

Table 8. Bond Angles(°) Involving Hydrogen

| atom  | atom  | atom  | angle | atom  | atom  | atom  | angle |
|-------|-------|-------|-------|-------|-------|-------|-------|
| Pr(2) | O(8)  | H(1)  | 109.5 | Pr(2) | O(8)  | H(2)  | 109.5 |
| H(1)  | O(8)  | H(2)  | 109.5 | C(57) | O(12) | H(59) | 109.5 |
| N(1)  | C(1)  | H(3)  | 108.8 | N(1)  | C(1)  | H(4)  | 108.8 |
| C(2)  | C(1)  | H(3)  | 108.8 | C(2)  | C(1)  | H(4)  | 108.8 |
| H(3)  | C(1)  | H(4)  | 109.5 | N(2)  | C(2)  | H(5)  | 108.7 |
| N(2)  | C(2)  | H(6)  | 108.7 | C(1)  | C(2)  | H(5)  | 108.7 |
| C(1)  | C(2)  | H(6)  | 108.7 | H(5)  | C(2)  | H(6)  | 109.5 |
| N(1)  | C(3)  | H(7)  | 109.0 | N(1)  | C(3)  | H(8)  | 109.0 |
| C(4)  | C(3)  | H(7)  | 109.0 | C(4)  | C(3)  | H(8)  | 109.0 |
| H(7)  | C(3)  | H(8)  | 109.5 | C(4)  | C(5)  | H(9)  | 120.4 |
| C(6)  | C(5)  | H(9)  | 120.4 | C(5)  | C(6)  | H(10) | 120.2 |
| C(7)  | C(6)  | H(10) | 120.2 | C(6)  | C(7)  | H(11) | 120.7 |
| C(8)  | C(7)  | H(11) | 120.7 | N(3)  | C(8)  | H(12) | 118.6 |
| C(7)  | C(8)  | H(12) | 118.6 | N(1)  | C(9)  | H(13) | 107.6 |
| N(1)  | C(9)  | H(14) | 107.6 | C(10) | C(9)  | H(13) | 107.6 |
| C(10) | C(9)  | H(14) | 107.6 | H(13) | C(9)  | H(14) | 109.5 |
| C(11) | C(12) | H(15) | 119.0 | C(13) | C(12) | H(15) | 119.0 |
| C(12) | C(13) | H(16) | 119.6 | C(14) | C(13) | H(16) | 119.6 |
| C(13) | C(14) | H(17) | 120.8 | C(15) | C(14) | H(17) | 120.9 |
| C(10) | C(15) | H(18) | 118.8 | C(14) | C(15) | H(18) | 118.8 |
| N(2)  | C(16) | H(19) | 108.9 | N(2)  | C(16) | H(20) | 108.9 |
| C(17) | C(16) | H(19) | 108.9 | C(17) | C(16) | H(20) | 108.9 |
| H(19) | C(16) | H(20) | 109.5 | C(17) | C(18) | H(21) | 120.7 |
| C(19) | C(18) | H(21) | 120.7 | C(18) | C(19) | H(22) | 120.6 |

Table 8. Bond Angles(°) Involving Hydrogen (continued)

| atom  | atom  | atom  | angle | atom  | atom  | atom  | angle |
|-------|-------|-------|-------|-------|-------|-------|-------|
| C(20) | C(19) | H(22) | 120.6 | C(19) | C(20) | H(23) | 120.4 |
| C(21) | C(20) | H(23) | 120.4 | N(4)  | C(21) | H(24) | 118.6 |
| C(20) | C(21) | H(24) | 118.6 | N(2)  | C(22) | H(25) | 108.2 |
| N(2)  | C(22) | H(26) | 108.2 | C(23) | C(22) | H(25) | 108.2 |
| C(23) | C(22) | H(26) | 108.2 | H(25) | C(22) | H(26) | 109.5 |
| C(24) | C(25) | H(27) | 119.1 | C(26) | C(25) | H(27) | 119.1 |
| C(25) | C(26) | H(28) | 119.7 | C(27) | C(26) | H(28) | 119.7 |
| C(26) | C(27) | H(29) | 120.7 | C(28) | C(27) | H(29) | 120.7 |
| C(23) | C(28) | H(30) | 119.3 | C(27) | C(28) | H(30) | 119.3 |
| N(5)  | C(29) | H(31) | 108.8 | N(5)  | C(29) | H(32) | 108.8 |
| C(30) | C(29) | H(31) | 108.8 | C(30) | C(29) | H(32) | 108.8 |
| H(31) | C(29) | H(32) | 109.5 | N(6)  | C(30) | H(33) | 108.6 |
| N(6)  | C(30) | H(34) | 108.6 | C(29) | C(30) | H(33) | 108.6 |
| C(29) | C(30) | H(34) | 108.6 | H(33) | C(30) | H(34) | 109.5 |
| N(5)  | C(31) | H(35) | 108.1 | N(5)  | C(31) | H(36) | 108.1 |
| C(32) | C(31) | H(35) | 108.1 | C(32) | C(31) | H(36) | 108.1 |
| H(35) | C(31) | H(36) | 109.5 | C(32) | C(33) | H(37) | 120.3 |
| C(34) | C(33) | H(37) | 120.3 | C(33) | C(34) | H(38) | 120.1 |
| C(35) | C(34) | H(38) | 120.1 | C(34) | C(35) | H(39) | 121.2 |
| C(36) | C(35) | H(39) | 121.2 | N(7)  | C(36) | H(40) | 118.2 |
| C(35) | C(36) | H(40) | 118.2 | N(5)  | C(37) | H(41) | 108.9 |
| N(5)  | C(37) | H(42) | 108.9 | C(38) | C(37) | H(41) | 108.9 |
| C(38) | C(37) | H(42) | 108.9 | H(41) | C(37) | H(42) | 109.5 |
| C(39) | C(40) | H(43) | 120.0 | C(41) | C(40) | H(43) | 120.0 |

Table 8. Bond Angles(°) Involving Hydrogen (continued)

| atom  | atom  | atom  | angle | atom  | atom  | atom  | angle |
|-------|-------|-------|-------|-------|-------|-------|-------|
| C(40) | C(41) | H(44) | 119.6 | C(42) | C(41) | H(44) | 119.6 |
| C(41) | C(42) | H(45) | 120.5 | C(43) | C(42) | H(45) | 120.5 |
| C(38) | C(43) | H(46) | 119.3 | C(42) | C(43) | H(46) | 119.3 |
| N(6)  | C(44) | H(47) | 107.9 | N(6)  | C(44) | H(48) | 107.9 |
| C(45) | C(44) | H(47) | 107.9 | C(45) | C(44) | H(48) | 107.9 |
| H(47) | C(44) | H(48) | 109.5 | C(45) | C(46) | H(49) | 120.4 |
| C(47) | C(46) | H(49) | 120.4 | C(46) | C(47) | H(50) | 120.5 |
| C(48) | C(47) | H(50) | 120.5 | C(47) | C(48) | H(51) | 120.6 |
| C(49) | C(48) | H(51) | 120.5 | N(8)  | C(49) | H(52) | 118.8 |
| C(48) | C(49) | H(52) | 118.8 | N(6)  | C(50) | H(53) | 108.8 |
| N(6)  | C(50) | H(54) | 108.8 | C(51) | C(50) | H(53) | 108.8 |
| C(51) | C(50) | H(54) | 108.8 | H(53) | C(50) | H(54) | 109.5 |
| C(52) | C(53) | H(55) | 120.0 | C(54) | C(53) | H(55) | 120.0 |
| C(53) | C(54) | H(56) | 119.3 | C(55) | C(54) | H(56) | 119.3 |
| C(54) | C(55) | H(57) | 120.8 | C(56) | C(55) | H(57) | 120.8 |
| C(51) | C(56) | H(58) | 119.4 | C(55) | C(56) | H(58) | 119.4 |
| O(12) | C(57) | H(60) | 109.5 | O(12) | C(57) | H(61) | 109.5 |
| O(12) | C(57) | H(62) | 109.5 | H(60) | C(57) | H(61) | 109.5 |
| H(60) | C(57) | H(62) | 109.5 | H(61) | C(57) | H(62) | 109.5 |

Table 9. Torsion Angles(°)

| atom  | atom | atom  | atom  | angle       | atom  | atom | atom  | atom  | angle      |
|-------|------|-------|-------|-------------|-------|------|-------|-------|------------|
| Pr(1) | O(1) | C(11) | C(10) | 4.8(5)      | Pr(1) | O(1) | C(11) | C(12) | -174.9(2)  |
| Pr(1) | O(2) | C(24) | C(23) | 50.9(3)     | Pr(1) | O(2) | C(24) | C(25) | -127.7(3)  |
| Pr(1) | O(3) | Pr(2) | O(4)  | 5.45(8)     | Pr(1) | O(3) | Pr(2) | O(5)  | -121.22(8) |
| Pr(1) | O(3) | Pr(2) | O(6)  | 162.77(8)   | Pr(1) | O(3) | Pr(2) | O(8)  | -71.86(8)  |
| Pr(1) | O(3) | Pr(2) | N(5)  | 132.39(10)  | Pr(1) | O(3) | Pr(2) | N(6)  | 71.95(9)   |
| Pr(1) | O(3) | Pr(2) | N(7)  | -159.70(10) | Pr(1) | O(3) | Pr(2) | N(8)  | 8.9(2)     |
| Pr(1) | O(3) | C(39) | C(38) | -108.2(2)   | Pr(1) | O(3) | C(39) | C(40) | 72.5(3)    |
| Pr(1) | O(4) | Pr(2) | O(3)  | -5.17(7)    | Pr(1) | O(4) | Pr(2) | O(5)  | 126.55(8)  |
| Pr(1) | O(4) | Pr(2) | O(6)  | -158.75(9)  | Pr(1) | O(4) | Pr(2) | O(8)  | 78.91(8)   |
| Pr(1) | O(4) | Pr(2) | N(5)  | -62.42(9)   | Pr(1) | O(4) | Pr(2) | N(6)  | -117.94(9) |
| Pr(1) | O(4) | Pr(2) | N(7)  | 18.53(15)   | Pr(1) | O(4) | Pr(2) | N(8)  | 176.61(9)  |
| Pr(1) | O(4) | C(52) | C(51) | 101.3(3)    | Pr(1) | O(4) | C(52) | C(53) | -82.9(3)   |
| Pr(1) | N(1) | C(1)  | C(2)  | 52.8(3)     | Pr(1) | N(1) | C(3)  | C(4)  | 56.8(2)    |
| Pr(1) | N(1) | C(9)  | C(10) | 67.1(3)     | Pr(1) | N(2) | C(2)  | C(1)  | 36.8(3)    |
| Pr(1) | N(2) | C(16) | C(17) | 49.9(3)     | Pr(1) | N(2) | C(22) | C(23) | 67.1(3)    |
| Pr(1) | N(3) | C(4)  | C(3)  | -5.0(3)     | Pr(1) | N(3) | C(4)  | C(5)  | 175.5(2)   |
| Pr(1) | N(3) | C(8)  | C(7)  | -173.9(2)   | Pr(1) | N(4) | C(17) | C(16) | 4.3(3)     |
| Pr(1) | N(4) | C(17) | C(18) | -176.7(2)   | Pr(1) | N(4) | C(21) | C(20) | 178.9(2)   |
| Pr(2) | O(3) | Pr(1) | O(1)  | -83.13(9)   | Pr(2) | O(3) | Pr(1) | O(2)  | 85.01(9)   |
| Pr(2) | O(3) | Pr(1) | O(4)  | -5.43(8)    | Pr(2) | O(3) | Pr(1) | N(1)  | -125.9(2)  |
| Pr(2) | O(3) | Pr(1) | N(2)  | 151.09(8)   | Pr(2) | O(3) | Pr(1) | N(3)  | 34.33(15)  |
| Pr(2) | O(3) | Pr(1) | N(4)  | -156.64(10) | Pr(2) | O(3) | C(39) | C(38) | 68.3(3)    |
| Pr(2) | O(3) | C(39) | C(40) | -110.9(3)   | Pr(2) | O(4) | Pr(1) | O(1)  | 103.32(8)  |
| Pr(2) | O(4) | Pr(1) | O(2)  | -74.11(7)   | Pr(2) | O(4) | Pr(1) | O(3)  | 5.11(7)    |

Table 9. Torsion Angles(°) (continued)

| atom  | atom  | atom  | atom  | angle      | atom  | atom  | atom  | atom  | angle     |
|-------|-------|-------|-------|------------|-------|-------|-------|-------|-----------|
| Pr(2) | O(4)  | Pr(1) | N(1)  | 162.61(7)  | Pr(2) | O(4)  | Pr(1) | N(2)  | -91.8(2)  |
| Pr(2) | O(4)  | Pr(1) | N(3)  | -150.22(9) | Pr(2) | O(4)  | Pr(1) | N(4)  | 49.17(13) |
| Pr(2) | O(4)  | C(52) | C(51) | -68.9(3)   | Pr(2) | O(4)  | C(52) | C(53) | 107.0(3)  |
| Pr(2) | O(5)  | N(9)  | O(6)  | 3.8(3)     | Pr(2) | O(5)  | N(9)  | O(7)  | -177.4(3) |
| Pr(2) | O(6)  | N(9)  | O(5)  | -3.8(3)    | Pr(2) | O(6)  | N(9)  | O(7)  | 177.4(3)  |
| Pr(2) | N(5)  | C(29) | C(30) | 55.2(3)    | Pr(2) | N(5)  | C(31) | C(32) | -39.6(3)  |
| Pr(2) | N(5)  | C(37) | C(38) | 69.5(2)    | Pr(2) | N(6)  | C(30) | C(29) | 32.5(3)   |
| Pr(2) | N(6)  | C(44) | C(45) | 43.4(3)    | Pr(2) | N(6)  | C(50) | C(51) | -59.3(3)  |
| Pr(2) | N(7)  | C(32) | C(31) | -20.9(3)   | Pr(2) | N(7)  | C(32) | C(33) | 164.3(2)  |
| Pr(2) | N(7)  | C(36) | C(35) | -165.9(2)  | Pr(2) | N(8)  | C(45) | C(44) | -6.9(3)   |
| Pr(2) | N(8)  | C(45) | C(46) | 170.4(2)   | Pr(2) | N(8)  | C(49) | C(48) | -169.9(2) |
| O(1)  | Pr(1) | O(2)  | C(24) | 141.9(3)   | O(1)  | Pr(1) | O(3)  | C(39) | 93.8(2)   |
| O(1)  | Pr(1) | O(4)  | C(52) | -67.4(2)   | O(1)  | Pr(1) | N(1)  | C(1)  | -161.4(2) |
| O(1)  | Pr(1) | N(1)  | C(3)  | 79.3(2)    | O(1)  | Pr(1) | N(1)  | C(9)  | -39.8(2)  |
| O(1)  | Pr(1) | N(2)  | C(2)  | 39.0(2)    | O(1)  | Pr(1) | N(2)  | C(16) | -79.8(2)  |
| O(1)  | Pr(1) | N(2)  | C(22) | 159.14(15) | O(1)  | Pr(1) | N(3)  | C(4)  | -32.4(2)  |
| O(1)  | Pr(1) | N(3)  | C(8)  | 142.7(2)   | O(1)  | Pr(1) | N(4)  | C(17) | 155.3(2)  |
| O(1)  | Pr(1) | N(4)  | C(21) | -23.8(2)   | O(1)  | C(11) | C(10) | C(9)  | 8.7(4)    |
| O(1)  | C(11) | C(10) | C(15) | -175.4(3)  | O(1)  | C(11) | C(12) | C(13) | 177.4(3)  |
| O(2)  | Pr(1) | O(1)  | C(11) | 149.2(3)   | O(2)  | Pr(1) | O(3)  | C(39) | -98.0(2)  |
| O(2)  | Pr(1) | O(4)  | C(52) | 115.1(2)   | O(2)  | Pr(1) | N(1)  | C(1)  | 29.0(2)   |
| O(2)  | Pr(1) | N(1)  | C(3)  | -90.3(2)   | O(2)  | Pr(1) | N(1)  | C(9)  | 150.6(2)  |
| O(2)  | Pr(1) | N(2)  | C(2)  | -142.1(2)  | O(2)  | Pr(1) | N(2)  | C(16) | 99.2(2)   |
| O(2)  | Pr(1) | N(2)  | C(22) | -21.92(15) | O(2)  | Pr(1) | N(3)  | C(4)  | 162.1(2)  |

Table 9. Torsion Angles(°) (continued)

| atom | atom  | atom  | atom  | angle      | atom | atom  | atom  | atom  | angle     |
|------|-------|-------|-------|------------|------|-------|-------|-------|-----------|
| O(2) | Pr(1) | N(3)  | C(8)  | -22.8(2)   | O(2) | Pr(1) | N(4)  | C(17) | -35.8(2)  |
| O(2) | Pr(1) | N(4)  | C(21) | 145.2(2)   | O(2) | C(24) | C(23) | C(22) | 3.7(4)    |
| O(2) | C(24) | C(23) | C(28) | -175.0(2)  | O(2) | C(24) | C(25) | C(26) | 175.0(3)  |
| O(3) | Pr(1) | O(1)  | C(11) | -154.9(3)  | O(3) | Pr(1) | O(2)  | C(24) | 84.4(2)   |
| O(3) | Pr(1) | O(4)  | C(52) | -165.6(2)  | O(3) | Pr(1) | N(1)  | C(1)  | -115.5(2) |
| O(3) | Pr(1) | N(1)  | C(3)  | 125.3(2)   | O(3) | Pr(1) | N(1)  | C(9)  | 6.2(3)    |
| O(3) | Pr(1) | N(2)  | C(2)  | 148.7(2)   | O(3) | Pr(1) | N(2)  | C(16) | 29.9(2)   |
| O(3) | Pr(1) | N(2)  | C(22) | -91.2(2)   | O(3) | Pr(1) | N(3)  | C(4)  | -146.4(2) |
| O(3) | Pr(1) | N(3)  | C(8)  | 28.7(3)    | O(3) | Pr(1) | N(4)  | C(17) | -108.0(2) |
| O(3) | Pr(1) | N(4)  | C(21) | 72.9(2)    | O(3) | Pr(2) | O(4)  | C(52) | 167.2(2)  |
| O(3) | Pr(2) | O(5)  | N(9)  | -126.8(2)  | O(3) | Pr(2) | O(6)  | N(9)  | 117.4(2)  |
| O(3) | Pr(2) | N(5)  | C(29) | -140.4(2)  | O(3) | Pr(2) | N(5)  | C(31) | 102.6(2)  |
| O(3) | Pr(2) | N(5)  | C(37) | -20.0(2)   | O(3) | Pr(2) | N(6)  | C(30) | 60.4(2)   |
| O(3) | Pr(2) | N(6)  | C(44) | 178.69(15) | O(3) | Pr(2) | N(6)  | C(50) | -57.1(2)  |
| O(3) | Pr(2) | N(7)  | C(32) | -76.9(2)   | O(3) | Pr(2) | N(7)  | C(36) | 88.0(2)   |
| O(3) | Pr(2) | N(8)  | C(45) | 95.3(2)    | O(3) | Pr(2) | N(8)  | C(49) | -93.6(3)  |
| O(3) | C(39) | C(38) | C(37) | -7.4(4)    | O(3) | C(39) | C(38) | C(43) | 174.9(3)  |
| O(3) | C(39) | C(40) | C(41) | -177.1(3)  | O(4) | Pr(1) | O(1)  | C(11) | 138.7(3)  |
| O(4) | Pr(1) | O(2)  | C(24) | 152.3(2)   | O(4) | Pr(1) | O(3)  | C(39) | 171.5(2)  |
| O(4) | Pr(1) | N(1)  | C(1)  | 134.5(2)   | O(4) | Pr(1) | N(1)  | C(3)  | 15.2(2)   |
| O(4) | Pr(1) | N(1)  | C(9)  | -103.9(2)  | O(4) | Pr(1) | N(2)  | C(2)  | -123.6(2) |
| O(4) | Pr(1) | N(2)  | C(16) | 117.6(2)   | O(4) | Pr(1) | N(2)  | C(22) | -3.5(3)   |
| O(4) | Pr(1) | N(3)  | C(4)  | -109.6(2)  | O(4) | Pr(1) | N(3)  | C(8)  | 65.5(2)   |
| O(4) | Pr(1) | N(4)  | C(17) | -148.7(2)  | O(4) | Pr(1) | N(4)  | C(21) | 32.2(3)   |

Table 9. Torsion Angles(°) (continued)

| atom | atom  | atom  | atom  | angle      | atom | atom  | atom  | atom  | angle      |
|------|-------|-------|-------|------------|------|-------|-------|-------|------------|
| O(4) | Pr(2) | O(3)  | C(39) | -171.3(2)  | O(4) | Pr(2) | O(5)  | N(9)  | 132.65(15) |
| O(4) | Pr(2) | O(6)  | N(9)  | -102.7(2)  | O(4) | Pr(2) | N(5)  | C(29) | -85.0(2)   |
| O(4) | Pr(2) | N(5)  | C(31) | 158.1(2)   | O(4) | Pr(2) | N(5)  | C(37) | 35.5(2)    |
| O(4) | Pr(2) | N(6)  | C(30) | 123.1(2)   | O(4) | Pr(2) | N(6)  | C(44) | -118.6(2)  |
| O(4) | Pr(2) | N(6)  | C(50) | 5.6(2)     | O(4) | Pr(2) | N(7)  | C(32) | -99.6(2)   |
| O(4) | Pr(2) | N(7)  | C(36) | 65.2(3)    | O(4) | Pr(2) | N(8)  | C(45) | 98.5(2)    |
| O(4) | Pr(2) | N(8)  | C(49) | -90.4(2)   | O(4) | C(52) | C(51) | C(50) | -1.4(4)    |
| O(4) | C(52) | C(51) | C(56) | 178.0(3)   | O(4) | C(52) | C(53) | C(54) | -177.6(3)  |
| O(5) | Pr(2) | O(3)  | C(39) | 62.1(2)    | O(5) | Pr(2) | O(4)  | C(52) | -61.1(2)   |
| O(5) | Pr(2) | O(6)  | N(9)  | 2.2(2)     | O(5) | Pr(2) | N(5)  | C(29) | 87.6(2)    |
| O(5) | Pr(2) | N(5)  | C(31) | -29.3(2)   | O(5) | Pr(2) | N(5)  | C(37) | -152.0(2)  |
| O(5) | Pr(2) | N(6)  | C(30) | -108.9(2)  | O(5) | Pr(2) | N(6)  | C(44) | 9.4(2)     |
| O(5) | Pr(2) | N(6)  | C(50) | 133.5(2)   | O(5) | Pr(2) | N(7)  | C(32) | 131.4(2)   |
| O(5) | Pr(2) | N(7)  | C(36) | -63.8(2)   | O(5) | Pr(2) | N(8)  | C(45) | -120.4(2)  |
| O(5) | Pr(2) | N(8)  | C(49) | 50.7(2)    | O(6) | Pr(2) | O(3)  | C(39) | -14.0(3)   |
| O(6) | Pr(2) | O(4)  | C(52) | 13.6(3)    | O(6) | Pr(2) | O(5)  | N(9)  | -2.2(2)    |
| O(6) | Pr(2) | N(5)  | C(29) | 59.5(2)    | O(6) | Pr(2) | N(5)  | C(31) | -57.4(2)   |
| O(6) | Pr(2) | N(5)  | C(37) | 179.9(2)   | O(6) | Pr(2) | N(6)  | C(30) | -78.7(2)   |
| O(6) | Pr(2) | N(6)  | C(44) | 39.63(15)  | O(6) | Pr(2) | N(6)  | C(50) | 163.8(2)   |
| O(6) | Pr(2) | N(7)  | C(32) | 78.8(2)    | O(6) | Pr(2) | N(7)  | C(36) | -116.4(2)  |
| O(6) | Pr(2) | N(8)  | C(45) | -67.0(2)   | O(6) | Pr(2) | N(8)  | C(49) | 104.1(2)   |
| O(8) | Pr(2) | O(3)  | C(39) | 111.4(2)   | O(8) | Pr(2) | O(4)  | C(52) | -108.7(2)  |
| O(8) | Pr(2) | O(5)  | N(9)  | -178.7(2)  | O(8) | Pr(2) | O(6)  | N(9)  | 6.1(2)     |
| O(8) | Pr(2) | N(5)  | C(29) | 177.87(15) | O(8) | Pr(2) | N(5)  | C(31) | 61.0(2)    |

Table 9. Torsion Angles(°) (continued)

| atom | atom  | atom  | atom  | angle     | atom | atom  | atom  | atom  | angle     |
|------|-------|-------|-------|-----------|------|-------|-------|-------|-----------|
| O(8) | Pr(2) | N(5)  | C(37) | -61.7(2)  | O(8) | Pr(2) | N(6)  | C(30) | 151.9(2)  |
| O(8) | Pr(2) | N(6)  | C(44) | -89.8(2)  | O(8) | Pr(2) | N(6)  | C(50) | 34.4(2)   |
| O(8) | Pr(2) | N(7)  | C(32) | -156.8(2) | O(8) | Pr(2) | N(7)  | C(36) | 8.1(2)    |
| O(8) | Pr(2) | N(8)  | C(45) | 171.8(2)  | O(8) | Pr(2) | N(8)  | C(49) | -17.1(2)  |
| N(1) | Pr(1) | O(1)  | C(11) | 9.4(3)    | N(1) | Pr(1) | O(2)  | C(24) | -82.7(2)  |
| N(1) | Pr(1) | O(3)  | C(39) | 51.1(3)   | N(1) | Pr(1) | O(4)  | C(52) | -8.1(3)   |
| N(1) | Pr(1) | N(2)  | C(2)  | -7.2(2)   | N(1) | Pr(1) | N(2)  | C(16) | -125.9(2) |
| N(1) | Pr(1) | N(2)  | C(22) | 113.0(2)  | N(1) | Pr(1) | N(3)  | C(4)  | 25.2(2)   |
| N(1) | Pr(1) | N(3)  | C(8)  | -159.7(3) | N(1) | Pr(1) | N(4)  | C(17) | 83.3(2)   |
| N(1) | Pr(1) | N(4)  | C(21) | -95.8(2)  | N(1) | C(1)  | C(2)  | N(2)  | -63.0(3)  |
| N(1) | C(3)  | C(4)  | N(3)  | -36.5(3)  | N(1) | C(3)  | C(4)  | C(5)  | 143.0(3)  |
| N(1) | C(9)  | C(10) | C(11) | -50.2(4)  | N(1) | C(9)  | C(10) | C(15) | 133.8(3)  |
| N(2) | Pr(1) | O(1)  | C(11) | -34.9(4)  | N(2) | Pr(1) | O(2)  | C(24) | -34.4(2)  |
| N(2) | Pr(1) | O(3)  | C(39) | -31.9(2)  | N(2) | Pr(1) | O(4)  | C(52) | 97.4(3)   |
| N(2) | Pr(1) | N(1)  | C(1)  | -22.6(2)  | N(2) | Pr(1) | N(1)  | C(3)  | -141.9(2) |
| N(2) | Pr(1) | N(1)  | C(9)  | 99.0(2)   | N(2) | Pr(1) | N(3)  | C(4)  | 88.8(2)   |
| N(2) | Pr(1) | N(3)  | C(8)  | -96.2(2)  | N(2) | Pr(1) | N(4)  | C(17) | 15.9(2)   |
| N(2) | Pr(1) | N(4)  | C(21) | -163.2(2) | N(2) | C(16) | C(17) | N(4)  | -38.1(3)  |
| N(2) | C(16) | C(17) | C(18) | 142.8(3)  | N(2) | C(22) | C(23) | C(24) | -67.7(4)  |
| N(2) | C(22) | C(23) | C(28) | 111.0(3)  | N(3) | Pr(1) | O(1)  | C(11) | 61.3(3)   |
| N(3) | Pr(1) | O(2)  | C(24) | -126.5(2) | N(3) | Pr(1) | O(3)  | C(39) | -148.7(2) |
| N(3) | Pr(1) | O(4)  | C(52) | 39.0(2)   | N(3) | Pr(1) | N(1)  | C(1)  | 78.9(2)   |
| N(3) | Pr(1) | N(1)  | C(3)  | -40.3(2)  | N(3) | Pr(1) | N(1)  | C(9)  | -159.5(2) |
| N(3) | Pr(1) | N(2)  | C(2)  | -66.4(2)  | N(3) | Pr(1) | N(2)  | C(16) | 174.8(2)  |

Table 9. Torsion Angles(°) (continued)

| atom | atom  | atom  | atom  | angle     | atom | atom  | atom  | atom  | angle     |
|------|-------|-------|-------|-----------|------|-------|-------|-------|-----------|
| N(3) | Pr(1) | N(2)  | C(22) | 53.7(2)   | N(3) | Pr(1) | N(4)  | C(17) | 61.3(2)   |
| N(3) | Pr(1) | N(4)  | C(21) | -117.8(2) | N(3) | C(4)  | C(5)  | C(6)  | -1.8(5)   |
| N(3) | C(8)  | C(7)  | C(6)  | -0.8(5)   | N(4) | Pr(1) | O(1)  | C(11) | -76.4(3)  |
| N(4) | Pr(1) | O(2)  | C(24) | 11.3(2)   | N(4) | Pr(1) | O(3)  | C(39) | 20.3(2)   |
| N(4) | Pr(1) | O(4)  | C(52) | -121.6(2) | N(4) | Pr(1) | N(1)  | C(1)  | -84.8(2)  |
| N(4) | Pr(1) | N(1)  | C(3)  | 155.9(2)  | N(4) | Pr(1) | N(1)  | C(9)  | 36.8(2)   |
| N(4) | Pr(1) | N(2)  | C(2)  | 85.8(2)   | N(4) | Pr(1) | N(2)  | C(16) | -33.0(2)  |
| N(4) | Pr(1) | N(2)  | C(22) | -154.1(2) | N(4) | Pr(1) | N(3)  | C(4)  | 50.2(2)   |
| N(4) | Pr(1) | N(3)  | C(8)  | -134.7(2) | N(4) | C(17) | C(18) | C(19) | -2.8(5)   |
| N(4) | C(21) | C(20) | C(19) | -1.5(5)   | N(5) | Pr(2) | O(3)  | C(39) | -44.3(2)  |
| N(5) | Pr(2) | O(4)  | C(52) | 110.0(2)  | N(5) | Pr(2) | O(5)  | N(9)  | -38.5(2)  |
| N(5) | Pr(2) | O(6)  | N(9)  | 147.7(2)  | N(5) | Pr(2) | N(6)  | C(30) | -3.1(2)   |
| N(5) | Pr(2) | N(6)  | C(44) | 115.1(2)  | N(5) | Pr(2) | N(6)  | C(50) | -120.7(2) |
| N(5) | Pr(2) | N(7)  | C(32) | -0.1(2)   | N(5) | Pr(2) | N(7)  | C(36) | 164.8(3)  |
| N(5) | Pr(2) | N(8)  | C(45) | -15.2(2)  | N(5) | Pr(2) | N(8)  | C(49) | 155.9(2)  |
| N(5) | C(29) | C(30) | N(6)  | -62.6(3)  | N(5) | C(31) | C(32) | N(7)  | 42.1(4)   |
| N(5) | C(31) | C(32) | C(33) | -143.1(3) | N(5) | C(37) | C(38) | C(39) | -64.5(3)  |
| N(5) | C(37) | C(38) | C(43) | 113.1(3)  | N(6) | Pr(2) | O(3)  | C(39) | -104.8(2) |
| N(6) | Pr(2) | O(4)  | C(52) | 54.5(2)   | N(6) | Pr(2) | O(5)  | N(9)  | 38.5(2)   |
| N(6) | Pr(2) | O(6)  | N(9)  | -142.5(2) | N(6) | Pr(2) | N(5)  | C(29) | -25.9(2)  |
| N(6) | Pr(2) | N(5)  | C(31) | -142.8(2) | N(6) | Pr(2) | N(5)  | C(37) | 94.5(2)   |
| N(6) | Pr(2) | N(7)  | C(32) | 20.3(3)   | N(6) | Pr(2) | N(7)  | C(36) | -174.9(2) |
| N(6) | Pr(2) | N(8)  | C(45) | 21.4(2)   | N(6) | Pr(2) | N(8)  | C(49) | -167.5(2) |
| N(6) | C(44) | C(45) | N(8)  | -26.8(4)  | N(6) | C(44) | C(45) | C(46) | 155.8(3)  |

Table 9. Torsion Angles(°) (continued)

| atom | atom  | atom  | atom  | angle      | atom | atom  | atom  | atom  | angle     |
|------|-------|-------|-------|------------|------|-------|-------|-------|-----------|
| N(6) | C(50) | C(51) | C(52) | 73.4(3)    | N(6) | C(50) | C(51) | C(56) | -106.0(3) |
| N(7) | Pr(2) | O(3)  | C(39) | 23.6(2)    | N(7) | Pr(2) | O(4)  | C(52) | -169.1(2) |
| N(7) | Pr(2) | O(5)  | N(9)  | -86.5(2)   | N(7) | Pr(2) | O(6)  | N(9)  | 79.0(2)   |
| N(7) | Pr(2) | N(5)  | C(29) | 137.3(2)   | N(7) | Pr(2) | N(5)  | C(31) | 20.4(2)   |
| N(7) | Pr(2) | N(5)  | C(37) | -102.2(2)  | N(7) | Pr(2) | N(6)  | C(30) | -23.1(2)  |
| N(7) | Pr(2) | N(6)  | C(44) | 95.2(2)    | N(7) | Pr(2) | N(6)  | C(50) | -140.6(2) |
| N(7) | Pr(2) | N(8)  | C(45) | -100.2(2)  | N(7) | Pr(2) | N(8)  | C(49) | 70.9(2)   |
| N(7) | C(32) | C(33) | C(34) | 1.8(4)     | N(7) | C(36) | C(35) | C(34) | 1.8(5)    |
| N(8) | Pr(2) | O(3)  | C(39) | -167.8(2)  | N(8) | Pr(2) | O(4)  | C(52) | -11.0(2)  |
| N(8) | Pr(2) | O(5)  | N(9)  | 78.0(2)    | N(8) | Pr(2) | O(6)  | N(9)  | -76.6(2)  |
| N(8) | Pr(2) | N(5)  | C(29) | 9.4(2)     | N(8) | Pr(2) | N(5)  | C(31) | -107.5(2) |
| N(8) | Pr(2) | N(5)  | C(37) | 129.9(2)   | N(8) | Pr(2) | N(6)  | C(30) | -150.0(2) |
| N(8) | Pr(2) | N(6)  | C(44) | -31.75(15) | N(8) | Pr(2) | N(6)  | C(50) | 92.4(2)   |
| N(8) | Pr(2) | N(7)  | C(32) | 111.2(2)   | N(8) | Pr(2) | N(7)  | C(36) | -84.0(3)  |
| N(8) | C(45) | C(46) | C(47) | 0.1(5)     | N(8) | C(49) | C(48) | C(47) | -0.3(5)   |
| C(1) | N(1)  | C(3)  | C(4)  | -62.0(3)   | C(1) | N(1)  | C(9)  | C(10) | -170.8(2) |
| C(1) | C(2)  | N(2)  | C(16) | 156.2(2)   | C(1) | C(2)  | N(2)  | C(22) | -84.4(3)  |
| C(2) | N(2)  | C(16) | C(17) | -70.5(3)   | C(2) | N(2)  | C(22) | C(23) | -171.5(2) |
| C(2) | C(1)  | N(1)  | C(3)  | 169.4(3)   | C(2) | C(1)  | N(1)  | C(9)  | -71.6(3)  |
| C(3) | N(1)  | C(9)  | C(10) | -50.7(3)   | C(3) | C(4)  | N(3)  | C(8)  | 179.6(3)  |
| C(3) | C(4)  | C(5)  | C(6)  | 178.7(3)   | C(4) | N(3)  | C(8)  | C(7)  | 1.2(5)    |
| C(4) | C(3)  | N(1)  | C(9)  | 179.0(2)   | C(4) | C(5)  | C(6)  | C(7)  | 2.2(5)    |
| C(5) | C(4)  | N(3)  | C(8)  | 0.1(4)     | C(5) | C(6)  | C(7)  | C(8)  | -0.9(5)   |
| C(9) | C(10) | C(11) | C(12) | -171.5(3)  | C(9) | C(10) | C(15) | C(14) | 172.6(3)  |

Table 9. Torsion Angles(°) (continued)

| atom  | atom  | atom  | atom  | angle     | atom  | atom  | atom  | atom  | angle     |
|-------|-------|-------|-------|-----------|-------|-------|-------|-------|-----------|
| C(10) | C(11) | C(12) | C(13) | -2.4(4)   | C(10) | C(15) | C(14) | C(13) | 0.3(5)    |
| C(11) | C(10) | C(15) | C(14) | -3.5(5)   | C(11) | C(12) | C(13) | C(14) | -0.7(5)   |
| C(12) | C(11) | C(10) | C(15) | 4.4(4)    | C(12) | C(13) | C(14) | C(15) | 1.8(5)    |
| C(16) | N(2)  | C(22) | C(23) | -53.4(3)  | C(16) | C(17) | N(4)  | C(21) | -176.5(2) |
| C(16) | C(17) | C(18) | C(19) | 176.1(3)  | C(17) | N(4)  | C(21) | C(20) | -0.2(4)   |
| C(17) | C(16) | N(2)  | C(22) | 171.1(2)  | C(17) | C(18) | C(19) | C(20) | 0.9(5)    |
| C(18) | C(17) | N(4)  | C(21) | 2.4(4)    | C(18) | C(19) | C(20) | C(21) | 1.1(5)    |
| C(22) | C(23) | C(24) | C(25) | -177.7(2) | C(22) | C(23) | C(28) | C(27) | -179.9(3) |
| C(23) | C(24) | C(25) | C(26) | -3.7(4)   | C(23) | C(28) | C(27) | C(26) | -1.4(5)   |
| C(24) | C(23) | C(28) | C(27) | -1.1(4)   | C(24) | C(25) | C(26) | C(27) | 1.1(5)    |
| C(25) | C(24) | C(23) | C(28) | 3.6(4)    | C(25) | C(26) | C(27) | C(28) | 1.4(5)    |
| C(29) | N(5)  | C(31) | C(32) | -155.4(3) | C(29) | N(5)  | C(37) | C(38) | -172.3(2) |
| C(29) | C(30) | N(6)  | C(44) | -85.7(3)  | C(29) | C(30) | N(6)  | C(50) | 153.9(2)  |
| C(30) | N(6)  | C(44) | C(45) | 163.8(2)  | C(30) | N(6)  | C(50) | C(51) | 179.7(2)  |
| C(30) | C(29) | N(5)  | C(31) | 173.7(2)  | C(30) | C(29) | N(5)  | C(37) | -66.7(3)  |
| C(31) | N(5)  | C(37) | C(38) | -53.6(3)  | C(31) | C(32) | N(7)  | C(36) | 173.9(3)  |
| C(31) | C(32) | C(33) | C(34) | -172.7(3) | C(32) | N(7)  | C(36) | C(35) | -0.9(5)   |
| C(32) | C(31) | N(5)  | C(37) | 84.6(3)   | C(32) | C(33) | C(34) | C(35) | -0.8(5)   |
| C(33) | C(32) | N(7)  | C(36) | -0.9(4)   | C(33) | C(34) | C(35) | C(36) | -0.9(5)   |
| C(37) | C(38) | C(39) | C(40) | 171.8(3)  | C(37) | C(38) | C(43) | C(42) | -174.3(3) |
| C(38) | C(39) | C(40) | C(41) | 3.7(4)    | C(38) | C(43) | C(42) | C(41) | 1.6(5)    |
| C(39) | C(38) | C(43) | C(42) | 3.2(4)    | C(39) | C(40) | C(41) | C(42) | 1.2(5)    |
| C(40) | C(39) | C(38) | C(43) | -5.8(4)   | C(40) | C(41) | C(42) | C(43) | -3.9(5)   |
| C(44) | N(6)  | C(50) | C(51) | 62.3(3)   | C(44) | C(45) | N(8)  | C(49) | -178.4(3) |

Table 9. Torsion Angles(°) (continued)

| atom  | atom  | atom  | atom  | angle     | atom  | atom  | atom  | atom  | angle    |
|-------|-------|-------|-------|-----------|-------|-------|-------|-------|----------|
| C(44) | C(45) | C(46) | C(47) | 177.3(3)  | C(45) | N(8)  | C(49) | C(48) | 1.2(5)   |
| C(45) | C(44) | N(6)  | C(50) | -80.3(3)  | C(45) | C(46) | C(47) | C(48) | 0.9(6)   |
| C(46) | C(45) | N(8)  | C(49) | -1.1(4)   | C(46) | C(47) | C(48) | C(49) | -0.7(6)  |
| C(50) | C(51) | C(52) | C(53) | -177.3(3) | C(50) | C(51) | C(56) | C(55) | 178.1(3) |
| C(51) | C(52) | C(53) | C(54) | -1.7(4)   | C(51) | C(56) | C(55) | C(54) | 0.1(5)   |
| C(52) | C(51) | C(56) | C(55) | -1.3(5)   | C(52) | C(53) | C(54) | C(55) | 0.5(5)   |
| C(53) | C(52) | C(51) | C(56) | 2.1(4)    | C(53) | C(54) | C(55) | C(56) | 0.3(5)   |

Table 10. Non-bonded Contacts out to 3.60 Å

| atom  | atom  | distance | ADC   | atom  | atom  | distance | ADC   |
|-------|-------|----------|-------|-------|-------|----------|-------|
| O(5)  | C(19) | 3.468(4) | 54501 | O(6)  | C(33) | 3.403(3) | 65602 |
| O(7)  | C(33) | 3.562(4) | 65602 | O(8)  | O(10) | 2.686(3) | 1     |
| O(8)  | O(9)  | 3.394(4) | 1     | O(8)  | N(10) | 3.455(4) | 1     |
| O(9)  | O(12) | 3.284(4) | 1     | O(9)  | C(57) | 3.334(6) | 1     |
| O(9)  | C(53) | 3.468(4) | 1     | O(9)  | C(30) | 3.482(4) | 45501 |
| O(10) | C(35) | 3.263(4) | 55602 | O(10) | C(34) | 3.286(5) | 55602 |
| O(10) | C(18) | 3.305(4) | 54501 | O(10) | C(19) | 3.424(5) | 54501 |
| O(11) | O(12) | 2.851(4) | 1     | O(11) | C(2)  | 3.315(4) | 54501 |
| O(11) | C(44) | 3.414(4) | 45501 | O(11) | C(18) | 3.437(4) | 54501 |
| O(12) | C(46) | 3.371(5) | 45501 | O(12) | C(1)  | 3.372(4) | 54501 |
| O(12) | C(44) | 3.404(4) | 45501 | O(12) | N(10) | 3.441(4) | 1     |
| O(12) | C(9)  | 3.477(4) | 54501 | O(12) | C(2)  | 3.524(4) | 54501 |
| C(3)  | C(5)  | 3.530(4) | 56502 | C(6)  | C(14) | 3.560(5) | 56502 |
| C(14) | C(47) | 3.555(5) | 56501 | C(20) | C(48) | 3.574(5) | 56501 |
| C(31) | C(33) | 3.561(4) | 65602 | C(41) | C(41) | 3.417(7) | 56602 |
| O(5)  | H(22) | 2.60     | 54501 | O(6)  | H(37) | 2.78     | 65602 |
| O(7)  | H(37) | 2.60     | 65602 | O(7)  | H(29) | 2.95     | 55602 |
| O(9)  | H(59) | 2.51     | 1     | O(9)  | H(33) | 2.62     | 45501 |
| O(9)  | H(55) | 2.64     | 1     | O(9)  | H(2)  | 2.65     | 1     |
| O(9)  | H(12) | 2.93     | 1     | O(9)  | H(60) | 2.94     | 1     |
| O(10) | H(2)  | 1.89     | 1     | O(10) | H(39) | 2.63     | 55602 |
| O(10) | H(38) | 2.67     | 55602 | O(10) | H(52) | 2.87     | 1     |
| O(10) | H(21) | 2.93     | 54501 | O(11) | H(59) | 1.93     | 1     |
| O(11) | H(6)  | 2.57     | 54501 | O(11) | H(48) | 2.58     | 45501 |

Table 10. Non-bonded Contacts out to 3.60 Å (continued)

| atom  | atom  | distance | ADC   | atom  | atom  | distance | ADC   |
|-------|-------|----------|-------|-------|-------|----------|-------|
| O(11) | H(38) | 2.86     | 55602 | O(12) | H(49) | 2.49     | 45501 |
| O(12) | H(3)  | 2.57     | 54501 | O(12) | H(13) | 2.71     | 54501 |
| O(12) | H(47) | 2.76     | 45501 | N(9)  | H(37) | 2.90     | 65602 |
| N(10) | H(59) | 2.52     | 1     | N(10) | H(2)  | 2.61     | 1     |
| C(5)  | H(8)  | 2.79     | 56502 | C(6)  | H(16) | 2.97     | 45501 |
| C(6)  | H(8)  | 2.99     | 56502 | C(11) | H(10) | 3.00     | 56502 |
| C(12) | H(10) | 2.78     | 56502 | C(13) | H(10) | 2.70     | 56502 |
| C(13) | H(50) | 2.98     | 56501 | C(14) | H(50) | 2.78     | 56501 |
| C(14) | H(10) | 2.80     | 56502 | C(15) | H(10) | 2.99     | 56502 |
| C(18) | H(44) | 2.88     | 56602 | C(27) | H(46) | 2.76     | 45501 |
| C(28) | H(45) | 2.82     | 56602 | C(28) | H(46) | 2.93     | 45501 |
| C(33) | H(35) | 2.66     | 65602 | C(34) | H(35) | 2.77     | 65602 |
| C(34) | H(21) | 2.88     | 56602 | C(41) | H(44) | 2.78     | 56602 |
| C(54) | H(7)  | 2.86     | 56502 | C(55) | H(7)  | 2.90     | 56502 |
| C(57) | H(18) | 2.90     | 56502 | H(8)  | H(9)  | 2.53     | 56502 |
| H(11) | H(33) | 2.46     | 45501 | H(11) | H(54) | 2.57     | 45501 |
| H(17) | H(58) | 2.30     | 66502 | H(18) | H(61) | 2.42     | 56502 |
| H(18) | H(60) | 2.59     | 56502 | H(20) | H(45) | 2.44     | 56602 |
| H(21) | H(38) | 2.43     | 56602 | H(21) | H(44) | 2.60     | 56602 |
| H(29) | H(46) | 2.57     | 45501 | H(44) | H(44) | 2.39     | 56602 |
| H(47) | H(59) | 2.58     | 65501 | H(56) | H(62) | 2.60     | 1     |

The ADC (atom designator code) specifies the position of an atom in a crystal. The 5-digit number shown in the table is a composite of three one-digit numbers and one two-digit number: TA (first digit) + TB (second digit) + TC (third digit) + SN (last two digits). TA, TB and TC are the crystal lattice translation digits along cell edges a, b and c. A translation digit of 5 indicates the origin unit cell. If TA = 4, this indicates a translation of one unit cell length along the a-axis in the negative direction. Each translation digit can range in value from 1 to 9 and thus  $\pm 4$  lattice translations from the origin (TA=5, TB=5, TC=5) can be represented.

The SN, or symmetry operator number, refers to the number of the symmetry operator used to generate the coordinates of the target atom. A list of symmetry operators relevant to this structure are given below.

For a given intermolecular contact, the first atom (origin atom) is located in the origin unit cell and its position can be generated using the identity operator (SN=1). Thus, the ADC for an origin atom is always 55501. The position of the second atom (target atom) can be generated using the ADC and the coordinates of the atom in the parameter table. For example, an ADC of 47502 refers to the target atom moved through symmetry operator two, then translated -1 cell translations along the a axis, +2 cell translations along the b axis, and 0 cell translations along the c axis.

An ADC of 1 indicates an intermolecular contact between two fragments (eg. cation and anion) that reside in the same asymmetric unit.

#### Symmetry Operators:

|     |    |    |   |     |     |     |    |
|-----|----|----|---|-----|-----|-----|----|
| (1) | x, | y, | z | (2) | -x, | -y, | -z |
|-----|----|----|---|-----|-----|-----|----|

Table 11. Least Squares Planes

Plane number 1

| Atoms defining plane | Distance  |
|----------------------|-----------|
| N(3)                 | 0.004(2)  |
| C(4)                 | 0.004(3)  |
| C(5)                 | -0.012(3) |
| C(6)                 | 0.011(3)  |
| C(7)                 | 0.002(3)  |
| C(8)                 | -0.010(3) |
| Additional Atoms     | Distance  |
| Pr(1)                | 0.221     |
| C(3)                 | 0.011     |

Plane number 2

| Atoms defining plane | Distance  |
|----------------------|-----------|
| N(4)                 | -0.005(2) |
| C(17)                | 0.015(3)  |
| C(18)                | -0.012(3) |
| C(19)                | -0.004(3) |
| C(20)                | 0.012(3)  |
| C(21)                | -0.004(3) |
| Additional Atoms     | Distance  |
| Pr(1)                | -0.083    |
| C(16)                | 0.095     |

Plane number 3

| Atoms defining plane | Distance  |
|----------------------|-----------|
| C(10)                | 0.022(3)  |
| C(11)                | -0.019(3) |
| C(12)                | 0.004(3)  |
| C(13)                | 0.015(3)  |
| C(14)                | -0.012(3) |
| C(15)                | -0.010(3) |
| Additional Atoms     | Distance  |
| Pr(1)                | -0.269    |
| O(1)                 | -0.081    |
| C(9)                 | 0.193     |

## Plane number 4

| Atoms defining plane | Distance  |
|----------------------|-----------|
| C(23)                | -0.013(3) |
| C(24)                | 0.020(3)  |
| C(25)                | -0.015(3) |
| C(26)                | -0.006(3) |
| C(27)                | 0.016(3)  |
| C(28)                | -0.003(3) |
|                      |           |
| Additional Atoms     | Distance  |
| Pr(1)                | 1.585     |
| O(2)                 | 0.111     |
| C(22)                | -0.031    |
| H(1)                 | 0.103     |

## Plane number 5

| Atoms defining plane | Distance  |
|----------------------|-----------|
| N(7)                 | -0.001(2) |
| C(32)                | 0.009(3)  |
| C(33)                | -0.009(3) |
| C(34)                | 0.000(3)  |
| C(35)                | 0.010(3)  |
| C(36)                | -0.009(3) |
|                      |           |
| Additional Atoms     | Distance  |
| Pr(2)                | -0.590    |
| C(31)                | 0.162     |

## Plane number 6

| Atoms defining plane | Distance  |
|----------------------|-----------|
| N(8)                 | 0.005(2)  |
| C(45)                | -0.004(3) |
| C(46)                | -0.003(3) |
| C(47)                | 0.008(4)  |
| C(48)                | -0.002(4) |
| C(49)                | -0.006(3) |
|                      |           |
| Additional Atoms     | Distance  |
| Pr(2)                | 0.388     |
| C(44)                | 0.046     |

## Plane number 7

| Atoms defining plane | Distance  |
|----------------------|-----------|
| C(38)                | 0.027(3)  |
| C(39)                | -0.028(3) |
| C(40)                | 0.010(3)  |
| C(41)                | 0.023(3)  |
| C(42)                | -0.025(3) |
| C(43)                | -0.006(3) |
| Additional Atoms     | Distance  |
| O(3)                 | -0.101    |
| C(37)                | 0.172     |

## Plane number 8

| Atoms defining plane | Distance  |
|----------------------|-----------|
| C(51)                | 0.009(3)  |
| C(52)                | -0.010(3) |
| C(53)                | 0.006(3)  |
| C(54)                | 0.002(3)  |
| C(55)                | -0.005(3) |
| C(56)                | -0.002(3) |
| Additional Atoms     | Distance  |
| O(4)                 | 0.042     |
| C(50)                | 0.053     |

## Plane number 9

| Atoms defining plane | Distance  |
|----------------------|-----------|
| O(5)                 | -0.001(2) |
| O(6)                 | -0.002(2) |
| O(7)                 | -0.003(3) |
| N(9)                 | 0.006(3)  |
| Additional Atoms     | Distance  |
| Pr(2)                | 0.144     |

## Plane number 10

| Atoms defining plane | Distance  |
|----------------------|-----------|
| O(9)                 | -0.009(4) |
| O(10)                | -0.005(3) |
| O(11)                | -0.010(4) |
| N(10)                | 0.019(3)  |
| Additional Atoms     | Distance  |
| H(2)                 | 0.370     |
| H(59)                | 0.616     |

# Summary

| plane | mean deviation | $\chi^2$ |
|-------|----------------|----------|
| 1     | 0.0070         | 36.9     |
| 2     | 0.0088         | 70.4     |
| 3     | 0.0137         | 168.6    |
| 4     | 0.0122         | 137.4    |
| 5     | 0.0063         | 37.7     |
| 6     | 0.0046         | 15.1     |
| 7     | 0.0197         | 335.7    |
| 8     | 0.0056         | 28.4     |
| 9     | 0.0029         | 6.4      |
| 10    | 0.0106         | 46.7     |

## Dihedral angles between planes (°)

| plane | 1     | 2     | 3     | 4     | 5    | 6     | 7     | 8    | 9    |
|-------|-------|-------|-------|-------|------|-------|-------|------|------|
| 2     | 78.5  |       |       |       |      |       |       |      |      |
| 3     | 111.8 | 69.5  |       |       |      |       |       |      |      |
| 4     | 79.0  | 74.9  | 35.8  |       |      |       |       |      |      |
| 5     | 41.2  | 40.9  | 101.5 | 86.1  |      |       |       |      |      |
| 6     | 73.1  | 10.5  | 64.7  | 65.3  | 39.9 |       |       |      |      |
| 7     | 61.0  | 23.9  | 92.0  | 88.2  | 20.0 | 27.4  |       |      |      |
| 8     | 58.9  | 25.3  | 92.7  | 87.6  | 17.9 | 27.9  | 2.2   |      |      |
| 9     | 58.5  | 125.1 | 154.5 | 122.1 | 85.5 | 125.3 | 101.2 | 99.8 |      |
| 10    | 9.4   | 85.6  | 109.4 | 74.8  | 50.0 | 79.2  | 69.7  | 67.5 | 56.8 |

EXPERIMENTAL DETAILS

A. Crystal Data

|                      |                                                                                 |
|----------------------|---------------------------------------------------------------------------------|
| Empirical Formula    | C <sub>57</sub> H <sub>66</sub> Gd <sub>2</sub> N <sub>10</sub> O <sub>14</sub> |
| Formula Weight       | 1429.71                                                                         |
| Crystal Color, Habit | colorless, prism                                                                |
| Crystal Dimensions   | 0.20 X 0.25 X 0.35 mm                                                           |
| Crystal System       | monoclinic                                                                      |
| Lattice Type         | Primitive                                                                       |
| Lattice Parameters   | a = 12.9850(7) Å<br>b = 21.5181(15) Å<br>c = 22.1460(2) Å<br>β = 106.9883(2)°   |
|                      | V = 5917.9(4) Å <sup>3</sup>                                                    |
| Space Group          | P2 <sub>1</sub> /n (#14)                                                        |
| Z value              | 4                                                                               |
| D <sub>calc</sub>    | 1.605 g/cm <sup>3</sup>                                                         |
| F <sub>000</sub>     | 2872.00                                                                         |
| μ(MoKα)              | 23.01 cm <sup>-1</sup>                                                          |

B. Intensity Measurements

|                             |                                                |
|-----------------------------|------------------------------------------------|
| Diffractometer              | Rigaku/ADSC CCD                                |
| Radiation                   | MoKα (λ = 0.71069 Å)<br>graphite monochromated |
| Detector Aperture           | 94 mm x 94 mm                                  |
| Data Images                 | 768 exposures of 30.0 seconds                  |
| φ oscillation Range (χ=-90) | 0.0 - 189.9°                                   |

|                                           |                                                                                      |
|-------------------------------------------|--------------------------------------------------------------------------------------|
| $\omega$ oscillation Range ( $\chi=-90$ ) | -23.0 - 17.8°                                                                        |
| Detector Position                         | 39.226(4) mm                                                                         |
| Detector Swing Angle                      | -10.0°                                                                               |
| $2\theta_{max}$                           | 60.1°                                                                                |
| No. of Reflections Measured               | Total: 54984<br>Unique: 14195 ( $R_{int} = 0.043$ )                                  |
| Corrections                               | Lorentz-polarization<br>Absorption/decay/scaling<br>(corr. factors: 0.6275 - 1.0000) |

## C. Structure Solution and Refinement

|                                            |                                    |
|--------------------------------------------|------------------------------------|
| Structure Solution                         | Patterson Methods (DIRDIF92 PATTY) |
| Refinement                                 | Full-matrix least-squares          |
| Function Minimized                         | $\Sigma w( Fo^2  -  Fc^2 )^2$      |
| Least Squares Weights                      | $w = \frac{1}{\sigma^2(Fo^2)}$     |
| p-factor                                   | 0.0000                             |
| Anomalous Dispersion                       | All non-hydrogen atoms             |
| No. Observations                           | 14195                              |
| No. Variables                              | 748                                |
| Reflection/Parameter Ratio                 | 18.98                              |
| Residuals (on $F^2$ , all data): R; Rw     | 0.069 ; 0.066                      |
| Goodness of Fit Indicator                  | 1.26                               |
| No. Observations ( $I > 3\sigma(I)$ )      | 8278                               |
| Residuals (on F, $I > 3\sigma(I)$ ): R; Rw | 0.037 ; 0.029                      |
| Max Shift/Error in Final Cycle             | 0.01                               |
| Maximum peak in Final Diff. Map            | 3.39 $e^-/\text{\AA}^3$ (near Gd)  |
| Minimum peak in Final Diff. Map            | -2.62 $e^-/\text{\AA}^3$ (near Gd) |

Table 2. Atomic coordinates and  $B_{eq}$

| atom  | x          | y            | z            | $B_{eq}$ |
|-------|------------|--------------|--------------|----------|
| Gd(1) | 0.20933(2) | 0.219494(11) | 0.356219(10) | 1.323(5) |
| Gd(2) | 0.33720(2) | 0.079078(11) | 0.321536(10) | 1.451(5) |
| O(1)  | 0.2800(3)  | 0.31462(13)  | 0.36380(13)  | 1.52(7)  |
| O(2)  | 0.2502(2)  | 0.11458(13)  | 0.39356(12)  | 1.50(7)  |
| O(3)  | 0.3859(2)  | 0.18449(14)  | 0.34134(13)  | 1.51(7)  |
| O(4)  | 0.1927(2)  | 0.15222(14)  | 0.26874(12)  | 1.54(7)  |
| O(5)  | 0.4245(3)  | -0.02368(15) | 0.32309(13)  | 2.10(8)  |
| O(6)  | 0.3777(3)  | -0.00106(14) | 0.40743(13)  | 1.90(8)  |
| O(7)  | 0.4587(3)  | -0.0893(2)   | 0.40196(15)  | 3.24(10) |
| O(8)  | 0.4564(8)  | 0.0615(4)    | 0.0351(4)    | 14.7(3)  |
| O(9)  | 0.3607(6)  | 0.1410(4)    | -0.0041(3)   | 12.9(3)  |
| O(10) | 0.4860(5)  | 0.1493(3)    | 0.0826(3)    | 9.1(2)   |
| O(11) | 0.4555(4)  | 0.2833(2)    | 0.0551(2)    | 6.32(15) |
| O(12) | 0.3891(6)  | 0.0237(3)    | -0.0948(3)   | 13.2(3)  |
| O(13) | 0.6990(4)  | 0.1351(2)    | 0.1692(2)    | 5.88(14) |
| O(14) | 0.2195(9)  | -0.0063(4)   | -0.2002(3)   | 20.6(4)  |
| N(1)  | 0.0968(3)  | 0.2894(2)    | 0.41806(15)  | 1.60(9)  |
| N(2)  | 0.0184(3)  | 0.1708(2)    | 0.3514(2)    | 1.58(9)  |
| N(3)  | 0.2940(3)  | 0.2292(2)    | 0.47276(15)  | 1.54(9)  |
| N(4)  | 0.0464(3)  | 0.2679(2)    | 0.2703(2)    | 1.68(9)  |
| N(5)  | 0.4801(3)  | 0.0871(2)    | 0.2615(2)    | 1.76(9)  |
| N(6)  | 0.2615(3)  | 0.0409(2)    | 0.2006(2)    | 1.99(10) |
| N(7)  | 0.5395(3)  | 0.0839(2)    | 0.3945(2)    | 1.65(9)  |
| N(8)  | 0.1931(3)  | -0.0115(2)   | 0.2995(2)    | 1.97(9)  |

Table 2. Atomic coordinates and  $B_{eq}$  (continued)

| atom  | x          | y          | z         | $B_{eq}$ |
|-------|------------|------------|-----------|----------|
| N(9)  | 0.4219(3)  | -0.0396(2) | 0.3787(2) | 2.12(10) |
| N(10) | 0.4316(7)  | 0.1168(5)  | 0.0362(3) | 7.0(3)   |
| C(1)  | -0.0199(4) | 0.2739(2)  | 0.3961(2) | 1.75(11) |
| C(2)  | -0.0389(4) | 0.2051(2)  | 0.3909(2) | 1.93(11) |
| C(3)  | 0.1372(4)  | 0.2785(2)  | 0.4878(2) | 1.97(11) |
| C(4)  | 0.2555(4)  | 0.2660(2)  | 0.5094(2) | 1.78(11) |
| C(5)  | 0.3200(4)  | 0.2871(2)  | 0.5676(2) | 2.34(12) |
| C(6)  | 0.4250(4)  | 0.2675(3)  | 0.5885(2) | 2.64(13) |
| C(7)  | 0.4654(4)  | 0.2271(3)  | 0.5517(2) | 2.41(12) |
| C(8)  | 0.3976(4)  | 0.2101(2)  | 0.4943(2) | 2.03(11) |
| C(9)  | 0.1062(4)  | 0.3577(2)  | 0.4055(2) | 1.70(11) |
| C(10) | 0.2193(4)  | 0.3811(2)  | 0.4320(2) | 1.88(11) |
| C(11) | 0.3020(4)  | 0.3575(2)  | 0.4088(2) | 1.51(10) |
| C(12) | 0.4064(4)  | 0.3810(2)  | 0.4339(2) | 1.96(11) |
| C(13) | 0.4287(4)  | 0.4267(3)  | 0.4805(2) | 2.80(13) |
| C(14) | 0.3471(5)  | 0.4499(3)  | 0.5027(2) | 3.12(14) |
| C(15) | 0.2429(4)  | 0.4273(2)  | 0.4783(2) | 2.51(12) |
| C(16) | -0.0451(4) | 0.1740(2)  | 0.2835(2) | 2.08(11) |
| C(17) | -0.0496(4) | 0.2377(2)  | 0.2566(2) | 1.66(11) |
| C(18) | -0.1446(4) | 0.2633(2)  | 0.2205(2) | 2.04(11) |
| C(19) | -0.1440(4) | 0.3225(3)  | 0.1967(2) | 2.61(13) |
| C(20) | -0.0471(4) | 0.3547(2)  | 0.2094(2) | 2.19(12) |
| C(21) | 0.0464(4)  | 0.3255(2)  | 0.2455(2) | 2.07(12) |
| C(22) | 0.0271(4)  | 0.1039(2)  | 0.3691(2) | 2.05(11) |

Table 2. Atomic coordinates and  $B_{eq}$  (continued)

| atom  | x         | y          | z         | $B_{eq}$ |
|-------|-----------|------------|-----------|----------|
| C(23) | 0.1030(4) | 0.0909(2)  | 0.4334(2) | 1.76(11) |
| C(24) | 0.2141(4) | 0.0948(2)  | 0.4417(2) | 1.59(11) |
| C(25) | 0.2857(4) | 0.0771(2)  | 0.4996(2) | 1.78(10) |
| C(26) | 0.2458(4) | 0.0575(2)  | 0.5488(2) | 2.41(12) |
| C(27) | 0.1357(5) | 0.0548(3)  | 0.5409(2) | 2.73(13) |
| C(28) | 0.0654(4) | 0.0707(2)  | 0.4835(2) | 2.46(12) |
| C(29) | 0.4543(4) | 0.0434(2)  | 0.2063(2) | 2.14(12) |
| C(30) | 0.3431(4) | 0.0497(2)  | 0.1655(2) | 2.26(12) |
| C(31) | 0.5923(4) | 0.0743(2)  | 0.2993(2) | 2.08(11) |
| C(32) | 0.6188(4) | 0.0924(2)  | 0.3674(2) | 1.84(11) |
| C(33) | 0.7201(4) | 0.1117(2)  | 0.4004(2) | 2.25(12) |
| C(34) | 0.7451(4) | 0.1245(3)  | 0.4643(2) | 2.69(13) |
| C(35) | 0.6653(4) | 0.1132(2)  | 0.4934(2) | 2.51(12) |
| C(36) | 0.5657(4) | 0.0937(2)  | 0.4576(2) | 2.00(11) |
| C(37) | 0.4726(4) | 0.1531(2)  | 0.2381(2) | 1.96(11) |
| C(38) | 0.5202(4) | 0.1998(2)  | 0.2884(2) | 1.91(11) |
| C(39) | 0.4756(4) | 0.2129(2)  | 0.3379(2) | 1.45(10) |
| C(40) | 0.5294(4) | 0.2555(2)  | 0.3847(2) | 2.07(12) |
| C(41) | 0.6218(4) | 0.2849(2)  | 0.3817(2) | 2.56(12) |
| C(42) | 0.6648(4) | 0.2741(3)  | 0.3324(3) | 2.77(13) |
| C(43) | 0.6139(4) | 0.2309(2)  | 0.2868(2) | 2.43(12) |
| C(44) | 0.2414(5) | -0.0266(2) | 0.2021(2) | 2.74(13) |
| C(45) | 0.1786(4) | -0.0451(2) | 0.2464(2) | 2.19(12) |
| C(46) | 0.1180(5) | -0.0986(2) | 0.2353(2) | 2.72(13) |

Table 2. Atomic coordinates and  $B_{eq}$  (continued).

| atom  | x         | y          | z         | $B_{eq}$ |
|-------|-----------|------------|-----------|----------|
| C(47) | 0.0682(5) | -0.1181(3) | 0.2796(3) | 3.20(14) |
| C(48) | 0.0845(4) | -0.0837(2) | 0.3350(2) | 2.66(13) |
| C(49) | 0.1463(4) | -0.0316(2) | 0.3422(2) | 2.07(12) |
| C(50) | 0.1572(4) | 0.0715(2)  | 0.1657(2) | 2.29(12) |
| C(51) | 0.1748(4) | 0.1398(2)  | 0.1588(2) | 1.81(11) |
| C(52) | 0.1976(4) | 0.1781(2)  | 0.2127(2) | 1.75(11) |
| C(53) | 0.2294(4) | 0.2388(2)  | 0.2088(2) | 1.81(11) |
| C(54) | 0.2391(4) | 0.2622(2)  | 0.1522(2) | 2.39(12) |
| C(55) | 0.2160(4) | 0.2255(3)  | 0.0983(2) | 2.69(13) |
| C(56) | 0.1836(4) | 0.1650(3)  | 0.1023(2) | 2.71(13) |
| C(57) | 0.5441(8) | 0.2850(4)  | 0.1092(3) | 8.7(3)   |

$$B_{eq} = \frac{8}{3}\pi^2(U_{11}(aa^*)^2 + U_{22}(bb^*)^2 + U_{33}(cc^*)^2 + 2U_{12}aa^*bb^* \cos \gamma + 2U_{13}aa^*cc^* \cos \beta + 2U_{23}bb^*cc^* \cos \alpha)$$

Table 3. Bond Lengths(Å)

| atom  | atom  | distance  | atom  | atom  | distance |
|-------|-------|-----------|-------|-------|----------|
| Gd(1) | Gd(2) | 3.6362(3) | Gd(1) | O(1)  | 2.230(3) |
| Gd(1) | O(2)  | 2.409(3)  | Gd(1) | O(3)  | 2.524(3) |
| Gd(1) | O(4)  | 2.377(3)  | Gd(1) | N(1)  | 2.728(3) |
| Gd(1) | N(2)  | 2.665(4)  | Gd(1) | N(3)  | 2.501(3) |
| Gd(1) | N(4)  | 2.613(4)  | Gd(2) | O(2)  | 2.336(3) |
| Gd(2) | O(3)  | 2.361(3)  | Gd(2) | O(4)  | 2.467(3) |
| Gd(2) | O(5)  | 2.481(3)  | Gd(2) | O(6)  | 2.507(3) |
| Gd(2) | N(5)  | 2.586(3)  | Gd(2) | N(6)  | 2.697(4) |
| Gd(2) | N(7)  | 2.654(4)  | Gd(2) | N(8)  | 2.647(4) |
| O(1)  | C(11) | 1.327(5)  | O(2)  | C(24) | 1.352(4) |
| O(3)  | C(39) | 1.338(5)  | O(4)  | C(52) | 1.378(5) |
| O(5)  | N(9)  | 1.289(4)  | O(6)  | N(9)  | 1.280(4) |
| O(7)  | N(9)  | 1.220(5)  | O(8)  | N(10) | 1.235(9) |
| O(9)  | N(10) | 1.196(9)  | O(10) | N(10) | 1.273(8) |
| O(11) | C(57) | 1.398(9)  | N(1)  | C(1)  | 1.487(6) |
| N(1)  | C(3)  | 1.497(5)  | N(1)  | C(9)  | 1.508(6) |
| N(2)  | C(2)  | 1.495(5)  | N(2)  | C(16) | 1.491(5) |
| N(2)  | C(22) | 1.487(6)  | N(3)  | C(4)  | 1.331(5) |
| N(3)  | C(8)  | 1.353(6)  | N(4)  | C(17) | 1.358(6) |
| N(4)  | C(21) | 1.358(6)  | N(5)  | C(29) | 1.501(6) |
| N(5)  | C(31) | 1.479(6)  | N(5)  | C(37) | 1.504(6) |
| N(6)  | C(30) | 1.499(6)  | N(6)  | C(44) | 1.478(6) |
| N(6)  | C(50) | 1.501(6)  | N(7)  | C(32) | 1.347(5) |
| N(7)  | C(36) | 1.355(5)  | N(8)  | C(45) | 1.346(5) |

Table 3. Bond Lengths(Å) (continued)

| atom  | atom  | distance | atom  | atom  | distance |
|-------|-------|----------|-------|-------|----------|
| N(8)  | C(49) | 1.336(5) | C(1)  | C(2)  | 1.500(6) |
| C(3)  | C(4)  | 1.494(6) | C(4)  | C(5)  | 1.392(6) |
| C(5)  | C(6)  | 1.372(7) | C(6)  | C(7)  | 1.393(7) |
| C(7)  | C(8)  | 1.368(6) | C(9)  | C(10) | 1.501(6) |
| C(10) | C(11) | 1.414(6) | C(10) | C(15) | 1.397(6) |
| C(11) | C(12) | 1.400(6) | C(12) | C(13) | 1.395(6) |
| C(13) | C(14) | 1.385(7) | C(14) | C(15) | 1.390(7) |
| C(16) | C(17) | 1.490(6) | C(17) | C(18) | 1.374(6) |
| C(18) | C(19) | 1.379(7) | C(19) | C(20) | 1.391(7) |
| C(20) | C(21) | 1.392(7) | C(22) | C(23) | 1.502(6) |
| C(23) | C(24) | 1.403(6) | C(23) | C(28) | 1.406(6) |
| C(24) | C(25) | 1.399(6) | C(25) | C(26) | 1.402(6) |
| C(26) | C(27) | 1.389(7) | C(27) | C(28) | 1.373(7) |
| C(29) | C(30) | 1.468(7) | C(31) | C(32) | 1.495(6) |
| C(32) | C(33) | 1.370(6) | C(33) | C(34) | 1.383(6) |
| C(34) | C(35) | 1.392(6) | C(35) | C(36) | 1.371(7) |
| C(37) | C(38) | 1.493(6) | C(38) | C(39) | 1.410(5) |
| C(38) | C(43) | 1.398(6) | C(39) | C(40) | 1.407(6) |
| C(40) | C(41) | 1.375(6) | C(41) | C(42) | 1.384(6) |
| C(42) | C(43) | 1.389(7) | C(44) | C(45) | 1.500(6) |
| C(45) | C(46) | 1.375(7) | C(46) | C(47) | 1.388(6) |
| C(47) | C(48) | 1.395(6) | C(48) | C(49) | 1.362(7) |
| C(50) | C(51) | 1.503(7) | C(51) | C(52) | 1.408(6) |
| C(51) | C(56) | 1.398(6) | C(52) | C(53) | 1.380(6) |

Table 3. Bond Lengths( $\text{\AA}$ ) (continued)

| atom  | atom  | distance | atom  | atom  | distance |
|-------|-------|----------|-------|-------|----------|
| C(53) | C(54) | 1.390(6) | C(54) | C(55) | 1.389(6) |
| C(55) | C(56) | 1.380(7) |       |       |          |

Table 4. Bond Angles(°)

| atom | atom  | atom | angle      | atom | atom  | atom | angle      |
|------|-------|------|------------|------|-------|------|------------|
| O(1) | Gd(1) | O(2) | 142.16(11) | O(1) | Gd(1) | O(3) | 85.07(10)  |
| O(1) | Gd(1) | O(4) | 123.91(10) | O(1) | Gd(1) | N(1) | 74.06(11)  |
| O(1) | Gd(1) | N(2) | 136.18(11) | O(1) | Gd(1) | N(3) | 78.38(11)  |
| O(1) | Gd(1) | N(4) | 85.25(12)  | O(2) | Gd(1) | O(3) | 69.37(9)   |
| O(2) | Gd(1) | O(4) | 70.59(9)   | O(2) | Gd(1) | N(1) | 116.16(10) |
| O(2) | Gd(1) | N(2) | 75.81(11)  | O(2) | Gd(1) | N(3) | 74.79(11)  |
| O(2) | Gd(1) | N(4) | 132.33(11) | O(3) | Gd(1) | O(4) | 65.28(10)  |
| O(3) | Gd(1) | N(1) | 150.48(10) | O(3) | Gd(1) | N(2) | 138.37(10) |
| O(3) | Gd(1) | N(3) | 91.01(11)  | O(3) | Gd(1) | N(4) | 126.64(10) |
| O(4) | Gd(1) | N(1) | 144.12(11) | O(4) | Gd(1) | N(2) | 82.31(10)  |
| O(4) | Gd(1) | N(3) | 143.11(11) | O(4) | Gd(1) | N(4) | 77.73(10)  |
| N(1) | Gd(1) | N(2) | 66.91(11)  | N(1) | Gd(1) | N(3) | 64.81(11)  |
| N(1) | Gd(1) | N(4) | 72.99(10)  | N(2) | Gd(1) | N(3) | 101.37(11) |
| N(2) | Gd(1) | N(4) | 65.25(11)  | N(3) | Gd(1) | N(4) | 137.43(11) |
| O(2) | Gd(2) | O(3) | 73.47(10)  | O(2) | Gd(2) | O(4) | 70.26(9)   |
| O(2) | Gd(2) | O(5) | 126.32(9)  | O(2) | Gd(2) | O(6) | 75.10(10)  |
| O(2) | Gd(2) | N(5) | 153.16(11) | O(2) | Gd(2) | N(6) | 131.99(12) |
| O(2) | Gd(2) | N(7) | 99.30(10)  | O(2) | Gd(2) | N(8) | 84.85(11)  |
| O(3) | Gd(2) | O(4) | 66.45(10)  | O(3) | Gd(2) | O(5) | 139.22(11) |
| O(3) | Gd(2) | O(6) | 122.31(10) | O(3) | Gd(2) | N(5) | 80.66(11)  |
| O(3) | Gd(2) | N(6) | 118.50(11) | O(3) | Gd(2) | N(7) | 71.67(11)  |
| O(3) | Gd(2) | N(8) | 151.45(11) | O(4) | Gd(2) | O(5) | 148.95(10) |
| O(4) | Gd(2) | O(6) | 139.50(9)  | O(4) | Gd(2) | N(5) | 105.92(10) |
| O(4) | Gd(2) | N(6) | 73.59(11)  | O(4) | Gd(2) | N(7) | 138.10(11) |

Table 4. Bond Angles(°) (continued)

| atom  | atom  | atom  | angle      | atom  | atom  | atom  | angle      |
|-------|-------|-------|------------|-------|-------|-------|------------|
| O(4)  | Gd(2) | N(8)  | 89.07(11)  | O(5)  | Gd(2) | O(6)  | 51.88(9)   |
| O(5)  | Gd(2) | N(5)  | 70.92(11)  | O(5)  | Gd(2) | N(6)  | 76.99(11)  |
| O(5)  | Gd(2) | N(7)  | 70.09(11)  | O(5)  | Gd(2) | N(8)  | 68.99(12)  |
| O(6)  | Gd(2) | N(5)  | 114.44(11) | O(6)  | Gd(2) | N(6)  | 118.60(11) |
| O(6)  | Gd(2) | N(7)  | 67.31(11)  | O(6)  | Gd(2) | N(8)  | 67.26(11)  |
| N(5)  | Gd(2) | N(6)  | 67.53(12)  | N(5)  | Gd(2) | N(7)  | 65.10(11)  |
| N(5)  | Gd(2) | N(8)  | 121.95(11) | N(6)  | Gd(2) | N(7)  | 128.70(11) |
| N(6)  | Gd(2) | N(8)  | 63.87(11)  | N(7)  | Gd(2) | N(8)  | 131.44(12) |
| Gd(1) | O(1)  | C(11) | 133.5(2)   | Gd(1) | O(2)  | Gd(2) | 100.03(10) |
| Gd(1) | O(2)  | C(24) | 118.3(3)   | Gd(2) | O(2)  | C(24) | 141.5(3)   |
| Gd(1) | O(3)  | Gd(2) | 96.13(10)  | Gd(1) | O(3)  | C(39) | 135.2(3)   |
| Gd(2) | O(3)  | C(39) | 128.3(3)   | Gd(1) | O(4)  | Gd(2) | 97.28(10)  |
| Gd(1) | O(4)  | C(52) | 118.1(3)   | Gd(2) | O(4)  | C(52) | 117.1(3)   |
| Gd(2) | O(5)  | N(9)  | 96.4(2)    | Gd(2) | O(6)  | N(9)  | 95.4(2)    |
| Gd(1) | N(1)  | C(1)  | 110.9(3)   | Gd(1) | N(1)  | C(3)  | 110.7(3)   |
| Gd(1) | N(1)  | C(9)  | 111.1(2)   | C(1)  | N(1)  | C(3)  | 108.6(3)   |
| C(1)  | N(1)  | C(9)  | 106.8(4)   | C(3)  | N(1)  | C(9)  | 108.6(4)   |
| Gd(1) | N(2)  | C(2)  | 113.5(3)   | Gd(1) | N(2)  | C(16) | 104.8(2)   |
| Gd(1) | N(2)  | C(22) | 111.8(3)   | C(2)  | N(2)  | C(16) | 110.2(4)   |
| C(2)  | N(2)  | C(22) | 109.6(3)   | C(16) | N(2)  | C(22) | 106.6(4)   |
| Gd(1) | N(3)  | C(4)  | 123.3(3)   | Gd(1) | N(3)  | C(8)  | 115.5(3)   |
| C(4)  | N(3)  | C(8)  | 118.5(4)   | Gd(1) | N(4)  | C(17) | 117.8(3)   |
| Gd(1) | N(4)  | C(21) | 124.3(3)   | C(17) | N(4)  | C(21) | 117.1(4)   |
| Gd(2) | N(5)  | C(29) | 110.7(3)   | Gd(2) | N(5)  | C(31) | 115.6(2)   |

Table 4. Bond Angles(°) (continued)

| atom  | atom  | atom  | angle     | atom  | atom  | atom  | angle     |
|-------|-------|-------|-----------|-------|-------|-------|-----------|
| Gd(2) | N(5)  | C(37) | 104.8(2)  | C(29) | N(5)  | C(31) | 107.0(4)  |
| C(29) | N(5)  | C(37) | 109.6(3)  | C(31) | N(5)  | C(37) | 109.0(4)  |
| Gd(2) | N(6)  | C(30) | 111.7(3)  | Gd(2) | N(6)  | C(44) | 107.0(3)  |
| Gd(2) | N(6)  | C(50) | 113.0(3)  | C(30) | N(6)  | C(44) | 107.0(4)  |
| C(30) | N(6)  | C(50) | 110.2(4)  | C(44) | N(6)  | C(50) | 107.7(4)  |
| Gd(2) | N(7)  | C(32) | 118.9(3)  | Gd(2) | N(7)  | C(36) | 122.6(3)  |
| C(32) | N(7)  | C(36) | 116.4(4)  | Gd(2) | N(8)  | C(45) | 117.9(3)  |
| Gd(2) | N(8)  | C(49) | 123.4(3)  | C(45) | N(8)  | C(49) | 118.0(4)  |
| O(5)  | N(9)  | O(6)  | 116.3(4)  | O(5)  | N(9)  | O(7)  | 121.3(4)  |
| O(6)  | N(9)  | O(7)  | 122.4(4)  | O(8)  | N(10) | O(9)  | 123.6(10) |
| O(8)  | N(10) | O(10) | 117.3(10) | O(9)  | N(10) | O(10) | 119.2(10) |
| N(1)  | C(1)  | C(2)  | 112.0(4)  | N(2)  | C(2)  | C(1)  | 115.7(4)  |
| N(1)  | C(3)  | C(4)  | 112.1(3)  | N(3)  | C(4)  | C(3)  | 116.5(4)  |
| N(3)  | C(4)  | C(5)  | 121.8(5)  | C(3)  | C(4)  | C(5)  | 121.5(4)  |
| C(4)  | C(5)  | C(6)  | 118.8(4)  | C(5)  | C(6)  | C(7)  | 120.1(5)  |
| C(6)  | C(7)  | C(8)  | 117.4(5)  | N(3)  | C(8)  | C(7)  | 123.4(4)  |
| N(1)  | C(9)  | C(10) | 112.2(4)  | C(9)  | C(10) | C(11) | 119.9(4)  |
| C(9)  | C(10) | C(15) | 120.4(4)  | C(11) | C(10) | C(15) | 119.7(5)  |
| O(1)  | C(11) | C(10) | 120.2(4)  | O(1)  | C(11) | C(12) | 121.3(4)  |
| C(10) | C(11) | C(12) | 118.4(4)  | C(11) | C(12) | C(13) | 121.1(5)  |
| C(12) | C(13) | C(14) | 120.1(5)  | C(13) | C(14) | C(15) | 119.7(5)  |
| C(10) | C(15) | C(14) | 120.9(5)  | N(2)  | C(16) | C(17) | 112.9(4)  |
| N(4)  | C(17) | C(16) | 115.1(4)  | N(4)  | C(17) | C(18) | 123.2(4)  |
| C(16) | C(17) | C(18) | 121.7(4)  | C(17) | C(18) | C(19) | 119.3(5)  |

Table 4. Bond Angles(°) (continued)

| atom  | atom  | atom  | angle    | atom  | atom  | atom  | angle    |
|-------|-------|-------|----------|-------|-------|-------|----------|
| C(18) | C(19) | C(20) | 119.2(5) | C(19) | C(20) | C(21) | 118.5(5) |
| N(4)  | C(21) | C(20) | 122.8(5) | N(2)  | C(22) | C(23) | 114.1(4) |
| C(22) | C(23) | C(24) | 118.6(4) | C(22) | C(23) | C(28) | 121.5(4) |
| C(24) | C(23) | C(28) | 119.7(4) | O(2)  | C(24) | C(23) | 119.7(4) |
| O(2)  | C(24) | C(25) | 121.2(4) | C(23) | C(24) | C(25) | 119.1(4) |
| C(24) | C(25) | C(26) | 119.8(4) | C(25) | C(26) | C(27) | 121.0(5) |
| C(26) | C(27) | C(28) | 119.2(4) | C(23) | C(28) | C(27) | 121.2(5) |
| N(5)  | C(29) | C(30) | 112.9(4) | N(6)  | C(30) | C(29) | 112.7(4) |
| N(5)  | C(31) | C(32) | 114.9(4) | N(7)  | C(32) | C(31) | 115.7(4) |
| N(7)  | C(32) | C(33) | 122.8(4) | C(31) | C(32) | C(33) | 121.3(4) |
| C(32) | C(33) | C(34) | 120.6(4) | C(33) | C(34) | C(35) | 117.0(5) |
| C(34) | C(35) | C(36) | 119.4(4) | N(7)  | C(36) | C(35) | 123.6(4) |
| N(5)  | C(37) | C(38) | 114.0(4) | C(37) | C(38) | C(39) | 122.7(4) |
| C(37) | C(38) | C(43) | 118.5(4) | C(39) | C(38) | C(43) | 118.8(4) |
| O(3)  | C(39) | C(38) | 121.0(4) | O(3)  | C(39) | C(40) | 120.6(4) |
| C(38) | C(39) | C(40) | 118.3(4) | C(39) | C(40) | C(41) | 121.2(4) |
| C(40) | C(41) | C(42) | 121.2(5) | C(41) | C(42) | C(43) | 118.1(5) |
| C(38) | C(43) | C(42) | 122.3(4) | N(6)  | C(44) | C(45) | 114.1(4) |
| N(8)  | C(45) | C(44) | 117.7(4) | N(8)  | C(45) | C(46) | 122.1(4) |
| C(44) | C(45) | C(46) | 119.9(4) | C(45) | C(46) | C(47) | 119.2(5) |
| C(46) | C(47) | C(48) | 118.7(5) | C(47) | C(48) | C(49) | 118.1(4) |
| N(8)  | C(49) | C(48) | 123.9(4) | N(6)  | C(50) | C(51) | 109.9(4) |
| C(50) | C(51) | C(52) | 119.1(4) | C(50) | C(51) | C(56) | 121.6(4) |
| C(52) | C(51) | C(56) | 118.7(5) | O(4)  | C(52) | C(51) | 118.2(4) |

Table 4. Bond Angles(°) (continued).

| atom  | atom  | atom  | angle    | atom  | atom  | atom  | angle    |
|-------|-------|-------|----------|-------|-------|-------|----------|
| O(4)  | C(52) | C(53) | 122.1(4) | C(51) | C(52) | C(53) | 119.5(4) |
| C(52) | C(53) | C(54) | 120.4(4) | C(53) | C(54) | C(55) | 121.1(5) |
| C(54) | C(55) | C(56) | 118.2(4) | C(51) | C(56) | C(55) | 122.0(5) |

Table 5. Hydrogen atom coordinates and  $B_{iso}$

| atom  | x       | y      | z      | $B_{iso}$ |
|-------|---------|--------|--------|-----------|
| H(1)  | -0.0547 | 0.2908 | 0.4263 | 2.1       |
| H(2)  | -0.0517 | 0.2928 | 0.3546 | 2.1       |
| H(3)  | -0.1163 | 0.1981 | 0.3725 | 2.3       |
| H(4)  | -0.0155 | 0.1875 | 0.4335 | 2.3       |
| H(5)  | 0.1222  | 0.3155 | 0.5096 | 2.4       |
| H(6)  | 0.0993  | 0.2427 | 0.4985 | 2.4       |
| H(7)  | 0.2910  | 0.3155 | 0.5932 | 2.8       |
| H(8)  | 0.4717  | 0.2818 | 0.6293 | 3.2       |
| H(9)  | 0.5395  | 0.2115 | 0.5664 | 2.9       |
| H(10) | 0.4255  | 0.1827 | 0.4674 | 2.4       |
| H(11) | 0.0831  | 0.3646 | 0.3598 | 2.0       |
| H(12) | 0.0591  | 0.3809 | 0.4248 | 2.0       |
| H(13) | 0.4647  | 0.3650 | 0.4185 | 2.3       |
| H(14) | 0.5023  | 0.4425 | 0.4976 | 3.4       |
| H(15) | 0.3627  | 0.4821 | 0.5354 | 3.7       |
| H(16) | 0.1851  | 0.4441 | 0.4939 | 3.0       |
| H(17) | -0.0120 | 0.1461 | 0.2595 | 2.5       |
| H(18) | -0.1188 | 0.1601 | 0.2792 | 2.5       |
| H(19) | -0.2120 | 0.2398 | 0.2118 | 2.4       |
| H(20) | -0.2111 | 0.3416 | 0.1711 | 3.1       |
| H(21) | -0.0447 | 0.3970 | 0.1934 | 2.6       |
| H(22) | 0.1151  | 0.3476 | 0.2533 | 2.5       |
| H(23) | -0.0446 | 0.0890 | 0.3682 | 2.5       |
| H(24) | 0.0523  | 0.0811 | 0.3378 | 2.5       |

Table 5. Hydrogen atom coordinates and  $B_{iso}$  (continued)

| atom  | x       | y       | z      | $B_{iso}$ |
|-------|---------|---------|--------|-----------|
| H(25) | 0.3635  | 0.0784  | 0.5058 | 2.1       |
| H(26) | 0.2962  | 0.0454  | 0.5894 | 2.9       |
| H(27) | 0.1086  | 0.0417  | 0.5758 | 3.3       |
| H(28) | -0.0123 | 0.0680  | 0.4775 | 3.0       |
| H(29) | 0.5034  | 0.0519  | 0.1811 | 2.6       |
| H(30) | 0.4650  | 0.0007  | 0.2223 | 2.6       |
| H(31) | 0.3305  | 0.0185  | 0.1319 | 2.7       |
| H(32) | 0.3341  | 0.0914  | 0.1467 | 2.7       |
| H(33) | 0.6052  | 0.0296  | 0.2973 | 2.5       |
| H(34) | 0.6405  | 0.0971  | 0.2805 | 2.5       |
| H(35) | 0.7754  | 0.1165  | 0.3786 | 2.7       |
| H(36) | 0.8159  | 0.1408  | 0.4880 | 3.2       |
| H(37) | 0.6803  | 0.1192  | 0.5390 | 3.0       |
| H(38) | 0.5103  | 0.0865  | 0.4788 | 2.4       |
| H(39) | 0.5104  | 0.1560  | 0.2058 | 2.4       |
| H(40) | 0.3964  | 0.1633  | 0.2192 | 2.4       |
| H(41) | 0.5006  | 0.2643  | 0.4200 | 2.5       |
| H(42) | 0.6578  | 0.3142  | 0.4152 | 3.1       |
| H(43) | 0.7293  | 0.2962  | 0.3298 | 3.3       |
| H(44) | 0.6447  | 0.2220  | 0.2523 | 2.9       |
| H(45) | 0.2012  | -0.0399 | 0.1594 | 3.3       |
| H(46) | 0.3111  | -0.0480 | 0.2151 | 3.3       |
| H(47) | 0.1100  | -0.1226 | 0.1966 | 3.3       |
| H(48) | 0.0225  | -0.1552 | 0.2721 | 3.8       |

Table 5. Hydrogen atom coordinates and  $B_{iso}$  (continued)

| atom  | x      | y       | z       | $B_{iso}$ |
|-------|--------|---------|---------|-----------|
| H(49) | 0.0523 | -0.0968 | 0.3679  | 3.2       |
| H(50) | 0.1571 | -0.0073 | 0.3810  | 2.5       |
| H(51) | 0.1296 | 0.0527  | 0.1238  | 2.7       |
| H(52) | 0.1047 | 0.0655  | 0.1893  | 2.7       |
| H(53) | 0.2453 | 0.2656  | 0.2462  | 2.2       |
| H(54) | 0.2627 | 0.3052  | 0.1503  | 2.9       |
| H(55) | 0.2225 | 0.2423  | 0.0584  | 3.2       |
| H(56) | 0.1663 | 0.1388  | 0.0645  | 3.3       |
| H(57) | 0.4357 | 0.2436  | 0.0455  | 7.6       |
| H(58) | 0.5835 | 0.3240  | 0.1101  | 10.4      |
| H(59) | 0.5192 | 0.2822  | 0.1469  | 10.4      |
| H(60) | 0.5918 | 0.2498  | 0.1086  | 10.4      |
| H(61) | 0.3975 | 0.0410  | -0.0567 | 16.6      |
| H(62) | 0.4379 | -0.0126 | -0.0842 | 16.6      |
| H(63) | 0.6307 | 0.1398  | 0.1415  | 6.7       |
| H(64) | 0.7173 | 0.0955  | 0.1701  | 6.7       |
| H(65) | 0.2811 | 0.0052  | -0.1703 | 22.5      |
| H(66) | 0.1643 | -0.0005 | -0.1811 | 22.5      |

Table 6. Anisotropic Displacement Parameters

| atom  | $U_{11}$    | $U_{22}$    | $U_{33}$    | $U_{12}$     | $U_{13}$    | $U_{23}$     |
|-------|-------------|-------------|-------------|--------------|-------------|--------------|
| Gd(1) | 0.01392(13) | 0.01685(13) | 0.02052(10) | -0.00169(12) | 0.00666(9)  | -0.00178(10) |
| Gd(2) | 0.01757(14) | 0.01822(13) | 0.02123(10) | 0.00074(12)  | 0.00862(10) | -0.00078(10) |
| O(1)  | 0.020(2)    | 0.014(2)    | 0.026(2)    | -0.0058(15)  | 0.0092(14)  | -0.0004(14)  |
| O(2)  | 0.021(2)    | 0.017(2)    | 0.0230(15)  | -0.0019(15)  | 0.0127(14)  | -0.0002(13)  |
| O(3)  | 0.014(2)    | 0.016(2)    | 0.028(2)    | -0.0044(15)  | 0.0088(14)  | -0.0021(14)  |
| O(4)  | 0.019(2)    | 0.020(2)    | 0.0192(15)  | 0.001(2)     | 0.0054(14)  | 0.0000(13)   |
| O(5)  | 0.036(2)    | 0.025(2)    | 0.025(2)    | 0.007(2)     | 0.019(2)    | 0.0046(15)   |
| O(6)  | 0.026(2)    | 0.023(2)    | 0.027(2)    | 0.002(2)     | 0.014(2)    | -0.0016(14)  |
| O(7)  | 0.062(3)    | 0.025(2)    | 0.041(2)    | 0.024(2)     | 0.022(2)    | 0.013(2)     |
| O(8)  | 0.295(13)   | 0.107(6)    | 0.162(7)    | 0.029(8)     | 0.076(8)    | -0.028(6)    |
| O(9)  | 0.094(6)    | 0.298(11)   | 0.087(4)    | 0.012(6)     | 0.009(4)    | 0.080(6)     |
| O(10) | 0.139(6)    | 0.154(7)    | 0.063(4)    | -0.026(5)    | 0.046(4)    | 0.005(4)     |
| O(11) | 0.065(4)    | 0.096(4)    | 0.091(4)    | 0.039(3)     | 0.040(3)    | 0.031(3)     |
| O(12) | 0.214(9)    | 0.170(7)    | 0.124(5)    | -0.086(7)    | 0.061(6)    | -0.040(5)    |
| O(13) | 0.068(4)    | 0.082(4)    | 0.086(3)    | -0.023(3)    | 0.040(3)    | -0.011(3)    |
| O(14) | 0.389(15)   | 0.187(9)    | 0.148(6)    | -0.048(9)    | -0.010(8)   | -0.087(6)    |
| N(1)  | 0.014(2)    | 0.024(2)    | 0.024(2)    | 0.002(2)     | 0.007(2)    | -0.001(2)    |
| N(2)  | 0.016(2)    | 0.022(2)    | 0.023(2)    | -0.001(2)    | 0.007(2)    | 0.004(2)     |
| N(3)  | 0.019(2)    | 0.019(2)    | 0.020(2)    | -0.001(2)    | 0.005(2)    | 0.002(2)     |
| N(4)  | 0.019(2)    | 0.022(3)    | 0.024(2)    | -0.001(2)    | 0.008(2)    | -0.002(2)    |
| N(5)  | 0.020(2)    | 0.023(2)    | 0.027(2)    | 0.005(2)     | 0.012(2)    | 0.000(2)     |
| N(6)  | 0.028(3)    | 0.022(3)    | 0.025(2)    | 0.000(2)     | 0.008(2)    | -0.005(2)    |
| N(7)  | 0.015(2)    | 0.019(2)    | 0.030(2)    | 0.001(2)     | 0.008(2)    | 0.003(2)     |
| N(8)  | 0.024(3)    | 0.017(2)    | 0.035(2)    | -0.005(2)    | 0.010(2)    | -0.006(2)    |

Table 6. Anisotropic Displacement Parameters (continued)

| atom  | $U_{11}$ | $U_{22}$ | $U_{33}$ | $U_{12}$  | $U_{13}$  | $U_{23}$  |
|-------|----------|----------|----------|-----------|-----------|-----------|
| N(9)  | 0.023(3) | 0.026(3) | 0.032(2) | -0.002(2) | 0.009(2)  | 0.000(2)  |
| N(10) | 0.106(7) | 0.126(8) | 0.048(4) | -0.018(6) | 0.046(5)  | 0.009(5)  |
| C(1)  | 0.014(3) | 0.024(3) | 0.031(2) | 0.001(2)  | 0.010(2)  | -0.001(2) |
| C(2)  | 0.016(3) | 0.030(3) | 0.030(3) | -0.001(2) | 0.013(2)  | -0.002(2) |
| C(3)  | 0.024(3) | 0.029(3) | 0.024(2) | -0.001(3) | 0.012(2)  | -0.001(2) |
| C(4)  | 0.029(3) | 0.031(3) | 0.011(2) | -0.003(3) | 0.011(2)  | -0.001(2) |
| C(5)  | 0.034(3) | 0.033(3) | 0.025(2) | -0.003(3) | 0.012(2)  | -0.001(2) |
| C(6)  | 0.032(4) | 0.038(4) | 0.025(3) | -0.011(3) | 0.000(2)  | -0.001(2) |
| C(7)  | 0.022(3) | 0.036(3) | 0.029(3) | -0.005(3) | 0.001(2)  | 0.003(2)  |
| C(8)  | 0.025(3) | 0.024(3) | 0.027(2) | -0.003(3) | 0.007(2)  | 0.003(2)  |
| C(9)  | 0.026(3) | 0.010(3) | 0.036(3) | -0.003(2) | 0.020(2)  | -0.004(2) |
| C(10) | 0.031(3) | 0.015(3) | 0.025(2) | -0.003(2) | 0.009(2)  | 0.001(2)  |
| C(11) | 0.022(3) | 0.012(3) | 0.021(2) | -0.005(2) | 0.003(2)  | 0.000(2)  |
| C(12) | 0.025(3) | 0.017(3) | 0.031(3) | -0.001(2) | 0.005(2)  | 0.003(2)  |
| C(13) | 0.031(4) | 0.024(3) | 0.041(3) | -0.009(3) | -0.006(3) | 0.002(3)  |
| C(14) | 0.056(5) | 0.025(3) | 0.033(3) | -0.016(3) | 0.006(3)  | -0.009(2) |
| C(15) | 0.039(4) | 0.022(3) | 0.037(3) | -0.005(3) | 0.017(3)  | -0.009(2) |
| C(16) | 0.011(3) | 0.036(3) | 0.030(3) | -0.006(3) | 0.002(2)  | -0.004(2) |
| C(17) | 0.020(3) | 0.022(3) | 0.022(2) | -0.006(2) | 0.007(2)  | -0.002(2) |
| C(18) | 0.013(3) | 0.037(3) | 0.026(2) | 0.001(3)  | 0.002(2)  | 0.004(2)  |
| C(19) | 0.023(3) | 0.034(3) | 0.039(3) | 0.007(3)  | 0.003(3)  | 0.005(3)  |
| C(20) | 0.029(3) | 0.024(3) | 0.033(3) | 0.003(3)  | 0.012(2)  | 0.007(2)  |
| C(21) | 0.026(3) | 0.028(3) | 0.027(3) | -0.009(3) | 0.012(2)  | -0.004(2) |
| C(22) | 0.023(3) | 0.019(3) | 0.038(3) | -0.011(2) | 0.014(2)  | -0.007(2) |

Table 6. Anisotropic Displacement Parameters (continued)

| atom  | $U_{11}$ | $U_{22}$ | $U_{33}$ | $U_{12}$  | $U_{13}$ | $U_{23}$  |
|-------|----------|----------|----------|-----------|----------|-----------|
| C(23) | 0.021(3) | 0.013(3) | 0.034(3) | 0.002(2)  | 0.010(2) | 0.003(2)  |
| C(24) | 0.021(3) | 0.013(3) | 0.031(2) | -0.005(2) | 0.015(2) | -0.002(2) |
| C(25) | 0.022(3) | 0.023(3) | 0.022(2) | -0.001(3) | 0.006(2) | 0.000(2)  |
| C(26) | 0.036(4) | 0.031(3) | 0.026(3) | -0.001(3) | 0.012(3) | 0.002(2)  |
| C(27) | 0.039(4) | 0.036(4) | 0.036(3) | 0.002(3)  | 0.023(3) | 0.006(3)  |
| C(28) | 0.026(3) | 0.024(3) | 0.053(3) | 0.000(3)  | 0.026(3) | 0.006(3)  |
| C(29) | 0.029(3) | 0.026(3) | 0.032(3) | 0.007(3)  | 0.018(2) | 0.002(2)  |
| C(30) | 0.034(4) | 0.031(3) | 0.025(2) | 0.004(3)  | 0.016(2) | -0.003(2) |
| C(31) | 0.024(3) | 0.027(3) | 0.032(3) | 0.005(3)  | 0.015(2) | 0.005(2)  |
| C(32) | 0.021(3) | 0.022(3) | 0.029(2) | 0.006(2)  | 0.011(2) | 0.004(2)  |
| C(33) | 0.016(3) | 0.030(3) | 0.041(3) | -0.001(3) | 0.012(2) | 0.004(2)  |
| C(34) | 0.018(3) | 0.046(4) | 0.035(3) | -0.004(3) | 0.003(2) | 0.002(3)  |
| C(35) | 0.023(3) | 0.028(3) | 0.041(3) | -0.003(3) | 0.005(3) | -0.001(3) |
| C(36) | 0.023(3) | 0.025(3) | 0.027(2) | -0.002(3) | 0.006(2) | 0.002(2)  |
| C(37) | 0.023(3) | 0.024(3) | 0.033(3) | 0.005(2)  | 0.018(2) | 0.008(2)  |
| C(38) | 0.024(3) | 0.025(3) | 0.023(2) | -0.006(2) | 0.005(2) | 0.005(2)  |
| C(39) | 0.014(3) | 0.020(3) | 0.024(2) | 0.000(2)  | 0.009(2) | 0.006(2)  |
| C(40) | 0.018(3) | 0.026(3) | 0.035(3) | 0.000(2)  | 0.009(2) | -0.002(2) |
| C(41) | 0.024(3) | 0.026(3) | 0.045(3) | -0.008(3) | 0.006(3) | -0.002(3) |
| C(42) | 0.017(3) | 0.032(3) | 0.059(3) | -0.006(3) | 0.016(3) | 0.005(3)  |
| C(43) | 0.028(3) | 0.032(3) | 0.039(3) | 0.003(3)  | 0.020(3) | 0.013(3)  |
| C(44) | 0.048(4) | 0.020(3) | 0.037(3) | -0.006(3) | 0.015(3) | -0.008(2) |
| C(45) | 0.031(3) | 0.017(3) | 0.033(3) | -0.001(3) | 0.005(2) | -0.004(2) |
| C(46) | 0.037(4) | 0.031(3) | 0.035(3) | -0.006(3) | 0.011(3) | -0.008(2) |

Table 6. Anisotropic Displacement Parameters (continued)

| atom  | $U_{11}$ | $U_{22}$ | $U_{33}$ | $U_{12}$  | $U_{13}$ | $U_{23}$  |
|-------|----------|----------|----------|-----------|----------|-----------|
| C(47) | 0.046(4) | 0.022(3) | 0.051(3) | -0.016(3) | 0.010(3) | -0.005(3) |
| C(48) | 0.034(4) | 0.023(3) | 0.047(3) | -0.005(3) | 0.017(3) | -0.002(3) |
| C(49) | 0.024(3) | 0.019(3) | 0.038(3) | -0.002(2) | 0.012(2) | -0.005(2) |
| C(50) | 0.026(3) | 0.037(3) | 0.022(2) | 0.001(3)  | 0.003(2) | -0.008(2) |
| C(51) | 0.016(3) | 0.025(3) | 0.025(2) | 0.005(2)  | 0.000(2) | -0.001(2) |
| C(52) | 0.012(3) | 0.033(3) | 0.020(2) | 0.007(2)  | 0.003(2) | 0.002(2)  |
| C(53) | 0.016(3) | 0.021(3) | 0.032(3) | 0.002(2)  | 0.007(2) | 0.000(2)  |
| C(54) | 0.025(3) | 0.026(3) | 0.041(3) | 0.004(3)  | 0.012(3) | 0.011(2)  |
| C(55) | 0.033(4) | 0.046(4) | 0.025(3) | 0.010(3)  | 0.010(2) | 0.010(3)  |
| C(56) | 0.037(4) | 0.043(4) | 0.021(2) | 0.008(3)  | 0.006(2) | -0.002(2) |
| C(57) | 0.143(9) | 0.141(9) | 0.063(5) | 0.086(8)  | 0.056(6) | 0.024(5)  |

The general temperature factor expression:

$$\exp(-2\pi^2(a^2U_{11}h^2 + b^2U_{22}k^2 + c^2U_{33}l^2 + 2a^*b^*U_{12}hk + 2a^*c^*U_{13}hl + 2b^*c^*U_{23}kl))$$