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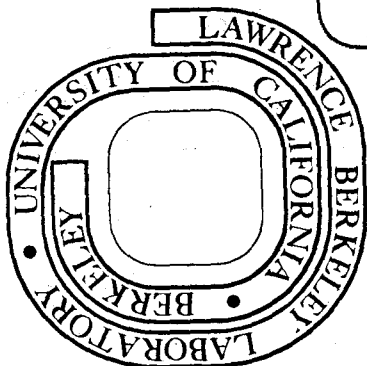
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N,N'-Bis(2,2,6,6-tetramethylpiperidyl-4)succinic  
acid diamide dihydrate\*

By Helena Ruben, Allan Zalkin and David H. Templeton

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Abstract.  $C_{22}H_{42}O_2N_4 \cdot 2H_2O$  crystallizes in the monoclinic space group  $P2_1/c$  with cell dimensions  $\underline{a} = 13.069(6)$ ,  $\underline{b} = 13.029(6)$ ,  $\underline{c} = 15.658(6)$  Å,  $\beta = 99.96(5)^\circ$ ,  $Z = 4$ ,  $d_x = 1.09$  g cm<sup>-3</sup>. The unit cell contains two crystallographically different molecules, each of which is on a center of symmetry. Any geometrical differences of the two chemically identical molecules can be explained by hydrogen bonding and packing.

\* Research performed under the auspices of the U.S. Atomic Energy Commission.

Introduction. The title compound was synthesized by Joss & Calvin (1972). A colorless crystal fragment of  $\sim 0.02$  cm in diameter was glued to a pyrex fiber, and used for the measurement of 5649 data, including standards and extinctions, with a Picker FACS-I automatic diffractometer system. The observed extinctions were those unique to  $P2_1/c$ .

Graphite-monochromated Cu  $K\alpha$  ( $\lambda = 1.54051 \text{ \AA}$  for  $K\alpha_1$ ) X-rays were used in the collection of the data by a  $\theta$ - $2\theta$  scan technique using a scintillation counter. No absorption correction was deemed necessary,  $\mu = 5.1 \text{ cm}^{-1}$  and  $\mu R \sim 0.1$ . All of the reflections within the quarter sphere of reflection out to a  $2\theta$  angle of  $124.5^\circ$  were collected, yielding 4160 unique data of which 3767 were greater than their estimated standard deviation. Standard deviations were estimated as described by St. Clair, Zalkin & Templeton (1971), with  $p = 0.05$  in the term  $(pI)^2$ .

The positions of all the non-hydrogen atoms, including two unexpected water molecules, were obtained from an E map phased by the application of "direct" methods. Hydrogen positions were calculated from the known chemical geometry. Full-matrix least-squares refinements were performed on all of the positional, anisotropic thermal (for the heavy atoms), and isotropic

thermal (hydrogen atoms) parameters. As the number of parameters would produce a matrix that exceeds the capacity of our computer, we alternately refined half of the structure at a time. For the final refinements, all of the heavy atom parameters were refined jointly with the hydrogen atoms fixed; this was followed with a refinement of all the hydrogen atoms with the heavy atoms fixed. The final shifts were less than 0.2% and 8% of an estimated standard deviation for the heavy atom and hydrogen parameters respectively. The weights were  $1/\sigma^2(F)$ , or zero if  $F < \sigma(F)$ . An empirical correction for extinction was applied which increased  $F$  about 10% for the strongest reflection. The final  $R$  factor,  $R = \sum |\Delta F| / \sum |F_o|$ , for all of the reflections was 0.049, and for the 3767 non-zero weighted reflections was 0.044. The weighted  $R$  factor,  $R_w = [\sum w(\Delta F)^2 / \sum w F_o^2]^{1/2}$ , was 0.065. The goodness of fit was 1.93.

Final atomic parameters are given in Tables 1, 2, and 3, with a guide to the numbering shown in Fig. 1. A table of calculated structure factors  $F$ ,  $\sigma(F)$ , and  $\Delta F$  has been deposited with the National Lending Library as Supplementary Publication No. SUP 00000.\*

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\* Copies may be obtained from the Executive Secretary, International Union of Crystallography, 13 White Friars, Chester CH1 1NZ, England.

Discussion. The biradical of this compound, where the hydrogen atoms of the two piperidyl nitrogen atoms are replaced by oxygen radicals, has been prepared (Joss & Calvin, 1972). Stable biradicals of such compounds have been proposed as a flexible strain gauge, which when attached to a membrane or a macromolecule at two points, would deform together with the support, and transduce the strain into the interaction-dependent features of the esr. spectrum (Calvin et al., 1969; and Ferruti et al., 1970). This structure determination was undertaken to provide accurate geometrical details in anticipation of such work.

Two crystallographically different, but chemically identical molecules, are centered about the centers of symmetry at  $(1/2, 1/2, 1/2; 1/2, 0, 0)$  and  $(0, 0, 0; 0, 1/2, 1/2)$  respectively. Each of the molecules is an extended chain (Fig. 2). The distances between the piperidyl nitrogen atoms, which are at opposite ends of the chains, are 14.45 and 14.24 Å respectively for the two molecules. Interatomic distances and angles are given in Tables 4 and 5. A stereoscopic view of the packing is shown in Fig. 3.

Chemically equivalent bond lengths in the two molecules differ by two or three times as much as would be expected according to the estimated standard deviations. Because a full-matrix could not be used,

the estimated standard deviations may be too low. Thermal motion, for which no correction was practicable, may also contribute to these differences. Thus the corresponding bond lengths in the two molecules may be regarded as identical. The bond angles exhibit differences which correspond to slightly different conformations for the two molecules, and these differences, while minor, are definitely outside the experimental error.

An extensive hydrogen bond system, shown in Fig. 4, involves all of the hydrogen atoms associated with oxygen and nitrogen, with the exception of H(1). We attribute the conformational differences to this hydrogen bonding or other packing effects.



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Table 1. Positional parameters of non-hydrogen atoms

	x	y	z
O(1)	.96574(9)	.1871(1)	.03084(9)
O(2)	.31827(8)	.43445(8)	.45814(6)
O(3)	.3236(1)	.1025(1)	.13909(9)
O(4)	.53744(9)	.4845(1)	.24297(9)
N(1)	.6173(1)	.3039(1)	.16769(9)
N(2)	.8322(1)	.1053(1)	.0722(1)
N(3)	.1595(1)	.2427(1)	.16324(8)
N(4)	.37845(9)	.4136(1)	.33275(8)
C(1)	.6980(1)	.2542(1)	.2324(1)
C(2)	.7533(1)	.1665(1)	.1928(1)
C(3)	.7864(1)	.1944(1)	.1078(1)
C(4)	.6934(1)	.2322(1)	.0449(1)
C(5)	.6371(1)	.3233(1)	.0783(1)
C(6)	.5293(2)	.3359(2)	.0218(1)
C(7)	.6984(2)	.4213(1)	.0749(2)
C(8)	.6407(2)	.2090(2)	.3005(1)
C(9)	.7761(2)	.3326(2)	.2762(1)
C(10)	.9152(1)	.1087(1)	.0335(1)
C(11)	-.0572(1)	.4906(1)	.4935(1)
C(12)	.1854(1)	.3445(1)	.1302(1)
C(13)	.2853(1)	.3811(1)	.1877(1)
C(14)	.2798(1)	.3769(1)	.28355(9)
C(15)	.2552(1)	.2682(1)	.30851(9)
C(16)	.1524(1)	.2301(1)	.25602(9)
C(17)	.1401(2)	.1150(2)	.2697(1)
C(18)	.0595(1)	.2831(2)	.2852(1)
C(19)	.0990(2)	.4244(2)	.1244(1)
C(20)	.2060(2)	.3244(2)	.0384(1)
C(21)	.3894(1)	.4422(1)	.41552(9)
C(22)	.4931(1)	.4900(1)	.45206(9)

Table 2. Anisotropic thermal parameters, Å<sup>2</sup>

Anisotropic temperature factors have the form  $\exp[-(1/4)(B_{11}h^2a^{*2} + \dots + 2B_{12}hka^*b^* + \dots)]$

	B <sub>11</sub>	B <sub>22</sub>	B <sub>33</sub>	B <sub>12</sub>	B <sub>13</sub>	B <sub>23</sub>
O(1)	4.05(6)	4.24(6)	7.56(8)	-1.12(5)	1.96(5)	-2.13(5)
O(2)	2.92(4)	4.24(5)	2.76(4)	-.39(4)	.44(4)	-.35(4)
O(3)	8.6(1)	10.1(1)	3.75(6)	5.50(9)	.99(6)	.20(7)
O(4)	4.14(6)	5.79(7)	5.43(6)	-.09(5)	1.73(5)	-1.61(5)
N(1)	3.50(6)	3.47(6)	3.54(6)	-.06(5)	1.12(5)	-.65(5)
N(2)	3.87(7)	3.02(6)	6.05(8)	-.41(5)	2.03(6)	-1.45(5)
N(3)	3.54(6)	3.26(6)	2.59(5)	-.72(5)	.09(4)	-.32(4)
N(4)	2.77(5)	4.19(6)	2.62(5)	-.61(5)	.33(4)	-.95(4)
C(1)	4.49(8)	3.33(7)	3.01(7)	.19(6)	.92(6)	-.50(6)
C(2)	4.64(8)	3.02(7)	3.65(8)	.35(6)	.60(6)	-.42(6)
C(3)	3.62(7)	2.75(7)	4.30(8)	-.12(5)	1.37(6)	-.87(6)
C(4)	4.92(9)	3.88(8)	3.06(7)	.19(6)	1.20(6)	-.48(6)
C(5)	4.66(8)	3.67(8)	3.20(7)	.50(6)	1.06(6)	.01(6)
C(6)	6.5(1)	7.5(1)	4.6(1)	2.7(1)	.01(8)	.05(9)
C(7)	8.2(1)	3.65(9)	5.8(1)	.03(8)	3.0(1)	.40(8)
C(8)	8.5(1)	5.5(1)	4.10(9)	.1(1)	2.71(9)	.14(8)
C(9)	4.87(9)	4.69(9)	5.0(1)	.59(7)	-.28(7)	-1.78(7)
C(10)	2.58(6)	4.06(8)	4.10(8)	-.30(6)	.23(5)	-1.42(6)
C(11)	3.06(7)	4.65(9)	6.2(1)	.21(6)	.89(7)	2.49(8)
C(12)	4.43(8)	3.31(7)	2.66(6)	-.80(6)	-.32(6)	.13(5)
C(13)	4.37(8)	3.60(7)	2.70(7)	-1.31(6)	.12(6)	.06(5)
C(14)	2.75(6)	3.30(7)	2.62(6)	-.32(5)	-.02(5)	-.55(5)
C(15)	3.16(7)	3.63(7)	2.42(6)	-.06(5)	.25(5)	-.02(5)
C(16)	3.35(7)	3.46(7)	2.76(6)	-.57(5)	.49(5)	-.39(5)
C(17)	6.9(1)	4.21(9)	3.99(8)	-1.87(8)	1.05(8)	.35(7)
C(18)	3.19(8)	6.8(1)	4.51(9)	-.34(7)	.94(6)	-.70(8)
C(19)	6.2(1)	4.37(9)	5.3(1)	.42(8)	-1.46(8)	.55(7)
C(20)	6.9(1)	5.8(1)	2.48(7)	-2.18(9)	-.06(7)	.11(7)
C(21)	2.65(6)	2.95(6)	2.45(6)	.13(5)	.07(5)	-.20(5)
C(22)	2.58(6)	3.95(7)	2.64(7)	-.27(5)	.11(5)	-.66(5)

Table 3. Hydrogen parametersTemperature factor has the form  $\exp(-B \sin^2 \theta / \lambda^2)$ 

	x	y	z	B
H(1)	.562(1)	.265(1)	.160(1)	4.0(4)
H(2)	.795(1)	.051(1)	.064(1)	4.3(4)
H(3)	.705(1)	.108(1)	.181(1)	3.6(4)
H(4)	.813(1)	.145(1)	.240(1)	4.1(4)
H(5)	.842(1)	.247(1)	.119(1)	3.8(4)
H(6)	.645(1)	.170(1)	.032(1)	4.7(4)
H(7)	.716(2)	.252(2)	-.013(2)	7.8(6)
H(8)	-.095(3)	.551(3)	.518(2)	11.6(9)
H(9)	-.089(2)	.499(2)	.429(2)	8.8(7)
H(10)	.489(3)	.257(3)	.043(3)	14.2(12)
H(11)	.532(2)	.336(2)	-.039(2)	7.6(6)
H(12)	.491(1)	.390(1)	.047(1)	4.6(4)
H(13)	.673(2)	.485(2)	.099(2)	8.8(7)
H(14)	.700(2)	.440(2)	.014(1)	5.7(5)
H(15)	.770(2)	.415(2)	.105(1)	6.3(5)
H(16)	.687(2)	.177(2)	.341(2)	9.9(8)
H(17)	.587(2)	.160(2)	.269(2)	7.7(6)
H(18)	.606(2)	.265(2)	.334(2)	7.3(6)
H(19)	.820(1)	.302(1)	.320(1)	4.4(4)
H(20)	.742(2)	.388(2)	.303(1)	5.0(4)
H(21)	.824(2)	.359(2)	.236(1)	6.0(5)
H(22)	.319(2)	.096(2)	.081(2)	6.8(6)
H(23)	.275(3)	.156(3)	.144(2)	11.8(10)
H(24)	.581(2)	.522(2)	.274(2)	6.7(5)
H(25)	.569(2)	.437(2)	.222(2)	6.9(6)
H(26)	.102(1)	.215(1)	.124(1)	3.8(4)
H(27)	.428(1)	.428(1)	.304(1)	3.6(4)
H(28)	.299(1)	.446(1)	.173(1)	3.8(4)
H(29)	.344(1)	.340(1)	.176(1)	3.7(4)
H(30)	.225(1)	.420(1)	.300(1)	3.3(3)
H(31)	.251(1)	.269(2)	.372(1)	4.6(4)
H(32)	.314(1)	.226(1)	.298(1)	4.4(4)
H(33)	.496(1)	.563(1)	.421(1)	4.0(4)
H(34)	.548(1)	.447(1)	.437(1)	2.9(3)
H(35)	.148(2)	.092(2)	.321(2)	7.2(6)
H(36)	.200(2)	.085(2)	.247(2)	7.7(6)
H(37)	.073(1)	.091(1)	.232(1)	4.7(4)
H(38)	.064(2)	.361(2)	.275(1)	5.6(5)
H(39)	.051(2)	.268(2)	.350(2)	7.2(6)
H(40)	-.004(2)	.257(2)	.250(1)	5.6(5)
H(41)	.036(2)	.398(2)	.092(2)	6.8(6)
H(42)	.117(2)	.484(2)	.094(1)	5.7(5)
H(43)	.088(2)	.449(2)	.187(2)	6.5(5)
H(44)	.218(2)	.393(2)	.006(2)	6.9(6)
H(45)	.144(2)	.293(2)	-.000(2)	6.7(6)
H(46)	.273(2)	.276(2)	.044(2)	7.7(6)

Table 4. Interatomic distances, Å

Molecule I		Molecule II	
O(1) - C(10)	1.221(2)	O(2) - C(21)	1.239(2)
N(1) - C(1)	1.479(2)	N(3) - C(12)	1.485(2)
N(1) - C(5)	1.489(2)	N(3) - C(16)	1.481(2)
N(2) - C(3)	1.460(2)	N(4) - C(14)	1.461(2)
N(2) - C(10)	1.331(2)	N(4) - C(21)	1.333(2)
C(1) - C(2)	1.539(2)	C(12) - C(13)	1.528(2)
C(4) - C(5)	1.536(2)	C(15) - C(16)	1.530(2)
C(1) - C(8)	1.525(3)	C(12) - C(20)	1.531(3)
C(1) - C(9)	1.521(3)	C(12) - C(19)	1.527(3)
C(5) - C(6)	1.539(3)	C(16) - C(17)	1.528(3)
C(5) - C(7)	1.512(3)	C(16) - C(18)	1.535(3)
C(2) - C(3)	1.524(3)	C(13) - C(14)	1.516(2)
C(3) - C(4)	1.509(3)	C(14) - C(15)	1.519(2)
C(10) - C(11)	1.508(3)	C(21) - C(22)	1.511(2)
C(11) - C(11)	1.493(4)	C(22) - C(22)	1.505(3)
Hydrogen Distances			
O(3) - H(22)	0.90(3)	O(4) - H(24)	0.81(3)
O(3) - H(23)	0.94(4)	O(4) - H(25)	0.80(3)
N(1) - H(1)	0.86(2)	N(3) - H(26)	0.98(2)
N(2) - H(2)	0.84(2)	N(4) - H(27)	0.86(2)
C(2) - H(3)	0.98(2)	C(13) - H(28)	0.88(2)
C(2) - H(4)	1.01(2)	C(13) - H(29)	0.96(2)
C(3) - H(5)	1.00(2)	C(14) - H(30)	0.98(2)
C(4) - H(6)	1.04(2)	C(15) - H(31)	0.97(2)

Table 4 (Cont.)

C(4) - H(7)	1.04(3)	C(15) - H(32)	0.97(2)
C(6) - H(10)	1.17(5)	C(17) - H(35)	0.85(3)
C(6) - H(11)	0.95(3)	C(17) - H(36)	0.98(3)
C(6) - H(12)	0.97(3)	C(17) - H(39)	1.02(3)
C(7) - H(13)	0.97(3)	C(18) - H(38)	1.03(3)
C(7) - H(14)	0.97(3)	C(18) - H(39)	1.05(3)
C(7) - H(15)	0.98(3)	C(18) - H(40)	0.98(3)
C(8) - H(16)	0.88(4)	C(19) - H(41)	0.97(3)
C(8) - H(17)	1.00(3)	C(19) - H(42)	0.95(3)
C(8) - H(18)	1.04(3)	C(19) - H(43)	1.06(3)
C(9) - H(19)	0.90(3)	C(20) - H(44)	1.05(3)
C(9) - H(20)	0.97(3)	C(20) - H(45)	0.98(3)
C(9) - H(21)	1.01(3)	C(20) - H(46)	1.05(3)
C(11) - H(8)	1.01(4)	C(22) - H(33)	1.05(2)
C(11) - H(9)	1.02(4)	C(22) - H(34)	0.96(2)

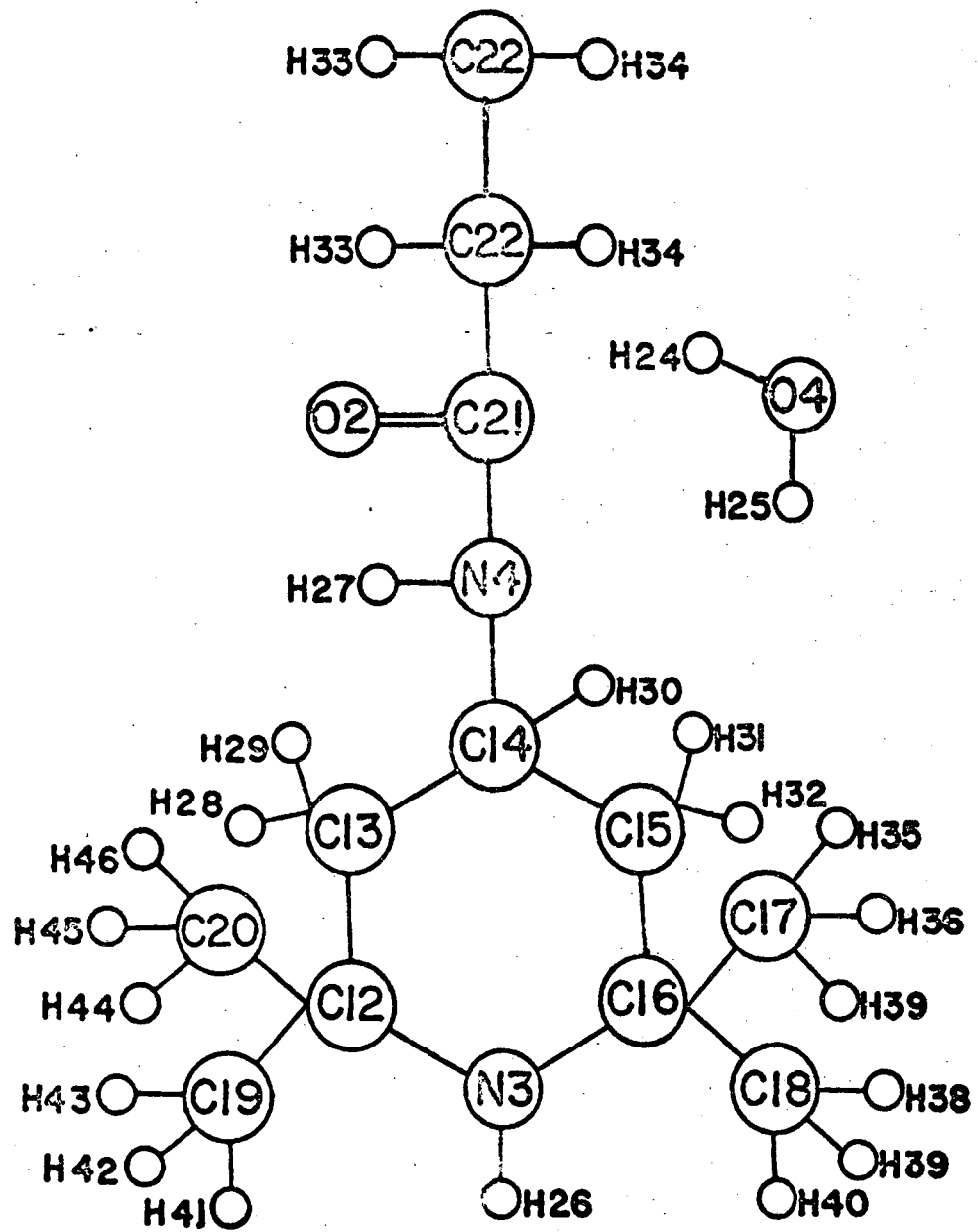
Table 5. Selected bond angles, deg

Molecule I		Molecule II	
C(11) - C(11) - C(10)	113.0(2)	C(22) - C(22) - C(21)	113.1(2)
C(11) - C(10) - O(1)	122.2(2)	C(22) - C(21) - O(2)	122.5(2)
C(11) - C(10) - N(2)	115.7(2)	C(22) - C(21) - N(4)	115.0(2)
O(1) - C(10) - N(2)	122.1(2)	O(2) - C(21) - N(4)	122.4(2)
C(10) - N(2) - C(3)	124.5(2)	C(21) - N(4) - C(14)	122.8(2)
N(2) - C(3) - C(2)	110.0(2)	N(4) - C(14) - C(13)	108.8(2)
C(3) - C(2) - C(1)	113.6(2)	C(14) - C(13) - C(12)	113.0(2)
C(2) - C(1) - N(1)	112.2(2)	C(13) - C(12) - N(3)	107.2(2)
C(2) - C(1) - C(9)	110.8(2)	C(13) - C(12) - C(19)	111.8(2)
C(2) - C(1) - C(8)	108.4(2)	C(13) - C(12) - C(20)	109.6(2)
C(8) - C(1) - C(9)	108.5(2)	C(19) - C(12) - C(20)	108.0(2)
C(8) - C(1) - N(1)	105.7(2)	C(20) - C(12) - N(3)	105.2(2)
C(9) - C(1) - N(1)	111.0(2)	C(19) - C(12) - N(3)	114.8(2)
C(1) - N(1) - C(5)	119.9(2)	C(12) - N(3) - C(16)	119.8(2)
C(4) - C(5) - N(1)	111.1(2)	C(15) - C(16) - N(3)	107.1(2)
C(4) - C(5) - C(6)	109.3(2)	C(15) - C(16) - C(17)	110.4(2)
C(4) - C(5) - C(7)	110.7(2)	C(15) - C(16) - C(18)	111.2(2)
C(6) - C(5) - C(7)	109.2(2)	C(17) - C(16) - C(18)	107.0(2)
C(6) - C(5) - N(1)	105.5(2)	C(17) - C(16) - N(3)	105.8(2)
C(7) - C(5) - N(1)	110.9(2)	C(18) - C(16) - N(3)	115.4(2)
C(5) - C(4) - C(3)	114.1(2)	C(16) - C(15) - C(14)	111.7(2)
C(4) - C(3) - C(2)	109.4(2)	C(15) - C(14) - C(13)	109.7(2)
C(4) - C(3) - N(2)	110.3(2)	C(15) - C(14) - N(4)	112.1(2)

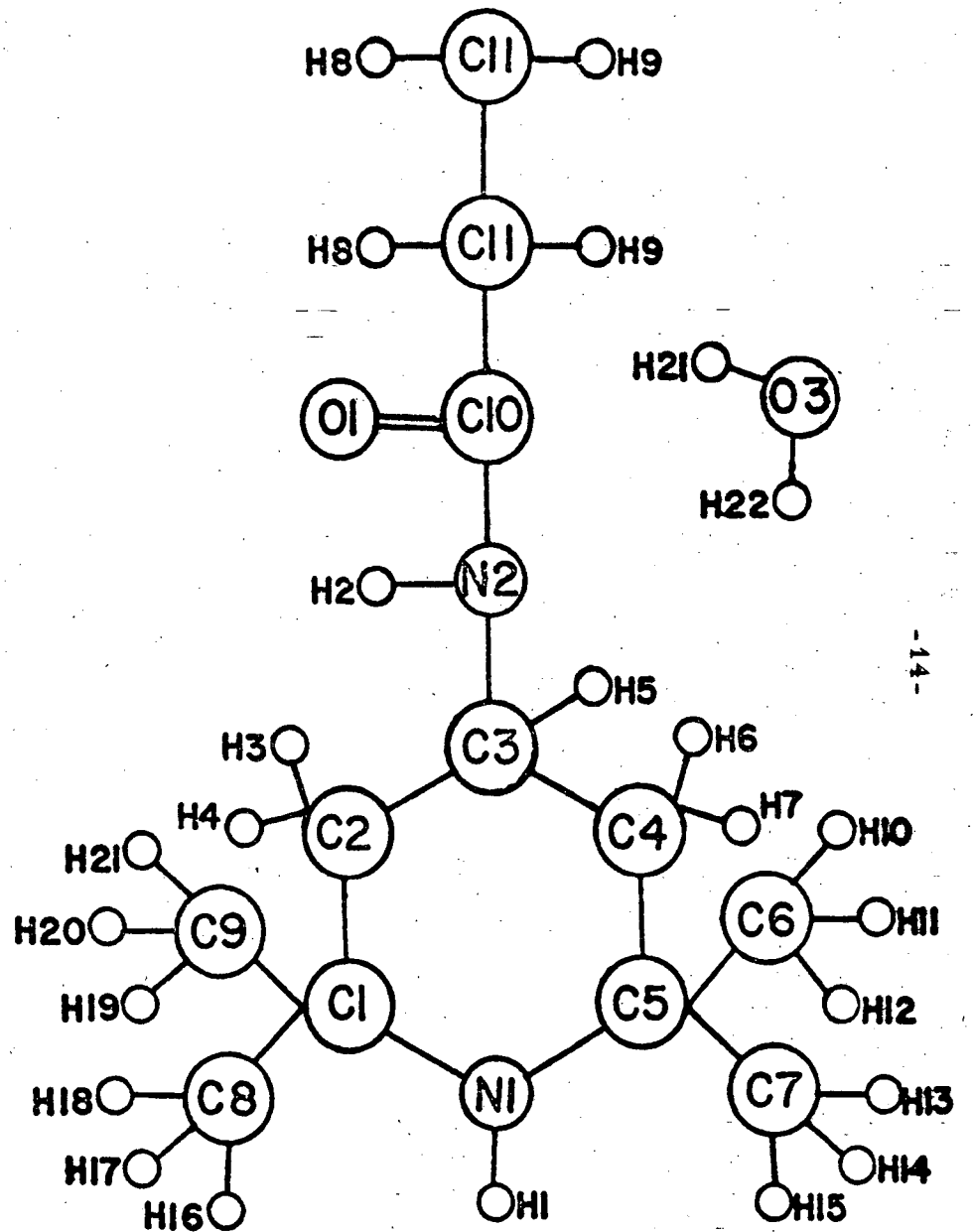
## Figure Captions

- Fig. 1. Atomic numbering scheme, showing half of each molecule. Centers of symmetry lie between C(11) and C(22) pairs.
- Fig. 2. Stereoscopic view of Molecule II.
- Fig. 3. Stereoscopic view of a unit cell showing the packing.
- Fig. 4. Schematic diagram of the hydrogen bonding.



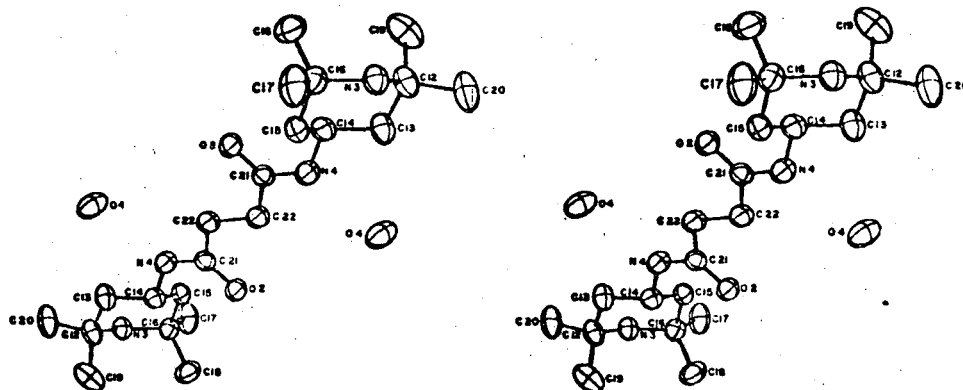


XBL 713-576



XBL 713-579

Fig. 1.



MBL 743-963

Fig. 2.

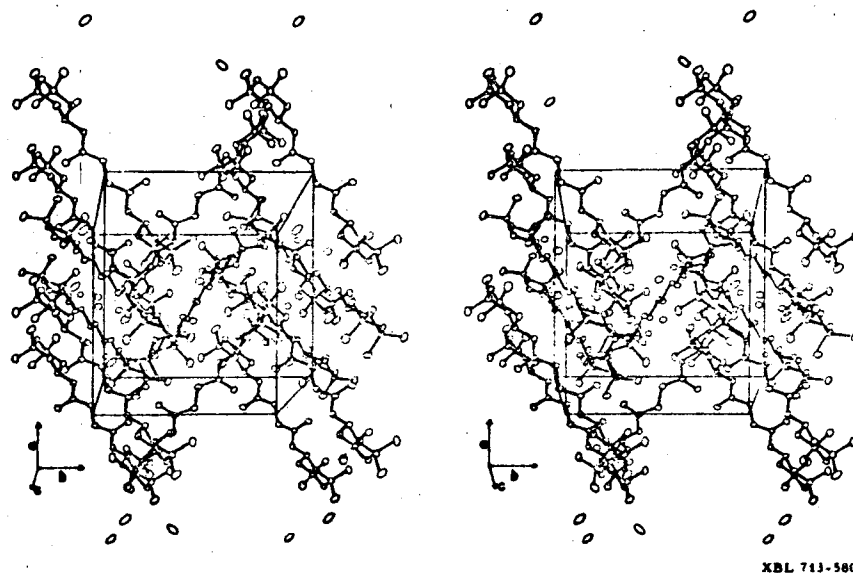
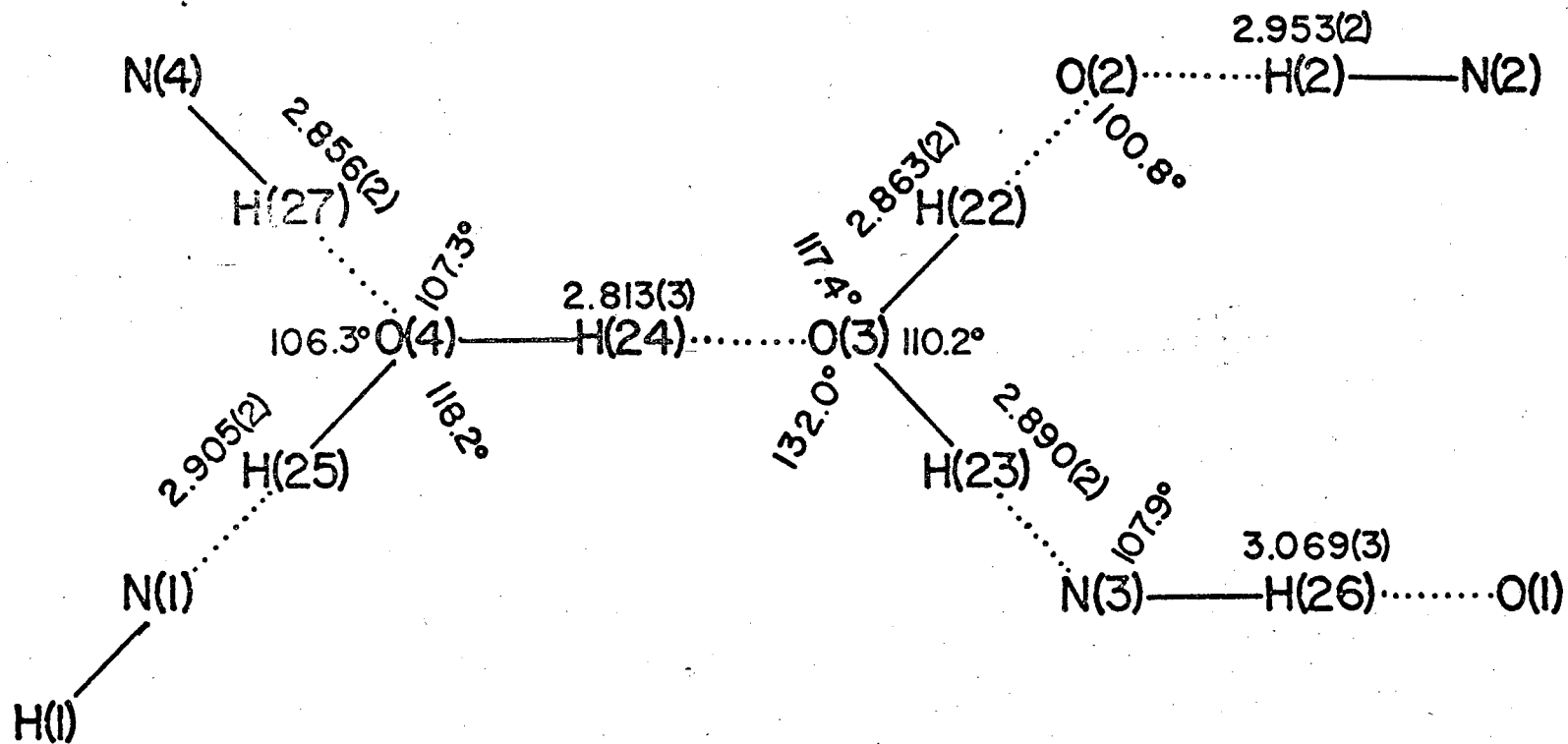


Fig. 3.



XBL 729-1871

Fig. 4.

## Supplementary Table

N,N'-Bis(2,2,6,6-tetramethylpiperidyl-4)succinic  
acid diamide dihydrate\*

By Helena Ruben, Allan Zalkin and David H. Templeton

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Abstract.  $C_{22}H_{42}O_2N_4 \cdot 2H_2O$  crystallizes in the monoclinic space group  $P2_1/c$  with cell dimensions  $\underline{a} = 13.069(6)$ ,  $\underline{b} = 13.029(6)$ ,  $\underline{c} = 15.658(6)$  Å,  $\beta = 99.96(5)^\circ$ ,  $Z = 4$ ,  $d_x = 1.09$  g cm<sup>-3</sup>. The unit cell contains two crystallographically different molecules, each of which is on a center of symmetry. Any geometrical differences of the two chemically identical molecules can be explained by hydrogen bonding and packing.

\* Research performed under the auspices of the U.S.  
Atomic Energy Commission.

OBSERVED STRUCTURE FACTORS, STANDARD DEVIATIONS, AND DIFFERENCES (X 6.1) FOR  
 $N_2N'$ -BIS(1-OXYL-2,2,6,6-TETRAMETHYL-PIPERIDYL)-SUCCINYL AMID F(0,0,0) = 5807

FOB AND FCA ARE THE OBSERVED AND CALCULATED STRUCTURE FACTORS.  
 SG = ESTIMATED STANDARD DEVIATION OF FOB. DEL = /FOB/ - /FCA/.  
 \* INDICATES ZERO WEIGHTED DATA.

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
H,K=	0,	0		7	94	3	-3	5	119	3	2	9	55	2	7	7	13	2	2
2	300	8	-14	8	176	5	-3	6	10	3	-4	10	13	4	-5	8	30	1	-1
4	565	14	-11	9	145	4	-4	7	52	2	6	11	32	2	2	H,K=	0,	14	
6	37	1	15	10	10	9	9	8	97	3	-1	12	31	1	-1	0	49	1	2
8	187	5	-3	11	40	1	-1	9	32	1	1	13	0	7	-4*	1	2	6	0*
10	200	5	2	12	45	1	1	10	76	2	-1	14	6	8	-4*	2	18	1	4
12	56	2	-3	13	7	8	3*	11	81	2	4	H,K=	0,	10	3	18	2	-3	
14	86	2	-7	14	148	4	-1	12	63	2	-1	0	92	2	-12	4	18	3	0
16	30	1	4	15	4	7	2*	13	10	3	-0	1	40	1	0	5	8	9	1*
H,K=	0,	1		16	132	4	-2	14	16	2	-1	2	57	2	-5	6	8	9	1*
1	535	20	-51	17	9	3	2	15	35	1	4	3	152	4	2	H,K=	1,	0	
2	793	31	-71	H,K=	0,	4		16	20	1	3	4	8	6	-0	-16	62	2	-5
3	241	7	-0	0	39	1	3	H,K=	0,	7	5	5	52	2	-0	-14	52	2	-10
4	624	18	-25	1	180	5	3	1	142	4	1	6	28	2	1	-12	64	2	-5
5	138	4	-9	2	93	2	2	2	6	3	0	7	6	7	-3*	-10	168	4	-4
6	143	4	-0	3	211	6	6	3	28	3	4	8	24	1	2	-8	535	14	16
7	85	2	7	4	254	8	9	4	117	3	-2	9	59	2	4	-6	554	15	7
8	420	11	6	5	144	4	-4	5	35	2	-7	10	15	3	-8	-4	301	8	8
9	133	3	-9	6	30	1	6	6	12	3	7	11	76	2	-2	-2	351	9	-7
10	16	4	2	7	68	2	2	7	4	7	1*	12	5	6	-3*	0	210	5	-8
11	60	2	-7	8	55	2	-1	8	30	1	6	13	17	2	2	2	500	13	-12
12	45	1	4	9	15	1	-1	9	46	2	-4	H,K=	0,	11	4	450	11	-28	
13	19	4	2	10	47	1	-5	10	21	1	-2	1	9	9	9*	6	583	15	-3
14	21	1	3	11	41	3	1	11	9	3	3	2	10	2	0	8	37	1	13
15	20	2	-4	12	91	2	1	12	60	2	3	3	14	2	4	10	13	1	-1
16	25	2	-3	13	60	2	-1	13	39	1	-1	4	63	2	-6	12	76	2	-3
17	39	1	2	14	73	2	-2	14	7	8	6*	5	33	1	0	14	94	2	-1
H,K=	0,	2		15	72	2	-0	15	38	2	-1	6	5	11	2*	16	54	2	4
0	602	15	-46	16	23	1	-0	H,K=	0,	8	7	50	2	1	H,K=	1,	1		
1	425	13	-15	17	9	4	-0	0	10	3	4	8	32	1	3	-17	21	2	-2
2	552	18	-24	H,K=	0,	5		1	100	3	10	9	23	2	-0	-16	12	4	-1
3	82	2	3	1	26	1	-1	2	257	7	-4	10	68	3	-2	-15	60	2	-5
4	92	3	6	2	248	7	1	3	95	2	2	11	10	3	-0	-14	35	1	1
5	17	2	12	3	156	4	9	4	187	5	-4	12	45	2	-3	-13	33	2	-4
6	278	8	13	4	146	4	0	5	197	5	-1	H,K=	0,	12	-12	108	3	3	
7	158	5	13	5	36	3	11	6	16	1	14	0	127	3	3	-11	41	1	-1
8	61	2	-3	6	181	6	6	7	91	3	-1	1	26	1	-1	-10	99	3	7
9	81	2	-2	7	11	1	2	8	76	2	-6	2	35	2	-1	-9	178	5	5
10	52	1	1	8	133	4	-9	9	150	4	-4	3	92	3	-4	-8	15	2	2
11	3	6	-0*	9	136	4	2	10	56	2	-1	4	7	9	-4*	-7	331	9	18
12	39	1	1	10	34	1	-2	11	20	1	2	5	17	1	3	-6	316	8	4
13	23	1	1	11	42	1	3	12	12	2	0	6	0	7	-2*	-5	195	5	-5
14	43	1	-2	12	144	4	-4	13	4	7	0*	7	16	2	-2	-4	287	7	9
15	15	2	-3	13	84	2	-1	14	21	1	1	8	0	6	-8*	-3	58	2	-0
16	22	1	5	14	79	2	1	H,K=	0,	9	9	25	1	3	-2	384	11	-4	
17	23	2	-2	15	45	1	1	1	161	4	-3	10	57	2	-1	-1	201	5	-7
H,K=	0,	3		16	58	2	2	2	74	2	1	H,K=	0,	13	0	32	1	-2	
1	309	8	3	H,K=	0,	6		3	59	2	1	1	16	2	1	1	262	10	-9
2	95	3	-2	0	241	6	6	4	147	4	-7	2	85	2	-2	2	173	6	0
3	292	9	1	1	144	4	6	5	51	1	-1	3	44	2	3	3	557	19	-11
4	83	2	10	2	165	4	2	6	13	4	0	4	39	1	1	4	36	1	2
5	12	2	-5	3	144	4	15	7	101	3	-1	5	95	3	2	5	288	8	0
6	181	5	13	4	179	5	-8	8	37	2	0	6	60	2	-0	6	217	6	13

OBSERVED STRUCTURES FACTORS (CONT) FOR  
N,N'-BIS(1-OXYL-2,2,6,6-TETRAMETHYL-PIPERIDYL)-SUCCINYL AMID

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
7	295	8	2	-8	49	1	-5	13	99	3	2	2	28	2	5	-5	163	4	-2
8	205	6	2	-7	270	7	7	14	28	4	-2	3	7	8	-2*	-4	17	3	-5
9	13	2	-1	-6	17	2	4	15	56	2	0	4	167	4	-9	-3	228	6	0
10	85	2	-0	-5	55	2	-0	16	32	1	5	5	82	2	-6	-2	158	4	5
11	169	4	1	-4	167	5	2		H,K=	1,	5	6	125	4	-3	-1	29	1	2
12	19	1	-5	-3	23	1	-3	-16	0	7	-2*	7	128	3	-1	0	84	2	-2
13	24	1	0	-2	367	9	-28	-15	6	7	0*	8	6	4	3	1	59	2	-3
14	53	2	-2	-1	238	6	-1	-14	60	2	-3	9	34	1	-5	2	114	3	-2
15	49	2	1	0	507	16	-17	-13	126	3	-1	10	27	1	-1	3	182	5	-9
16	13	2	5	1	608	26	-38	-12	55	2	1	11	4	9	2*	4	95	2	6
17	29	1	0	2	103	4	9	-11	67	2	3	12	43	1	4	5	77	2	-1
	H,K=	1,	2	3	126	5	5	-10	94	2	-2	13	33	1	-5	6	114	3	0
-17	24	2	-1	4	87	3	-4	-9	55	2	-1	14	2	7	-7*	7	78	2	3
-16	0	7	-6*	5	99	4	5	-8	136	4	6	15	7	9	0*	8	138	4	5
-15	16	2	-1	6	198	6	12	-7	159	4	6		H,K=	1,	7	9	5	7	-3*
-14	16	2	-5	7	4	5	1*	-6	97	3	-6	-15	31	1	-0	10	175	5	2
-13	9	10	3*	8	53	3	4	-5	242	7	17	-14	39	1	-4	11	38	1	-1
-12	28	2	-3	9	153	4	1	-4	38	7	29	-13	37	1	1	12	28	1	-2
-11	81	2	-2	10	36	1	-4	-3	327	8	-7	-12	32	1	-2	13	22	1	2
-10	206	6	-4	11	178	5	8	-2	256	7	6	-11	71	2	-1	14	9	3	5
-9	92	2	-0	12	118	3	-3	-1	324	9	-14	-10	144	4	-4		H,K=	1,	9
-8	155	4	9	13	82	2	-3	0	233	6	-8	-9	21	2	5	-14	30	2	5
-7	184	5	3	14	4	7	2*	1	184	5	10	-8	49	1	0	-13	13	3	-3
-6	206	6	3	15	80	2	-2	2	61	2	-5	-7	90	2	1	-12	59	2	1
-5	439	13	-6	16	67	2	1	3	182	10	11	-6	162	4	0	-11	16	4	-3
-4	289	9	-8	17	4	6	-0*	4	46	2	5	-5	75	2	4	-10	132	4	-0
-3	244	8	1		H,K=	1,	4	5	142	4	-8	-4	24	1	15	-9	136	4	-2
-2	255	8	-8	-17	16	3	-3	6	37	1	6	-3	163	4	-6	-8	56	2	-1
-1	310	8	-15	-16	8	4	-4	7	15	2	3	-2	393	10	8	-7	43	2	-3
0	377	12	3	-15	30	2	-0	8	75	2	-2	-1	58	2	-2	-6	52	1	-1
1	196	7	2	-14	115	3	-4	9	117	3	-4	0	283	7	-8	-5	28	2	6
2	182	6	-11	-13	14	5	-1	10	72	2	5	1	43	1	1	-4	73	2	0
3	113	4	-2	-12	65	2	3	11	120	3	-6	2	306	8	-11	-3	19	1	-2
4	17	15	9	-11	81	3	1	12	87	3	-1	3	22	1	1	-2	23	1	-0
5	239	8	-1	-10	16	2	9	13	7	10	-5*	4	91	2	1	-1	73	2	-1
6	235	7	-13	-9	88	3	4	14	13	2	3	5	109	3	-8	0	107	3	3
7	251	7	-3	-8	30	10	7	15	41	1	-1	6	101	3	7	1	31	1	1
8	104	3	9	-7	4	6	-5*	16	9	3	6	7	7	8	3*	2	66	2	-4
9	83	2	4	-6	359	10	7		H,K=	1,	6	8	30	1	2	3	23	1	-5
10	84	2	-2	-5	185	5	-4	-16	52	1	-2	9	23	3	-1	4	130	3	-6
11	48	1	-1	-4	61	2	3	-15	38	1	0	10	9	3	-1	5	64	2	6
12	30	2	4	-3	275	8	6	-14	21	2	-2	11	6	8	-4*	6	36	2	1
13	205	5	-5	-2	22	1	-3	-13	64	2	-0	12	70	2	0	7	35	2	-2
14	62	2	-7	-1	245	6	12	-12	74	2	-1	13	9	10	-2*	8	64	2	-3
15	18	1	4	0	102	3	-6	-11	152	4	-3	14	56	2	-0	9	76	2	-2
16	23	1	2	1	492	16	-7	-10	131	3	4	15	10	3	9	10	14	4	2
17	60	2	-2	2	101	3	0	-9	138	4	-1		H,K=	1,	8	11	56	2	3
	H,K=	1,	3	3	25	1	3	-8	58	2	-7	-15	22	1	1	12	8	10	5*
-17	49	1	0	4	188	7	-15	-7	68	2	5	-14	33	1	3	13	21	2	-0
-16	8	9	5*	5	125	4	1	-6	342	10	-2	-13	61	2	3		H,K=	1,	10
-15	38	1	0	6	152	5	-2	-5	123	3	-1	-12	159	4	-8	-13	28	1	-2
-14	25	1	-0	7	31	2	-3	-4	130	3	19	-11	28	2	3	-12	15	2	-2
-13	14	2	1	8	33	1	-1	-3	201	5	-11	-10	121	3	2	-11	8	9	1*
-12	83	2	-8	9	69	2	-5	-2	267	7	3	-9	29	1	3	-10	67	2	-2
-11	156	4	5	10	180	5	-1	-1	79	2	7	-8	34	1	-4	-9	34	2	-3
-10	27	3	5	11	135	3	-5	0	82	2	0	-7	12	2	8	-8	9	4	5
-9	107	3	-1	12	81	2	-6	1	159	4	-3	-6	70	2	3	-7	90	2	-2

OBSERVED STRUCTURES FACTORS (CONT) FOR  
 N,N'-BIS(1-OXYL-2,2,6,6-TETRAMETHYL-PIPERIDYL)-SUCCINYL AMID

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	
-6	27	2	-1	2	18	3	2	16	25	2	-1	2	270	9	-20	-11	14	2	-1	
-5	68	2	5	3	15	2	2				H,K= 2,	1	3	156	6	0	-10	7	8	1*
-4	70	2	-0	4	48	1	-0	-17	38	1	-4	4	72	2	-5	-9	173	4	5	
-3	29	1	0	5	3	7	-0*	-16	29	1	3	5	234	7	9	-8	98	3	7	
-2	64	2	-1	6	67	2	1	-15	3	6	1*	6	150	4	3	-7	2	5	-4*	
-1	85	2	-0	7	80	2	2	-14	28	2	-5	7	166	5	-11	-6	18	1	2	
0	25	3	-5	8	14	5	7	-13	38	1	1	8	159	4	2	-5	161	4	-1	
1	43	1	1	9	30	1	-2	-12	10	4	1	9	50	2	2	-4	116	3	-6	
2	198	5	-3	10	37	1	-0	-11	66	2	-2	10	93	2	-1	-3	38	1	2	
3	193	5	0				H,K= 1,	13	-10	151	4	11	11	145	4	-1	-2	61	16	50
4	79	2	1	-8	19	2	2	-9	178	5	3	12	49	2	0	-1	145	4	7	
5	61	2	0	-7	58	2	3	-8	11	3	3	13	76	2	-1	0	391	12	-15	
6	109	3	-5	-6	61	2	4	-7	204	5	0	14	31	1	-3	1	176	6	-1	
7	53	2	-0	-5	63	2	7	-6	147	4	-27	15	30	2	-0	2	324	10	-3	
8	49	1	-0	-4	29	2	1	-5	19	1	2	16	17	1	1	3	16	1	8	
9	127	3	2	-3	11	2	1	-4	193	5	-0				H,K= 2,	3	4	63	2	8
10	41	2	1	-2	13	2	5	-3	55	2	2	-17	13	2	0	5	69	2	3	
11	29	3	-1	-1	49	2	-6	-2	85	2	3	-16	137	3	-3	6	138	5	-2	
12	35	1	3	0	75	2	-3	-1	125	3	-13	-15	66	2	5	7	69	2	1	
			H,K= 1,	11	1	71	2	-0	0	624	37	-32	-14	6	7	5*	8	63	2	5
-12	14	1	-1	2	5	8	-4*	1	207	8	0	-13	17	2	-2	9	44	2	-6	
-11	18	2	1	3	3	7	-0*	2	666	29	-26	-12	6	7	6*	10	22	2	-5	
-10	15	4	1	4	52	1	-3	3	569	20	-21	-11	67	2	-3	11	43	2	-5	
-9	32	1	-1	5	35	2	-3	4	97	3	6	-10	0	6	-9*	12	9	11	7*	
-8	10	3	-3	6	69	2	-1	5	49	1	6	-9	76	2	-1	13	19	5	-0	
-7	8	10	5*	7	31	1	1	6	138	4	3	-8	222	6	2	14	23	1	-1	
-6	87	2	-3	8	56	2	-1	7	106	3	5	-7	63	2	4	15	9	5	8	
-5	9	4	-2				H,K= 1,	14	8	53	2	-7	-6	265	9	-3	16	41	2	-3
-4	29	3	-2	-6	6	9	-1*	9	10	2	-10	-5	36	1	5					5
-3	72	2	-1	-5	9	3	0	10	18	3	4	-4	62	2	1	-16	0	7	-3*	
-2	60	2	-1	-4	14	5	5	11	78	2	4	-3	459	12	-15	-15	6	7	6*	
-1	86	2	-5	-3	15	2	-0	12	84	2	-4	-2	196	5	22	-14	94	3	0	
0	53	1	-1	-2	13	4	-2	13	69	2	-1	-1	157	4	2	-13	59	2	0	
1	49	1	-2	-1	10	2	1	14	20	1	1	0	808	40	-47	-12	67	2	-1	
2	150	4	-1	0	36	1	-1	15	7	9	-0*	1	175	6	-6	-11	84	3	2	
3	49	2	-0	1	10	7	-1	16	36	1	0	2	55	14	17	-10	19	2	1	
4	160	5	-0	2	31	2	-0	17	55	1	0	3	551	22	-19	-9	12	2	8	
5	30	2	5	3	41	2	-2				H,K= 2,	2	4	48	2	2	-8	38	2	-2
6	9	3	-0	4	20	1	-1	-17	49	1	3	5	84	3	-3	-7	2	5	-6*	
7	50	1	1	5	8	2	5	-16	68	2	-4	6	29	1	-1	-6	106	3	7	
8	0	9	-2*				H,K= 2,	0	-15	41	2	-1	7	176	5	0	-5	51	1	4
9	74	2	0	-16	82	2	-9	-14	94	3	-6	8	165	4	-11	-4	228	6	18	
10	47	2	2	-14	84	2	-9	-13	28	1	5	9	10	10	1*	-3	358	9	-13	
11	8	9	-0*	-12	79	2	-3	-12	59	2	1	10	268	7	-10	-2	325	8	-3	
			H,K= 1,	12	-10	224	6	-6	-11	38	2	6	11	44	2	-7	-1	10	2	-2
-10	78	2	3	-8	441	11	8	-10	38	1	-3	12	131	3	4	0	128	3	3	
-9	24	2	-5	-6	30	1	1	-9	39	2	-4	13	1	7	-3*	1	328	10	1	
-8	9	10	1*	-4	516	13	11	-8	139	4	2	14	77	2	-0	2	244	7	6	
-7	35	2	1	-2	987	49-103	-7	104	3	8	15	13	4	3	3	4	48	2	11	
-6	15	5	3	0	818	36	-66	-6	25	3	-7	16	16	4	-1	4	16	2	-0	
-5	54	2	0	2	69	2	7	-5	183	5	14				H,K= 2,	4	5	6	6	4*
-4	38	2	1	4	175	4	-6	-4	241	6	-7	-17	27	1	2	6	59	2	4	
-3	30	4	-5	6	26	1	-1	-3	235	7	3	-16	14	5	2	7	86	2	3	
-2	14	2	-0	8	27	1	8	-2	234	6	-7	-15	36	1	2	8	91	2	9	
-1	121	3	2	10	72	2	4	-1	957	44	-80	-14	105	3	3	9	43	1	2	
0	14	3	0	12	104	3	5	0	652	32	-31	-13	32	1	-2	10	96	2	-3	
1	27	1	-0	14	62	2	-0	1	844	64	-51	-12	65	2	-0	11	148	4	-3	



OBSERVED STRUCTURES FACTORS (CONT) FOR  
N,N'-BIS(1-OXYL-2,2,6,6-TETRAMETHYL-PIPERIDYL)-SUCCINYL AMID

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
12	79	3	-5	3	39	2	3	-2	9	11	7*	1	147	4	-3	0	45	2	1
13	84	2	2	4	96	2	-2	-1	60	2	-1	2	62	2	-4	1	0	8	-2*
14	114	3	1	5	7	7	4*	0	90	2	6	3	158	4	-0	2	66	3	-1
15	21	1	-0	6	85	2	5	1	56	2	2	4	12	3	2	3	21	3	-2
16	28	1	-1	7	134	3	-4	2	10	3	-1	5	107	3	1	4	27	2	-5
	H,K=	2,	6	8	20	3	-4	3	102	3	1	6	20	1	3	5	28	2	1
-16	60	2	1	9	45	2	-1	4	13	4	1	7	20	3	-1		H,K=	3,	0
-15	4	7	3*	10	23	1	6	5	135	3	1	8	57	2	0	-16	16	3	-7
-14	37	1	-1	11	37	1	-3	6	57	2	-5	9	68	2	1	-14	91	2	9
-13	37	1	-2	12	58	2	-2	7	13	2	-4	10	32	1	3	-12	7	8	3*
-12	18	3	-1	13	51	2	-1	8	65	2	6	11	37	1	1	-10	107	3	8
-11	100	3	3	14	64	3	2	9	7	8	1*		H,K=	2,	12	-8	519	13	15
-10	56	2	-1	15	7	8	-1*	10	99	3	-1	-10	33	1	3	-6	175	4	21
-9	16	1	-4		H,K=	2,	8	11	12	5	-3	-9	31	2	1	-4	146	4	9
-8	87	2	-2	-15	34	1	0	12	26	1	2	-8	8	10	5*	-2	57	2	0
-7	34	1	-3	-14	32	1	-1	13	20	3	4	-7	39	1	-1	0	193	5	15
-6	28	1	1	-13	61	2	1		H,K=	2,	10	-6	46	2	2	2	215	6	10
-5	31	1	18	-12	9	10	-1*	-13	23	3	-1	-5	36	2	3	4	64	2	7
-4	304	8	5	-11	50	2	-2	-12	16	3	2	-4	6	10	-3*	6	356	9	-19
-3	90	2	1	-10	35	2	1	-11	28	1	-4	-3	23	1	2	8	67	2	-4
-2	107	3	1	-9	71	2	2	-10	98	3	-3	-2	116	3	-2	10	72	2	-1
-1	121	3	11	-8	15	5	0	-9	20	1	2	-1	19	3	-0	12	60	2	-1
0	366	10	7	-7	80	2	9	-8	41	2	2	0	30	2	5	14	158	4	-3
1	241	7	-3	-6	96	2	7	-7	0	7	-5*	1	94	2	3	16	48	1	-0
2	192	6	-11	-5	68	2	2	-6	12	3	-1	2	60	2	-3		H,K=	3,	1
3	148	4	-7	-4	111	3	5	-5	104	3	0	3	12	4	-1	-17	7	7	5*
4	129	3	5	-3	125	3	-7	-4	32	2	-0	4	25	1	2	-16	21	2	2
5	31	1	-1	-2	40	1	2	-3	47	2	0	5	21	3	2	-15	88	2	-5
6	15	3	13	-1	33	1	-3	-2	114	3	4	6	32	2	1	-14	8	9	-4*
7	92	2	0	0	19	2	5	-1	126	3	-7	7	34	2	4	-13	6	12	3*
8	47	1	2	1	75	2	0	0	119	3	1	8	16	2	2	-12	129	3	11
9	40	1	4	2	270	7	5	1	121	3	-1	9	39	1	1	-11	137	4	-3
10	136	3	-2	3	22	4	3	2	97	3	1		H,K=	2,	13	-10	2	6	-6*
11	122	3	3	4	73	2	-2	3	111	3	-5	-8	28	3	8	-9	112	3	-7
12	58	2	1	5	22	2	1	4	169	5	-1	-7	51	1	0	-8	182	5	14
13	17	3	-2	6	13	2	1	5	183	5	-5	-6	17	2	3	-7	248	6	9
14	9	9	3*	7	79	2	-1	6	78	2	0	-5	53	1	1	-6	347	9	-15
15	15	1	1	8	21	1	-1	7	7	7	-2*	-4	5	7	4*	-5	317	8	6
	H,K=	2,	7	9	7	8	-0*	8	4	7	-4*	-3	31	2	4	-4	135	3	8
-15	38	1	2	10	61	2	-2	9	157	5	-2	-2	44	1	-1	-3	338	9	-11
-14	20	2	4	11	17	2	1	10	6	9	4*	-1	16	2	-2	-2	157	4	9
-13	109	3	-2	12	21	2	3	11	69	2	0	0	28	2	1	-1	289	7	15
-12	53	2	3	13	25	1	-0	12	33	1	1	1	26	1	0	0	57	2	0
-11	25	2	-0	14	10	2	-2		H,K=	2,	11	2	25	2	1	1	98	3	11
-10	9	9	-5*		H,K=	2,	9	-12	38	1	-0	3	31	2	1	2	426	11	-12
-9	134	3	-3	-14	34	1	-1	-11	13	2	6	4	7	9	3*	3	278	7	-1
-8	120	3	2	-13	22	2	2	-10	9	3	3	5	88	2	-1	4	0	7	-2*
-7	48	2	-4	-12	11	10	1	-9	57	2	3	6	60	2	1	5	50	1	-4
-6	26	1	-4	-11	11	3	7	-8	15	3	-3	7	60	2	1	6	159	4	-3
-5	132	3	-5	-10	24	1	-4	-7	4	7	-0*	8	18	3	-1	7	155	4	1
-4	140	4	-0	-9	52	2	-6	-6	11	3	3		H,K=	2,	14	8	51	1	-3
-3	8	4	6	-8	129	3	-4	-5	41	1	-1	-6	9	4	5	9	74	2	0
-2	103	3	8	-7	11	3	1	-4	76	2	-8	-5	45	1	2	10	13	6	-1
-1	66	2	8	-6	70	2	4	-3	10	3	3	-4	53	2	1	11	148	4	6
0	65	2	2	-5	83	2	-3	-2	65	2	-5	-3	20	1	1	12	29	2	-2
1	173	4	4	-4	30	2	0	-1	16	2	-0	-2	12	2	1	13	6	9	1*
2	108	3	3	-3	42	2	1	0	66	2	2	-1	39	1	1	14	57	2	1

OBSERVED STRUCTURES FACTORS (CONT) FOR  
N,N'-BIS(1-OXYL-2,2,6,6-TETRAMETHYL-PIPERIDYL)-SUCCINYL AMID

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
15	15	3	6	2	25	1	1	-10	155	4	8	14	31	2	4	8	82	2	-0
16	25	2	1	3	37	1	4	-9	85	2	1	15	45	1	1	9	96	3	-3
	H,K=	3,	2	4	564	14	-19	-8	63	2	4		H,K=	3,	7	10	121	3	-2
-17	20	1	1	5	225	6	-7	-7	25	1	-0	-15	81	2	-1	11	76	2	3
-16	10	5	7	6	111	3	0	-6	33	1	0	-14	19	2	-4	12	28	2	2
-15	0	8	-8*	7	32	1	-1	-5	90	2	0	-13	29	1	4	13	9	5	-0
-14	25	2	8	8	88	2	-2	-4	116	3	-11	-12	55	2	0		H,K=	3,	9
-13	71	2	-1	9	106	3	-1	-3	628	16	3	-11	77	2	-1	-14	20	2	5
-12	26	2	2	10	10	3	-4	-2	322	8	-3	-10	268	7	-11	-13	97	3	3
-11	11	3	-1	11	177	5	-2	-1	155	4	4	-9	73	2	0	-12	17	2	-0
-10	72	2	-1	12	104	3	-2	0	202	5	4	-8	107	3	-5	-11	39	2	2
-9	332	8	4	13	62	2	-1	1	184	5	-2	-7	18	2	1	-10	97	3	-2
-8	212	5	14	14	19	5	5	2	51	1	2	-6	8	4	-1	-9	58	2	-1
-7	75	2	2	15	24	2	4	3	87	2	9	-5	11	3	9	-8	24	2	1
-6	201	5	0	16	65	2	-0	4	29	1	2	-4	63	2	-0	-7	63	2	-1
-5	344	9	4		H,K=	3,	4	5	86	2	5	-3	145	4	5	-6	32	2	1
-4	99	3	8	-17	9	3	-4	6	56	2	-7	-2	103	3	-14	-5	45	1	5
-3	313	8	-8	-16	21	2	2	7	52	1	1	-1	111	3	7	-4	31	1	-1
-2	115	3	3	-15	0	8	-0*	8	23	2	0	0	48	1	-2	-3	119	3	2
-1	298	8	-6	-14	35	3	0	9	14	3	1	1	185	5	0	-2	63	2	0
0	72	2	-1	-13	32	1	4	10	92	2	2	2	41	1	-1	-1	32	1	3
1	136	3	-4	-12	21	2	4	11	82	2	4	3	105	3	6	0	41	1	1
2	145	4	-6	-11	162	4	3	12	10	4	-2	4	30	1	-0	1	177	5	-6
3	271	7	-17	-10	98	3	0	13	78	2	0	5	22	1	7	2	20	1	3
4	362	9	-4	-9	7	7	-3*	14	22	1	-1	6	31	1	3	3	7	8	5*
5	41	1	-2	-8	136	3	6	15	53	2	-5	7	58	2	-0	4	91	2	3
6	149	4	5	-7	324	8	4		H,K=	3,	6	8	28	3	4	5	18	2	6
7	56	2	-2	-6	16	1	-1	-16	24	2	-0	9	101	3	-0	6	48	2	-2
8	4	7	-9*	-5	257	7	3	-15	29	1	-4	10	11	3	11	7	54	2	2
9	159	4	0	-4	167	4	-4	-14	35	1	1	11	20	5	-0	8	51	2	-0
10	75	2	1	-3	401	10	22	-13	72	2	6	12	55	2	-3	9	130	3	4
11	218	6	-0	-2	333	8	17	-12	183	5	-1	13	58	2	0	10	37	2	0
12	91	3	-1	-1	226	6	-5	-11	83	2	11	14	39	1	-1	11	13	3	-1
13	55	2	3	0	70	2	6	-10	0	9	-3*		H,K=	3,	8	12	13	3	-2
14	42	2	2	1	331	8	-10	-9	82	2	-1	-15	37	1	3	13	62	2	2
15	19	2	3	2	4	5	3*	-8	17	2	-1	-14	62	2	-1		H,K=	3,	10
16	27	1	5	3	95	2	2	-7	187	5	9	-13	50	2	-2	-13	16	2	-2
	H,K=	3,	3	4	164	4	9	-6	37	2	4	-12	95	3	0	-12	24	2	2
-17	0	8	-1*	5	236	6	-9	-5	175	4	9	-11	31	1	3	-11	20	2	5
-16	30	2	-3	6	151	4	-5	-4	170	4	-9	-10	81	2	-0	-10	8	9	2*
-15	36	1	0	7	179	5	-10	-3	53	2	3	-9	16	2	2	-9	13	4	8
-14	31	1	-4	8	76	2	4	-2	114	3	8	-8	99	3	-3	-8	48	2	-1
-13	46	2	-1	9	91	2	-1	-1	71	2	-0	-7	10	3	3	-7	22	2	2
-12	75	2	-0	10	84	2	2	0	234	6	-12	-6	103	3	-2	-6	58	2	0
-11	170	4	-2	11	28	3	3	1	61	2	-11	-5	99	3	-3	-5	76	2	-4
-10	99	3	1	12	114	3	6	2	46	1	6	-4	27	2	-12	-4	17	3	5
-9	140	4	-3	13	59	2	0	3	161	4	-3	-3	31	1	2	-3	56	2	-6
-8	85	2	6	14	19	2	-6	4	8	4	4	-2	33	1	5	-2	94	2	3
-7	212	5	11	15	12	2	10	5	100	3	-1	-1	96	3	-12	-1	9	6	2
-6	299	8	17	16	18	1	-2	6	86	2	-2	0	200	5	-6	0	22	4	3
-5	167	4	1		H,K=	3,	5	7	33	1	-7	1	237	6	1	1	63	2	-4
-4	75	2	8	-16	39	1	-0	8	13	2	-2	2	106	3	-5	2	12	3	0
-3	492	13	-12	-15	21	2	4	9	9	12	8*	3	11	2	8	3	131	3	-6
-2	63	2	3	-14	53	2	5	10	152	4	2	4	11	3	11	4	114	3	-5
-1	322	8	-2	-13	90	3	-1	11	12	3	4	5	79	2	4	5	65	2	-4
0	71	2	-9	-12	55	2	1	12	76	2	1	6	30	2	4	6	227	6	0
1	26	1	-2	-11	42	1	1	13	10	5	7	7	44	1	-5	7	53	2	1

OBSERVED STRUCTURE FACTORS (CONT) FOR  
N,N'-BIS(1-OXYL-2,2,6,6-TETRAMETHYL-PIPERIDYL)-SUCCINYL AMID

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
8	112	3	4	-2	74	2	1	0	23	1	4	-13	21	2	-1	10	129	3	-5
9	57	2	-1	-1	10	12	8*	1	171	4	5	-12	63	2	4	11	11	3	0
10	9	12	4*	0	6	15	5*	2	305	8	0	-11	8	4	7	12	39	2	4
11	55	2	5	1	87	2	3	3	405	10	-14	-10	19	2	5	13	10	3	3
12	22	1	1	2	54	2	2	4	30	1	-0	-9	164	4	3	14	1	7	-2*
	H,K=	3,	11	3	11	3	-4	5	254	6	-7	-8	48	1	7	15	1	8	-2*
-12	39	1	-2	4	41	1	-2	6	98	3	8	-7	398	10	-7	H,K=	4,	4	5
-11	6	7	4*	5	36	2	-2	7	34	1	2	-6	21	1	13	-16	9	6	5
-10	8	9	-10*	6	74	2	0	8	29	1	8	-5	70	2	-4	-15	33	1	1
-9	19	2	2	7	13	2	-5	9	153	4	-2	-4	327	8	20	-14	82	2	-2
-8	82	2	-0	H,K=	3,	14	10	185	5	-0	-3	201	5	-4	-13	25	2	1	1
-7	33	2	1	-5	25	1	4	11	35	1	4	-2	205	5	-2	-12	20	2	3
-6	0	9	-6*	-4	36	1	5	12	21	2	3	-1	38	1	2	-11	221	6	4
-5	71	2	5	-3	12	2	2	13	7	7	4*	0	463	12	10	-10	16	5	6
-4	19	2	-0	-2	34	1	3	14	45	1	-3	1	78	2	-5	-9	162	4	0
-3	5	7	5*	-1	35	1	-2	15	13	2	4	2	163	4	13	-8	119	3	3
-2	11	5	6	0	31	1	3	16	14	2	2	3	425	11	-5	-7	33	1	1
-1	60	2	-3	1	7	8	-3*	H,K=	4,	2	4	99	3	-8	-6	58	2	3	3
0	140	4	1	2	7	8	1*-17	10	11	10*	5	179	5	1	-5	20	1	-7	17
1	0	9	-0*	3	42	1	-2	-16	10	3	6	6	12	2	0	-4	242	6	5
2	101	3	-2	4	30	2	3	-15	52	2	5	7	8	4	1	-3	74	2	5
3	15	3	3	H,K=	4,	0	-14	51	2	1	8	75	2	9	-2	172	4	13	13
4	75	3	-2	-16	99	3	-6	-13	0	9	-10*	9	21	2	-5	-1	207	5	4
5	73	2	-1	-14	34	1	1	-12	3	9	3*	10	314	8	-6	0	91	2	9
6	35	1	0	-12	166	4	6	-11	72	2	2	11	95	3	-0	1	457	12	-14
7	116	3	1	-10	48	1	-3	-10	51	1	2	12	14	8	4	2	134	3	-11
8	123	3	5	-8	156	4	-9	-9	140	4	7	13	86	2	5	3	161	4	-1
9	16	2	2	-6	516	13	12	-8	16	5	-2	14	15	2	-2	4	7	5	4
10	5	7	-3*	4	244	6	9	-7	188	5	0	15	42	1	2	5	80	2	-7
	H,K=	3,	12	-2	95	2	-5	-6	128	3	-11	H,K=	4,	4	4	6	10	3	2
-10	27	4	-3	0	18	1	-2	-5	110	3	10	-17	5	7	1*	7	72	2	2
-9	47	1	-3	2	116	3	3	-4	110	3	7	-16	19	2	-0	8	79	2	5
-8	18	4	7	4	589	15	2	-3	424	11	-1	-15	21	2	-4	9	134	3	1
-7	22	2	-5	6	344	9	-7	-2	91	2	2	-14	15	2	3	10	45	1	-0
-6	39	2	-1	8	101	3	8	-1	322	8	2	-13	28	2	-2	11	8	7	-6
-5	48	2	-0	10	218	6	-0	0	31	1	-2	-12	14	3	-2	12	158	4	-1
-4	15	3	4	12	240	6	0	1	119	3	-9	-11	58	2	-5	13	29	1	-2
-3	41	2	-3	14	35	2	7	2	358	9	-6	-10	23	1	-3	14	52	2	0
-2	56	2	3	16	20	1	2	3	126	3	3	-9	186	5	-5	15	22	3	-0
-1	20	2	-1	H,K=	4,	1	4	153	4	1	-8	7	5	-2	H,K=	4,	4	6	6
0	38	3	4	-17	66	2	-2	5	373	9	4	-7	57	2	4	-16	76	2	0
1	10	6	7	-16	26	2	0	6	145	4	8	-6	91	2	-7	-15	67	2	4
2	26	2	2	-15	90	2	6	7	75	2	-4	-5	33	1	4	-14	26	2	1
3	112	3	2	-14	68	2	-7	8	8	4	-4	-4	160	4	4	-13	89	2	2
4	33	2	-1	-13	77	2	-3	9	12	3	-0	-3	369	9	-1	-12	0	9	-3*
5	46	1	-6	-12	106	3	6	10	169	4	-2	-2	31	1	-2	-11	41	2	-0
6	51	2	-3	-11	140	4	-2	11	204	5	1	-1	110	3	5	-10	93	2	1
7	29	1	3	-10	53	1	-4	12	114	3	-2	0	109	3	4	-9	52	2	9
8	0	8	-3*	-9	35	1	2	13	88	2	-2	1	145	4	-10	-8	77	2	2
9	16	2	-4	-8	12	2	6	14	33	1	6	2	262	7	3	-7	50	1	-4
	H,K=	3,	13	-7	214	5	8	15	7	8	-5*	3	182	5	-10	-6	181	5	6
-8	22	1	6	-6	173	4	0	16	13	3	1	4	99	3	6	-5	41	2	6
-7	58	2	6	-5	161	4	13	H,K=	4,	3	5	5	6	-4*	-4	95	2	-8	-8
-6	8	8	6*	-4	289	7	-5	-17	0	11	-12*	6	49	1	-3	-3	144	4	0
-5	12	4	0	-3	314	8	7	-16	24	1	-3	7	10	3	4	-2	45	1	4
-4	20	2	-5	-2	184	5	3	-15	50	2	-6	8	40	1	-3	-1	132	3	9
-3	18	2	-4	-1	213	5	-8	-14	97	3	-3	9	103	3	-6	0	330	8	-4

OBSERVED STRUCTURE FACTORS (CONT) FOR  
 N,N'-BIS(1-OXYL-2,2,6,6-TETRAMETHYL-PIPERIDYL)-SUCCINYL AMID

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
1	90	2	4	-4	95	2	-6	-3	57	2	2	8	9	5	8	-4	137	3	10
2	33	1	1	-3	0	7	-9*	-2	178	5	-5	H,K=	4, 13	-3	191	5	6		
3	139	4	7	-2	46	2	-7	-1	115	3	-4	-8	21	2	4	-2	141	4	17
4	39	1	-8	-1	85	2	-6	0	20	2	4	-7	0	7	-1*	-1	61	2	5
5	37	2	-6	0	66	2	0	1	282	7	-3	-6	16	2	-2	0	185	5	-1
6	117	3	4	1	55	2	1	2	55	2	4	-5	6	8	-7*	1	52	1	2
7	47	1	2	2	36	1	-5	3	32	3	-0	-4	20	2	1	2	0	5	-17*
8	28	2	4	3	18	2	-3	4	25	4	6	-3	0	9	-3*	3	229	6	6
9	28	1	2	4	138	4	-9	5	18	2	-2	-2	16	3	4	4	40	1	2
10	66	2	8	5	31	1	-1	6	25	2	1	-1	11	4	8	5	165	4	1
11	25	2	5	6	94	2	-6	7	51	2	0	0	60	2	-3	6	101	3	-8
12	16	2	-4	7	54	2	1	8	34	1	-1	1	4	7	3*	7	15	2	-4
13	42	1	-1	8	123	3	-5	9	74	2	1	2	35	1	0	8	144	4	8
14	76	2	-1	9	119	4	2	10	14	2	-1	3	28	2	-3	9	11	3	3
	H,K=	4,	7	10	38	1	-0	11	4	11	-1*	4	78	2	1	10	115	3	2
-15	62	2	-3	11	12	3	4	H,K=	4,	11	5	19	2	5	11	187	5	-2	
-14	20	2	1	12	24	2	8	-11	4	8	1*	6	21	1	1	12	29	2	-2
-13	6	9	5*	13	57	2	-0	-10	33	1	1	H,K=	4,	14	13	25	1	-2	
-12	33	2	3	H,K=	4,	9	-9	-9	26	2	-5	-4	23	2	-4	14	30	1	-0
-11	11	5	0	-14	0	11	-3*	-8	26	2	7	-3	10	4	2	15	5	11	-2*
-10	98	3	-6	-13	21	1	0	-7	27	1	6	-2	16	2	3	H,K=	5,	2	
-9	52	2	1	-12	48	1	2	-6	25	2	-2	-1	17	2	5	-17	14	2	-0
-8	25	1	1	-11	23	2	3	-5	26	1	-2	0	7	7	-3*	-16	33	1	4
-7	61	2	2	-10	34	1	2	-4	12	4	-11	1	28	1	2	-15	41	2	4
-6	62	2	-3	-9	36	1	3	-3	44	2	-4	2	30	2	2	-14	16	3	5
-5	25	1	-3	-8	0	9	-11*	-2	57	2	-3	3	41	1	-1	-13	82	2	-2
-4	73	2	4	-7	10	23	-10*	-1	99	3	-3	H,K=	5,	0	-12	145	4	0	
-3	125	3	0	-6	26	2	3	0	81	2	-1	-16	87	2	9	-11	133	3	6
-2	179	5	-3	-5	14	2	1	1	18	5	-2	-14	90	2	-2	-10	37	2	-3
-1	54	2	5	-4	79	2	0	2	103	3	4	-12	77	2	-2	-9	231	6	6
0	24	2	-4	-3	109	3	-4	3	9	4	2	-10	37	1	-1	-8	84	2	3
1	7	4	7	-2	63	2	-2	4	103	3	4	-8	73	2	5	-7	68	2	4
2	56	2	-2	-1	109	3	-1	5	61	2	3	-6	19	1	6	-6	75	2	-3
3	18	1	-1	0	65	2	3	6	88	2	-3	-4	32	1	-1	-5	242	6	9
4	157	4	6	1	89	2	-0	7	18	2	-2	-2	288	7	-0	-4	88	2	-0
5	40	1	-0	2	64	2	2	8	33	2	4	0	267	7	-4	-3	77	2	2
6	14	3	3	3	29	1	2	9	16	5	5	2	9	2	-8	-2	161	4	3
7	155	4	1	4	81	2	-1	10	12	3	-1	4	578	15	12	-1	153	4	-5
8	58	2	1	5	33	1	4	H,K=	4,	12	6	41	2	-6	0	347	9	-9	
9	133	3	6	6	51	2	-1	-10	20	2	-1	8	40	1	-4	1	223	6	2
10	26	2	0	7	42	1	4	-9	5	11	1*	10	149	4	-1	2	338	9	-3
11	28	1	4	8	99	3	1	-8	17	2	-0	12	208	5	-7	3	41	1	2
12	55	3	-0	9	19	2	-2	-7	22	1	-3	14	52	2	6	4	214	5	5
13	66	2	-0	10	24	2	2	-6	18	2	-8	H,K=	5,	1	5	126	3	6	
14	73	2	-0	11	13	8	3	-5	4	9	-0*	-17	28	1	4	6	137	3	-5
	H,K=	4,	8	12	14	10	-0	-4	41	2	1	-16	26	1	-0	7	46	1	-4
-15	7	10	1*	H,K=	4,	10	-3	8	9	0*	-15	7	9	3*	8	69	2	-5	
-14	14	6	-3	-13	54	2	-0	-2	56	2	-5	-14	79	2	-7	9	36	1	-8
-13	31	2	1	-12	47	1	-2	-1	24	2	1	-13	137	4	1	10	105	3	2
-12	22	2	1	-11	18	2	1	0	41	2	6	-12	81	2	6	11	27	3	2
-11	45	2	-3	-10	9	7	-4	1	0	9	-4*	-11	122	3	3	12	23	2	6
-10	29	1	7	-9	41	2	5	2	50	2	1	-10	162	4	-0	13	18	2	2
-9	55	2	4	-8	23	4	9	3	58	2	-0	-9	99	3	-3	14	47	2	-2
-8	43	2	-2	-7	28	1	3	4	60	2	-4	-8	251	6	6	15	16	2	3
-7	69	2	2	-6	67	2	4	5	96	3	0	-7	145	4	0	H,K=	5,	3	
-6	93	2	0	-5	25	2	-6	6	0	8	-2*	-6	44	1	0	-17	19	2	1
-5	46	1	-1	-4	31	1	2	7	0	7	-7*	-5	25	1	-6	-16	51	2	-2

OBSERVED STRUCTURES FACTORS (CONT) FOR  
N,N'-BIS(1-OXYL-2,2,6,6-TETRAMETHYL-PIPERIDYL)-SUCCINYL AMID

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-15	8	9	4*	8	51	2	-1	1	133	3	1	-2	11	3	-6	3	111	3	3
-14	53	2	4	9	85	2	3	2	71	2	5	-1	13	3	-6	4	70	2	-3
-13	97	3	2	10	10	6	2	3	19	2	-0	0	245	6	-3	5	25	2	3
-12	168	4	3	11	25	2	-1	4	83	2	6	1	2	8	-5*	6	35	2	0
-11	34	1	8	12	8	5	7	5	33	1	-3	2	145	4	-2	7	91	2	5
-10	146	4	-7	13	44	2	3	6	22	1	-0	3	0	8	-1*	8	39	1	-0
-9	27	1	-4	14	25	2	1	7	20	4	4	4	103	3	-2	9	43	1	0
-8	92	2	-4		H,K=	5,	5	8	64	2	-0	5	20	2	-2	10	59	2	2
-7	25	1	-4	-16	28	1	4	9	123	3	0	6	20	2	-4		H,K=	5,	11
-6	264	7	13	-15	5	7	-2*	10	0	8	-6*	7	202	5	-3	-11	23	2	-2
-5	100	3	-6	-14	38	2	-1	11	30	2	-1	8	76	2	-1	-10	15	3	3
-4	157	4	5	-13	67	2	2	12	98	3	5	9	6	8	-3*	-9	14	3	0
-3	234	6	7	-12	185	5	-6	13	22	3	2	10	56	2	5	-8	0	9	-13*
-2	335	8	-13	-11	23	2	2	14	29	1	2	11	27	1	4	-7	28	1	-6
-1	314	8	-6	-10	125	3	1		H,K=	5,	7	12	28	1	2	-6	27	2	2
0	210	5	4	-9	234	6	-1	-15	23	2	-4		H,K=	5,	9	-5	3	9	-3*
1	353	9	5	-8	99	3	0	-14	31	2	-1	-13	6	11	2*	-4	35	1	-0
2	243	6	4	-7	45	1	-2	-13	13	2	4	-12	19	2	-6	-3	92	2	-3
3	83	2	13	-6	43	1	3	-12	52	2	-0	-11	14	2	-1	-2	71	2	-6
4	117	3	-3	-5	10	6	0	-11	60	2	3	-10	47	1	5	-1	62	2	-3
5	151	4	-5	-4	41	1	-6	-10	131	3	-4	-9	79	2	-6	0	72	2	-5
6	103	3	-1	-3	135	3	8	-9	33	1	1	-8	17	3	-5	1	34	3	0
7	15	4	1	-2	183	5	13	-8	110	3	6	-7	27	1	-1	2	16	3	8
8	5	8	3*	-1	109	3	1	-7	56	2	-1	-6	55	2	1	3	77	2	-2
9	13	2	2	0	20	1	3	-6	13	2	2	-5	23	2	-3	4	15	2	1
10	99	3	4	1	37	1	-6	-5	127	3	2	-4	29	2	-4	5	21	2	3
11	0	9	-2*	2	202	5	2	-4	153	4	-6	-3	34	1	-0	6	36	2	-0
12	13	4	12	3	240	6	-5	-3	46	1	2	-2	39	1	-1	7	15	6	-2
13	6	9	-6*	4	39	1	1	-2	219	6	-2	-1	148	4	1	8	129	3	1
14	16	3	0	5	20	2	5	-1	3	7	1*	0	44	1	-4	9	36	1	2
15	11	2	-3	6	117	3	-7	0	90	2	1	1	42	1	-1		H,K=	5,	12
	H,K=	5,	4	7	118	3	-3	1	142	4	-4	2	79	2	-6	-9	0	8	-3*
-17	5	10	-1*	8	65	2	2	2	109	3	-2	3	86	2	-3	-8	40	1	1
-16	8	4	-0	9	66	2	-1	3	112	3	6	4	28	3	3	-7	12	4	1
-15	56	2	1	10	57	2	-2	4	34	1	-4	5	0	8	-7*	-6	31	1	-3
-14	13	2	3	11	84	2	3	5	74	2	3	6	18	2	-0	-5	62	2	-8
-13	57	2	-3	12	48	2	-1	6	68	2	-4	7	39	1	5	-4	34	1	-0
-12	35	2	4	13	34	1	-2	7	32	3	2	8	25	2	-0	-3	13	3	-5
-11	108	3	12	14	9	14	1*	8	158	4	1	9	20	4	-3	-2	56	2	1
-10	206	5	-1		H,K=	5,	6	9	88	2	-3	10	25	1	-4	-1	42	2	-2
-9	48	1	7	-16	20	2	-5	10	49	1	1	11	34	1	5	0	12	3	7
-8	37	3	-12	-15	36	1	2	11	19	2	-1		H,K=	5,	10	1	42	2	0
-7	173	4	-3	-14	9	4	8	12	76	2	1	-12	28	2	6	2	34	1	-1
-6	14	1	-1	-13	21	2	2	13	48	2	3	-11	9	4	-1	3	38	1	-5
-5	119	3	15	-12	132	3	4		H,K=	5,	8	-10	60	2	-3	4	11	12	1*
-4	25	1	-4	-11	58	2	-5	-14	0	7	-7*	-9	48	2	3	5	11	3	1
-3	123	3	-6	-10	105	3	-1	-13	47	2	-3	-8	17	3	4	6	40	1	-2
-2	211	5	3	-9	127	3	6	-12	43	2	3	-7	100	3	-13	7	62	2	4
-1	42	1	-4	-8	34	1	3	-11	21	2	2	-6	7	8	2*		H,K=	5,	13
0	96	2	7	-7	84	2	-3	-10	21	2	5	-5	71	2	0	-7	3	8	-2*
1	88	2	1	-6	125	3	2	-9	100	3	-5	-4	50	2	-1	-6	30	1	-3
2	55	1	1	-5	41	1	-6	-8	14	2	8	-3	40	2	2	-5	27	1	1
3	23	2	2	-4	81	2	-1	-7	21	2	-8	-2	31	4	2	-4	75	2	1
4	200	5	5	-3	107	3	0	-6	32	2	0	-1	12	3	6	-3	0	8	-3*
5	61	2	-12	-2	10	2	3	-5	14	3	10	0	20	2	6	-2	52	2	-1
6	174	4	2	-1	142	4	8	-4	30	1	-2	1	143	4	-3	-1	0	7	-10*
7	10	4	5	0	275	7	4	-3	22	1	-0	2	65	2	-2	0	45	1	0

OBSERVED STRUCTURES FACTORS (CONT) FOR  
N,N'-BIS(1-OXYL-2,2,6,6-TETRAMETHYL-PIPERIDYL)-SUCCINYL AMID

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL			
1	30	2	-4	11	111	3	-1	2	14	2	-4	-5	133	3	16	-8	69	2	6			
2	68	2	1	12	61	2	-4	3	231	6	5	-4	218	6	6	-7	94	2	2			
3	47	1	-3	13	9	9	4*	4	73	2	5	-3	216	5	2	-6	27	2	1			
4	11	9	1	14	19	2	-0	5	56	2	3	-2	171	4	10	-5	10	3	-0			
5	14	2	0					6,	2	6	89	2	3	-1	141	4	-4	-4	58	2	3	
				H,K=	5,	14	-17	26	1	7	7	145	4	-0	0	157	4	3	-3	11	2	8
-3	8	5	-3	-16	10	5	5	8	140	4	7	1	12	2	3	-2	13	2	-13			
-2	49	2	1	-15	51	1	1	9	90	2	2	2	130	3	7	-1	21	2	6			
-1	36	1	-2	-14	36	1	4	10	34	2	3	3	20	2	4	0	74	2	2			
0	26	1	1	-13	78	3	-6	11	153	4	3	4	43	1	-0	1	135	4	-8			
1	7	8	-4*	-12	71	2	-2	12	87	2	-1	5	128	3	0	2	190	5	5			
				H,K=	6,	0	-11	199	5	0	13	43	1	3	6	110	3	-1	3	0	11	-10*
-16	19	2	-5	-10	5	8	-7*	14	12	3	2	7	39	1	-1	4	112	3	2			
-14	53	2	5	-9	37	2	-1					H,K=	6,	4	8	75	2	0	5	8	9	5*
-12	94	2	-2	-8	92	2	-1	-16	64	2	1	9	23	1	-0	6	20	2	-5			
-10	37	2	2	-7	65	2	5	-15	93	3	6	10	59	2	3	7	59	2	0			
-8	76	2	0	-6	0	6	-10*	-14	101	3	1	11	74	2	0	8	6	9	-2*			
-6	121	3	-5	-5	94	2	6	-13	48	2	-7	12	94	3	0	9	68	2	-1			
-4	51	1	2	-4	50	1	-2	-12	5	15	3*	13	15	2	-2	10	72	2	3			
-2	11	1	7	-3	210	5	-0	-11	14	3	5				H,K=	6,	6	11	25	2	0	
0	247	6	3	-2	32	2	-0	-10	105	3	-4	-15	32	1	4	12	3	7	-0*			
2	414	10	7	-1	324	8	-6	-9	144	4	-1	-14	6	7	4*		H,K=	6,	8			
4	80	2	3	0	54	1	2	-8	29	1	-1	-13	8	9	-2*	-14	78	2	4			
6	321	8	-3	1	55	2	4	-7	210	5	10	-12	56	2	2	-13	17	2	5			
8	81	2	7	2	10	2	3	-6	51	1	0	-11	26	2	-1	-12	2	8	2*			
10	420	11	-19	3	300	8	-2	-5	138	4	-2	-10	62	2	3	-11	26	1	-3			
12	87	2	-5	4	55	2	2	-4	111	3	2	-9	0	8	-7*	-10	15	3	2			
14	4	7	-2*	5	48	1	-9	-3	80	2	3	-8	35	1	-3	-9	12	4	-1			
				H,K=	6,	1	6	24	1	-2	-2	62	2	-2	-7	97	3	-5	-8	42	2	5
-17	7	8	-4*	7	109	3	-2	-1	77	2	-1	-6	54	2	5	-7	11	5	1			
-16	46	1	2	8	133	3	0	0	43	1	3	-5	15	1	2	-6	37	2	7			
-15	16	3	2	9	124	3	-2	1	117	3	-1	-4	167	4	5	-5	143	4	-8			
-14	0	9	-7*	10	34	2	-3	2	89	2	-6	-3	33	1	1	-4	72	2	-4			
-13	96	3	-1	11	78	2	3	3	78	2	2	-2	96	3	-2	-3	31	1	-5			
-12	44	1	-3	12	92	2	-2	4	127	3	5	-1	74	2	0	-2	37	1	3			
-11	14	13	12	13	30	2	3	5	140	4	5	0	63	2	-1	-1	111	3	-12			
-10	65	2	1	14	18	1	5	6	22	1	-4	1	11	3	-2	0	70	2	1			
-9	198	5	3					H,K=	6,	3	7	57	2	-2	2	29	1	1	1	250	6	3
-8	54	1	3	-17	23	1	-1	8	57	2	-1	3	114	3	2	2	204	5	0			
-7	152	4	-2	-16	56	2	-1	9	7	9	5*	4	53	1	0	3	61	2	5			
-6	47	2	-4	-15	5	8	-6*	10	18	2	4	5	28	1	-0	4	71	2	-2			
-5	220	6	-8	-14	44	2	2	11	13	4	-2	6	46	1	-6	5	70	2	3			
-4	45	1	3	-13	90	3	-3	12	14	3	2	7	25	1	0	6	45	1	-4			
-3	34	1	-2	-12	217	6	0	13	30	2	4	8	43	2	-4	7	16	3	-6			
-2	104	3	16	-11	100	3	-1	14	33	1	-1	9	4	7	-0*	8	73	2	5			
-1	97	3	0	-10	119	3	-3					H,K=	6,	5	10	0	8	-8*	9	23	2	-5
0	214	5	-3	-9	148	4	-7	-16	39	1	4	11	18	2	0	10	77	2	4			
1	211	5	5	-8	82	2	5	-15	33	1	1	12	67	2	6	11	35	2	-1			
2	322	8	-1	-7	10	10	-10*	-14	7	9	3*	13	81	2	8		H,K=	6,	9			
3	66	2	3	-6	188	5	1	-13	0	8	-2*				H,K=	6,	7	-13	20	5	2	
4	5	6	4*	-5	143	4	-4	-12	3	8	-4*	-15	63	2	-1	-12	31	1	-1			
5	71	2	-4	-4	199	5	10	-11	197	5	0	-14	30	1	-1	-11	63	2	0			
6	10	3	8	-3	89	2	-5	-10	124	3	2	-13	11	3	-1	-10	35	2	-5			
7	38	1	-1	-2	58	2	-3	-9	144	4	-3	-12	32	2	2	-9	75	3	0			
8	20	1	-7	-1	19	1	2	-8	30	1	-3	-11	49	1	3	-8	34	2	7			
9	61	2	0	0	44	1	-9	-7	75	2	3	-10	76	2	5	-7	76	2	3			
10	65	2	-2	1	174	4	-4	-6	174	4	-3	-9	95	3	-2	-6	14	3	-6			

OBSERVED STRUCTURE FACTORS (CONT) FOR  
 N,N'-BIS(1-OXYL-2,2,6,6-TETRAMETHYL-PIPERIDYL)-SUCCINYL AMID

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-5	96	3	-5	6	28	1	6	-9	7	8	3*-16	5	11	-2*	10	10	3	3	
-4	51	2	-1	7	32	1	-2	-8	18	2	0	-15	19	2	1	11	74	2	2
-3	67	2	6	8	8	8	8*	-7	133	3	12	-14	48	2	1	12	0	7	-2*
-2	43	2	4	H,K=	6,	12	-6	17	1	-3	-13	28	7	5	13	58	2	1	
-1	20	2	6	-9	30	1	-0	-5	179	5	13	-12	247	6	3	H,K=	7,	5	
0	79	2	-4	-8	6	7	-5*	-4	42	1	4	-11	78	2	-2	-15	41	2	1
1	52	2	-5	-7	8	8	-2*	-3	148	4	6	-10	86	3	-3	-14	43	1	-1
2	101	3	2	-6	0	7	-3*	-2	162	4	2	-9	170	4	2	-13	9	9	8*
3	121	3	-3	-5	21	2	-2	-1	43	1	-2	-8	29	2	2	-12	18	2	10
4	66	2	-0	-4	28	2	5	0	30	2	3	-7	65	2	2	-11	33	2	-0
5	58	2	1	-3	59	2	-1	1	270	7	-1	-6	160	4	-2	-10	89	2	4
6	19	3	-1	-2	49	2	1	2	154	4	1	-5	67	2	-4	-9	176	5	3
7	64	2	-5	-1	9	8	-11	3	61	2	-1	-4	39	1	-1	-8	26	1	-2
8	80	2	-1	0	40	2	-4	4	225	6	-1	-3	78	2	-0	-7	86	2	-1
9	25	3	1	1	45	1	-1	5	8	10	0*	-2	122	3	-4	-6	7	8	0*
10	11	4	4	2	17	3	2	6	104	3	0	-1	10	3	-2	-5	148	4	-5
11	10	3	-1	3	17	2	-3	7	80	2	-3	0	63	2	6	-4	74	2	2
H,K=	6,	10	4	21	1	-2	8	14	2	1	1	240	6	-9	-3	168	4	-3	
-12	14	2	2	5	8	8	6*	9	31	2	-0	2	121	3	-1	-2	47	2	-1
-11	46	2	-2	6	23	2	-2	10	90	2	1	3	145	4	-4	-1	38	1	-2
-10	7	9	6*	H,K=	6,	13	11	0	9	-4*	4	145	4	2	0	145	4	7	
-9	19	2	-2	-6	16	10	1	12	23	1	-1	5	45	1	-1	1	59	2	-0
-8	95	3	4	-5	23	1	-1	13	38	1	-1	6	28	1	2	2	223	6	1
-7	62	2	1	-4	21	2	5	14	16	4	6	7	77	2	3	3	61	2	1
-6	48	1	-9	-3	60	2	-5	H,K=	7,	2	8	23	1	-2	4	71	2	1	
-5	15	3	7	-2	57	2	-3	-16	0	8	-1*	9	34	1	-2	5	44	1	-0
-4	14	2	3	-1	38	1	2	-15	0	7	-4*	10	116	3	-1	6	77	2	4
-3	54	2	-1	0	23	1	0	-14	90	2	2	11	35	1	1	7	67	2	-4
-2	71	2	-0	1	43	1	1	-13	71	2	-1	12	68	2	2	8	19	5	-6
-1	32	2	-4	2	5	8	-8*	-12	60	2	-3	13	3	8	-3*	9	50	2	-3
0	24	2	1	3	0	8	-1*	-11	23	2	2	H,K=	7,	4	10	26	3	-4	
1	138	4	1	H,K=	7,	0	-10	215	5	-0	-16	21	3	2	11	36	1	-2	
2	59	2	-3	-16	82	2	-0	-9	5	11	-7*	-15	0	8	-8*	12	20	2	-1
3	10	4	6	-14	15	2	-2	-8	86	2	3	-14	54	2	0	13	33	1	3
4	26	1	1	-12	136	3	-4	-7	53	2	1	-13	88	2	1	H,K=	7,	6	
5	54	2	-2	-10	256	7	-5	-6	42	1	3	-12	107	3	-1	-15	0	8	-3*
6	46	1	-0	-8	81	2	2	-5	30	1	2	-11	165	4	1	-14	51	2	3
7	31	4	1	-6	363	9	25	-4	1	6	0*	-10	244	6	-4	-13	11	3	5
8	7	8	1*	-4	299	8	0	-3	31	2	-5	-9	41	3	0	-12	34	1	-1
9	23	1	-3	-2	134	3	6	-2	137	3	-3	-8	78	2	-10	-11	56	2	3
H,K=	6,	11	0	141	4	8	-1	94	2	5	-7	116	3	-3	-10	44	1	-8	
-10	43	2	2	2	387	10	18	0	53	1	5	-6	12	2	4	-9	34	1	-1
-9	25	1	4	4	350	9	1	1	19	1	1	-5	144	4	-4	-8	35	2	0
-8	31	2	0	6	110	3	1	2	53	1	5	-4	0	7	-1*	-7	126	3	5
-7	82	2	6	8	33	3	1	3	74	2	4	-3	43	1	-4	-6	73	2	-1
-6	11	5	-1	10	124	4	-2	4	165	4	5	-2	81	2	8	-5	74	2	6
-5	18	5	3	12	8	9	-2*	5	74	2	2	-1	196	5	-2	-4	9	3	9
-4	9	4	-2	14	13	2	2	6	45	1	1	0	11	3	5	-3	28	1	-5
-3	50	2	-3	H,K=	7,	1	7	7	8	5*	1	98	3	0	-2	0	8	-4*	
-2	23	1	2	-17	10	11	-5*	8	18	2	-2	2	23	2	-6	-1	133	3	6
-1	0	9	-4*	-16	10	5	-4	9	83	2	0	3	57	2	1	0	278	7	-9
0	112	3	-0	-15	63	2	1	10	35	1	-1	4	46	1	-2	1	15	2	-0
1	33	1	3	-14	23	2	0	11	114	3	1	5	121	3	-3	2	23	1	1
2	31	1	-2	-13	59	2	1	12	26	2	5	6	16	2	2	3	24	2	-3
3	8	5	6	-12	33	2	5	13	30	1	-2	7	39	1	-0	4	105	3	1
4	8	8	-3*	-11	43	1	3	14	18	3	-0	8	72	2	2	5	8	9	8*
5	16	3	2	-10	18	2	-5	H,K=	7,	3	9	58	3	2	6	54	2	3	

OBSERVED STRUCTURE FACTORS (CONT) FOR  
 N,N'-BIS(1-OXYL-2,2,6,6-TETRAMETHYL-PIPERIDYL)-SUCCINYL AMID

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
7	55	2	-6	10	39	1	-6	-1	23	1	2	-7	30	1	1	-12	82	2	7
8	20	2	1	11	81	2	1	0	15	3	-7	-6	19	3	10	-11	28	1	2
9	23	2	-2		H,K= 7,	9	1	0	8	-7*	-5	91	2	0	-10	70	2	-2	
10	0	9	-1*-12	16	5	2	2	26	1	-1	-4	47	1	3	-9	63	2	-4	
11	27	4	-0	-11	30	1	-4	3	14	2	1	-3	38	1	5	-8	23	2	-2
12	0	8	-1*-10	9	8	6	4	0	7	-1*	-2	95	2	2	-7	15	2	7	
	H,K= 7,	7	-9	90	3	-1	5	2	7	-1*	-1	178	5	3	-6	75	2	5	
-14	13	3	1	-8	60	2	7	6	3	8	-2*	0	155	4	-0	-5	17	4	-5
-13	52	2	4	-7	10	6	5	7	0	7	-4*	1	50	1	0	-4	62	2	3
-12	11	3	6	-6	31	2	0		H,K= 7,	12	2	260	7	-3	-3	59	2	2	
-11	41	2	-1	-5	28	2	-2	-8	32	2	-5	3	162	4	-3	-2	109	3	3
-10	75	2	1	-4	106	3	-4	-7	30	2	-5	4	33	1	-0	-1	26	1	-0
-9	97	3	2	-3	87	2	1	-6	18	2	-2	5	19	2	7	0	12	2	-5
-8	76	2	1	-2	10	6	-2	-5	32	1	0	6	18	2	-3	1	31	1	1
-7	13	3	-1	-1	22	4	-2	-4	62	2	-0	7	72	2	3	2	88	2	2
-6	48	2	1	0	18	5	7	-3	41	1	-1	8	17	3	-1	3	42	1	-1
-5	37	1	-7	1	122	3	-0	-2	0	9	-6*	9	89	2	2	4	143	4	-0
-4	23	2	4	2	92	2	1	-1	0	8	-12*	10	6	9	4*	5	57	2	-5
-3	67	2	2	3	0	9	-0*	0	26	3	-0	11	0	9	-4*	6	46	1	-5
-2	38	1	1	4	29	2	1	1	38	1	1	12	45	1	-2	7	123	3	-3
-1	83	2	3	5	15	2	5	2	8	8	7*	13	10	3	1	8	0	8	-9*
0	38	1	2	6	32	2	-2	3	0	8	-3*		H,K= 8,	2	9	28	2	1	
1	11	4	1	7	35	2	1	4	9	5	-1	-16	79	2	1	10	75	2	3
2	171	4	-0	8	36	1	-4	5	8	10	8*-15	9	4	3	11	35	1	3	
3	11	5	9	9	54	2	-4		H,K= 7,	13	-14	29	1	-0	12	8	4	7	
4	41	1	3	10	12	6	-2	-4	22	2	2	-13	55	2	3		H,K= 8,	4	
5	114	3	-4		H,K= 7,	10	-3	31	1	2	-12	70	2	-0	-15	44	1	1	
6	36	2	-1	-11	32	1	2	-2	9	4	-7	-11	108	3	3	-14	24	3	-1
7	83	2	-4	-10	23	2	-5	-1	48	2	1	-10	60	3	3	-13	20	2	4
8	102	3	0	-9	27	1	-7	0	14	2	0	-9	41	1	9	-12	135	4	1
9	0	12	-4*	-8	54	2	-0	1	38	1	-3	-8	44	1	1	-11	43	2	3
10	87	2	-3	-7	59	2	-7		H,K= 8,	0	-7	10	3	6	-10	21	2	2	
11	19	2	1	-6	52	2	5	-16	11	3	-0	-6	104	3	12	-9	36	2	0
	H,K= 7,	8	-5	66	2	1	-14	41	1	5	-5	106	3	7	-8	93	2	9	
-13	10	3	0	-4	34	2	-3	-12	197	5	-5	-4	55	2	1	-7	40	2	4
-12	50	1	1	-3	2	9	-5*-10	57	2	1	-3	27	1	-2	-6	26	1	-1	
-11	7	9	5*	-2	51	2	-3	-8	51	2	-3	-2	34	1	-3	-5	111	3	7
-10	89	2	-7	-1	20	2	0	-6	6	10	-8*	-1	8	4	7	-4	131	3	-2
-9	15	3	4	0	107	3	-2	-4	126	3	-1	0	53	1	0	-3	38	1	-6
-8	47	2	-2	1	60	2	-1	-2	256	7	3	1	56	2	1	-2	140	4	1
-7	68	2	-10	2	10	6	1	0	112	3	-3	2	38	1	-1	-1	105	3	-11
-6	5	8	-12*	3	18	3	9	2	92	2	7	3	121	3	4	0	5	7	3*
-5	33	3	-2	4	5	9	0*	4	122	3	-6	4	21	1	-1	1	3	8	-6*
-4	29	2	-0	5	6	12	-3*	6	83	2	2	5	58	2	1	2	0	8	-3*
-3	68	2	5	6	28	3	-1	8	212	5	-13	6	188	5	-3	3	101	3	-9
-2	151	4	1	7	3	8	0*	10	111	3	-9	7	10	5	-12	4	46	1	-1
-1	14	3	3	8	38	1	-2	12	20	1	5	8	8	13	7*	5	47	3	-1
0	198	5	8		H,K= 7,	11		H,K= 8,	1	9	73	2	-3	6	19	2	-0		
1	12	4	1	-10	45	2	0	-16	16	4	-3	10	105	3	0	7	62	2	4
2	135	4	-8	-9	33	1	2	-15	34	2	1	11	26	2	-1	8	13	10	-1
3	25	2	-5	-8	25	2	3	-14	28	1	-0	12	13	7	6	9	10	7	-7
4	15	3	4	-7	11	3	4	-13	12	4	-3	13	33	1	-1	10	20	2	1
5	111	3	1	-6	13	3	5	-12	17	3	2		H,K= 8,	3	11	6	7	3*	
6	45	2	0	-5	46	2	5	-11	94	2	-4	-16	14	2	6	12	23	1	3
7	20	5	-3	-4	45	2	-1	-10	121	3	-4	-15	8	8	3*		H,K= 8,	5	
8	83	2	6	-3	12	13	-2*	-9	7	7	6*-14	54	2	2	-15	0	7	-0*	
9	25	2	1	-2	23	2	0	-8	13	2	-0	-13	15	3	5	-14	7	8	6*



OBSERVED STRUCTURE FACTORS (CONT) FOR  
N,N'-BIS(1-OXYL-2,2,6,6-TETRAMETHYL-PIPERIDYL)-SUCCINYL AMID

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-13	65	2	-2	-11	87	2	-3	-2	7	7	-1*	H,K=	9,	0	-4	105	3	2	
-12	70	2	-2	-10	73	2	3	-1	58	2	1	-16	14	2	2	-3	14	3	10
-11	118	3	4	-9	67	2	-0	0	87	2	0	-14	56	2	-2	-2	134	3	-2
-10	159	4	-3	-8	0	9	-6*	1	44	1	-1	-12	134	3	-7	-1	61	2	1
-9	100	3	4	-7	36	1	3	2	40	1	4	-10	5	9	3*	0	58	2	0
-8	51	2	4	-6	206	5	-0	3	17	3	3	-8	104	3	-9	1	159	4	-2
-7	32	2	-1	-5	8	6	-5	4	36	1	5	-6	55	2	-4	2	144	4	-7
-6	23	3	-8	-4	13	4	-4	5	70	2	3	-4	93	3	1	3	41	1	-3
-5	158	4	-1	-3	48	2	1	6	12	12	2*	-2	56	2	5	4	34	1	-3
-4	97	3	4	-2	99	3	3	7	3	8	-4*	0	259	7	-9	5	122	3	0
-3	59	3	-3	-1	53	2	1	8	8	4	6	2	147	4	-8	6	3	8	-3*
-2	30	1	4	0	32	1	3	H,K=	8,	10	4	104	3	-8	7	70	2	1	
-1	39	1	-2	1	202	5	2	-10	32	1	-3	6	89	2	1	8	7	13	4*
0	11	4	3	2	121	3	-0	-9	7	7	3*	8	100	3	0	9	55	2	-7
1	79	2	5	3	47	1	-1	-8	66	2	1	10	26	3	4	10	28	2	2
2	67	2	-4	4	95	3	1	-7	72	2	4	12	55	2	2	11	14	13	-0
3	30	1	1	5	25	2	4	-6	16	2	-5	H,K=	9,	1	12	34	1	-0	
4	0	12	-7*	6	23	2	-7	-5	53	2	0	-15	19	2	-0	H,K=	9,	3	3
5	43	1	3	7	41	2	7	-4	22	1	4	-14	18	2	0	-15	11	2	1
6	16	3	-6	8	61	2	5	-3	92	2	-1	-13	40	1	-4	-14	26	1	-2
7	29	2	-3	9	17	2	10	-2	39	2	1	-12	38	3	1	-13	9	3	8
8	16	2	-8	10	13	3	3	-1	31	2	5	-11	23	2	-0	-12	43	2	1
9	58	2	2	H,K=	8,	8	8	0	27	1	1	-10	131	3	-2	-11	14	3	3
10	38	3	4	-13	6	13	-1*	1	2	9	-5*	-9	68	2	-2	-10	66	2	-3
11	51	1	1	-12	41	1	-0	2	7	8	2*	-8	127	3	1	-9	35	1	0
12	54	2	3	-11	6	7	-2*	3	10	3	5	-7	20	6	0	-8	104	3	-3
H,K=	8,	6	-10	63	2	5	4	25	2	-3	-6	41	1	-0	-7	24	2	2	2
-14	29	1	3	-9	11	5	-3	5	0	7	-0*	-5	105	3	2	-6	95	3	-0
-13	46	2	3	-8	73	2	-3	6	15	2	-3	-4	38	1	3	-5	35	2	3
-12	76	2	3	-7	119	3	0	7	55	2	-0	-3	52	2	-6	-4	70	2	-5
-11	33	2	2	-6	13	3	2	H,K=	8,	11	-2	82	2	-3	-3	57	2	-3	-3
-10	67	2	3	-5	71	2	-4	-9	45	1	0	-1	31	1	1	-2	6	8	1*
-9	49	2	1	-4	17	2	5	-8	21	2	1	0	24	1	-3	-1	95	2	1
-8	209	5	-1	-3	62	2	9	-7	17	1	3	1	162	4	-1	0	88	2	-4
-7	7	9	5*	-2	61	2	2	-6	6	12	2*	2	90	3	-4	1	73	2	-1
-6	106	3	4	-1	111	3	2	-5	2	7	-6*	3	31	1	-2	2	113	3	-3
-5	138	4	1	0	66	2	3	-4	63	2	0	4	36	2	2	3	112	3	-3
-4	73	2	1	1	62	2	-1	-3	39	1	0	5	80	2	-2	4	68	2	0
-3	84	2	2	2	11	5	1	-2	51	1	4	6	45	2	2	5	24	1	0
-2	98	3	-0	3	17	2	-3	-1	16	3	1	7	46	1	1	6	41	2	6
-1	65	2	6	4	19	2	0	0	22	4	3	8	48	2	-3	7	44	2	8
0	81	2	1	5	45	1	-2	1	16	2	3	9	69	2	1	8	11	3	-1
1	3	8	1*	6	44	2	1	2	20	2	-4	10	16	6	-2	9	24	2	0
2	11	4	-2	7	20	2	-4	3	20	2	-1	11	37	1	1	10	8	12	2*
3	118	3	1	8	70	2	2	4	6	11	5*	12	45	1	3	11	0	11	-8*
4	13	3	13	9	39	2	2	5	35	1	2	H,K=	9,	2	H,K=	9,	4	4	4
5	25	3	1	H,K=	8,	9	9	H,K=	8,	12	-15	23	1	1	-15	50	1	-1	-1
6	15	2	-1	-12	20	3	8	-6	28	1	-1	-14	33	2	-4	-14	15	2	-1
7	11	5	8	-11	16	2	-0	-5	0	8	-8*	-13	36	1	1	-13	15	2	-3
8	11	5	-4	-10	15	3	-1	-4	28	1	5	-12	73	2	2	-12	22	2	-1
9	5	9	-1*	-9	6	12	-2*	-3	41	1	2	-11	23	1	3	-11	32	2	-2
10	61	2	4	-8	0	9	-4*	-2	8	8	5*	-10	111	3	1	-10	41	2	-4
11	54	2	2	-7	11	3	2	-1	0	7	-10*	-9	18	2	0	-9	4	8	-3*
H,K=	8,	7	-6	64	2	-4	0	8	4	6	-8	72	2	4	-8	52	2	0	0
-14	13	3	-2	-5	35	1	0	1	43	1	-2	-7	36	1	-1	-7	18	2	-4
-13	81	2	4	-4	27	2	2	2	14	2	0	-6	72	2	-0	-6	86	2	1
-12	45	2	3	-3	13	4	-4	3	14	2	-5	-5	117	3	1	-5	38	1	-1

OBSERVED STRUCTURES FACTORS (CONT) FOR  
 N,N'-BIS(1-OXYL-2,2,6,6-TETRAMETHYL-PIPERIDYL)-SUCCINYL AMID

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L	F0B	SG	DEL	L	F0B	SG	DEL	L	F0B	SG	DEL	L	F0B	SG	DEL	L	F0B	SG	DEL
-4	69	2	-2	-1	13	2	3	8	29	1	2	0	11	3	2	7	24	2	1
-3	24	1	-1	0	76	3	-1	H,K=	9,	9	2	73	2	2	8	75	2	0	
-2	13	3	9	1	52	2	-0	-11	24	4	3	4	48	1	-4	9	31	3	4
-1	44	1	0	2	46	2	-2	-10	25	3	-2	6	75	2	-8	10	6	7	-4*
0	58	2	-2	3	8	9	6*	-9	11	3	-3	8	30	1	3	H,K=	10,	3	
1	109	3	-2	4	89	2	-2	-8	10	3	-6	10	25	2	-6	-14	26	3	-1
2	103	3	0	5	10	3	9	-7	23	2	1	H,K=	10,	1	-13	19	2	3	
3	26	2	0	6	80	2	5	-6	40	2	-6	-15	10	4	-4	-12	57	2	-1
4	1	8	0*	7	35	1	0	-5	21	2	5	-14	32	1	-4	-11	51	3	1
5	64	2	-0	8	16	3	1	-4	9	4	6	-13	36	2	3	-10	41	2	3
6	35	1	7	9	37	1	-3	-3	71	2	2	-12	35	2	-0	-9	71	3	-7
7	28	2	-1	10	46	1	5	-2	29	2	-0	-11	66	2	-3	-8	40	2	-4
8	30	2	1	H,K=	9,	7	-1	-1	25	4	-5	-10	110	3	-2	-7	20	2	-5
9	0	9	-2*	-13	19	1	2	0	70	2	5	-9	76	2	-3	-6	31	1	-2
10	25	1	1	-12	38	1	-0	1	55	2	1	-8	30	1	0	-5	5	7	-6*
11	13	3	-0	-11	37	2	1	2	12	4	0	-7	52	2	-2	-4	54	2	-0
H,K=	9,	5	-10	102	3	-3	3	3	36	3	1	-6	61	2	-1	-3	64	2	-2
-14	21	2	0	-9	16	3	0	4	56	2	-3	-5	86	2	-1	-2	114	3	0
-13	69	2	-0	-8	42	2	-4	5	83	2	4	-4	47	2	0	-1	15	2	-1
-12	7	9	-2*	-7	9	8	2	6	64	2	1	-3	40	2	1	0	73	2	-2
-11	48	2	2	-6	11	5	2	7	27	1	4	-2	43	1	1	1	102	3	3
-10	21	2	6	-5	72	2	8	H,K=	9,	10	-1	92	2	6	2	61	2	-2	
-9	7	7	3*	-4	185	5	1	-9	50	1	3	0	63	2	2	3	135	3	-1
-8	14	8	10	-3	117	3	-0	-8	18	2	-4	1	56	2	-0	4	43	2	2
-7	143	4	2	-2	28	2	0	-7	56	2	2	2	133	3	-6	5	42	2	2
-6	25	1	4	-1	28	1	-0	-6	43	3	-1	3	23	2	0	6	79	2	-10
-5	119	3	6	0	237	6	5	-5	13	3	1	4	25	1	-3	7	64	2	0
-4	5	9	-9*	1	76	3	2	-4	59	2	-0	5	17	2	0	8	60	2	-5
-3	92	3	0	2	19	2	2	-3	26	1	-1	6	34	1	-2	9	33	1	1
-2	42	1	2	3	43	2	0	-2	21	2	-2	7	53	2	-4	10	34	1	-3
-1	11	4	5	4	23	4	6	-1	14	3	2	8	28	2	-3	H,K=	10,	4	
0	140	4	-2	5	10	3	1	0	44	2	5	9	7	9	2*-14	20	1	-5	
1	30	2	-3	6	0	8	-3*	1	51	2	-5	10	33	1	1	-13	53	2	-2
2	7	9	-4*	7	8	6	-6	2	13	2	-1	11	16	2	-6	-12	15	3	-1
3	94	3	4	8	25	2	1	3	10	3	4	H,K=	10,	2	-11	46	1	0	
4	24	2	1	9	11	3	1	4	53	2	-1	-15	40	1	-3	-10	24	2	-0
5	39	2	7	H,K=	9,	8	5	67	2	1	-14	16	2	-3	-9	89	3	0	
6	10	6	-4	-12	63	2	2	H,K=	9,	11	-13	49	1	-5	-8	66	2	-2	
7	60	2	9	-11	31	1	2	-7	47	1	3	-12	14	2	-3	-7	92	2	0
8	77	2	0	-10	7	15	3*	-6	0	7	-4*-11	44	2	-0	-6	79	2	-2	
9	11	2	-3	-9	27	2	5	-5	14	3	1	-10	16	2	1	-5	87	2	-2
10	0	8	-1*	-8	76	2	2	-4	12	3	2	-9	59	2	-1	-4	54	2	-1
11	73	2	0	-7	35	2	3	-3	54	3	1	-8	102	3	-4	-3	120	3	-1
H,K=	9,	6	-6	0	13	-4*	-2	53	2	3	-7	72	2	-4	-2	25	2	-1	
-14	15	2	2	-5	94	2	3	-1	23	1	-1	-6	9	6	0	-1	150	4	-0
-13	23	1	-1	-4	29	1	2	0	23	1	0	-5	64	2	0	0	86	2	-1
-12	87	3	1	-3	28	2	0	1	11	4	10	-4	17	2	3	1	135	3	5
-11	37	2	1	-2	32	1	3	2	62	2	0	-3	86	2	6	2	108	3	-0
-10	23	2	3	-1	34	1	-4	3	42	1	7	-2	30	3	1	3	33	2	-2
-9	79	2	-1	0	102	3	-0	H,K=	10,	0	-1	90	2	1	4	0	8	-6*	
-8	73	2	0	1	31	2	1	-14	36	1	-6	0	107	3	-3	5	43	1	5
-7	32	3	-0	2	30	1	2	-12	141	4	1	1	84	2	-2	6	39	1	-2
-6	207	5	0	3	75	2	-0	-10	119	3	-7	2	52	2	-3	7	10	3	6
-5	3	8	-5*	4	51	2	7	-8	92	2	-2	3	42	1	4	8	11	2	4
-4	136	3	5	5	7	9	2*	-6	12	9	6	4	51	2	1	9	36	2	0
-3	154	4	3	6	15	2	4	-4	164	4	3	5	47	2	-3	10	11	2	0
-2	199	5	-5	7	5	8	-3*	-2	221	6	1	6	46	1	2	H,K=	10,	5	

OBSERVED STRUCTURES FACTORS (CONT) FOR  
N,N'-BIS(1-OXYL-2,2,6,6-TETRAMETHYL-PIPERIDYL)-SUCCINYL AMID

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-13	66	2	3	-3	19	2	-1	1	38	1	2	-5	73	2	1	4	0	13	-10*
-12	51	1	-1	-2	60	2	3	2	52	1	-1	-4	53	2	3	5	38	1	2
-11	42	1	2	-1	8	9	-5*	3	36	1	3	-3	43	1	1	6	13	3	2
-10	32	1	2	0	17	2	8	H,K= 10,	11			-2	84	2	-1	7	3	7	-3*
-9	40	1	-1	1	35	1	1	-4	9	10	0*	-1	111	3	3	8	36	1	-1
-8	75	2	-4	2	65	2	-5	-3	45	1	6	0	11	3	2	H,K= 11,			5
-7	92	3	2	3	29	1	-1	-2	31	1	2	1	43	2	0	-12	0	7	-5*
-6	72	2	2	4	4	8	-1*	-1	32	1	-2	2	92	2	3	-11	9	3	0
-5	125	3	4	5	9	7	4	0	41	1	5	3	13	4	3	-10	10	3	8
-4	73	2	-2	6	27	2	-0	H,K= 11,	0			4	30	3	2	-9	61	2	3
-3	64	2	3	7	36	2	2	-14	67	2	4	5	77	2	-5	-8	17	2	3
-2	28	1	3	8	3	7	-1*	-12	80	2	1	6	7	9	-3*	-7	96	3	2
-1	164	4	5	H,K= 10,	8			-10	57	2	1	7	19	5	3	-6	21	2	6
0	11	3	7	-11	72	2	0	-8	93	2	-7	8	8	12	3*	-5	140	4	4
1	114	3	1	-10	70	2	2	-6	35	2	-0	9	11	3	1	-4	79	2	1
2	0	9	-3*	-9	19	2	2	-4	110	3	3	H,K= 11,	3			-3	133	3	-3
3	50	1	4	-8	35	1	-2	-2	174	4	2	-13	12	2	1	-2	119	3	2
4	6	9	-4*	-7	82	2	-0	0	21	2	-0	-12	6	8	2*	-1	33	1	6
5	87	2	-5	-6	41	1	2	2	13	3	-4	-11	36	2	-0	0	63	2	-3
6	15	2	-5	-5	8	6	4	4	45	1	3	-10	48	2	-2	1	162	4	8
7	0	12	-6*	-4	105	3	-1	6	9	4	-1	-9	71	2	1	2	71	2	2
8	17	2	-2	-3	28	3	1	8	45	1	4	-8	92	2	-1	3	56	2	-0
9	0	13	-2*	-2	0	8	-7*	H,K= 11,	1			-7	49	2	4	4	27	2	1
H,K= 10,	6			-1	27	2	3	-14	13	5	-1	-6	70	2	1	5	32	3	3
-13	49	2	2	0	64	2	5	-13	24	2	0	-5	16	3	-0	6	0	8	-5*
-12	34	1	0	1	19	2	-0	-12	11	4	1	-4	89	2	2	7	26	1	1
-11	52	2	1	2	0	9	-5*	-11	19	2	0	-3	60	2	0	8	30	1	4
-10	0	9	-1*	3	68	2	-2	-10	46	2	1	-2	99	3	-1	H,K= 11,			6
-9	62	2	0	4	0	9	-2*	-9	2	8	-1*	-1	13	4	7	-12	10	3	2
-8	18	3	8	5	26	1	2	-8	27	2	-2	0	232	6	2	-11	5	7	-4*
-7	33	1	1	6	42	1	2	-7	33	2	-3	1	0	8	-5*	-10	79	2	-3
-6	81	2	2	7	12	7	1	-6	20	2	3	2	10	5	2	-9	7	7	-0*
-5	30	2	-3	H,K= 10,	9			-5	11	3	-4	3	48	1	-1	-8	32	3	-1
-4	47	2	5	-9	13	2	4	-4	59	2	-6	4	70	2	-6	-7	11	3	-0
-3	70	2	-0	-8	42	2	-1	-3	71	2	-1	5	35	2	3	-6	65	2	2
-2	77	2	3	-7	65	2	-1	-2	31	2	-4	6	73	2	2	-5	5	8	4*
-1	137	4	5	-6	49	2	-2	-1	119	3	-2	7	48	2	4	-4	40	1	3
0	44	2	2	-5	52	2	-5	0	114	3	-3	8	0	8	-2*	-3	24	2	-0
1	55	2	-4	-4	0	9	-4*	1	56	2	-2	9	14	2	-1	-2	5	9	-2*
2	16	2	-1	-3	41	2	1	2	79	2	-3	H,K= 11,	4			-1	40	2	-1
3	0	13	-4*	-2	30	2	-2	3	19	2	1	-13	16	2	4	0	4	9	-1*
4	32	2	-1	-1	35	1	1	4	16	2	0	-12	36	1	-1	1	12	4	-4
5	7	13	-5*	0	24	1	0	5	14	2	7	-11	19	2	3	2	25	3	2
6	34	2	0	1	37	1	0	6	12	4	8	-10	8	9	-6*	3	37	2	4
7	26	2	1	2	31	1	0	7	5	9	3*	-9	12	2	3	4	25	2	0
8	20	2	2	3	24	1	-1	8	24	3	3	-8	11	16	5*	5	15	2	-0
9	0	7	-2*	4	18	2	0	9	0	11	-2*	-7	99	3	2	6	23	2	-0
H,K= 10,	7			5	34	1	3	H,K= 11,	2			-6	63	2	5	7	27	1	3
-12	40	1	1	H,K= 10,	10			-14	0	8	-2*	-5	119	3	5	H,K= 11,			7
-11	7	8	1*	-7	24	1	2	-13	65	2	-1	-4	73	2	-2	-11	32	2	-6
-10	14	2	3	-6	58	2	2	-12	18	2	4	-3	113	3	9	-10	12	2	4
-9	39	1	0	-5	25	1	2	-11	32	1	-3	-2	116	3	2	-9	35	1	1
-8	63	2	-1	-4	45	1	-1	-10	10	13	-3*	-1	97	3	0	-8	13	3	1
-7	6	9	5*	-3	24	3	3	-9	37	1	-5	0	112	3	-4	-7	62	2	-1
-6	140	4	-2	-2	36	2	-0	-8	121	3	-2	1	76	2	1	-6	3	8	-0*
-5	52	2	3	-1	26	2	2	-7	72	2	1	2	36	1	3	-5	20	2	2
-4	33	2	2	0	13	3	0	-6	89	2	-3	3	113	3	1	-4	25	1	-3

OBSERVED STRUCTURES FACTORS (CONT) FOR  
N,N'-BIS(1-OXYL-2,2,6,6-TETRAMETHYL-PIPERIDYL)-SUCCINYL AMID

L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL	L	FOB	SG	DEL
-3	10	3	1	-13	15	2	-2	1	59	2	-1	-1	0	9	-2*	2	21	2	-5
-2	56	2	-1	-12	16	2	3	2	14	3	8	0	68	2	5	3	44	3	-2
-1	5	9	-5*	-11	42	1	-3	3	23	1	4	1	28	2	2	4	78	2	1
0	17	3	4	-10	26	2	-1	4	15	2	5	2	0	8	-9*	5	25	2	-3
1	7	8	0*	-9	67	2	-2	5	49	2	1	3	26	2	-5	6	17	1	6
2	12	4	1	-8	20	2	1	6	25	2	-5	4	17	2	4	H,K=	13,	2	
3	0	9	-5*	-7	28	2	6	7	30	1	-2	5	20	1	-6	-11	33	1	-0
4	2	8	-3*	-6	45	2	-1	H,K=	12,	4	H,K=	12,	7	-10	14	3	4	4	
5	15	2	0	-5	38	2	4	-12	34	1	-3	-9	0	7	-3*	-9	10	3	1
6	9	3	1	-4	9	9	5*	-11	17	2	2	-8	95	3	-2	-8	19	2	3
H,K=	11,	8	-3	91	2	-6	-10	45	1	-1	-7	7	7	-1*	-7	59	2	-1	
-9	13	3	0	-2	8	9	4*	-9	27	2	3	-6	32	1	1	-6	28	2	3
-8	25	3	1	-1	20	2	3	-8	91	2	-1	-5	44	1	-1	-5	8	5	-3
-7	12	2	3	0	10	3	6	-7	75	2	0	-4	46	1	2	-4	55	2	3
-6	0	8	-1*	1	80	2	-4	-6	102	3	-3	-3	14	7	-0	-3	29	2	4
-5	54	2	2	2	10	7	-3	-5	33	1	3	-2	35	1	5	-2	7	9	6*
-4	54	2	-1	3	17	2	-1	-4	0	8	-2*	-1	13	3	5	-1	11	5	4
-3	13	3	3	4	44	2	-2	-3	29	1	-3	0	13	7	5	0	2	9	-8*
-2	41	2	0	5	0	9	-15*	-2	43	1	3	1	42	1	1	1	16	2	-2
-1	10	3	0	6	2	7	0*	-1	59	2	-0	2	83	2	-2	2	56	2	-2
0	41	1	-3	7	48	1	-1	0	0	9	-4*	3	22	1	-2	3	9	6	0
1	10	5	1	8	12	3	0	1	37	2	-2	4	47	1	1	4	25	1	-3
2	15	3	3	H,K=	12,	2	2	43	2	-2	H,K=	12,	8	5	11	9	5	5	
3	16	2	-2	-12	61	2	-1	3	36	2	4	-7	16	2	2	H,K=	13,	3	
4	0	7	-3*	-11	51	2	-3	4	29	2	-3	-6	18	4	-3	-10	63	2	0
5	18	2	8	-10	56	2	-5	5	28	1	-2	-5	6	7	5*	-9	17	4	-4
H,K=	11,	9	-9	85	2	-1	6	16	2	1	-4	54	2	1	-8	63	2	1	
-7	38	1	-2	-8	4	9	4*	7	27	1	3	-3	0	8	-4*	-7	17	3	0
-6	14	2	-2	-7	83	2	-3	H,K=	12,	5	-2	20	1	-0	-6	11	3	2	
-5	10	5	-6	-6	12	3	-3	-11	18	1	1	-1	3	8	-1*	-5	7	8	-4*
-4	0	8	-7*	-5	13	2	8	-10	45	1	-1	0	70	2	4	-4	32	1	1
-3	40	1	-1	-4	59	2	0	-9	67	2	2	1	13	2	-3	-3	0	9	-7*
-2	20	4	4	-3	16	2	0	-8	30	1	0	2	82	2	4	-2	102	3	2
-1	28	2	-0	-2	115	3	-1	-7	25	2	-3	H,K=	13,	0	-1	13	3	4	
0	16	2	5	-1	161	4	-3	-6	40	1	-2	-10	47	1	-2	0	39	1	0
1	42	1	0	0	14	9	2	-5	43	2	2	-8	62	2	2	1	10	3	4
2	41	2	-2	1	16	3	-7	-4	8	4	5	-6	129	3	1	2	13	2	1
3	45	1	5	2	65	2	1	-3	65	3	-1	-4	40	2	0	3	5	7	-1*
H,K=	11,	10	3	11	13	3*	-2	13	4	-5	-2	47	2	3	4	28	1	3	
-4	48	2	-3	4	27	2	-5	-1	20	2	-1	0	132	3	0	5	17	1	0
-3	1	7	-2*	5	31	1	1	0	66	2	1	2	49	2	1	H,K=	13,	4	
-2	37	1	2	6	31	1	-1	1	36	2	-4	4	72	2	-3	-10	43	1	1
-1	8	6	0	7	6	7	0*	2	31	3	4	6	67	2	0	-9	22	2	-4
0	0	8	-0*	H,K=	12,	3	3	70	2	-6	H,K=	13,	1	-8	46	1	-1	-1	
H,K=	12,	0	-12	12	2	-3	4	13	7	2	-11	29	1	-3	-7	61	2	4	
-12	62	2	-4	-11	49	1	-1	5	16	2	-1	-10	32	2	0	-6	18	2	-0
-10	0	7	-1*	-10	23	2	-5	6	30	1	-1	-9	31	1	-3	-5	40	1	2
-8	52	2	-5	-9	64	2	-1	H,K=	12,	6	-8	3	9	-1*	-4	33	1	1	
-6	66	2	5	-8	32	1	-4	-10	5	11	1*	-7	12	3	-2	-3	31	1	-2
-4	11	3	1	-7	26	1	0	-9	14	2	2	-6	25	2	0	-2	76	2	2
-2	141	4	6	-6	24	2	-3	-8	5	8	-0*	-5	92	3	-3	-1	29	2	4
0	61	2	-3	-5	9	4	5	-7	75	2	1	-4	30	1	-0	0	34	1	1
2	32	2	-6	-4	7	9	3*	-6	48	2	-1	-3	77	2	-3	1	0	12	-5*
4	50	2	-2	-3	42	1	2	-5	8	6	-2	-2	5	9	-4*	2	68	2	4
6	9	3	6	-2	138	4	-0	-4	64	2	1	-1	27	1	-3	3	10	5	4
8	34	1	2	-1	27	2	0	-3	53	2	5	0	0	8	-4*	4	8	3	8
H,K=	12,	1	0	21	2	1	-2	31	2	-2	1	39	1	0	H,K=	13,	5	5	



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