

## CIF File of compound 10

data\_db1

|                              |  |
|------------------------------|--|
| _audit_creation_method       | 'SHELXL-2014/7'  |
| _shelx_SHELXL_version_number | '2014/7'   |
| _chemical_name_systematic    | ?  |
| _chemical_name_common        | ?  |
| _chemical_melting_point      | ?  |
| _chemical_formula_moiety     | 'C <sub>24</sub> H <sub>34</sub> N <sub>6</sub> O <sub>4</sub> ' |
| _chemical_formula_sum        | 'C <sub>24</sub> H <sub>34</sub> N <sub>6</sub> O <sub>4</sub> ' |
| _chemical_formula_weight     | 470.57   |

loop\_

|   |                   |
|---|-------------------|
| _atom_type_symbol                                       |                   |
| _atom_type_description                                  |                   |
| _atom_type_scatter_dispersion_real                      |                   |
| _atom_type_scatter_dispersion_imag                      |                   |
| _atom_type_scatter_source                               |                   |
| 'C'   | 'C' 0.0181 0.0091 |
| 'International Tables Vol C Tables 4.2.6.8 and 6.1.1.4' |                   |
| 'H'   | 'H' 0.0000 0.0000 |
| 'International Tables Vol C Tables 4.2.6.8 and 6.1.1.4' |                   |
| 'N'   | 'N' 0.0311 0.0180 |
| 'International Tables Vol C Tables 4.2.6.8 and 6.1.1.4' |                   |
| 'O'   | 'O' 0.0492 0.0322 |
| 'International Tables Vol C Tables 4.2.6.8 and 6.1.1.4' |                   |

|                             |              |
|-----------------------------|--------------|
| _space_group_crystal_system | orthorhombic |
| _space_group_IT_number      | 61           |
| _space_group_name_H-M_alt   | 'P b c a'    |
| _space_group_name_Hall      | '-P 2ac 2ab' |

\_shelx\_space\_group\_comment

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The symmetry employed for this shelxl refinement is uniquely defined by the following loop, which should always be used as a source of symmetry information in preference to the above space-group names. They are only intended as comments.

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loop\_

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_space_group_symop_operation_xyz
'x, y, z'
'-x+1/2, -y, z+1/2'
'x+1/2, -y+1/2, -z'
'-x, y+1/2, -z+1/2'
'-x, -y, -z'
'x-1/2, y, -z-1/2'
'-x-1/2, y-1/2, z'
'x, -y-1/2, z-1/2'

_cell_length_a          22.9241(2)
_cell_length_b          7.32050(10)
_cell_length_c          42.5522(4)
_cell_angle_alpha       90
_cell_angle_beta        90
_cell_angle_gamma       90
_cell_volume            7140.93(13)
_cell_formula_units_Z   12
_cell_measurement_temperature 100(2)
_cell_measurement_reflns_used 14178
_cell_measurement_theta_min 2.8330
_cell_measurement_theta_max 69.7890
_exptl_crystal_description 'cut block'
_exptl_crystal_colour    yellow
_exptl_crystal_density_meas ?
_exptl_crystal_density_method ?
_exptl_crystal_density_diffn 1.313
_exptl_crystal_F_000     3024
_exptl_transmission_factor_min ?
_exptl_transmission_factor_max ?
_exptl_crystal_size_max  0.140
_exptl_crystal_size_mid  0.090
_exptl_crystal_size_min  0.040
_exptl_absorpt_coefficient_mu 0.745
_shelx_estimated_absorpt_T_min 0.903
_shelx_estimated_absorpt_T_max 0.971
loop_
_exptl_crystal_face_index_h
_exptl_crystal_face_index_k
_exptl_crystal_face_index_l
_exptl_crystal_face_perp_dist
1      0      1 0.0200
-1     0     -1 0.0200

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```

1      0    -1 0.0250
-1     0     1 0.0250
0     -1     0 0.0700
0      1     0 0.0700
_exptl_absorpt_correction_T_min          0.892
_exptl_absorpt_correction_T_max          1.000
_exptl_absorpt_correction_type            gaussian
_exptl_absorpt_process_details
;
CrysAlisPro 1.171.40.67a (Rigaku Oxford Diffraction, 2019)
Numerical absorption correction based on gaussian integration over
    a multifaceted crystal model
Empirical absorption correction using spherical harmonics,
    implemented in SCALE3 ABSPACK scaling algorithm.
;
#_exptl_absorpt_special_details      ?
_diffrn_ambient_temperature          100(2)
_diffrn_radiation_wavelength          1.54178
_diffrn_radiation_type                 CuK\alpha
_diffrn_source 'Rotating-anode X-ray tube'
_diffrn_source_type 'Rigaku (Cu) X-ray Source'
_diffrn_radiation_monochromator mirror
_diffrn_measurement_device_type 'XtaLAB AFC11 (RCD3): quarter-chi single'
_diffrn_detector_area_resol_mean      ?
_diffrn_reflns_number                  31395
_diffrn_reflns_av_unetI/netI          0.0217
_diffrn_reflns_av_R_equivalents       0.0338
_diffrn_reflns_limit_h_min            -24
_diffrn_reflns_limit_h_max            27
_diffrn_reflns_limit_k_min            -8
_diffrn_reflns_limit_k_max            8
_diffrn_reflns_limit_l_min            -51
_diffrn_reflns_limit_l_max            49
_diffrn_reflns_theta_min              2.076
_diffrn_reflns_theta_max              68.243
_diffrn_reflns_theta_full              67.679
_diffrn_measured_fraction_theta_max    0.988
_diffrn_measured_fraction_theta_full  0.989
_diffrn_reflns_Laue_measured_fraction_max    0.988
_diffrn_reflns_Laue_measured_fraction_full  0.989
_diffrn_reflns_point_group_measured_fraction_max    0.988
_diffrn_reflns_point_group_measured_fraction_full  0.989
_reflns_number_total                  6453

```

\_reflns\_number\_gt 5944  
\_reflns\_threshold\_expression 'I > 2σ(I)'

\_reflns\_special\_details

;

Reflections were merged by SHELXL according to the crystal class for the calculation of statistics and refinement.

\_reflns\_Friedel\_fraction is defined as the number of unique Friedel pairs measured divided by the number that would be possible theoretically, ignoring centric projections and systematic absences.

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\_computing\_data\_collection 'CrysAlisPro 1.171.40.67a (Rigaku OD, 2019)'  
\_computing\_cell\_refinement 'CrysAlisPro 1.171.40.67a (Rigaku OD, 2019)'  
\_computing\_data\_reduction 'CrysAlisPro 1.171.40.67a (Rigaku OD, 2019)'  
\_computing\_structure\_solution 'SHELXT (Sheldrick, 2015)'  
\_computing\_structure\_refinement 'SHELXL-2014/7 (Sheldrick, 2014)'  
\_computing\_molecular\_graphics 'ORTEP-3 (Farrugia, 1997)'  
\_computing\_publication\_material 'SHELXL-2014/7 (Sheldrick, 2014)'  
\_refine\_special\_details ?  
\_refine\_ls\_structure\_factor\_coef Fsqd  
\_refine\_ls\_matrix\_type full  
\_refine\_ls\_weighting\_scheme calc  
\_refine\_ls\_weighting\_details  
'w=1/[σ<sup>2</sup>(F<sub>o</sub><sup>2</sup>)+(0.0522P)<sup>2</sup>+2.4244P] where P=(F<sub>o</sub><sup>2</sup>+2F<sub>c</sub><sup>2</sup>)/3'  
\_atom\_sites\_solution\_primary dual  
\_atom\_sites\_solution\_secondary ?  
\_atom\_sites\_solution\_hydrogens mixed  
\_refine\_ls\_hydrogen\_treatment mixed  
\_refine\_ls\_extinction\_method 'SHELXL-2014/7 (Sheldrick 2014)'  
\_refine\_ls\_extinction\_coef 0.00011(3)  
\_refine\_ls\_extinction\_expression  
'F<sub>c</sub><sup>\*</sup>=kF<sub>c</sub>[1+0.001xF<sub>c</sub><sup>2</sup>l<sup>3</sup>/sin(2q)]<sup>-1/4</sup>  
\_refine\_ls\_number\_reflns 6453  
\_refine\_ls\_number\_parameters 473  
\_refine\_ls\_number\_restraints 0  
\_refine\_ls\_R\_factor\_all 0.0469  
\_refine\_ls\_R\_factor\_gt 0.0425  
\_refine\_ls\_wR\_factor\_ref 0.1125  
\_refine\_ls\_wR\_factor\_gt 0.1095  
\_refine\_ls\_goodness\_of\_fit\_ref 1.081

|                             |       |
|-----------------------------|-------|
| _refine_ls_restrained_S_all | 1.081 |
| _refine_ls_shift/su_max     | 0.000 |
| _refine_ls_shift/su_mean    | 0.000 |

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_site_symmetry_order        |  |
| _atom_site_calc_flag                  |  |
| _atom_site_refinement_flags_posn      |  |
| _atom_site_refinement_flags_adp       |  |
| _atom_site_refinement_flags_occupancy |  |
| _atom_site_disorder_assembly          |  |
| _atom_site_disorder_group             |  |

C1 C 0.17035(7) 0.7284(2) 0.33855(3) 0.0357(3) Uani 1 1 d . . . . .  
H1A H 0.1923 0.6140 0.3422 0.043 Uiso 1 1 calc R U . . .  
H1B H 0.1726 0.8031 0.3579 0.043 Uiso 1 1 calc R U . . .  
C2 C 0.19758(7) 0.8319(2) 0.31164(3) 0.0376(3) Uani 1 1 d . . . . .  
H2A H 0.1786 0.9528 0.3097 0.045 Uiso 1 1 calc R U . . .  
H2B H 0.2394 0.8524 0.3162 0.045 Uiso 1 1 calc R U . . .  
C3 C 0.13076(7) 0.7025(3) 0.27487(4) 0.0448(4) Uani 1 1 d . . . . .  
H3A H 0.1275 0.6320 0.2551 0.054 Uiso 1 1 calc R U . . .  
H3B H 0.1109 0.8212 0.2718 0.054 Uiso 1 1 calc R U . . .  
C4 C 0.10117(7) 0.5986(2) 0.30118(4) 0.0407(4) Uani 1 1 d . . . . .  
H4A H 0.0589 0.5898 0.2966 0.049 Uiso 1 1 calc R U . . .  
H4B H 0.1170 0.4729 0.3019 0.049 Uiso 1 1 calc R U . . .  
C5 C 0.07432(7) 0.6274(2) 0.35670(3) 0.0335(3) Uani 1 1 d . . . . .  
C6 C 0.09376(7) 0.6343(2) 0.38763(3) 0.0340(3) Uani 1 1 d . . . . .  
H6 H 0.1324 0.6748 0.3916 0.041 Uiso 1 1 calc R U . . .  
C7 C 0.05847(7) 0.5839(2) 0.41337(3) 0.0341(3) Uani 1 1 d . . . . .  
C8 C 0.00136(7) 0.5178(2) 0.40629(4) 0.0350(3) Uani 1 1 d . . . . .  
C9 C -0.01853(7) 0.5152(2) 0.37522(4) 0.0374(3) Uani 1 1 d . . . . .  
H9 H -0.0571 0.4748 0.3710 0.045 Uiso 1 1 calc R U . . .  
C10 C 0.01589(7) 0.5687(2) 0.35090(4) 0.0374(3) Uani 1 1 d . . . . .  
H10 H 0.0011 0.5671 0.3301 0.045 Uiso 1 1 calc R U . . .  
C11 C 0.13824(7) 0.6510(2) 0.45134(4) 0.0369(3) Uani 1 1 d . . . . .  
H11A H 0.1458 0.7756 0.4433 0.044 Uiso 1 1 calc R U . . .

H11B H 0.1670 0.5668 0.4418 0.044 Uiso 1 1 calc R U ...  
 C12 C 0.14440(7) 0.6487(2) 0.48681(4) 0.0411(4) Uani 1 1 d .....  
 H12A H 0.1161 0.7358 0.4960 0.049 Uiso 1 1 calc R U ...  
 H12B H 0.1345 0.5252 0.4947 0.049 Uiso 1 1 calc R U ...  
 C13 C 0.20500(8) 0.6985(3) 0.49783(4) 0.0479(4) Uani 1 1 d .....  
 H13A H 0.2154 0.8203 0.4894 0.057 Uiso 1 1 calc R U ...  
 H13B H 0.2332 0.6089 0.4893 0.057 Uiso 1 1 calc R U ...  
 C14 C 0.21015(10) 0.7019(4) 0.53362(5) 0.0753(7) Uani 1 1 d .....  
 H14A H 0.2502 0.7336 0.5396 0.113 Uiso 1 1 calc R U ...  
 H14B H 0.2004 0.5811 0.5421 0.113 Uiso 1 1 calc R U ...  
 H14C H 0.1832 0.7930 0.5422 0.113 Uiso 1 1 calc R U ...  
 C15 C 0.23594(6) 0.7055(2) 0.26087(3) 0.0335(3) Uani 1 1 d .....  
 C16 C 0.22510(7) 0.6514(2) 0.22998(3) 0.0339(3) Uani 1 1 d .....  
 H16 H 0.1858 0.6477 0.2229 0.041 Uiso 1 1 calc R U ...  
 C17 C 0.26945(7) 0.6023(2) 0.20888(3) 0.0340(3) Uani 1 1 d .....  
 C18 C 0.32825(7) 0.6095(2) 0.22033(4) 0.0368(3) Uani 1 1 d .....  
 C19 C 0.33887(7) 0.6737(2) 0.25085(4) 0.0381(3) Uani 1 1 d .....  
 H19 H 0.3781 0.6826 0.2580 0.046 Uiso 1 1 calc R U ...  
 C20 C 0.29524(7) 0.7236(2) 0.27060(4) 0.0359(3) Uani 1 1 d .....  
 H20 H 0.3041 0.7705 0.2909 0.043 Uiso 1 1 calc R U ...  
 C21 C 0.19746(7) 0.5275(2) 0.16726(4) 0.0379(3) Uani 1 1 d .....  
 H21A H 0.1769 0.6465 0.1676 0.045 Uiso 1 1 calc R U ...  
 H21B H 0.1757 0.4418 0.1809 0.045 Uiso 1 1 calc R U ...  
 C22 C 0.19874(7) 0.4541(2) 0.13400(4) 0.0399(4) Uani 1 1 d .....  
 H22A H 0.2218 0.3399 0.1336 0.048 Uiso 1 1 calc R U ...  
 H22B H 0.2185 0.5439 0.1202 0.048 Uiso 1 1 calc R U ...  
 C23 C 0.13807(8) 0.4157(3) 0.12102(4) 0.0467(4) Uani 1 1 d .....  
 H23A H 0.1174 0.3320 0.1355 0.056 Uiso 1 1 calc R U ...  
 H23B H 0.1158 0.5316 0.1202 0.056 Uiso 1 1 calc R U ...  
 C24 C 0.13919(9) 0.3314(3) 0.08844(4) 0.0556(5) Uani 1 1 d .....  
 H24A H 0.0992 0.3081 0.0814 0.083 Uiso 1 1 calc R U ...  
 H24B H 0.1608 0.2160 0.0891 0.083 Uiso 1 1 calc R U ...  
 H24C H 0.1583 0.4156 0.0738 0.083 Uiso 1 1 calc R U ...  
 N1 N 0.10925(5) 0.68476(18) 0.33182(3) 0.0340(3) Uani 1 1 d .....  
 N2 N 0.19192(6) 0.7339(2) 0.28205(3) 0.0402(3) Uani 1 1 d .....  
 N3 N 0.07943(6) 0.59451(19) 0.44295(3) 0.0374(3) Uani 1 1 d .....  
 H1N H 0.0559(8) 0.550(3) 0.4589(4) 0.045 Uiso 1 1 d . U ...  
 N4 N 0.25632(6) 0.55064(19) 0.17927(3) 0.0372(3) Uani 1 1 d .....  
 H2N H 0.2856(9) 0.513(3) 0.1679(4) 0.045 Uiso 1 1 d . U ...  
 N5 N -0.03632(6) 0.44496(19) 0.42960(3) 0.0398(3) Uani 1 1 d .....  
 N6 N 0.37633(6) 0.5471(2) 0.20271(3) 0.0434(3) Uani 1 1 d .....  
 O1 O -0.02358(5) 0.46248(17) 0.45809(3) 0.0460(3) Uani 1 1 d .....  
 O2 O -0.08105(5) 0.36218(19) 0.42151(3) 0.0540(3) Uani 1 1 d .....

O3 O 0.36934(5) 0.49534(19) 0.17479(3) 0.0509(3) Uani 1 1 d . . . . .  
 O4 O 0.42559(5) 0.5422(2) 0.21515(3) 0.0554(3) Uani 1 1 d . . . . .  
 C25 C 0.54022(7) 0.1430(2) -0.00554(3) 0.0368(3) Uani 1 1 d . . . . .  
 H25A H 0.5801 0.1835 -0.0112 0.044 Uiso 1 1 calc R U . . .  
 H25B H 0.5160 0.2533 -0.0023 0.044 Uiso 1 1 calc R U . . .  
 C26 C 0.48482(7) -0.0323(2) 0.03215(4) 0.0357(3) Uani 1 1 d . . . . .  
 H26A H 0.4585 0.0712 0.0370 0.043 Uiso 1 1 calc R U . . .  
 H26B H 0.4880 -0.1095 0.0512 0.043 Uiso 1 1 calc R U . . .  
 C27 C 0.57950(7) 0.0946(2) 0.04731(3) 0.0337(3) Uani 1 1 d . . . . .  
 C28 C 0.56323(7) 0.0892(2) 0.07859(3) 0.0344(3) Uani 1 1 d . . . . .  
 H28 H 0.5249 0.0497 0.0838 0.041 Uiso 1 1 calc R U . . .  
 C29 C 0.60129(7) 0.1400(2) 0.10305(3) 0.0346(3) Uani 1 1 d . . . . .  
 C30 C 0.65768(7) 0.2029(2) 0.09440(4) 0.0366(3) Uani 1 1 d . . . . .  
 C31 C 0.67469(7) 0.2023(2) 0.06270(4) 0.0379(3) Uani 1 1 d . . . . .  
 H31 H 0.7132 0.2389 0.0573 0.045 Uiso 1 1 calc R U . . .  
 C32 C 0.63735(7) 0.1505(2) 0.03954(4) 0.0372(3) Uani 1 1 d . . . . .  
 H32 H 0.6497 0.1515 0.0182 0.045 Uiso 1 1 calc R U . . .  
 C33 C 0.52527(7) 0.0777(2) 0.14323(4) 0.0387(4) Uani 1 1 d . . . . .  
 H33A H 0.5170 -0.0475 0.1356 0.046 Uiso 1 1 calc R U . . .  
 H33B H 0.4954 0.1610 0.1344 0.046 Uiso 1 1 calc R U . . .  
 C34 C 0.52308(7) 0.0822(2) 0.17875(4) 0.0421(4) Uani 1 1 d . . . . .  
 H34A H 0.5283 0.2099 0.1859 0.051 Uiso 1 1 calc R U . . .  
 H34B H 0.5561 0.0097 0.1871 0.051 Uiso 1 1 calc R U . . .  
 C35 C 0.46688(8) 0.0087(3) 0.19250(4) 0.0483(4) Uani 1 1 d . . . . .  
 H35A H 0.4347 0.0945 0.1878 0.058 Uiso 1 1 calc R U . . .  
 H35B H 0.4575 -0.1100 0.1825 0.058 Uiso 1 1 calc R U . . .  
 C36 C 0.47156(9) -0.0166(3) 0.22756(4) 0.0567(5) Uani 1 1 d . . . . .  
 H36A H 0.4350 -0.0676 0.2356 0.085 Uiso 1 1 calc R U . . .  
 H36B H 0.4790 0.1017 0.2376 0.085 Uiso 1 1 calc R U . . .  
 H36C H 0.5037 -0.1004 0.2323 0.085 Uiso 1 1 calc R U . . .  
 N7 N 0.54246(5) 0.03728(17) 0.02366(3) 0.0341(3) Uani 1 1 d . . . . .  
 N8 N 0.58287(6) 0.13418(19) 0.13306(3) 0.0390(3) Uani 1 1 d . . . . .  
 H3N H 0.6101(8) 0.175(3) 0.1485(4) 0.047 Uiso 1 1 d . U . . .  
 N9 N 0.69815(6) 0.2716(2) 0.11643(3) 0.0426(3) Uani 1 1 d . . . . .  
 O5 O 0.68723(5) 0.25859(17) 0.14532(3) 0.0474(3) Uani 1 1 d . . . . .  
 O6 O 0.74370(5) 0.34621(19) 0.10699(3) 0.0538(3) Uani 1 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\_23

\_atom\_site\_aniso\_U\_13

\_atom\_site\_aniso\_U\_12

C1 0.0339(8) 0.0368(8) 0.0364(8) 0.0014(6) -0.0039(6) -0.0017(6)  
C2 0.0378(8) 0.0410(8) 0.0341(8) -0.0012(6) -0.0007(6) -0.0022(7)  
C3 0.0322(8) 0.0670(12) 0.0352(8) -0.0059(8) 0.0001(6) -0.0006(8)  
C4 0.0330(8) 0.0500(10) 0.0391(8) -0.0081(7) -0.0011(6) -0.0012(7)  
C5 0.0346(8) 0.0281(7) 0.0379(8) 0.0006(6) -0.0012(6) 0.0039(6)  
C6 0.0317(7) 0.0321(7) 0.0381(8) -0.0014(6) -0.0013(6) 0.0023(6)  
C7 0.0353(8) 0.0289(7) 0.0380(8) -0.0020(6) -0.0001(6) 0.0034(6)  
C8 0.0338(8) 0.0319(8) 0.0394(8) 0.0014(6) 0.0018(6) 0.0028(6)  
C9 0.0326(8) 0.0345(8) 0.0451(9) -0.0002(7) -0.0021(6) 0.0025(6)  
C10 0.0347(8) 0.0370(8) 0.0404(8) -0.0004(6) -0.0037(6) 0.0038(7)  
C11 0.0370(8) 0.0357(8) 0.0381(8) -0.0009(6) 0.0008(6) 0.0013(7)  
C12 0.0391(9) 0.0458(9) 0.0384(8) -0.0012(7) -0.0004(7) 0.0015(7)  
C13 0.0412(9) 0.0551(11) 0.0473(9) 0.0013(8) -0.0042(7) 0.0015(8)  
C14 0.0584(13) 0.115(2) 0.0526(11) -0.0108(12) -0.0119(10) -0.0043(13)  
C15 0.0343(8) 0.0309(7) 0.0353(7) 0.0053(6) 0.0011(6) -0.0011(6)  
C16 0.0313(7) 0.0345(8) 0.0358(8) 0.0039(6) 0.0003(6) -0.0009(6)  
C17 0.0374(8) 0.0306(7) 0.0341(7) 0.0064(6) 0.0020(6) -0.0023(6)  
C18 0.0326(8) 0.0395(8) 0.0384(8) 0.0068(6) 0.0046(6) -0.0005(6)  
C19 0.0327(8) 0.0431(9) 0.0385(8) 0.0082(7) -0.0012(6) -0.0035(7)  
C20 0.0359(8) 0.0376(8) 0.0341(7) 0.0044(6) -0.0020(6) -0.0033(7)  
C21 0.0371(8) 0.0400(8) 0.0364(8) 0.0024(6) 0.0012(6) -0.0005(7)  
C22 0.0401(9) 0.0429(9) 0.0367(8) 0.0012(7) 0.0018(6) -0.0005(7)  
C23 0.0423(9) 0.0544(10) 0.0432(9) -0.0020(8) -0.0001(7) -0.0021(8)  
C24 0.0527(11) 0.0697(13) 0.0444(10) -0.0039(9) -0.0039(8) -0.0094(10)  
N1 0.0326(7) 0.0376(7) 0.0318(6) 0.0003(5) -0.0015(5) 0.0005(5)  
N2 0.0325(7) 0.0528(8) 0.0352(7) -0.0052(6) 0.0003(5) -0.0017(6)  
N3 0.0363(7) 0.0398(7) 0.0359(7) 0.0004(6) 0.0012(5) -0.0009(6)  
N4 0.0344(7) 0.0431(7) 0.0341(6) 0.0014(6) 0.0040(5) 0.0001(6)  
N5 0.0372(7) 0.0391(7) 0.0432(7) 0.0018(6) 0.0007(6) 0.0012(6)  
N6 0.0355(7) 0.0533(9) 0.0415(8) 0.0041(6) 0.0048(6) -0.0001(6)  
O1 0.0456(7) 0.0527(7) 0.0398(6) 0.0005(5) 0.0048(5) -0.0034(6)  
O2 0.0417(7) 0.0652(8) 0.0552(7) 0.0064(6) -0.0017(5) -0.0160(6)  
O3 0.0407(7) 0.0712(9) 0.0408(6) -0.0042(6) 0.0075(5) 0.0005(6)  
O4 0.0325(6) 0.0828(10) 0.0510(7) 0.0009(6) 0.0009(5) 0.0045(6)  
C25 0.0381(8) 0.0366(8) 0.0357(8) 0.0028(6) -0.0016(6) -0.0032(7)  
C26 0.0355(8) 0.0380(8) 0.0336(7) 0.0024(6) 0.0004(6) -0.0019(7)  
C27 0.0352(8) 0.0296(7) 0.0361(8) 0.0003(6) -0.0033(6) 0.0023(6)  
C28 0.0331(8) 0.0328(7) 0.0373(8) 0.0004(6) -0.0008(6) 0.0008(6)  
C29 0.0381(8) 0.0292(7) 0.0364(8) 0.0011(6) -0.0022(6) 0.0049(6)  
C30 0.0338(8) 0.0344(8) 0.0415(8) -0.0002(6) -0.0061(6) 0.0026(7)  
C31 0.0321(8) 0.0353(8) 0.0463(9) 0.0010(7) -0.0011(6) 0.0017(6)



C32 0.0369(8) 0.0358(8) 0.0389(8) 0.0013(6) 0.0016(6) 0.0028(7)  
 C33 0.0391(8) 0.0377(8) 0.0394(8) 0.0008(7) -0.0020(6) 0.0017(7)  
 C34 0.0415(9) 0.0447(9) 0.0401(8) 0.0004(7) -0.0016(7) 0.0031(7)  
 C35 0.0437(10) 0.0524(10) 0.0488(10) -0.0047(8) -0.0001(8) 0.0002(8)  
 C36 0.0505(11) 0.0704(13) 0.0491(10) -0.0010(9) 0.0099(8) 0.0022(10)  
 N7 0.0349(7) 0.0363(7) 0.0312(6) 0.0021(5) -0.0010(5) -0.0024(6)  
 N8 0.0385(7) 0.0420(7) 0.0365(7) -0.0003(6) -0.0036(6) -0.0013(6)  
 N9 0.0395(8) 0.0431(8) 0.0451(8) 0.0016(6) -0.0086(6) 0.0007(6)  
 O5 0.0467(7) 0.0555(7) 0.0401(6) -0.0016(5) -0.0090(5) -0.0012(6)  
 O6 0.0401(7) 0.0633(8) 0.0580(7) 0.0066(6) -0.0088(6) -0.0129(6)

\_geom\_special\_details

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All esds (except the esd in the dihedral angle between two l.s. planes)  
 are estimated using the full covariance matrix. The cell esds are taken  
 into account individually in the estimation of esds in distances, angles  
 and torsion angles; correlations between esds in cell parameters are only  
 used when they are defined by crystal symmetry. An approximate (isotropic)  
 treatment of cell esds is used for estimating esds involving l.s. planes.

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loop\_

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C1 N1 1.4649(19) . ?  
 C1 C2 1.508(2) . ?  
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 C1 H1B 0.9900 . ?  
 C2 N2 1.4549(19) . ?  
 C2 H2A 0.9900 . ?  
 C2 H2B 0.9900 . ?  
 C3 N2 1.453(2) . ?  
 C3 C4 1.514(2) . ?  
 C3 H3A 0.9900 . ?  
 C3 H3B 0.9900 . ?  
 C4 N1 1.4604(19) . ?  
 C4 H4A 0.9900 . ?  
 C4 H4B 0.9900 . ?  
 C5 C6 1.391(2) . ?  
 C5 N1 1.3920(19) . ?

C5 C10 1.428(2) . ?  
 C6 C7 1.411(2) . ?  
 C6 H6 0.9500 . ?  
 C7 N3 1.3495(19) . ?  
 C7 C8 1.428(2) . ?  
 C8 C9 1.399(2) . ?  
 C8 N5 1.419(2) . ?  
 C9 C10 1.359(2) . ?  
 C9 H9 0.9500 . ?  
 C10 H10 0.9500 . ?  
 C11 N3 1.455(2) . ?  
 C11 C12 1.516(2) . ?  
 C11 H11A 0.9900 . ?  
 C11 H11B 0.9900 . ?  
 C12 C13 1.511(2) . ?  
 C12 H12A 0.9900 . ?  
 C12 H12B 0.9900 . ?  
 C13 C14 1.528(3) . ?  
 C13 H13A 0.9900 . ?  
 C13 H13B 0.9900 . ?  
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 C14 H14B 0.9800 . ?  
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 C15 C20 1.427(2) . ?  
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 N6 O4 1.2477(18) . ?  
 N6 O3 1.2569(18) . ?  
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 C25 H25B 0.9900 . ?  
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 C26 H26B 0.9900 . ?  
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 C28 C29 1.408(2) . ?  
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 C30 N9 1.411(2) . ?  
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 C32 H32 0.9500 . ?  
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 C33 H33A 0.9900 . ?  
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 C35 H35B 0.9900 . ?  
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 C36 H36B 0.9800 . ?

C36 H36C 0.9800 . ?  
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N9 O5 1.2582(18) . ?

loop\_

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C2 C1 H1B 109.5 . . ?  
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H2A C2 H2B 107.9 . . ?  
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C3 C4 H4B 109.0 . . ?  
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C6 C5 C10 118.35(14) . . ?  
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C7 C6 H6 118.6 . . ?

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 N3 C7 C8 122.87(14) .. ?  
 C6 C7 C8 116.80(13) .. ?  
 C9 C8 N5 117.20(14) .. ?  
 C9 C8 C7 120.20(14) .. ?  
 N5 C8 C7 122.54(14) .. ?  
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 C8 C9 H9 119.1 .. ?  
 C9 C10 C5 119.99(14) .. ?  
 C9 C10 H10 120.0 .. ?  
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 N3 C11 C12 109.12(13) .. ?  
 N3 C11 H11A 109.9 .. ?  
 C12 C11 H11A 109.9 .. ?  
 N3 C11 H11B 109.9 .. ?  
 C12 C11 H11B 109.9 .. ?  
 H11A C11 H11B 108.3 .. ?  
 C13 C12 C11 113.07(14) .. ?  
 C13 C12 H12A 109.0 .. ?  
 C11 C12 H12A 109.0 .. ?  
 C13 C12 H12B 109.0 .. ?  
 C11 C12 H12B 109.0 .. ?  
 H12A C12 H12B 107.8 .. ?  
 C12 C13 C14 112.60(16) .. ?  
 C12 C13 H13A 109.1 .. ?  
 C14 C13 H13A 109.1 .. ?  
 C12 C13 H13B 109.1 .. ?  
 C14 C13 H13B 109.1 .. ?  
 H13A C13 H13B 107.8 .. ?  
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 C13 C14 H14B 109.5 .. ?  
 H14A C14 H14B 109.5 .. ?  
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 H14A C14 H14C 109.5 .. ?  
 H14B C14 H14C 109.5 .. ?  
 N2 C15 C16 122.14(14) .. ?  
 N2 C15 C20 119.82(13) .. ?  
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 C15 C16 H16 118.4 .. ?  
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 C19 C20 H20 120.1 . . ?  
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 N4 C21 C22 110.63(13) . . ?  
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 C22 C21 H21A 109.5 . . ?  
 N4 C21 H21B 109.5 . . ?  
 C22 C21 H21B 109.5 . . ?  
 H21A C21 H21B 108.1 . . ?  
 C21 C22 C23 112.76(13) . . ?  
 C21 C22 H22A 109.0 . . ?  
 C23 C22 H22A 109.0 . . ?  
 C21 C22 H22B 109.0 . . ?  
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 C24 C23 H23B 109.0 . . ?  
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 C23 C24 H24B 109.5 . . ?  
 H24A C24 H24B 109.5 . . ?  
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 H24A C24 H24C 109.5 . . ?  
 H24B C24 H24C 109.5 . . ?  
 C5 N1 C4 118.41(13) . . ?  
 C5 N1 C1 117.84(12) . . ?  
 C4 N1 C1 112.96(12) . . ?  
 C15 N2 C3 123.28(13) . . ?  
 C15 N2 C2 125.36(13) . . ?  
 C3 N2 C2 110.25(12) . . ?  
 C7 N3 C11 125.12(13) . . ?  
 C7 N3 H1N 117.2(12) . . ?

C11 N3 H1N 117.3(11) . . ?  
 C17 N4 C21 124.63(13) . . ?  
 C17 N4 H2N 115.8(12) . . ?  
 C21 N4 H2N 118.9(12) . . ?  
 O2 N5 O1 120.74(13) . . ?  
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 O1 N5 C8 119.71(13) . . ?  
 O4 N6 O3 120.53(13) . . ?  
 O4 N6 C18 119.42(14) . . ?  
 O3 N6 C18 120.05(13) . . ?  
 N7 C25 C26 111.51(13) . 5\_655 ?  
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 C26 C25 H25A 109.3 5\_655 . ?  
 N7 C25 H25B 109.3 . . ?  
 C26 C25 H25B 109.3 5\_655 . ?  
 H25A C25 H25B 108.0 . . ?  
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 N7 C26 H26A 109.6 . . ?  
 C25 C26 H26A 109.6 5\_655 . ?  
 N7 C26 H26B 109.6 . . ?  
 C25 C26 H26B 109.6 5\_655 . ?  
 H26A C26 H26B 108.1 . . ?  
 N7 C27 C28 121.77(14) . . ?  
 N7 C27 C32 119.32(13) . . ?  
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 C29 C28 H28 118.8 . . ?  
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 N8 C29 C30 122.79(14) . . ?  
 C28 C29 C30 117.25(14) . . ?  
 C31 C30 N9 117.17(14) . . ?  
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 N9 C30 C29 122.79(14) . . ?  
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 C30 C31 H31 119.3 . . ?  
 C31 C32 C27 119.84(14) . . ?  
 C31 C32 H32 120.1 . . ?  
 C27 C32 H32 120.1 . . ?  
 N8 C33 C34 108.80(13) . . ?  
 N8 C33 H33A 109.9 . . ?  
 C34 C33 H33A 109.9 . . ?

N8 C33 H33B 109.9 . . ?  
 C34 C33 H33B 109.9 . . ?  
 H33A C33 H33B 108.3 . . ?  
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 C33 C34 H34A 108.8 . . ?  
 C35 C34 H34A 108.8 . . ?  
 C33 C34 H34B 108.8 . . ?  
 C35 C34 H34B 108.8 . . ?  
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 C36 C35 H35B 109.3 . . ?  
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 C35 C36 H36B 109.5 . . ?  
 H36A C36 H36B 109.5 . . ?  
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 H36B C36 H36C 109.5 . . ?  
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 C27 N7 C25 118.60(13) . . ?  
 C26 N7 C25 111.23(12) . . ?  
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 C33 N8 H3N 118.6(11) . . ?  
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N1 C1 C2 N2 -55.17(17) . . . . ?



N2 C3 C4 N1 53.23(19) . . . . ?  
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 C5 C6 C7 C8 2.1(2) . . . . ?  
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 N5 C8 C9 C10 -174.93(14) . . . . ?  
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 N1 C5 C10 C9 -179.06(14) . . . . ?  
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 C11 C12 C13 C14 178.10(18) . . . . ?  
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 C15 C16 C17 N4 179.85(14) . . . . ?  
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 N4 C17 C18 C19 176.63(14) . . . . ?  
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 C2 C1 N1 C5 -165.64(13) . . . . ?  
 C2 C1 N1 C4 50.45(17) . . . . ?  
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 C12 C11 N3 C7 178.85(14) . . . . ?  
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 C9 C8 N5 O1 -172.00(14) . . . . ?  
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 C19 C18 N6 O4 3.6(2) . . . . ?  
 C17 C18 N6 O4 -173.61(15) . . . . ?  
 C19 C18 N6 O3 -177.05(15) . . . . ?  
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 C27 C28 C29 N8 179.17(14) . . . . ?  
 C27 C28 C29 C30 1.6(2) . . . . ?  
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 N7 C27 C32 C31 -178.15(14) . . . . ?  
 C28 C27 C32 C31 -1.9(2) . . . . ?  
 N8 C33 C34 C35 -174.50(14) . . . . ?  
 C33 C34 C35 C36 169.24(15) . . . . ?  
 C28 C27 N7 C26 -0.5(2) . . . . ?  
 C32 C27 N7 C26 175.55(13) . . . . ?  
 C28 C27 N7 C25 139.81(15) . . . . ?  
 C32 C27 N7 C25 -44.1(2) . . . . ?  
 C25 C26 N7 C27 -161.18(13) 5\_655 . . . ?  
 C25 C26 N7 C25 55.76(18) 5\_655 . . . ?  
 C26 C25 N7 C27 160.40(13) 5\_655 . . . ?  
 C26 C25 N7 C26 -56.47(18) 5\_655 . . . ?  
 C28 C29 N8 C33 0.3(2) . . . . ?  
 C30 C29 N8 C33 177.69(14) . . . . ?

C34 C33 N8 C29 177.39(14) . . . . ?  
 C31 C30 N9 O6 7.8(2) . . . . ?  
 C29 C30 N9 O6 -170.72(15) . . . . ?  
 C31 C30 N9 O5 -173.14(14) . . . . ?  
 C29 C30 N9 O5 8.3(2) . . . . ?

loop\_

\_geom\_hbond\_atom\_site\_label\_D  
 \_geom\_hbond\_atom\_site\_label\_H  
 \_geom\_hbond\_atom\_site\_label\_A  
 \_geom\_hbond\_distance\_DH  
 \_geom\_hbond\_distance\_HA  
 \_geom\_hbond\_distance\_DA  
 \_geom\_hbond\_angle\_DHA  
 \_geom\_hbond\_site\_symmetry\_A  
 N3 H1N O1 0.925(19) 1.933(19) 2.6317(18) 130.7(15) .  
 N4 H2N O3 0.87(2) 1.95(2) 2.6291(18) 134.2(16) .  
 N8 H3N O5 0.95(2) 1.877(19) 2.6126(18) 131.8(15) .  
 C1 H1B O6 0.99 2.45 3.1616(19) 128.2 4\_655  
 C2 H2B O5 0.99 2.45 3.2580(19) 138.9 4\_655  
 C9 H9 O3 0.95 2.58 3.3403(19) 137.1 6\_556  
 C10 H10 O4 0.95 2.59 3.496(2) 158.7 6\_556  
 C25 H25B O1 0.99 2.59 3.418(2) 141.4 6\_656

\_refine\_diff\_density\_max 0.197  
 \_refine\_diff\_density\_min -0.183  
 \_refine\_diff\_density\_rms 0.033

\_shelx\_res\_file

;

db1.res created by SHELXL-2014/7

TITL db1\_a.res Pbca

CELL 1.54178 22.9241 7.3205 42.5522 90.000 90.000 90.000  
 ZERR 12 0.0002 0.0001 0.0004 0.000 0.000 0.000  
 LATT 1  
 SYMM 0.50000 - X , - Y , 0.50000 + Z  
 SYMM 0.50000 + X , 0.50000 - Y , - Z  
 SYMM - X , 0.50000 + Y , 0.50000 - Z  
 SFAC C H N O  
 UNIT 288 408 72 48

```

L.S. 4
FMAP 2
temp -173
PLAN 20
size 0.14 0.09 0.04
rem cut yellow block
ACTA
BOND $H
CONF
htab
equiv $4 1-x,-y,-z
mpla 4 c1 c2 c3 c4 n1 n2
mpla c5 c6 c7 c8 c9 c10
mpla n5 o1 o2
mpla c15 c16 c17 c18 c19 c20
mpla n6 o3 o4
mpla 4 c25 c26 c25_$4 c26_$4 n7
mpla c27 c28 c29 c30 c31 c32
mpla n9 o5 o6
REM Instructions for potential hydrogen bonds
HTAB N3 O1
HTAB N4 O3
HTAB N8 O5
EQIV $1 x-1/2, y, -z+1/2
HTAB C1 O5_$1
EQIV $2 -x+1, y+1/2, -z+1/2
HTAB C1 O6_$2
HTAB C2 O5_$2
HTAB C9 O3_$1
HTAB C10 O4_$1
EQIV $3 x+1/2, y, -z+1/2
HTAB C25 O1_$3
WGHT      0.052200      2.424400
EXTI      0.000110
FVAR      0.17604
mole 1
C1      1      0.170346      0.728441      0.338551      11.00000      0.03393
0.03676 =
          0.03642      0.00138      -0.00393      -0.00166
AFIX 23
H1A 2      0.192348      0.614024      0.342202      11.00000      -1.20000
H1B 2      0.172600      0.803087      0.357914      11.00000      -1.20000
AFIX 0

```

|           |    |           |          |          |          |          |
|-----------|----|-----------|----------|----------|----------|----------|
| C2        | 1  | 0.197584  | 0.831916 | 0.311635 | 11.00000 | 0.03783  |
| 0.04097 = |    |           |          |          |          |          |
|           |    | 0.03413   | -0.00124 | -0.00074 | -0.00224 |          |
| AFIX      | 23 |           |          |          |          |          |
| H2A       | 2  | 0.178555  | 0.952795 | 0.309701 | 11.00000 | -1.20000 |
| H2B       | 2  | 0.239436  | 0.852411 | 0.316161 | 11.00000 | -1.20000 |
| AFIX      | 0  |           |          |          |          |          |
| C3        | 1  | 0.130763  | 0.702507 | 0.274866 | 11.00000 | 0.03225  |
| 0.06700 = |    |           |          |          |          |          |
|           |    | 0.03521   | -0.00593 | 0.00008  | -0.00058 |          |
| AFIX      | 23 |           |          |          |          |          |
| H3A       | 2  | 0.127537  | 0.632032 | 0.255086 | 11.00000 | -1.20000 |
| H3B       | 2  | 0.110883  | 0.821207 | 0.271771 | 11.00000 | -1.20000 |
| AFIX      | 0  |           |          |          |          |          |
| C4        | 1  | 0.101173  | 0.598555 | 0.301176 | 11.00000 | 0.03296  |
| 0.04996 = |    |           |          |          |          |          |
|           |    | 0.03909   | -0.00806 | -0.00107 | -0.00120 |          |
| AFIX      | 23 |           |          |          |          |          |
| H4A       | 2  | 0.058911  | 0.589839 | 0.296631 | 11.00000 | -1.20000 |
| H4B       | 2  | 0.117039  | 0.472851 | 0.301925 | 11.00000 | -1.20000 |
| AFIX      | 0  |           |          |          |          |          |
| C5        | 1  | 0.074325  | 0.627404 | 0.356696 | 11.00000 | 0.03460  |
| 0.02813 = |    |           |          |          |          |          |
|           |    | 0.03789   | 0.00063  | -0.00120 | 0.00392  |          |
| C6        | 1  | 0.093761  | 0.634341 | 0.387634 | 11.00000 | 0.03171  |
| 0.03209 = |    |           |          |          |          |          |
|           |    | 0.03812   | -0.00145 | -0.00129 | 0.00229  |          |
| AFIX      | 43 |           |          |          |          |          |
| H6        | 2  | 0.132441  | 0.674785 | 0.391607 | 11.00000 | -1.20000 |
| AFIX      | 0  |           |          |          |          |          |
| C7        | 1  | 0.058469  | 0.583863 | 0.413366 | 11.00000 | 0.03526  |
| 0.02892 = |    |           |          |          |          |          |
|           |    | 0.03800   | -0.00196 | -0.00011 | 0.00345  |          |
| C8        | 1  | 0.001362  | 0.517794 | 0.406288 | 11.00000 | 0.03377  |
| 0.03188 = |    |           |          |          |          |          |
|           |    | 0.03939   | 0.00141  | 0.00183  | 0.00278  |          |
| C9        | 1  | -0.018530 | 0.515159 | 0.375216 | 11.00000 | 0.03261  |
| 0.03451 = |    |           |          |          |          |          |
|           |    | 0.04506   | -0.00023 | -0.00214 | 0.00252  |          |
| AFIX      | 43 |           |          |          |          |          |
| H9        | 2  | -0.057134 | 0.474847 | 0.370997 | 11.00000 | -1.20000 |
| AFIX      | 0  |           |          |          |          |          |

|           |     |          |          |          |          |          |
|-----------|-----|----------|----------|----------|----------|----------|
| C10       | 1   | 0.015889 | 0.568720 | 0.350901 | 11.00000 | 0.03468  |
| 0.03696 = |     |          |          |          |          |          |
|           |     | 0.04042  | -0.00039 | -0.00372 | 0.00377  |          |
| AFIX      | 43  |          |          |          |          |          |
| H10       | 2   | 0.001082 | 0.567128 | 0.330051 | 11.00000 | -1.20000 |
| AFIX      | 0   |          |          |          |          |          |
| C11       | 1   | 0.138243 | 0.650996 | 0.451339 | 11.00000 | 0.03697  |
| 0.03572 = |     |          |          |          |          |          |
|           |     | 0.03809  | -0.00093 | 0.00078  | 0.00132  |          |
| AFIX      | 23  |          |          |          |          |          |
| H11A      | 2   | 0.145848 | 0.775551 | 0.443255 | 11.00000 | -1.20000 |
| H11B      | 2   | 0.167014 | 0.566777 | 0.441792 | 11.00000 | -1.20000 |
| AFIX      | 0   |          |          |          |          |          |
| C12       | 1   | 0.144397 | 0.648714 | 0.486814 | 11.00000 | 0.03909  |
| 0.04585 = |     |          |          |          |          |          |
|           |     | 0.03841  | -0.00120 | -0.00035 | 0.00155  |          |
| AFIX      | 23  |          |          |          |          |          |
| H12A      | 2   | 0.116089 | 0.735777 | 0.496000 | 11.00000 | -1.20000 |
| H12B      | 2   | 0.134549 | 0.525211 | 0.494669 | 11.00000 | -1.20000 |
| AFIX      | 0   |          |          |          |          |          |
| C13       | 1   | 0.205000 | 0.698463 | 0.497834 | 11.00000 | 0.04121  |
| 0.05511 = |     |          |          |          |          |          |
|           |     | 0.04728  | 0.00126  | -0.00422 | 0.00155  |          |
| AFIX      | 23  |          |          |          |          |          |
| H13A      | 2   | 0.215415 | 0.820278 | 0.489430 | 11.00000 | -1.20000 |
| H13B      | 2   | 0.233202 | 0.608918 | 0.489282 | 11.00000 | -1.20000 |
| AFIX      | 0   |          |          |          |          |          |
| C14       | 1   | 0.210146 | 0.701862 | 0.533625 | 11.00000 | 0.05839  |
| 0.11478 = |     |          |          |          |          |          |
|           |     | 0.05260  | -0.01084 | -0.01186 | -0.00428 |          |
| AFIX      | 137 |          |          |          |          |          |
| H14A      | 2   | 0.250187 | 0.733591 | 0.539566 | 11.00000 | -1.50000 |
| H14B      | 2   | 0.200368 | 0.581147 | 0.542073 | 11.00000 | -1.50000 |
| H14C      | 2   | 0.183185 | 0.793030 | 0.542195 | 11.00000 | -1.50000 |
| AFIX      | 0   |          |          |          |          |          |
| C15       | 1   | 0.235941 | 0.705505 | 0.260871 | 11.00000 | 0.03426  |
| 0.03090 = |     |          |          |          |          |          |
|           |     | 0.03528  | 0.00531  | 0.00106  | -0.00107 |          |
| C16       | 1   | 0.225097 | 0.651425 | 0.229980 | 11.00000 | 0.03132  |
| 0.03453 = |     |          |          |          |          |          |
|           |     | 0.03581  | 0.00392  | 0.00027  | -0.00087 |          |
| AFIX      | 43  |          |          |          |          |          |
| H16       | 2   | 0.185819 | 0.647694 | 0.222890 | 11.00000 | -1.20000 |

|           |    |          |          |          |          |          |
|-----------|----|----------|----------|----------|----------|----------|
| AFIX      | 0  |          |          |          |          |          |
| C17       | 1  | 0.269450 | 0.602279 | 0.208885 | 11.00000 | 0.03737  |
| 0.03059 = |    |          |          |          |          |          |
|           |    | 0.03413  | 0.00638  | 0.00200  | -0.00230 |          |
| C18       | 1  | 0.328248 | 0.609464 | 0.220330 | 11.00000 | 0.03256  |
| 0.03954 = |    |          |          |          |          |          |
|           |    | 0.03835  | 0.00679  | 0.00456  | -0.00053 |          |
| C19       | 1  | 0.338868 | 0.673710 | 0.250852 | 11.00000 | 0.03272  |
| 0.04309 = |    |          |          |          |          |          |
|           |    | 0.03847  | 0.00816  | -0.00122 | -0.00346 |          |
| AFIX      | 43 |          |          |          |          |          |
| H19       | 2  | 0.378053 | 0.682614 | 0.257955 | 11.00000 | -1.20000 |
| AFIX      | 0  |          |          |          |          |          |
| C20       | 1  | 0.295236 | 0.723592 | 0.270597 | 11.00000 | 0.03588  |
| 0.03764 = |    |          |          |          |          |          |
|           |    | 0.03414  | 0.00444  | -0.00201 | -0.00333 |          |
| AFIX      | 43 |          |          |          |          |          |
| H20       | 2  | 0.304129 | 0.770464 | 0.290857 | 11.00000 | -1.20000 |
| AFIX      | 0  |          |          |          |          |          |
| C21       | 1  | 0.197464 | 0.527537 | 0.167258 | 11.00000 | 0.03714  |
| 0.04003 = |    |          |          |          |          |          |
|           |    | 0.03641  | 0.00240  | 0.00116  | -0.00048 |          |
| AFIX      | 23 |          |          |          |          |          |
| H21A      | 2  | 0.176941 | 0.646512 | 0.167576 | 11.00000 | -1.20000 |
| H21B      | 2  | 0.175741 | 0.441839 | 0.180932 | 11.00000 | -1.20000 |
| AFIX      | 0  |          |          |          |          |          |
| C22       | 1  | 0.198736 | 0.454128 | 0.133995 | 11.00000 | 0.04007  |
| 0.04289 = |    |          |          |          |          |          |
|           |    | 0.03673  | 0.00124  | 0.00179  | -0.00052 |          |
| AFIX      | 23 |          |          |          |          |          |
| H22A      | 2  | 0.221823 | 0.339862 | 0.133596 | 11.00000 | -1.20000 |
| H22B      | 2  | 0.218511 | 0.543879 | 0.120233 | 11.00000 | -1.20000 |
| AFIX      | 0  |          |          |          |          |          |
| C23       | 1  | 0.138065 | 0.415748 | 0.121018 | 11.00000 | 0.04231  |
| 0.05443 = |    |          |          |          |          |          |
|           |    | 0.04322  | -0.00205 | -0.00011 | -0.00213 |          |
| AFIX      | 23 |          |          |          |          |          |
| H23A      | 2  | 0.117406 | 0.332041 | 0.135510 | 11.00000 | -1.20000 |
| H23B      | 2  | 0.115815 | 0.531558 | 0.120207 | 11.00000 | -1.20000 |
| AFIX      | 0  |          |          |          |          |          |
| C24       | 1  | 0.139186 | 0.331403 | 0.088438 | 11.00000 | 0.05266  |
| 0.06968 = |    |          |          |          |          |          |
|           |    | 0.04444  | -0.00388 | -0.00387 | -0.00940 |          |

AFIX 137

|      |   |          |          |          |          |          |
|------|---|----------|----------|----------|----------|----------|
| H24A | 2 | 0.099156 | 0.308146 | 0.081416 | 11.00000 | -1.50000 |
| H24B | 2 | 0.160846 | 0.216049 | 0.089088 | 11.00000 | -1.50000 |
| H24C | 2 | 0.158281 | 0.415557 | 0.073776 | 11.00000 | -1.50000 |

AFIX 0

|    |   |          |          |          |          |         |
|----|---|----------|----------|----------|----------|---------|
| N1 | 3 | 0.109249 | 0.684758 | 0.331820 | 11.00000 | 0.03255 |
|----|---|----------|----------|----------|----------|---------|

0.03763 =

|    |   |          |          |          |          |         |
|----|---|----------|----------|----------|----------|---------|
|    |   | 0.03181  | 0.00035  | -0.00149 | 0.00046  |         |
| N2 | 3 | 0.191919 | 0.733901 | 0.282048 | 11.00000 | 0.03248 |

0.05284 =

|    |   |          |          |          |          |         |
|----|---|----------|----------|----------|----------|---------|
|    |   | 0.03524  | -0.00516 | 0.00033  | -0.00169 |         |
| N3 | 3 | 0.079426 | 0.594508 | 0.442946 | 11.00000 | 0.03629 |

0.03982 =

|     |   |          |          |          |          |          |
|-----|---|----------|----------|----------|----------|----------|
|     |   | 0.03594  | 0.00040  | 0.00118  | -0.00086 |          |
| H1N | 2 | 0.055916 | 0.550438 | 0.458904 | 11.00000 | -1.20000 |

|    |   |          |          |          |          |         |
|----|---|----------|----------|----------|----------|---------|
| N4 | 3 | 0.256322 | 0.550640 | 0.179271 | 11.00000 | 0.03437 |
|----|---|----------|----------|----------|----------|---------|

0.04311 =

|     |   |          |          |          |          |          |
|-----|---|----------|----------|----------|----------|----------|
|     |   | 0.03407  | 0.00142  | 0.00398  | 0.00010  |          |
| H2N | 2 | 0.285571 | 0.513297 | 0.167906 | 11.00000 | -1.20000 |

|    |   |           |          |          |          |         |
|----|---|-----------|----------|----------|----------|---------|
| N5 | 3 | -0.036323 | 0.444960 | 0.429601 | 11.00000 | 0.03718 |
|----|---|-----------|----------|----------|----------|---------|

0.03910 =

|    |   |          |          |          |          |         |
|----|---|----------|----------|----------|----------|---------|
|    |   | 0.04318  | 0.00177  | 0.00072  | 0.00123  |         |
| N6 | 3 | 0.376332 | 0.547061 | 0.202706 | 11.00000 | 0.03548 |

0.05332 =

|    |   |           |          |          |          |         |
|----|---|-----------|----------|----------|----------|---------|
|    |   | 0.04154   | 0.00407  | 0.00476  | -0.00007 |         |
| O1 | 4 | -0.023582 | 0.462483 | 0.458094 | 11.00000 | 0.04562 |

0.05275 =

|    |   |           |          |          |          |         |
|----|---|-----------|----------|----------|----------|---------|
|    |   | 0.03975   | 0.00045  | 0.00479  | -0.00338 |         |
| O2 | 4 | -0.081049 | 0.362175 | 0.421514 | 11.00000 | 0.04172 |

0.06519 =

|    |   |          |          |          |          |         |
|----|---|----------|----------|----------|----------|---------|
|    |   | 0.05523  | 0.00637  | -0.00166 | -0.01601 |         |
| O3 | 4 | 0.369336 | 0.495335 | 0.174795 | 11.00000 | 0.04070 |

0.07123 =

|    |   |          |          |          |          |         |
|----|---|----------|----------|----------|----------|---------|
|    |   | 0.04083  | -0.00421 | 0.00746  | 0.00052  |         |
| O4 | 4 | 0.425589 | 0.542189 | 0.215153 | 11.00000 | 0.03247 |

0.08284 =

|  |  |         |         |         |         |  |
|--|--|---------|---------|---------|---------|--|
|  |  | 0.05101 | 0.00093 | 0.00085 | 0.00453 |  |
|--|--|---------|---------|---------|---------|--|

mole 2

|     |   |          |          |           |          |         |
|-----|---|----------|----------|-----------|----------|---------|
| C25 | 1 | 0.540221 | 0.143048 | -0.005539 | 11.00000 | 0.03814 |
|-----|---|----------|----------|-----------|----------|---------|

0.03662 =

|  |  |         |         |          |          |  |
|--|--|---------|---------|----------|----------|--|
|  |  | 0.03568 | 0.00277 | -0.00161 | -0.00321 |  |
|--|--|---------|---------|----------|----------|--|

AFIX 23

|      |   |          |          |           |          |          |
|------|---|----------|----------|-----------|----------|----------|
| H25A | 2 | 0.580083 | 0.183507 | -0.011167 | 11.00000 | -1.20000 |
|------|---|----------|----------|-----------|----------|----------|



|           |    |          |           |           |          |          |         |
|-----------|----|----------|-----------|-----------|----------|----------|---------|
| H25B      | 2  | 0.515971 | 0.253312  | -0.002256 | 11.00000 | -1.20000 |         |
| AFIX      | 0  |          |           |           |          |          |         |
| C26       | 1  | 0.484822 | -0.032299 | 0.032153  | 11.00000 |          | 0.03551 |
| 0.03801 = |    |          |           |           |          |          |         |
|           |    | 0.03362  | 0.00240   | 0.00043   | -0.00193 |          |         |
| AFIX      | 23 |          |           |           |          |          |         |
| H26A      | 2  | 0.458505 | 0.071194  | 0.036978  | 11.00000 | -1.20000 |         |
| H26B      | 2  | 0.487953 | -0.109464 | 0.051185  | 11.00000 | -1.20000 |         |
| AFIX      | 0  |          |           |           |          |          |         |
| C27       | 1  | 0.579497 | 0.094624  | 0.047306  | 11.00000 |          | 0.03524 |
| 0.02965 = |    |          |           |           |          |          |         |
|           |    | 0.03611  | 0.00030   | -0.00326  | 0.00226  |          |         |
| C28       | 1  | 0.563230 | 0.089186  | 0.078592  | 11.00000 |          | 0.03309 |
| 0.03276 = |    |          |           |           |          |          |         |
|           |    | 0.03734  | 0.00037   | -0.00081  | 0.00085  |          |         |
| AFIX      | 43 |          |           |           |          |          |         |
| H28       | 2  | 0.524946 | 0.049683  | 0.083774  | 11.00000 | -1.20000 |         |
| AFIX      | 0  |          |           |           |          |          |         |
| C29       | 1  | 0.601287 | 0.140005  | 0.103052  | 11.00000 |          | 0.03810 |
| 0.02920 = |    |          |           |           |          |          |         |
|           |    | 0.03638  | 0.00106   | -0.00224  | 0.00489  |          |         |
| C30       | 1  | 0.657677 | 0.202888  | 0.094403  | 11.00000 |          | 0.03380 |
| 0.03444 = |    |          |           |           |          |          |         |
|           |    | 0.04148  | -0.00022  | -0.00609  | 0.00264  |          |         |
| C31       | 1  | 0.674687 | 0.202285  | 0.062697  | 11.00000 |          | 0.03209 |
| 0.03526 = |    |          |           |           |          |          |         |
|           |    | 0.04626  | 0.00098   | -0.00112  | 0.00166  |          |         |
| AFIX      | 43 |          |           |           |          |          |         |
| H31       | 2  | 0.713168 | 0.238898  | 0.057313  | 11.00000 | -1.20000 |         |
| AFIX      | 0  |          |           |           |          |          |         |
| C32       | 1  | 0.637348 | 0.150511  | 0.039542  | 11.00000 |          | 0.03693 |
| 0.03583 = |    |          |           |           |          |          |         |
|           |    | 0.03894  | 0.00125   | 0.00157   | 0.00283  |          |         |
| AFIX      | 43 |          |           |           |          |          |         |
| H32       | 2  | 0.649740 | 0.151535  | 0.018238  | 11.00000 | -1.20000 |         |
| AFIX      | 0  |          |           |           |          |          |         |
| C33       | 1  | 0.525270 | 0.077654  | 0.143225  | 11.00000 |          | 0.03909 |
| 0.03772 = |    |          |           |           |          |          |         |
|           |    | 0.03943  | 0.00076   | -0.00202  | 0.00175  |          |         |
| AFIX      | 23 |          |           |           |          |          |         |
| H33A      | 2  | 0.516999 | -0.047481 | 0.135610  | 11.00000 | -1.20000 |         |
| H33B      | 2  | 0.495425 | 0.161009  | 0.134442  | 11.00000 | -1.20000 |         |
| AFIX      | 0  |          |           |           |          |          |         |

```

C34    1      0.523076      0.082153      0.178754      11.00000      0.04149
0.04472 =
          0.04006      0.00039      -0.00156      0.00310
AFIX 23
H34A   2      0.528348      0.209873      0.185856      11.00000      -1.20000
H34B   2      0.556082      0.009692      0.187103      11.00000      -1.20000
AFIX   0
C35    1      0.466880      0.008696      0.192497      11.00000      0.04366
0.05243 =
          0.04882      -0.00471      -0.00014      0.00018
AFIX 23
H35A   2      0.434673      0.094541      0.187794      11.00000      -1.20000
H35B   2      0.457509      -0.109964      0.182543      11.00000      -1.20000
AFIX   0
C36    1      0.471556      -0.016597      0.227557      11.00000      0.05052
0.07044 =
          0.04908      -0.00104      0.00992      0.00219
AFIX 137
H36A   2      0.434983      -0.067560      0.235640      11.00000      -1.50000
H36B   2      0.479008      0.101735      0.237550      11.00000      -1.50000
H36C   2      0.503718      -0.100411      0.232277      11.00000      -1.50000
AFIX   0
N7     3      0.542465      0.037284      0.023665      11.00000      0.03490
0.03629 =
          0.03121      0.00215      -0.00100      -0.00245
N8     3      0.582869      0.134176      0.133060      11.00000      0.03849
0.04203 =
          0.03652      -0.00028      -0.00361      -0.00126
H3N    2      0.610098      0.174622      0.148546      11.00000      -1.20000
N9     3      0.698151      0.271562      0.116430      11.00000      0.03952
0.04306 =
          0.04514      0.00158      -0.00857      0.00068
O5     4      0.687233      0.258586      0.145322      11.00000      0.04671
0.05546 =
          0.04013      -0.00156      -0.00901      -0.00124
O6     4      0.743704      0.346215      0.106989      11.00000      0.04014
0.06330 =
          0.05803      0.00661      -0.00879      -0.01288
HKLF 4 1 -1.0000  0.0000  0.0000  0.0000  1.0000  0.0000  0.0000  0.0000 -1.0000

REM  db1_a.res Pbca
REM R1 = 0.0425 for 5944 Fo > 4sig(Fo) and 0.0469 for all 6453 data
REM 473 parameters refined using 0 restraints

```

END

WGHT        0.0522        2.4291

REM Instructions for potential hydrogen bonds

HTAB C1 O5\_\$1

HTAB C1 O6\_\$2

HTAB C2 O5\_\$2

HTAB C9 O3\_\$1

HTAB C10 O4\_\$1

HTAB N3 O1

HTAB N4 O3

HTAB C25 O1\_\$3

HTAB N8 O5

REM Highest difference peak   0.197,   deepest hole -0.183,   1-sigma level   0.033

|     |   |         |         |        |          |      |      |
|-----|---|---------|---------|--------|----------|------|------|
| Q1  | 1 | 0.0275  | 0.5441  | 0.4096 | 11.00000 | 0.05 | 0.20 |
| Q2  | 1 | 0.6498  | 0.2317  | 0.1540 | 11.00000 | 0.05 | 0.19 |
| Q3  | 1 | -0.0108 | 0.5800  | 0.3952 | 11.00000 | 0.05 | 0.18 |
| Q4  | 1 | 0.2999  | 0.6242  | 0.2145 | 11.00000 | 0.05 | 0.17 |
| Q5  | 1 | 0.4604  | 0.3028  | 0.1333 | 11.00000 | 0.05 | 0.17 |
| Q6  | 1 | 0.4689  | -0.0709 | 0.0179 | 11.00000 | 0.05 | 0.16 |
| Q7  | 1 | 0.1377  | 0.7032  | 0.3356 | 11.00000 | 0.05 | 0.16 |
| Q8  | 1 | 0.5430  | 0.0770  | 0.0105 | 11.00000 | 0.05 | 0.16 |
| Q9  | 1 | 0.1802  | 0.5348  | 0.4358 | 11.00000 | 0.05 | 0.15 |
| Q10 | 1 | 0.2481  | 0.6694  | 0.2197 | 11.00000 | 0.05 | 0.15 |
| Q11 | 1 | 0.0994  | 0.6408  | 0.3427 | 11.00000 | 0.05 | 0.15 |
| Q12 | 1 | 0.6447  | 0.3515  | 0.0687 | 11.00000 | 0.05 | 0.15 |
| Q13 | 1 | 0.4626  | 0.1361  | 0.1994 | 11.00000 | 0.05 | 0.15 |
| Q14 | 1 | 0.2313  | 0.7105  | 0.2445 | 11.00000 | 0.05 | 0.15 |
| Q15 | 1 | 0.3327  | 0.6630  | 0.2333 | 11.00000 | 0.05 | 0.14 |
| Q16 | 1 | -0.0030 | 0.4822  | 0.3932 | 11.00000 | 0.05 | 0.14 |
| Q17 | 1 | 0.2679  | 0.7133  | 0.2669 | 11.00000 | 0.05 | 0.14 |
| Q18 | 1 | 0.1999  | 0.7418  | 0.2960 | 11.00000 | 0.05 | 0.14 |
| Q19 | 1 | 0.6106  | 0.2990  | 0.0453 | 11.00000 | 0.05 | 0.14 |
| Q20 | 1 | 0.4503  | 0.2048  | 0.1637 | 11.00000 | 0.05 | 0.14 |

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