean 10.00
_diffn_reflns_number 47668
_diffn_reflns_av_R_equivalents 0.109
_diffn_reflns_theta_max 25.07
_diffn_measured_fraction_theta_max 0.9953
_diffn_reflns_theta_full 25.07
_diffn_measured_fraction_theta_full 0.9953
_diffn_reflns_limit_h_min -8
_diffn_reflns_limit_h_max 8
_diffn_reflns_limit_k_min -11
_diffn_reflns_limit_k_max 11
_diffn_reflns_limit_l_min -18
_diffn_reflns_limit_l_max 18

#=====

=

REFINEMENT DATA

_refine_special_details

;

Refinement using reflections with $F^2 > 3.0 \sigma(F^2)$.

The weighted R-factor (wR), goodness of fit (S) and R-factor (gt) are based on F , with F set to zero for negative F . The threshold expression of $F^2 > 2.0 \sigma(F^2)$ is used only for calculating R-factor (gt).

;

_reflns_number_total 3414

```

        _reflns_number_gt          2886
_reflns_threshold_expression      F^2>2.0\$(F^2)
        _refine_ls_structure_factor_coef    F
        _refine_ls_R_factor_gt          0.0840
        _refine_ls_wR_factor_ref        0.2190
_refine_ls_hydrogen_treatment    riding
        _refine_ls_number_reflns        2886
        _refine_ls_number_parameters    215
        _refine_ls_goodness_of_fit_ref  1.125
        _refine_ls_weighting_scheme     calc
        _refine_ls_weighting_details
;
Chebychev polynomial with 3 parameters (Carruthers & Watkin, 1979)
        15.8680  10.0543  9.9976
;
_refine_ls_shift/su_max          0.0000
_refine_diff_density_max         0.28
_refine_diff_density_min        -0.27
_refine_ls_extinction_method     none
_refine_ls_extinction_coef       ?

loop_
    _atom_type_symbol
    _atom_type_description
    _atom_type_scatter_dispersion_real
    _atom_type_scatter_dispersion_imag
    _atom_type_scatter_source
    'C' 'C' 0.003 0.002
;
International Tables for Crystallography
(1992, Vol. C, Tables 4.2.6.8 and 6.1.1.4)
;
'H' 'H' 0.000 0.000
;
International Tables for Crystallography
(1992, Vol. C, Table 6.1.1.4)
;
'N' 'N' 0.006 0.003
;
International Tables for Crystallography
(1992, Vol. C, Tables 4.2.6.8 and 6.1.1.4)
;

```

'Cl' 'Cl' 0.148 0.159

;

International Tables for Crystallography
(1992, Vol. C, Tables 4.2.6.8 and 6.1.1.4)

;

#=====

=

ATOMIC COORDINATES AND THERMAL PARAMETERS

loop_

_atom_site_label

_atom_site_type_symbol

_atom_site_fract_x

_atom_site_fract_y

_atom_site_fract_z

_atom_site_U_iso_or_equiv

_atom_site_adp_type

_atom_site_occupancy

_atom_site_symmetry_multiplicity

_atom_site_calc_flag

_atom_site_refinement_flags

_atom_site_disorder_assembly

_atom_site_disorder_group

Cl(1)	Cl	0.6845(5)	-0.5289(3)	0.5846(2)	0.0385(9)	Uani	1.00	1	d...
Cl(2)	Cl	0.2679(7)	0.0128(4)	0.9033(3)	0.0543(12)	Uani	1.00	1	d...
N(1)	N	0.256(2)	-0.3131(11)	0.9341(6)	0.033(3)	Uani	1.00	1	d...
N(3)	N	0.327(1)	-0.2184(11)	0.5667(7)	0.028(2)	Uani	1.00	1	d...
N(2)	N	0.311(2)	-0.5170(13)	0.8815(7)	0.037(3)	Uani	1.00	1	d...
N(4)	N	0.124(2)	0.0002(11)	0.6130(6)	0.030(3)	Uani	1.00	1	d...
C(16)	C	0.204(2)	0.0330(12)	0.5252(8)	0.031(3)	Uani	1.00	1	d...
C(1)	C	0.269(2)	-0.5430(13)	0.9737(9)	0.035(3)	Uani	1.00	1	d...
C(7)	C	0.301(2)	-0.3789(13)	0.8589(8)	0.030(3)	Uani	1.00	1	d...
C(10)	C	0.212(2)	-0.150(1)	0.6338(7)	0.030(3)	Uani	1.00	1	d...
C(2)	C	0.232(2)	-0.4140(13)	1.0070(7)	0.029(3)	Uani	1.00	1	d...
C(11)	C	0.320(2)	-0.1059(13)	0.4975(8)	0.029(3)	Uani	1.00	1	d...
C(14)	C	0.259(2)	0.1593(13)	0.3823(9)	0.032(3)	Uani	1.00	1	d...
C(8)	C	0.363(2)	-0.3091(11)	0.7672(6)	0.020(2)	Uani	1.00	1	d...
C(12)	C	0.424(2)	-0.1143(12)	0.4063(8)	0.034(3)	Uani	1.00	1	d...
C(3)	C	0.187(2)	-0.395(1)	1.1001(7)	0.029(3)	Uani	1.00	1	d...
C(5)	C	0.221(3)	-0.655(2)	1.1178(11)	0.053(5)	Uani	1.00	1	d...

C(13)	C	0.384(2)	0.022(2)	0.3531(9)	0.046(4)	Uani	1.00	1	d . . .
C(15)	C	0.169(3)	0.166(2)	0.4706(8)	0.045(4)	Uani	1.00	1	d . . .
C(9)	C	0.157(2)	-0.233(2)	0.7217(7)	0.038(3)	Uani	1.00	1	d . . .
C(6)	C	0.251(2)	-0.6721(13)	1.0277(9)	0.041(4)	Uani	1.00	1	d . . .
C(4)	C	0.180(2)	-0.519(1)	1.1528(9)	0.034(3)	Uani	1.00	1	d . . .
H(1)	H	0.157(2)	-0.301(1)	1.1220(7)	0.034(4)	Uiso	1.00	1	d . . .
H(2)	H	0.162(2)	-0.517(1)	1.2155(9)	0.040(4)	Uiso	1.00	1	d . . .
H(3)	H	0.210(3)	-0.738(2)	1.1585(11)	0.066(6)	Uiso	1.00	1	d . . .
H(4)	H	0.262(2)	-0.7606(13)	1.0043(9)	0.047(4)	Uiso	1.00	1	d . . .
H(5)	H	0.250(2)	-0.2231(11)	0.9372(6)	0.042(4)	Uiso	1.00	1	d . . .
H(6)	H	0.326(2)	-0.5799(13)	0.8447(7)	0.050(4)	Uiso	1.00	1	d . . .
H(7)	H	0.422(2)	-0.2372(11)	0.7720(6)	0.021(3)	Uiso	1.00	1	d . . .
H(8)	H	0.456(2)	-0.3841(11)	0.7319(6)	0.021(3)	Uiso	1.00	1	d . . .
H(9)	H	0.062(2)	-0.161(2)	0.7588(7)	0.044(4)	Uiso	1.00	1	d . . .
H(10)	H	0.102(2)	-0.306(2)	0.7155(7)	0.044(4)	Uiso	1.00	1	d . . .
H(11)	H	0.395(1)	-0.3128(11)	0.5656(7)	0.032(3)	Uiso	1.00	1	d . . .
H(12)	H	0.055(2)	0.0643(11)	0.6503(6)	0.034(3)	Uiso	1.00	1	d . . .
H(13)	H	0.507(2)	-0.2074(12)	0.3843(8)	0.036(4)	Uiso	1.00	1	d . . .
H(14)	H	0.444(2)	0.020(2)	0.2926(9)	0.047(4)	Uiso	1.00	1	d . . .
H(15)	H	0.246(2)	0.2494(13)	0.3439(9)	0.039(4)	Uiso	1.00	1	d . . .
H(16)	H	0.076(3)	0.257(2)	0.4919(8)	0.057(5)	Uiso	1.00	1	d . . .

loop_

_atom_site_aniso_label

_atom_site_aniso_U_11

_atom_site_aniso_U_22

_atom_site_aniso_U_33

_atom_site_aniso_U_12

_atom_site_aniso_U_13

_atom_site_aniso_U_23

Cl(1)	0.037(2)	0.027(2)	0.041(2)	-0.0055(12)	0.0014(12)	0.0034(12)
Cl(2)	0.074(3)	0.038(2)	0.060(2)	-0.030(2)	-0.020(2)	0.007(2)
N(1)	0.066(7)	0.025(5)	0.013(4)	-0.024(5)	0.002(4)	-0.004(4)
N(3)	0.025(5)	0.022(5)	0.034(5)	-0.005(4)	-0.001(4)	-0.005(4)
N(2)	0.033(5)	0.061(7)	0.030(5)	-0.025(5)	0.004(4)	-0.027(5)
N(4)	0.033(5)	0.032(5)	0.020(5)	-0.009(4)	-0.005(4)	0.004(4)
C(16)	0.027(6)	0.016(5)	0.044(7)	-0.006(5)	-0.013(5)	0.016(5)
C(1)	0.021(5)	0.030(6)	0.038(7)	-0.004(5)	0.012(5)	0.006(5)
C(7)	0.028(6)	0.030(6)	0.027(6)	-0.014(5)	0.010(4)	0.000(5)
C(10)	0.044(7)	0.034(6)	0.010(5)	-0.017(5)	0.001(4)	0.005(4)
C(2)	0.037(6)	0.031(6)	0.022(6)	-0.008(5)	-0.019(5)	0.002(5)

C(11)	0.025(5)	0.027(6)	0.047(7)	-0.018(5)	-0.017(5)	-0.000(5)
C(14)	0.029(6)	0.020(6)	0.047(7)	-0.015(5)	-0.005(5)	0.012(5)
C(8)	0.024(5)	0.017(5)	0.011(5)	-0.005(4)	0.004(4)	0.009(4)
C(12)	0.037(7)	0.016(5)	0.038(7)	0.001(5)	0.007(5)	-0.009(5)
C(3)	0.023(5)	0.043(7)	0.020(5)	-0.010(5)	-0.000(4)	-0.010(5)
C(5)	0.072(10)	0.045(8)	0.049(9)	-0.019(7)	-0.029(8)	-0.006(7)
C(13)	0.052(8)	0.032(7)	0.032(7)	0.016(6)	-0.013(6)	-0.009(5)
C(15)	0.068(9)	0.057(9)	0.017(6)	-0.035(8)	-0.011(6)	0.014(6)
C(9)	0.057(8)	0.046(7)	0.008(5)	-0.018(6)	-0.000(5)	-0.001(5)
C(6)	0.053(8)	0.016(6)	0.049(8)	-0.015(6)	-0.004(6)	0.020(5)
C(4)	0.023(6)	0.034(6)	0.042(7)	-0.009(5)	-0.004(5)	0.004(5)

#=====

=

_computing_data_collection	'PROCESS'
_computing_cell_refinement	'PROCESS'
_computing_data_reduction	'CrystalStructure'
_computing_structure_solution	'SIR92'
_computing_structure_refinement	'CRYSTALS'
_computing_publication_material	'CrystalStructure Ver. 3.5.1'
_computing_molecular_graphics	?

#=====

=

MOLECULAR GEOMETRY

_geom_special_details

;

ENTER SPECIAL DETAILS OF THE MOLECULAR GEOMETRY

;

loop_

_geom_bond_atom_site_label_1

_geom_bond_atom_site_label_2

_geom_bond_distance

_geom_bond_publ_flag

_geom_bond_site_symmetry_1

_geom_bond_site_symmetry_2

N(1) C(7) 1.34(2) yes ..

N(1) C(2) 1.39(1) yes ..

N(1)	H(5)	0.86(2)	no	..
N(3)	C(10)	1.30(1)	yes	..
N(3)	C(11)	1.38(1)	yes	..
N(3)	H(11)	0.86(1)	no	..
N(2)	C(1)	1.39(2)	yes	..
N(2)	C(7)	1.30(2)	yes	..
N(2)	H(6)	0.86(2)	no	..
N(4)	C(16)	1.40(1)	yes	..
N(4)	C(10)	1.35(1)	yes	..
N(4)	H(12)	0.86(1)	no	..
C(16)	C(11)	1.38(2)	yes	..
C(16)	C(15)	1.38(2)	yes	..
C(1)	C(2)	1.34(2)	yes	..
C(1)	C(6)	1.41(2)	yes	..
C(7)	C(8)	1.52(1)	yes	..
C(10)	C(9)	1.52(2)	yes	..
C(2)	C(3)	1.43(2)	yes	..
C(11)	C(12)	1.46(2)	yes	..
C(14)	C(13)	1.39(2)	yes	..
C(14)	C(15)	1.39(2)	yes	..
C(14)	H(15)	0.95(2)	no	..
C(8)	C(9)	1.61(2)	yes	..
C(8)	H(7)	0.95(2)	no	..
C(8)	H(8)	0.95(1)	no	..
C(12)	C(13)	1.39(2)	yes	..
C(12)	H(13)	0.95(2)	no	..
C(3)	C(4)	1.34(2)	yes	..
C(3)	H(1)	0.95(2)	no	..
C(5)	C(6)	1.39(2)	yes	..
C(5)	C(4)	1.40(2)	yes	..
C(5)	H(3)	0.95(2)	no	..
C(13)	H(14)	0.95(2)	no	..
C(15)	H(16)	0.95(2)	no	..
C(9)	H(9)	0.95(2)	no	..
C(9)	H(10)	0.95(3)	no	..
C(6)	H(4)	0.95(2)	no	..
C(4)	H(2)	0.95(2)	no	..
H(11)	Cl(1)	2.354(8)	no	..

loop_

_geom_angle_atom_site_label_1

_geom_angle_atom_site_label_2

_geom_angle_atom_site_label_3

_geom_angle

_geom_angle_publ_flag

_geom_angle_site_symmetry_1

_geom_angle_site_symmetry_2

_geom_angle_site_symmetry_3

C(7)	N(1)	C(2)	110.1(10)	yes	...
C(7)	N(1)	H(5)	125(1)	no	...
C(2)	N(1)	H(5)	124(1)	no	...
C(10)	N(3)	C(11)	104.9(9)	yes	...
C(10)	N(3)	H(11)	127(1)	no	...
C(11)	N(3)	H(11)	127(1)	no	...
C(1)	N(2)	C(7)	110(1)	yes	...
C(1)	N(2)	H(6)	124(1)	no	...
C(7)	N(2)	H(6)	124(1)	no	...
C(16)	N(4)	C(10)	106.7(8)	yes	...
C(16)	N(4)	H(12)	126(1)	no	...
C(10)	N(4)	H(12)	125(1)	no	...
C(11)	C(16)	C(15)	123(1)	yes	...
C(11)	C(16)	N(4)	104(1)	yes	...
C(15)	C(16)	N(4)	131(1)	yes	...
C(2)	C(1)	C(6)	122(1)	yes	...
C(2)	C(1)	N(2)	107(1)	yes	...
C(6)	C(1)	N(2)	130(1)	yes	...
C(8)	C(7)	N(1)	124(1)	yes	...
C(8)	C(7)	N(2)	127(1)	yes	...
N(1)	C(7)	N(2)	107(1)	yes	...
C(9)	C(10)	N(3)	122(1)	yes	...
C(9)	C(10)	N(4)	123.6(9)	yes	...
N(3)	C(10)	N(4)	113.2(9)	yes	...
C(3)	C(2)	N(1)	129(1)	yes	...
C(3)	C(2)	C(1)	124(1)	yes	...
N(1)	C(2)	C(1)	105(1)	yes	...
C(12)	C(11)	N(3)	130(1)	yes	...
C(12)	C(11)	C(16)	118(1)	yes	...
N(3)	C(11)	C(16)	110(1)	yes	...
C(13)	C(14)	C(15)	119(1)	yes	...
C(13)	C(14)	H(15)	120(1)	no	...
C(15)	C(14)	H(15)	119(1)	no	...
C(9)	C(8)	H(7)	111(1)	no	...
C(9)	C(8)	H(8)	108(1)	no	...
C(9)	C(8)	C(7)	105.6(9)	yes	...

H(7)	C(8)	H(8)	109(1)	no	...
H(7)	C(8)	C(7)	110(1)	no	...
H(8)	C(8)	C(7)	110(1)	no	...
C(13)	C(12)	H(13)	122(1)	no	...
C(13)	C(12)	C(11)	115(1)	yes	...
H(13)	C(12)	C(11)	121(1)	no	...
C(4)	C(3)	H(1)	123(1)	no	...
C(4)	C(3)	C(2)	113(1)	yes	...
H(1)	C(3)	C(2)	122(1)	no	...
C(6)	C(5)	C(4)	124(1)	yes	...
C(6)	C(5)	H(3)	117(2)	no	...
C(4)	C(5)	H(3)	117(1)	no	...
H(14)	C(13)	C(14)	117(1)	no	...
H(14)	C(13)	C(12)	117(1)	no	...
C(14)	C(13)	C(12)	124(1)	yes	...
H(16)	C(15)	C(16)	119(1)	no	...
H(16)	C(15)	C(14)	121(1)	no	...
C(16)	C(15)	C(14)	117(1)	yes	...
H(9)	C(9)	H(10)	109(1)	no	...
H(9)	C(9)	C(10)	108(1)	no	...
H(9)	C(9)	C(8)	107(1)	no	...
H(10)	C(9)	C(10)	113(1)	no	...
H(10)	C(9)	C(8)	110(1)	no	...
C(10)	C(9)	C(8)	106(1)	yes	...
H(4)	C(6)	C(1)	123(1)	no	...
H(4)	C(6)	C(5)	124(1)	no	...
C(1)	C(6)	C(5)	112(1)	yes	...
H(2)	C(4)	C(3)	118(1)	no	...
H(2)	C(4)	C(5)	119(1)	no	...
C(3)	C(4)	C(5)	121(1)	yes	...
Cl(1)	H(11)	N(3)	153(1)	no	...

loop_

_geom_torsion_atom_site_label_1
 _geom_torsion_atom_site_label_2
 _geom_torsion_atom_site_label_3
 _geom_torsion_atom_site_label_4
 _geom_torsion
 _geom_torsion_publ_flag
 _geom_torsion_site_symmetry_1
 _geom_torsion_site_symmetry_2
 _geom_torsion_site_symmetry_3

_geom_torsion_site_symmetry_4

C(2)	N(1)	C(7)	N(2)	-1(1)	yes	....
C(2)	N(1)	C(7)	C(8)	-172(1)	yes	....
H(5)	N(1)	C(7)	N(2)	175(1)	no	....
H(5)	N(1)	C(7)	C(8)	4(2)	no	....
C(7)	N(1)	C(2)	C(1)	1(1)	yes	....
C(7)	N(1)	C(2)	C(3)	178(1)	yes	....
H(5)	N(1)	C(2)	C(1)	-175(1)	no	....
H(5)	N(1)	C(2)	C(3)	1(2)	no	....
C(11)	N(3)	C(10)	N(4)	2(1)	yes	....
C(11)	N(3)	C(10)	C(9)	173(1)	yes	....
H(11)	N(3)	C(10)	N(4)	-179.3(14)	no	....
H(11)	N(3)	C(10)	C(9)	-8(2)	no	....
C(10)	N(3)	C(11)	C(16)	1(1)	yes	....
C(10)	N(3)	C(11)	C(12)	177(1)	yes	....
H(11)	N(3)	C(11)	C(16)	-176(1)	no	....
H(11)	N(3)	C(11)	C(12)	0(2)	no	....
C(10)	N(3)	H(11)	Cl(1)	-86(2)	no	....
C(11)	N(3)	H(11)	Cl(1)	91(2)	no	....
C(7)	N(2)	C(1)	C(2)	0(1)	yes	....
C(7)	N(2)	C(1)	C(6)	175(1)	yes	....
H(6)	N(2)	C(1)	C(2)	-172(1)	no	....
H(6)	N(2)	C(1)	C(6)	3(2)	no	....
C(1)	N(2)	C(7)	N(1)	0(1)	yes	....
C(1)	N(2)	C(7)	C(8)	171(1)	yes	....
H(6)	N(2)	C(7)	N(1)	173(1)	no	....
H(6)	N(2)	C(7)	C(8)	-16(2)	no	....
C(10)	N(4)	C(16)	C(11)	5(1)	yes	....
C(10)	N(4)	C(16)	C(15)	179.9(18)	yes	....
H(12)	N(4)	C(16)	C(11)	172(1)	no	....
H(12)	N(4)	C(16)	C(15)	-12(2)	no	....
C(16)	N(4)	C(10)	N(3)	-5(1)	yes	....
C(16)	N(4)	C(10)	C(9)	-175(1)	yes	....
H(12)	N(4)	C(10)	N(3)	-172(1)	no	....
H(12)	N(4)	C(10)	C(9)	16(2)	no	....
N(4)	C(16)	C(11)	N(3)	-4(1)	yes	....
N(4)	C(16)	C(11)	C(12)	178(1)	yes	....
C(15)	C(16)	C(11)	N(3)	-179.7(16)	yes	....
C(15)	C(16)	C(11)	C(12)	3(2)	yes	....
N(4)	C(16)	C(15)	C(14)	-173(1)	yes	....
N(4)	C(16)	C(15)	H(16)	0(3)	no	....
C(11)	C(16)	C(15)	C(14)	0(2)	yes	....

C(11)	C(16)	C(15)	H(16)	173(2)	no	....
N(2)	C(1)	C(2)	N(1)	-1(1)	yes	....
N(2)	C(1)	C(2)	C(3)	-178(1)	yes	....
C(6)	C(1)	C(2)	N(1)	-177(1)	yes	....
C(6)	C(1)	C(2)	C(3)	5(2)	yes	....
N(2)	C(1)	C(6)	C(5)	176(1)	yes	....
N(2)	C(1)	C(6)	H(4)	-2(2)	no	....
C(2)	C(1)	C(6)	C(5)	-9(2)	yes	....
C(2)	C(1)	C(6)	H(4)	172(1)	no	....
N(1)	C(7)	C(8)	C(9)	-95(1)	yes	....
N(1)	C(7)	C(8)	H(7)	25(1)	no	....
N(1)	C(7)	C(8)	H(8)	147(1)	no	....
N(2)	C(7)	C(8)	C(9)	95(1)	yes	....
N(2)	C(7)	C(8)	H(7)	-143(1)	no	....
N(2)	C(7)	C(8)	H(8)	-21(2)	no	....
N(3)	C(10)	C(9)	C(8)	69(1)	yes	....
N(3)	C(10)	C(9)	H(9)	-174(1)	no	....
N(3)	C(10)	C(9)	H(10)	-52(2)	no	....
N(4)	C(10)	C(9)	C(8)	-120(1)	yes	....
N(4)	C(10)	C(9)	H(9)	-4(2)	no	....
N(4)	C(10)	C(9)	H(10)	117(1)	no	....
N(1)	C(2)	C(3)	C(4)	-178(1)	yes	....
N(1)	C(2)	C(3)	H(1)	5(2)	no	....
C(1)	C(2)	C(3)	C(4)	-2(1)	yes	....
C(1)	C(2)	C(3)	H(1)	-178(1)	no	....
N(3)	C(11)	C(12)	C(13)	179.6(14)	yes	....
N(3)	C(11)	C(12)	H(13)	3(2)	no	....
C(16)	C(11)	C(12)	C(13)	-4(2)	yes	....
C(16)	C(11)	C(12)	H(13)	179.3(18)	no	....
C(15)	C(14)	C(13)	C(12)	1(2)	yes	....
C(15)	C(14)	C(13)	H(14)	-180(2)	no	....
H(15)	C(14)	C(13)	C(12)	174(1)	no	....
H(15)	C(14)	C(13)	H(14)	-5(3)	no	....
C(13)	C(14)	C(15)	C(16)	-2(2)	yes	....
C(13)	C(14)	C(15)	H(16)	-175(2)	no	....
H(15)	C(14)	C(15)	C(16)	-175(1)	no	....
H(15)	C(14)	C(15)	H(16)	10(3)	no	....
C(7)	C(8)	C(9)	C(10)	174(1)	yes	....
C(7)	C(8)	C(9)	H(9)	58(1)	no	....
C(7)	C(8)	C(9)	H(10)	-61(1)	no	....
H(7)	C(8)	C(9)	C(10)	54(1)	no	....
H(7)	C(8)	C(9)	H(9)	-62(1)	no	....

H(7)	C(8)	C(9)	H(10)	178(1)	no	....
H(8)	C(8)	C(9)	C(10)	-66(1)	no	....
H(8)	C(8)	C(9)	H(9)	177(1)	no	....
H(8)	C(8)	C(9)	H(10)	57(1)	no	....
C(11)	C(12)	C(13)	C(14)	1(2)	yes	....
C(11)	C(12)	C(13)	H(14)	-177(2)	no	....
H(13)	C(12)	C(13)	C(14)	178(1)	no	....
H(13)	C(12)	C(13)	H(14)	-1(3)	no	....
C(2)	C(3)	C(4)	C(5)	2(1)	yes	....
C(2)	C(3)	C(4)	H(2)	175(1)	no	....
H(1)	C(3)	C(4)	C(5)	178(1)	no	....
H(1)	C(3)	C(4)	H(2)	-8(2)	no	....
C(4)	C(5)	C(6)	C(1)	9(2)	yes	....
C(4)	C(5)	C(6)	H(4)	-171(2)	no	....
H(3)	C(5)	C(6)	C(1)	-178(1)	no	....
H(3)	C(5)	C(6)	H(4)	0(3)	no	....
C(6)	C(5)	C(4)	C(3)	-7(2)	yes	....
C(6)	C(5)	C(4)	H(2)	-180(2)	no	....
H(3)	C(5)	C(4)	C(3)	-178(2)	no	....
H(3)	C(5)	C(4)	H(2)	8(3)	no	....

loop_

_geom_contact_atom_site_label_1

_geom_contact_atom_site_label_2

_geom_contact_distance

_geom_contact_publ_flag

_geom_contact_site_symmetry_1

_geom_contact_site_symmetry_2

Cl(1)	N(3)	3.146(8)	yes	.55501
Cl(1)	H(8)	2.781(9)	no	.55501
Cl(1)	H(11)	2.354(8)	no	.55501
Cl(1)	H(16)	3.06(1)	no	.64501
Cl(2)	N(1)	3.13(1)	yes	.55501
Cl(2)	H(4)	2.86(2)	no	.56501
Cl(2)	H(5)	2.29(1)	no	.55501
Cl(2)	H(7)	3.15(1)	no	.55501
N(1)	Cl(2)	3.13(1)	yes	.55501
N(1)	N(2)	2.12(2)	yes	.55501
N(1)	C(1)	2.17(2)	yes	.55501
N(1)	C(8)	2.53(1)	yes	.55501
N(1)	C(3)	2.55(1)	yes	.55501
N(1)	C(9)	3.36(1)	yes	.55501

N(1)	C(6)	3.53(2)	yes	.55501
N(1)	H(1)	2.85(1)	no	.55501
N(1)	H(6)	2.95(2)	no	.55501
N(1)	H(7)	2.67(1)	no	.55501
N(1)	H(8)	3.24(1)	no	.55501
N(1)	H(9)	3.14(2)	no	.55501
N(3)	Cl(1)	3.146(8)	yes	.55501
N(3)	N(4)	2.21(1)	yes	.55501
N(3)	C(16)	2.27(1)	yes	.55501
N(3)	C(8)	3.09(1)	yes	.55501
N(3)	C(12)	2.58(2)	yes	.55501
N(3)	C(15)	3.59(2)	yes	.55501
N(3)	C(9)	2.47(1)	yes	.55501
N(3)	H(7)	3.30(1)	no	.55501
N(3)	H(8)	2.87(1)	no	.55501
N(3)	H(9)	3.21(1)	no	.55501
N(3)	H(10)	2.75(2)	no	.55501
N(3)	H(12)	3.03(1)	no	.55501
N(3)	H(13)	2.86(2)	no	.55501
N(2)	N(1)	2.12(2)	yes	.55501
N(2)	C(2)	2.20(2)	yes	.55501
N(2)	C(8)	2.53(2)	yes	.55501
N(2)	C(3)	3.58(2)	yes	.55501
N(2)	C(9)	3.36(2)	yes	.55501
N(2)	C(6)	2.54(2)	yes	.55501
N(2)	H(4)	2.85(2)	no	.55501
N(2)	H(5)	2.94(2)	no	.55501
N(2)	H(7)	3.21(2)	no	.55501
N(2)	H(8)	2.67(1)	no	.55501
N(2)	H(10)	3.21(2)	no	.55501
N(4)	N(3)	2.21(1)	yes	.55501
N(4)	C(11)	2.19(1)	yes	.55501
N(4)	C(8)	3.58(1)	yes	.55501
N(4)	C(12)	3.58(1)	yes	.55501
N(4)	C(15)	2.53(2)	yes	.55501
N(4)	C(9)	2.53(2)	yes	.55501
N(4)	H(7)	3.49(1)	no	.55501
N(4)	H(9)	2.58(1)	no	.55501
N(4)	H(10)	3.15(2)	no	.55501
N(4)	H(11)	3.04(1)	no	.55501
N(4)	H(16)	2.79(2)	no	.55501
C(16)	N(3)	2.27(1)	yes	.55501

C(16)	C(10)	2.21(2)	yes	.55501
C(16)	C(14)	2.37(2)	yes	.55501
C(16)	C(12)	2.45(2)	yes	.55501
C(16)	C(13)	2.72(2)	yes	.55501
C(16)	H(11)	3.10(1)	no	.55501
C(16)	H(12)	2.03(1)	no	.55501
C(16)	H(13)	3.31(2)	no	.55501
C(16)	H(15)	3.23(2)	no	.55501
C(16)	H(16)	2.03(2)	no	.55501
C(1)	N(1)	2.17(2)	yes	.55501
C(1)	C(7)	2.21(2)	yes	.55501
C(1)	C(3)	2.45(2)	yes	.55501
C(1)	C(5)	2.32(2)	yes	.55501
C(1)	C(4)	2.73(2)	yes	.55501
C(1)	H(1)	3.31(2)	no	.55501
C(1)	H(3)	3.19(2)	no	.55501
C(1)	H(4)	2.09(2)	no	.55501
C(1)	H(5)	3.00(2)	no	.55501
C(1)	H(6)	2.01(2)	no	.55501
C(7)	C(1)	2.21(2)	yes	.55501
C(7)	C(2)	2.23(2)	yes	.55501
C(7)	C(9)	2.49(2)	yes	.55501
C(7)	C(6)	3.58(2)	yes	.55501
C(7)	H(5)	1.96(2)	no	.55501
C(7)	H(6)	1.92(2)	no	.55501
C(7)	H(7)	2.06(2)	no	.55501
C(7)	H(8)	2.06(1)	no	.55501
C(7)	H(9)	2.63(2)	no	.55501
C(7)	H(10)	2.69(2)	no	.55501
C(10)	C(16)	2.21(2)	yes	.55501
C(10)	C(11)	2.13(2)	yes	.55501
C(10)	C(8)	2.50(1)	yes	.55501
C(10)	C(12)	3.56(2)	yes	.55501
C(10)	C(15)	3.57(2)	yes	.55501
C(10)	H(7)	2.66(2)	no	.55501
C(10)	H(8)	2.71(1)	no	.55501
C(10)	H(9)	2.03(1)	no	.55501
C(10)	H(10)	2.09(2)	no	.55501
C(10)	H(11)	1.95(1)	no	.55501
C(10)	H(12)	1.98(1)	no	.55501
C(2)	N(2)	2.20(2)	yes	.55501
C(2)	C(7)	2.23(2)	yes	.55501

C(2)	C(5)	2.66(2)	yes	.55501
C(2)	C(6)	2.41(2)	yes	.55501
C(2)	C(4)	2.33(2)	yes	.55501
C(2)	H(1)	2.11(2)	no	.55501
C(2)	H(2)	3.20(2)	no	.55501
C(2)	H(4)	3.27(2)	no	.55501
C(2)	H(5)	2.01(2)	no	.55501
C(2)	H(6)	3.02(2)	no	.55501
C(11)	N(4)	2.19(1)	yes	.55501
C(11)	C(10)	2.13(2)	yes	.55501
C(11)	C(14)	2.80(2)	yes	.55501
C(11)	C(13)	2.40(2)	yes	.55501
C(11)	C(15)	2.43(2)	yes	.55501
C(11)	C(9)	3.59(2)	yes	.55501
C(11)	H(11)	2.02(1)	no	.55501
C(11)	H(12)	3.02(1)	no	.55501
C(11)	H(13)	2.12(2)	no	.55501
C(11)	H(14)	3.27(2)	no	.55501
C(11)	H(16)	3.28(2)	no	.55501
C(14)	C(16)	2.37(2)	yes	.55501
C(14)	C(11)	2.80(2)	yes	.55501
C(14)	C(12)	2.45(2)	yes	.55501
C(14)	H(3)	3.46(2)	no	.56401
C(14)	H(13)	3.31(2)	no	.55501
C(14)	H(14)	2.02(2)	no	.55501
C(14)	H(16)	2.06(2)	no	.55501
C(8)	N(1)	2.53(1)	yes	.55501
C(8)	N(3)	3.09(1)	yes	.55501
C(8)	N(2)	2.53(2)	yes	.55501
C(8)	N(4)	3.58(1)	yes	.55501
C(8)	C(10)	2.50(1)	yes	.55501
C(8)	C(9)	1.61(2)	yes	.55501
C(8)	H(5)	2.75(1)	no	.55501
C(8)	H(6)	2.77(2)	no	.55501
C(8)	H(9)	2.10(2)	no	.55501
C(8)	H(10)	2.14(2)	no	.55501
C(8)	H(11)	3.07(1)	no	.55501
C(12)	N(3)	2.58(2)	yes	.55501
C(12)	N(4)	3.58(1)	yes	.55501
C(12)	C(16)	2.45(2)	yes	.55501
C(12)	C(10)	3.56(2)	yes	.55501
C(12)	C(14)	2.45(2)	yes	.55501

C(12)	C(15)	2.86(2)	yes	.55501
C(12)	H(11)	2.87(1)	no	.55501
C(12)	H(14)	2.01(2)	no	.55501
C(12)	H(15)	3.30(2)	no	.55501
C(3)	N(1)	2.55(1)	yes	.55501
C(3)	N(2)	3.58(2)	yes	.55501
C(3)	C(1)	2.45(2)	yes	.55501
C(3)	C(5)	2.40(2)	yes	.55501
C(3)	C(6)	2.91(2)	yes	.55501
C(3)	H(2)	1.98(2)	no	.55501
C(3)	H(3)	3.23(2)	no	.55501
C(3)	H(5)	2.82(1)	no	.55501
C(5)	C(1)	2.32(2)	yes	.55501
C(5)	C(2)	2.66(2)	yes	.55501
C(5)	C(3)	2.40(2)	yes	.55501
C(5)	H(1)	3.28(2)	no	.55501
C(5)	H(2)	2.05(2)	no	.55501
C(5)	H(4)	2.08(2)	no	.55501
C(13)	C(16)	2.72(2)	yes	.55501
C(13)	C(11)	2.40(2)	yes	.55501
C(13)	C(15)	2.40(2)	yes	.55501
C(13)	H(3)	3.57(2)	no	.56401
C(13)	H(13)	2.06(2)	no	.55501
C(13)	H(15)	2.04(2)	no	.55501
C(13)	H(16)	3.27(2)	no	.55501
C(15)	N(3)	3.59(2)	yes	.55501
C(15)	N(4)	2.53(2)	yes	.55501
C(15)	C(10)	3.57(2)	yes	.55501
C(15)	C(11)	2.43(2)	yes	.55501
C(15)	C(12)	2.86(2)	yes	.55501
C(15)	C(13)	2.40(2)	yes	.55501
C(15)	H(12)	2.85(2)	no	.55501
C(15)	H(14)	3.25(2)	no	.55501
C(15)	H(15)	2.04(2)	no	.55501
C(9)	N(1)	3.36(1)	yes	.55501
C(9)	N(3)	2.47(1)	yes	.55501
C(9)	N(2)	3.36(2)	yes	.55501
C(9)	N(4)	2.53(2)	yes	.55501
C(9)	C(7)	2.49(2)	yes	.55501
C(9)	C(11)	3.59(2)	yes	.55501
C(9)	C(8)	1.61(2)	yes	.55501
C(9)	H(5)	3.51(2)	no	.55501

C(9)	H(6)	3.46(2)	no	. 55501
C(9)	H(7)	2.15(2)	no	. 55501
C(9)	H(8)	2.11(2)	no	. 55501
C(9)	H(11)	2.72(1)	no	. 55501
C(9)	H(12)	2.77(2)	no	. 55501
C(6)	N(1)	3.53(2)	yes	. 55501
C(6)	N(2)	2.54(2)	yes	. 55501
C(6)	C(7)	3.58(2)	yes	. 55501
C(6)	C(2)	2.41(2)	yes	. 55501
C(6)	C(3)	2.91(2)	yes	. 55501
C(6)	C(4)	2.47(2)	yes	. 55501
C(6)	H(2)	3.31(2)	no	. 55501
C(6)	H(3)	2.01(2)	no	. 55501
C(6)	H(6)	2.82(2)	no	. 55501
C(4)	C(1)	2.73(2)	yes	. 55501
C(4)	C(2)	2.33(2)	yes	. 55501
C(4)	C(6)	2.47(2)	yes	. 55501
C(4)	H(1)	2.03(2)	no	. 55501
C(4)	H(3)	2.03(2)	no	. 55501
C(4)	H(4)	3.34(2)	no	. 55501
H(1)	N(1)	2.85(1)	no	. 55501
H(1)	C(1)	3.31(2)	no	. 55501
H(1)	C(2)	2.11(2)	no	. 55501
H(1)	C(5)	3.28(2)	no	. 55501
H(1)	C(4)	2.03(2)	no	. 55501
H(2)	C(2)	3.20(2)	no	. 55501
H(2)	C(3)	1.98(2)	no	. 55501
H(2)	C(5)	2.05(2)	no	. 55501
H(2)	C(6)	3.31(2)	no	. 55501
H(3)	C(1)	3.19(2)	no	. 55501
H(3)	C(3)	3.23(2)	no	. 55501
H(3)	C(6)	2.01(2)	no	. 55501
H(3)	C(4)	2.03(2)	no	. 55501
H(4)	Cl(2)	2.86(2)	no	. 54501
H(4)	N(2)	2.85(2)	no	. 55501
H(4)	C(1)	2.09(2)	no	. 55501
H(4)	C(2)	3.27(2)	no	. 55501
H(4)	C(5)	2.08(2)	no	. 55501
H(4)	C(4)	3.34(2)	no	. 55501
H(5)	Cl(2)	2.29(1)	no	. 55501
H(5)	N(2)	2.94(2)	no	. 55501
H(5)	C(1)	3.00(2)	no	. 55501

H(5)	C(7)	1.96(2)	no	. 55501
H(5)	C(2)	2.01(2)	no	. 55501
H(5)	C(8)	2.75(1)	no	. 55501
H(5)	C(3)	2.82(1)	no	. 55501
H(5)	C(9)	3.51(2)	no	. 55501
H(6)	N(1)	2.95(2)	no	. 55501
H(6)	C(1)	2.01(2)	no	. 55501
H(6)	C(7)	1.92(2)	no	. 55501
H(6)	C(2)	3.02(2)	no	. 55501
H(6)	C(8)	2.77(2)	no	. 55501
H(6)	C(9)	3.46(2)	no	. 55501
H(6)	C(6)	2.82(2)	no	. 55501
H(7)	Cl(2)	3.15(1)	no	. 55501
H(7)	N(1)	2.67(1)	no	. 55501
H(7)	N(3)	3.30(1)	no	. 55501
H(7)	N(2)	3.21(2)	no	. 55501
H(7)	N(4)	3.49(1)	no	. 55501
H(7)	C(7)	2.06(2)	no	. 55501
H(7)	C(10)	2.66(2)	no	. 55501
H(7)	C(9)	2.15(2)	no	. 55501
H(8)	Cl(1)	2.781(9)	no	. 55501
H(8)	N(1)	3.24(1)	no	. 55501
H(8)	N(3)	2.87(1)	no	. 55501
H(8)	N(2)	2.67(1)	no	. 55501
H(8)	C(7)	2.06(1)	no	. 55501
H(8)	C(10)	2.71(1)	no	. 55501
H(8)	C(9)	2.11(2)	no	. 55501
H(9)	N(1)	3.14(2)	no	. 55501
H(9)	N(3)	3.21(1)	no	. 55501
H(9)	N(4)	2.58(1)	no	. 55501
H(9)	C(7)	2.63(2)	no	. 55501
H(9)	C(10)	2.03(1)	no	. 55501
H(9)	C(8)	2.10(2)	no	. 55501
H(10)	N(3)	2.75(2)	no	. 55501
H(10)	N(2)	3.21(2)	no	. 55501
H(10)	N(4)	3.15(2)	no	. 55501
H(10)	C(7)	2.69(2)	no	. 55501
H(10)	C(10)	2.09(2)	no	. 55501
H(10)	C(8)	2.14(2)	no	. 55501
H(11)	Cl(1)	2.354(8)	no	. 55501
H(11)	N(4)	3.04(1)	no	. 55501
H(11)	C(16)	3.10(1)	no	. 55501

H(11)	C(10)	1.95(1)	no	.55501
H(11)	C(11)	2.02(1)	no	.55501
H(11)	C(8)	3.07(1)	no	.55501
H(11)	C(12)	2.87(1)	no	.55501
H(11)	C(9)	2.72(1)	no	.55501
H(12)	N(3)	3.03(1)	no	.55501
H(12)	C(16)	2.03(1)	no	.55501
H(12)	C(10)	1.98(1)	no	.55501
H(12)	C(11)	3.02(1)	no	.55501
H(12)	C(15)	2.85(2)	no	.55501
H(12)	C(9)	2.77(2)	no	.55501
H(13)	N(3)	2.86(2)	no	.55501
H(13)	C(16)	3.31(2)	no	.55501
H(13)	C(11)	2.12(2)	no	.55501
H(13)	C(14)	3.31(2)	no	.55501
H(13)	C(13)	2.06(2)	no	.55501
H(14)	C(11)	3.27(2)	no	.55501
H(14)	C(14)	2.02(2)	no	.55501
H(14)	C(12)	2.01(2)	no	.55501
H(14)	C(15)	3.25(2)	no	.55501
H(15)	C(16)	3.23(2)	no	.55501
H(15)	C(12)	3.30(2)	no	.55501
H(15)	C(5)	3.46(2)	no	.56401
H(15)	C(13)	2.04(2)	no	.55501
H(15)	C(15)	2.04(2)	no	.55501
H(15)	C(4)	3.37(2)	no	.56401
H(16)	Cl(1)	3.06(1)	no	.46501
H(16)	N(4)	2.79(2)	no	.55501
H(16)	C(16)	2.03(2)	no	.55501
H(16)	C(11)	3.28(2)	no	.55501
H(16)	C(14)	2.06(2)	no	.55501
H(16)	C(13)	3.27(2)	no	.55501

#=====

=

Additional structures and associated data_? identifiers
 # should be added at this point if there is more than one
 # structure analysis in the CIF.

#=====

=

End of CIF

#=====

=