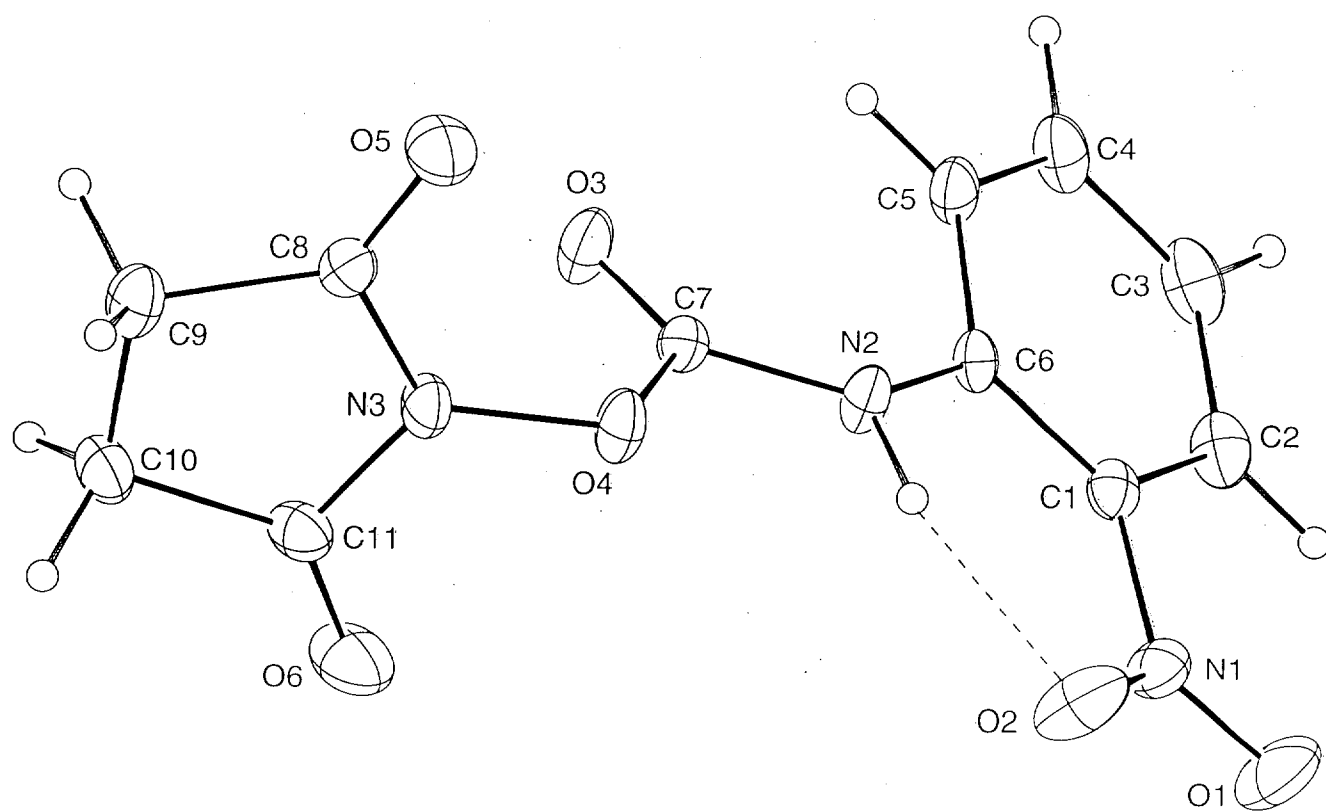


Figure 1. ORTEP view of 6



**Table 1.** Crystal data and Structure Refinement for 6.

|                                        |                                                                                                                                                           |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Color / Shape                          | yellow / fragment                                                                                                                                         |
| Empirical formula                      | C <sub>11</sub> H <sub>9</sub> N <sub>3</sub> O <sub>6</sub>                                                                                              |
| Formula weight                         | 279.21                                                                                                                                                    |
| Temperature                            | 293(2) K                                                                                                                                                  |
| Crystal system                         | monoclinic                                                                                                                                                |
| Space group                            | P 2 <sub>1</sub> /a                                                                                                                                       |
| Unit cell dimensions                   | $a = 12.530(1) \text{ \AA}$ $\alpha = 90^\circ$<br>$b = 10.077(2) \text{ \AA}$ $\beta = 94.50(1)^\circ$<br>$c = 9.572(2) \text{ \AA}$ $\gamma = 90^\circ$ |
| Volume                                 | 1204.9(4) Å <sup>3</sup>                                                                                                                                  |
| Z / Calculated density                 | 4 / 1.539 Mg/m <sup>3</sup>                                                                                                                               |
| Absorption coefficient                 | 0.077 mm <sup>-1</sup>                                                                                                                                    |
| Diffractometer                         | Nonius Kappa CCD                                                                                                                                          |
| Radiation / Wavelength                 | AgK $\alpha$ (graphite monochrom. ) / 0.56090 Å                                                                                                           |
| F(000)                                 | 576                                                                                                                                                       |
| Crystal size                           | .40 x .30 x .30 mm                                                                                                                                        |
| $\theta$ range for data collection     | 4.18 to 19.27°                                                                                                                                            |
| Index ranges                           | $0 \leq h \leq 14, 0 \leq k \leq 11, -11 \leq l \leq 11$                                                                                                  |
| Reflections collected / unique         | 8346 / 2162 [ $R_{\text{int}} = 0.043$ ]                                                                                                                  |
| Completeness to $\theta = 19.27^\circ$ | 99.8%                                                                                                                                                     |
| Absorption correction                  | none                                                                                                                                                      |
| Refinement method                      | Full-matrix least-squares on $F^2$                                                                                                                        |
| Computing                              | Collect / DENZO / maXus / SHELXL97                                                                                                                        |
| Data / restraints / parameters         | 2035 / 1 / 209                                                                                                                                            |
| Goodness-of-fit on $F^2$               | 1.050                                                                                                                                                     |
| SHELXL97 weight parameters             | 0.0375, 0.5285                                                                                                                                            |
| Final R indices [ $I > 2\sigma(I)$ ]   | $R_1 = 0.0368, wR_2 = 0.0898$                                                                                                                             |
| R indices (all data)                   | $R_1 = 0.0461, wR_2 = 0.0959$                                                                                                                             |
| Extinction coefficient                 | 0.069(7)                                                                                                                                                  |
| Largest diff. peak and hole            | 0.212 and -0.199 eÅ <sup>-3</sup>                                                                                                                         |

**Table 2.** Atomic coordinates [ $\times 10^4$ ] and Equivalent isotropic displacement parameters [ $\text{\AA}^2 \times 10^3$ ] for **6**.

| ATOM  | x        | y        | z        | U(eq) |
|-------|----------|----------|----------|-------|
| O(1)  | 7967(1)  | -1829(2) | 16083(2) | 71(1) |
| O(2)  | 7139(1)  | -606(2)  | 14541(2) | 68(1) |
| N(1)  | 7933(1)  | -1225(1) | 14981(2) | 41(1) |
| C(1)  | 8894(1)  | -1195(2) | 14194(2) | 32(1) |
| C(2)  | 9798(2)  | -1800(2) | 14826(2) | 44(1) |
| C(3)  | 10742(2) | -1774(2) | 14187(2) | 49(1) |
| C(4)  | 10784(2) | -1124(2) | 12927(2) | 46(1) |
| C(5)  | 9887(1)  | -516(2)  | 12291(2) | 38(1) |
| C(6)  | 8914(1)  | -556(2)  | 12900(2) | 30(1) |
| N(2)  | 8005(1)  | 61(1)    | 12238(1) | 35(1) |
| C(7)  | 7778(1)  | 104(2)   | 10844(2) | 30(1) |
| O(3)  | 8289(1)  | -233(1)  | 9914(1)  | 48(1) |
| O(4)  | 6758(1)  | 675(1)   | 10626(1) | 41(1) |
| N(3)  | 6365(1)  | 571(1)   | 9241(1)  | 36(1) |
| C(8)  | 6398(1)  | 1612(2)  | 8320(2)  | 34(1) |
| O(5)  | 6807(1)  | 2670(1)  | 8613(1)  | 53(1) |
| C(9)  | 5845(2)  | 1121(2)  | 6972(2)  | 46(1) |
| C(10) | 5518(2)  | -304(2)  | 7239(2)  | 47(1) |
| C(11) | 5871(1)  | -581(2)  | 8740(2)  | 41(1) |
| O(6)  | 5780(1)  | -1549(2) | 9452(2)  | 70(1) |

U(eq) is defined as one third of the trace of the orthogonalized  $U_{ij}$  tensor.

**Table 3.** Bond lengths [Å] and angles [°] for 6.

|                  |            |                  |            |
|------------------|------------|------------------|------------|
| O(1)-N(1)        | 1.215(2)   | O(2)-N(1)        | 1.220(2)   |
| N(1)-C(1)        | 1.470(2)   | C(1)-C(2)        | 1.384(2)   |
| C(1)-C(6)        | 1.398(2)   | C(2)-C(3)        | 1.374(3)   |
| C(3)-C(4)        | 1.377(3)   | C(4)-C(5)        | 1.379(3)   |
| C(5)-C(6)        | 1.393(2)   | C(6)-N(2)        | 1.405(2)   |
| N(2)-C(7)        | 1.342(2)   | C(7)-O(3)        | 1.187(2)   |
| C(7)-O(4)        | 1.403(2)   | O(4)-N(3)        | 1.381(2)   |
| N(3)-C(8)        | 1.373(2)   | N(3)-C(11)       | 1.383(2)   |
| C(8)-O(5)        | 1.206(2)   | C(8)-C(9)        | 1.500(3)   |
| C(9)-C(10)       | 1.521(3)   | C(10)-C(11)      | 1.496(3)   |
| C(11)-O(6)       | 1.201(2)   |                  |            |
| O(1)-N(1)-O(2)   | 121.88(16) | O(1)-N(1)-C(1)   | 118.72(15) |
| O(2)-N(1)-C(1)   | 119.35(13) | C(2)-C(1)-C(6)   | 121.27(16) |
| C(2)-C(1)-N(1)   | 116.28(15) | C(6)-C(1)-N(1)   | 122.42(14) |
| C(3)-C(2)-C(1)   | 120.09(18) | C(2)-C(3)-C(4)   | 119.48(18) |
| C(3)-C(4)-C(5)   | 120.83(18) | C(4)-C(5)-C(6)   | 120.81(17) |
| C(5)-C(6)-C(1)   | 117.49(15) | C(5)-C(6)-N(2)   | 120.27(14) |
| C(1)-C(6)-N(2)   | 122.22(14) | C(7)-N(2)-C(6)   | 124.28(13) |
| O(3)-C(7)-N(2)   | 130.71(15) | O(3)-C(7)-O(4)   | 123.00(14) |
| N(2)-C(7)-O(4)   | 106.29(12) | N(3)-O(4)-C(7)   | 111.33(11) |
| C(8)-N(3)-O(4)   | 122.14(13) | C(8)-N(3)-C(11)  | 116.95(14) |
| O(4)-N(3)-C(11)  | 120.84(13) | O(5)-C(8)-N(3)   | 123.99(15) |
| O(5)-C(8)-C(9)   | 130.59(16) | N(3)-C(8)-C(9)   | 105.42(15) |
| C(8)-C(9)-C(10)  | 106.20(15) | C(11)-C(10)-C(9) | 105.91(15) |
| O(6)-C(11)-N(3)  | 123.01(17) | O(6)-C(11)-C(10) | 131.47(18) |
| N(3)-C(11)-C(10) | 105.51(15) |                  |            |

**Table 4.** Anisotropic displacement parameters [ $\text{\AA}^2 \times 10^3$ ] for **6**.

| ATOM  | U11   | U22   | U33   | U23    | U13    | U12    |
|-------|-------|-------|-------|--------|--------|--------|
| O(1)  | 83(1) | 83(1) | 49(1) | 32(1)  | 14(1)  | 0(1)   |
| O(2)  | 57(1) | 86(1) | 64(1) | 33(1)  | 25(1)  | 24(1)  |
| N(1)  | 53(1) | 36(1) | 36(1) | 6(1)   | 6(1)   | -3(1)  |
| C(1)  | 41(1) | 24(1) | 30(1) | -3(1)  | -1(1)  | 0(1)   |
| C(2)  | 58(1) | 30(1) | 41(1) | 3(1)   | -11(1) | 4(1)   |
| C(3)  | 45(1) | 43(1) | 56(1) | -12(1) | -17(1) | 15(1)  |
| C(4)  | 34(1) | 61(1) | 42(1) | -20(1) | -4(1)  | 10(1)  |
| C(5)  | 37(1) | 51(1) | 27(1) | -10(1) | 1(1)   | 3(1)   |
| C(6)  | 34(1) | 29(1) | 24(1) | -7(1)  | -3(1)  | 4(1)   |
| N(2)  | 34(1) | 49(1) | 22(1) | 0(1)   | 1(1)   | 12(1)  |
| C(7)  | 32(1) | 31(1) | 27(1) | 1(1)   | 0(1)   | 2(1)   |
| O(3)  | 44(1) | 74(1) | 26(1) | -4(1)  | 4(1)   | 12(1)  |
| O(4)  | 40(1) | 55(1) | 26(1) | 1(1)   | -5(1)  | 12(1)  |
| N(3)  | 38(1) | 41(1) | 27(1) | 3(1)   | -7(1)  | 1(1)   |
| C(8)  | 30(1) | 38(1) | 33(1) | 5(1)   | 1(1)   | 5(1)   |
| O(5)  | 62(1) | 42(1) | 54(1) | 6(1)   | -4(1)  | -8(1)  |
| C(9)  | 48(1) | 56(1) | 34(1) | 5(1)   | -7(1)  | 8(1)   |
| C(10) | 38(1) | 60(1) | 43(1) | -7(1)  | -5(1)  | -7(1)  |
| C(11) | 30(1) | 43(1) | 48(1) | 4(1)   | -3(1)  | -2(1)  |
| O(6)  | 72(1) | 54(1) | 80(1) | 23(1)  | -17(1) | -21(1) |

The anisotropic displacement factor exponent takes the form:  $-2\pi^2 [ (h a^*)^2 U_{11} + \dots + 2 h k a^* b^* U_{12} ]$

**Table 5.** Hydrogen coordinates [ $\times 10^4$ ] and isotropic displacement parameters [ $\text{\AA}^2 \times 10^3$ ] for 6.

| ATOM   | x         | y        | z         | U(eq) |
|--------|-----------|----------|-----------|-------|
| H(2)   | 9724(16)  | -2200(2) | 15710(2)  | 57    |
| H(3)   | 11378(19) | -2160(2) | 14620(2)  | 64    |
| H(4)   | 11468(19) | -1080(2) | 12480(2)  | 60    |
| H(5)   | 9926(16)  | -60(2)   | 11400(2)  | 50    |
| H(21)  | 7409(11)  | 268(18)  | 12822(17) | 46    |
| H(9A)  | 6354(18)  | 1190(2)  | 6240(2)   | 61    |
| H(9B)  | 5248(19)  | 1610(2)  | 6820(2)   | 61    |
| H(10A) | 4770(2)   | -470(2)  | 7110(2)   | 61    |
| H(10B) | 5842(18)  | -910(2)  | 6650(2)   | 61    |

**Table 6.** Selected torsion angles [°] for **6**.

---

|                     |             |
|---------------------|-------------|
| O(1)-N(1)-C(1)-C(6) | 178.16(16)  |
| N(1)-C(1)-C(6)-N(2) | -2.4(2)     |
| C(1)-C(6)-N(2)-C(7) | -145.72(16) |
| C(6)-N(2)-C(7)-O(4) | 173.79(14)  |
| N(2)-C(7)-O(4)-N(3) | -170.05(13) |
| C(7)-O(4)-N(3)-C(8) | -100.43(17) |

---

**Table 7.** Hydrogen-bonds for **6** [Å and °].

| D-H...A             | d(D-H)   | d(H...A)  | d(D...A)   | <(DHA)>   |
|---------------------|----------|-----------|------------|-----------|
| N(2)-H(21)...O(2)   | 0.989(9) | 1.920(16) | 2.6192(19) | 125.4(14) |
| N(2)-H(21)...O(5)#1 | 0.989(9) | 2.356(16) | 3.0861(19) | 130.0(14) |

Symmetry transformations used to generate equivalent atoms: #1 x,-y+1/2,z+1/2