

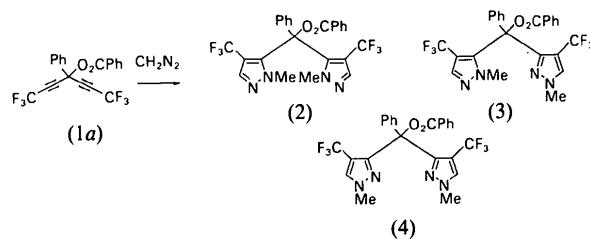
References

- Arces, P., Roman, E., Pozo, M. C. & Serrano, J. A. (1993). *J. Chem. Soc. Perkin Trans. 1*, pp. 1939–1940.
- Braisted, A. C. & Schultz, P. G. (1990). *J. Am. Chem. Soc.* **112**, 7430–7431.
- Cremer, D. & Pople, J. A. (1975). *J. Am. Chem. Soc.* **97**, 1354–1358.
- Debaerdemaecker, T., Germain, G., Main, P., Refaat, L. S., Tate, C. & Woolfson, M. M. (1988). *MULTAN88. A System of Computer Programs for the Automatic Solution of Crystal Structures from X-ray Diffraction Data*. Univs. of York, England, and Louvain, Belgium.
- Gupta, R. C., Raynor, C. M., Stoodley, R. J., Slawin, A. M. Z. & Williams, D. J. (1988). *J. Chem. Soc. Perkin Trans. 1*, pp. 1773–1785.
- Hilvert, D., Hill, K. W., Nared, K. D. & Auditor, M. T. M. (1989). *J. Am. Chem. Soc.* **111**, 9261–9262.
- Johnson, C. K. (1976). *ORTEPII. Report ORNL-5138*. Oak Ridge National Laboratory, Tennessee, USA.
- Nardelli, M. (1983). *Comput. Chem.* **7**, 95–98.
- Sheldrick, G. M. (1993). *SHELXL93. Program for Crystal Structure Refinement*. Univ. of Göttingen, Germany.
- Suckling, C. J., Tedford, M. C., Bence, L. M., Irvine, J. I. & Stimson, W. H. (1993). *J. Chem. Soc. Perkin Trans. 1*, pp. 1925–1929.

a methyl group to an outer N atom has reversed the situation in the second compound [$\text{O}-\text{C}-\text{C}-\text{C}(\text{CF}_3)$ –63 (1), –41 (1) and 65 (1), 34 (1) $^\circ$ for the two molecules in the asymmetric unit, respectively].

Comment

The structure determinations reported herein form part of a general investigation of the reaction of 1,4-diynyl esters of type $(\text{CF}_3\text{C}\equiv\text{C})_2\text{CRO}_2\text{CR}$ (1) with dienes and 1,3-dipolar reagents (Tajammal 1991; Barlow, Tajammal & Tipping 1992). The structures of the two crystalline bis(methylpyrazoles) (2) and (3) were required to determine the direction of addition of diazomethane to the 1,4-diynyl ester [(1a), $\text{R} = \text{Ph}$] and to establish the identity of the third isolated bis(methylpyrazole) (4).



Acta Cryst. (1994). **C50**, 1487–1490

α,α -Bis(1-methyl-4-trifluoromethyl-5-pyrazolyl)benzyl Benzoate and α -(1-Methyl-4-trifluoromethyl-3-pyrazolyl)- α -(1-methyl-4-trifluoromethyl-5-pyrazolyl)benzyl Benzoate: an Investigation into the Direction of Diazomethane Addition to α,α -Bis(3,3,3-trifluoropropynyl)benzyl Benzoate

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(Received 25 January 1994; accepted 7 March 1994)

Abstract

The structures of the title compounds, two isomers of $\text{C}_{24}\text{H}_{18}\text{F}_6\text{N}_4\text{O}_2$, may be compared by considering the geometry about the tetrahedral benzyl C atoms. In each compound the planar phenyl and benzoate systems are aligned approximately parallel to the ester C–O bond with the latter substituent projecting between the phenyl and 1-methyl-4-trifluoromethylpyrazolyl rings. However, while both CF_3 substituents in the first molecule project away from the ester C–O bond [$\text{O}-\text{C}-\text{C}-\text{C}(\text{CF}_3)$ –138.5 (5), –122.2 (6) $^\circ$], removal of

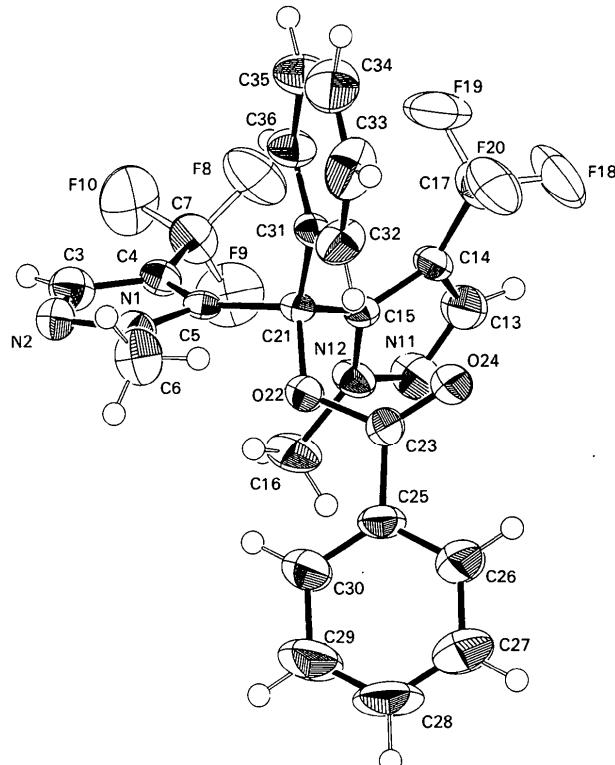


Fig. 1. α,α -Bis(1-methyl-4-trifluoromethylpyrazol-5-yl)benzyl benzoate, including atomic numbering scheme, drawn using ORTEPII (Johnson, 1976). Displacement ellipsoids are plotted at the 50% probability level.

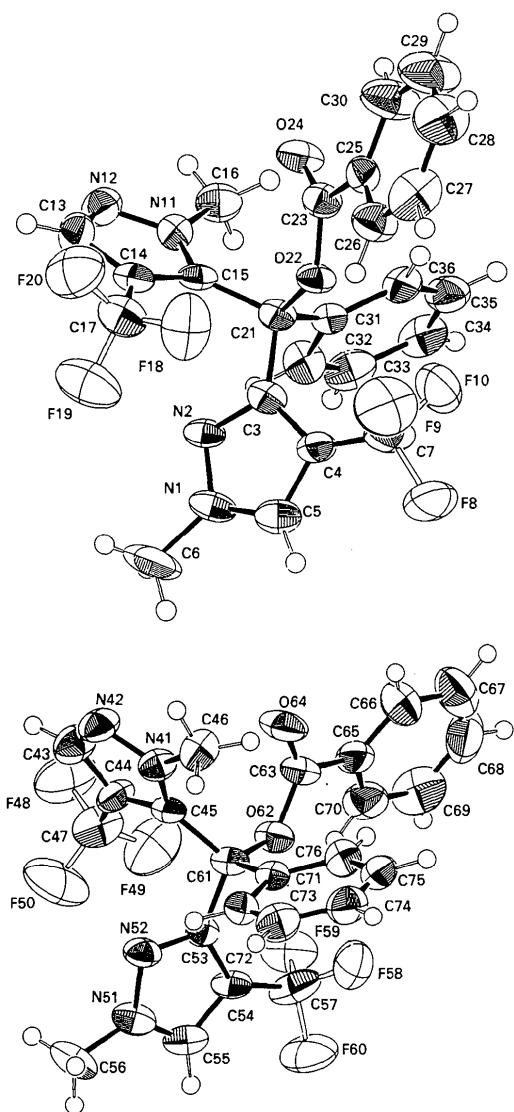


Fig. 2. The two molecules which comprise an asymmetric unit of α -(1-methyl-4-trifluoromethylpyrazol-3-yl)- α -(1-methyl-4-trifluoromethylpyrazol-5-yl)benzyl benzoate, including atomic numbering scheme, drawn using ORTEPII (Johnson, 1976). Displacement ellipsoids are plotted at the 50% probability level.

Experimental

A solution of diazomethane (1.91 g, 45.5 mmol) in diethyl ether (100 ml) was added to a stirred solution of α,α -bis(3,3,3-trifluoropropynyl)benzyl benzoate (1a) (4.50 g, 11.4 mmol) in diethyl ether (60 ml) at 273 K and stirring was continued at this temperature for 1 h. After warming to room temperature the solvent was removed *in vacuo* to give a solid residue (6.01 g) which was shown by TLC (eluent CH₂Cl₂/MeOH 98:2 v/v) to contain three major (R_F 0.75, 0.68 and 0.63) and several minor components. The major components were separated by repeated dry column flash chromatography (Merck Kieselgel 60_{GF254}; same eluent) then dissolved in diethyl ether, dried (P₂O₅) and the ether removed *in vacuo* to afford α,α -bis(1-methyl-4-trifluoromethylpyrazol-

5-yl)benzyl benzoate (2) (1.15 g, 2.31 mmol, 23%; calculated for C₂₄H₁₈F₆N₄O₂ C 56.7, H 3.5, F 22.4, N 11.0%, M⁺ 508; found C 56.4, H 3.4, F 22.6, N 10.8%, M⁺ 508; m.p. 418 K), α -(1-methyl-4-trifluoromethylpyrazol-3-yl)- α -(1-methyl-4-trifluoromethylpyrazol-5-yl)benzyl benzoate (3) (2.25 g, 4.40 mmol, 39%; found C 56.4, H 3.7, F 22.4, N 11.0%, M⁺ 508; m.p. 421 K) and α,α -bis(1-methyl-4-trifluoromethylpyrazol-3-yl)benzyl benzoate (4) (1.04 g, 2.05 mmol, 18%; found C 56.5, H 3.5, F 22.4, N 11.1%, M⁺ 508; m.p. 502 K). Compounds (2) and (3) were recrystallized from CH₂Cl₂.

Compound (2)

Crystal data



M_r = 508.42

Monoclinic

$P2_1/c$

a = 10.503 (3) Å

b = 10.268 (3) Å

c = 21.750 (4) Å

β = 97.03 (2) $^\circ$

V = 2328 (1) Å³

Z = 4

D_x = 1.450 Mg m⁻³

Mo K α radiation

λ = 0.71069 Å

Cell parameters from 24 reflections

θ = 12.37–17.64 $^\circ$

μ = 0.1205 mm⁻¹

T = 296 K

Needle

0.40 × 0.20 × 0.20 mm

Colourless

Data collection

AFC-6S diffractometer

$w/2\theta$ scans

Absorption correction:

refined from ΔF
(DIFABS; Walker & Stuart, 1983)

T_{\min} = 0.87, T_{\max} = 1.12

4624 measured reflections

4370 independent reflections

1975 observed reflections

[$I > 3\sigma(I)$]

R_{int} = 0.031

θ_{\max} = 25.0 $^\circ$

h = 0 → 12

k = 0 → 11

l = -24 → 24

3 standard reflections

monitored every 150 reflections

intensity variation: none

Refinement

Refinement on F

R = 0.055

wR = 0.036

S = 2.55

1975 reflections

325 parameters

H-atom parameters not refined

Weighting scheme based on measured e.s.d.'s

(Δ/σ)_{max} = 0.0054

$\Delta\rho_{\max}$ = 0.31 e Å⁻³

$\Delta\rho_{\min}$ = -0.23 e Å⁻³

Atomic scattering factors

from International Tables
for X-ray Crystallography
(1974, Vol. IV)

Table 1. Fractional atomic coordinates and equivalent isotropic displacement parameters (Å²) for (2)

$$U_{\text{eq}} = (1/3)\sum_i \sum_j U_{ij} a_i^* a_j^* \mathbf{a}_i \cdot \mathbf{a}_j$$

	<i>x</i>	<i>y</i>	<i>z</i>	<i>U</i> _{eq}
N1	0.7022 (3)	0.8593 (4)	0.6723 (2)	0.035 (2)
N2	0.6185 (4)	0.9439 (4)	0.6414 (2)	0.045 (2)
C3	0.5431 (5)	0.8694 (6)	0.6042 (2)	0.049 (3)
C4	0.5759 (4)	0.7389 (5)	0.6096 (2)	0.035 (2)
C5	0.6805 (4)	0.7336 (4)	0.6547 (2)	0.027 (2)
C6	0.8051 (5)	0.9162 (5)	0.7152 (2)	0.059 (3)
C7	0.5110 (5)	0.6395 (6)	0.5695 (3)	0.055 (3)

F8	0.5902 (3)	0.5570 (3)	0.5449 (1)	0.081 (2)	<i>Refinement</i>	$\Delta\rho_{\max} = 0.34 \text{ e } \text{\AA}^{-3}$
F9	0.4290 (3)	0.5624 (3)	0.5953 (2)	0.087 (2)	<i>Refinement on F</i>	$\Delta\rho_{\min} = -0.31 \text{ e } \text{\AA}^{-3}$
F10	0.4379 (3)	0.6926 (3)	0.5210 (1)	0.094 (2)	$R = 0.069$	Extinction correction:
N11	0.5904 (4)	0.4734 (4)	0.7005 (2)	0.042 (2)	$wR = 0.061$	Zachariasen (1967)
N12	0.5461 (4)	0.3511 (4)	0.6938 (2)	0.061 (3)	$S = 3.27$	Type II, Gaussian,
C13	0.6303 (5)	0.2899 (5)	0.6641 (3)	0.058 (3)	2953 reflections	isotropic
C14	0.7292 (5)	0.3713 (5)	0.6513 (2)	0.040 (3)	661 parameters	Extinction coefficient:
C15	0.7017 (4)	0.4909 (4)	0.6755 (2)	0.031 (2)	H-atom parameters not	1.51×10^{-7}
C16	0.5171 (4)	0.5624 (5)	0.7353 (2)	0.058 (3)	refined	Atomic scattering factors
C17	0.8375 (6)	0.3230 (6)	0.6201 (3)	0.063 (3)	Weighting scheme based on	from <i>International Tables</i>
F18	0.8365 (3)	0.1921 (3)	0.6193 (2)	0.111 (2)	measured e.s.d.'s	for X-ray Crystallography
F19	0.8343 (3)	0.3596 (3)	0.5616 (2)	0.089 (2)	$(\Delta/\sigma)_{\max} = 0.0262$	(1974, Vol. IV)
F20	0.9544 (3)	0.3561 (3)	0.6471 (2)	0.084 (2)		
C21	0.7676 (4)	0.6239 (4)	0.6820 (2)	0.031 (2)		
O22	0.7849 (3)	0.6540 (3)	0.7494 (1)	0.037 (2)		
C23	0.8350 (4)	0.5615 (5)	0.7905 (2)	0.043 (3)		
O24	0.8885 (3)	0.4655 (3)	0.7753 (2)	0.056 (2)		
C25	0.8089 (5)	0.5905 (5)	0.8553 (2)	0.047 (3)		
C26	0.8583 (5)	0.5048 (6)	0.9007 (3)	0.065 (3)		
C27	0.8304 (6)	0.5213 (7)	0.9608 (3)	0.086 (4)		
C28	0.7577 (7)	0.6228 (8)	0.9746 (3)	0.090 (5)		
C29	0.7092 (6)	0.7094 (7)	0.9304 (3)	0.096 (4)		
C30	0.7362 (5)	0.6940 (6)	0.8698 (3)	0.069 (3)		
C31	0.8943 (4)	0.6339 (4)	0.6542 (2)	0.035 (2)		
C32	1.0107 (4)	0.6504 (5)	0.6894 (2)	0.052 (3)		
C33	1.1210 (5)	0.6617 (6)	0.6600 (3)	0.075 (4)		
C34	1.1134 (6)	0.6567 (7)	0.5965 (3)	0.080 (4)		
C35	0.9974 (5)	0.6440 (6)	0.5613 (3)	0.067 (3)		
C36	0.8890 (4)	0.6340 (5)	0.5904 (2)	0.049 (3)		

Table 2. Selected geometric parameters (\AA , $^\circ$) for (2)

C5—C21	1.525 (6)	C21—C31	1.531 (5)
C15—C21	1.530 (6)	O22—C23	1.365 (5)
C21—O22	1.487 (5)		
C5—C21—C15	112.3 (4)	C15—C21—O22	106.1 (3)
C5—C21—O22	103.0 (3)	C15—C21—C31	115.4 (4)
C5—C21—C31	107.8 (4)	O22—C21—C31	111.6 (4)

Compound (3)*Crystal data* $M_r = 508.42$

Triclinic

 $P\bar{1}$ $a = 9.701 (3) \text{ \AA}$ $b = 26.934 (7) \text{ \AA}$ $c = 8.832 (2) \text{ \AA}$ $\alpha = 94.18 (2)^\circ$ $\beta = 93.37 (2)^\circ$ $\gamma = 85.44 (2)^\circ$ $V = 2291 (2) \text{ \AA}^3$ $Z = 4$ $D_x = 1.474 \text{ Mg m}^{-3}$ *Data collection*

AFC-6S diffractometer

 ω scans with profile analysis

Absorption correction:

refined from ΔF

(DIFABS; Walker & Stuart, 1983)

 $T_{\min} = 0.85$, $T_{\max} = 1.03$

8611 measured reflections

8072 independent reflections

2953 observed reflections

[$I > 3\sigma(I)$]

Mo $K\alpha$ radiation
 $\lambda = 0.71069 \text{ \AA}$
 Cell parameters from 23 reflections
 $a = 9.701 (3) \text{ \AA}$
 $\theta = 12.23\text{--}18.38^\circ$
 $b = 26.934 (7) \text{ \AA}$
 $\mu = 0.1224 \text{ mm}^{-1}$
 $c = 8.832 (2) \text{ \AA}$
 $T = 296 \text{ K}$
 Needle
 $\text{0.40} \times \text{0.30} \times \text{0.20 mm}$
 Colourless

	x	y	z	U_{eq}
N1	0.3265 (9)	0.3534 (3)	0.712 (1)	0.047 (5)
N2	0.4636 (8)	0.3440 (3)	0.6908 (9)	0.039 (4)
C3	0.525 (1)	0.3560 (3)	0.825 (1)	0.036 (5)
C4	0.427 (1)	0.3723 (4)	0.934 (1)	0.045 (6)
C5	0.301 (1)	0.3696 (4)	0.853 (1)	0.048 (6)
C6	0.227 (1)	0.3450 (5)	0.584 (1)	0.099 (8)
C7	0.441 (1)	0.3902 (6)	1.093 (1)	0.072 (8)
F8	0.3266 (6)	0.3853 (3)	1.1681 (7)	0.091 (4)
F9	0.4673 (8)	0.4363 (3)	1.1185 (8)	0.105 (5)
F10	0.5432 (7)	0.3649 (3)	1.1730 (7)	0.089 (4)
N11	0.8419 (8)	0.3191 (3)	0.6211 (10)	0.042 (5)
N12	0.8762 (8)	0.3323 (3)	0.487 (1)	0.052 (5)
C13	0.801 (1)	0.3765 (4)	0.467 (1)	0.055 (6)
C14	0.716 (1)	0.3897 (4)	0.589 (1)	0.050 (6)
C15	0.7431 (9)	0.3496 (4)	0.687 (1)	0.036 (5)
C16	0.922 (1)	0.2747 (4)	0.676 (1)	0.054 (6)
C17	0.621 (1)	0.4336 (5)	0.596 (2)	0.067 (8)
F18	0.5933 (8)	0.4522 (3)	0.7353 (8)	0.095 (5)
F19	0.4993 (7)	0.4291 (2)	0.5230 (8)	0.100 (5)
F20	0.6764 (7)	0.4715 (3)	0.5314 (8)	0.097 (5)
C21	0.6812 (10)	0.3450 (3)	0.840 (1)	0.035 (5)
O22	0.7251 (6)	0.3860 (2)	0.9485 (7)	0.039 (3)
C23	0.861 (1)	0.3941 (4)	0.969 (1)	0.042 (6)
O24	0.9531 (7)	0.3679 (3)	0.9080 (8)	0.052 (4)
C25	0.884 (1)	0.4366 (4)	1.082 (1)	0.043 (6)
C26	0.780 (1)	0.4711 (4)	1.129 (1)	0.058 (6)
C27	0.809 (1)	0.5086 (4)	1.237 (1)	0.070 (7)
C28	0.941 (2)	0.5136 (5)	1.294 (1)	0.09 (1)
C29	1.045 (1)	0.4803 (6)	1.248 (2)	0.10 (1)
C30	1.017 (1)	0.4409 (5)	1.142 (1)	0.081 (8)
C31	0.7057 (9)	0.2940 (4)	0.908 (1)	0.040 (5)
C32	0.648 (1)	0.2543 (4)	0.826 (1)	0.050 (6)
C33	0.663 (1)	0.2078 (4)	0.884 (1)	0.061 (7)
C34	0.732 (1)	0.2004 (4)	1.025 (1)	0.061 (7)
C35	0.786 (1)	0.2422 (4)	1.105 (1)	0.057 (6)
C36	0.774 (1)	0.2880 (3)	1.049 (1)	0.050 (6)
N41	0.6006 (9)	0.2013 (3)	0.3925 (9)	0.046 (5)
N42	0.7343 (10)	0.1941 (3)	0.4477 (10)	0.058 (5)
C43	0.760 (1)	0.1461 (5)	0.449 (1)	0.064 (7)
C44	0.645 (1)	0.1209 (4)	0.398 (1)	0.052 (6)
C45	0.543 (1)	0.1566 (4)	0.359 (1)	0.043 (6)
C46	0.541 (1)	0.2532 (4)	0.389 (1)	0.056 (7)
C47	0.648 (2)	0.0664 (4)	0.389 (2)	0.068 (8)
F48	0.7339 (8)	0.0472 (3)	0.4987 (8)	0.112 (5)
F49	0.5274 (8)	0.0479 (3)	0.4111 (9)	0.112 (5)
F50	0.6898 (9)	0.0434 (3)	0.2609 (9)	0.125 (6)
N51	0.4650 (10)	0.0740 (3)	-0.0377 (10)	0.049 (5)
N52	0.4973 (9)	0.1100 (3)	0.0743 (9)	0.049 (5)
C53	0.395 (1)	0.1096 (4)	0.171 (1)	0.043 (5)
C54	0.298 (1)	0.0760 (3)	0.116 (1)	0.048 (6)
C55	0.348 (1)	0.0537 (4)	-0.018 (1)	0.063 (7)
C56	0.553 (1)	0.0647 (5)	-0.167 (1)	0.087 (8)
C57	0.172 (1)	0.0620 (5)	0.179 (1)	0.070 (8)

Table 3. Fractional atomic coordinates and equivalent isotropic displacement parameters (\AA^2) for (3)

$$U_{\text{eq}} = (1/3)\sum_i \sum_j U_{ij} a_i^* a_j^* \mathbf{a}_i \cdot \mathbf{a}_j$$

F58	0.0835 (7)	0.0979 (3)	0.2279 (8)	0.089 (5)
F59	0.1992 (7)	0.0321 (2)	0.2988 (7)	0.085 (4)
F60	0.0996 (7)	0.0327 (3)	0.0763 (7)	0.102 (5)
C61	0.393 (1)	0.1494 (3)	0.302 (1)	0.038 (5)
O62	0.3176 (6)	0.1301 (2)	0.4174 (7)	0.048 (4)
C63	0.313 (1)	0.1549 (4)	0.555 (1)	0.051 (6)
O64	0.3790 (8)	0.1892 (3)	0.5978 (7)	0.071 (5)
C65	0.212 (1)	0.1364 (5)	0.653 (1)	0.058 (5)
C66	0.163 (1)	0.1661 (4)	0.771 (1)	0.072 (7)
C67	0.060 (2)	0.1519 (6)	0.860 (1)	0.09 (1)
C68	0.008 (1)	0.1081 (7)	0.826 (2)	0.09 (1)
C69	0.055 (1)	0.0743 (5)	0.711 (2)	0.083 (8)
C70	0.157 (1)	0.0920 (5)	0.622 (1)	0.069 (7)
C71	0.313 (1)	0.1964 (3)	0.239 (1)	0.035 (5)
C72	0.358 (1)	0.2158 (4)	0.113 (1)	0.052 (6)
C73	0.288 (1)	0.2576 (5)	0.053 (1)	0.064 (7)
C74	0.171 (1)	0.2787 (4)	0.118 (2)	0.070 (8)
C75	0.125 (1)	0.2604 (5)	0.243 (1)	0.066 (7)
C76	0.193 (1)	0.2188 (4)	0.303 (1)	0.048 (6)

Table 4. Selected geometric parameters (Å, °) for (3)

C3—C21	1.52 (1)	C45—C61	1.53 (1)
C15—C21	1.53 (1)	C53—C61	1.52 (1)
C21—O22	1.48 (1)	C61—O62	1.44 (1)
C21—C31	1.53 (1)	C61—C71	1.55 (1)
C3—C21—C15	109.5 (8)	C45—C61—C53	108.6 (8)
C3—C21—O22	102.6 (7)	C45—C61—O62	110.7 (7)
C3—C21—C31	106.2 (8)	C45—C61—C71	114.8 (8)
C15—C21—O22	109.3 (7)	C53—C61—O62	105.5 (8)
C15—C21—C31	116.4 (7)	C53—C61—C71	106.0 (7)
O22—C21—C31	112.0 (7)	O62—C61—C71	110.6 (8)

Data collection and cell refinement: *MSC/AFC Diffractometer Control Software* (Molecular Structure Corporation, 1989). Data reduction: *TEXSAN PROCESS* (Molecular Structure Corporation, 1985). Program(s) used to solve structure: *TEXSAN*; *MITHRIL* (Gilmore, 1984). Program(s) used to refine structure: *TEXSAN LS*. Molecular graphics: *TEXSAN*; *ORTEPII* (Johnson, 1976). Software used to prepare material for publication: *TEXSAN FINISH*. Literature survey: *CSSR* (1984).

Lists of structure factors, anisotropic displacement parameters, H-atom coordinates and complete geometry have been deposited with the IUCr (Reference: LI1106). Copies may be obtained through The Managing Editor, International Union of Crystallography, 5 Abbey Square, Chester CH1 2HU, England.

References

- Barlow, M. G., Tajammal, S. & Tipping, A. E. (1992). *J. Chem. Soc. Perkin Trans. 1*, pp. 2495–2505.
- CSSR (1984). *Crystal Structure Search and Retrieval Instruction Manual*. SERC Daresbury Laboratory, Warrington, England.
- Gilmore, C. J. (1984). *J. Appl. Cryst.* **17**, 42–46.
- Johnson, C. K. (1976). *ORTEPII*. Report ORNL-5138. Oak Ridge National Laboratory, Tennessee, USA.
- Molecular Structure Corporation (1985). *TEXSAN. TEXRAY Structure Analysis Package*. MSC, 3200 Research Forest Drive, The Woodlands, TX 77381, USA.
- Molecular Structure Corporation (1989). *MSC/AFC Diffractometer Control Software*. MSC, 3200 Research Forest Drive, The Woodlands, TX 77381, USA.
- Walker, N. & Stuart, D. (1983). *Acta Cryst. A* **39**, 158–166.
- Tajammal, S. (1991). PhD thesis, Univ. of Manchester, England.
- Zachariasen, W. H. (1967). *Acta Cryst. C* **23**, 558–564.

Acta Cryst. (1994). **C50**, 1490–1492

Structure Analysis of a Reversible Monoamine Oxidase A Inhibitor: 3-{(R)-3-Hydroxybutoxy}phenyl-(R)-5-methoxymethyl-1,3-oxazolidin-2-one

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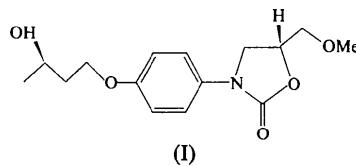
(Received 29 November 1993; accepted 24 March 1994)

Abstract

The structure of a new reversible type-A MAO inhibitor and analogue of befloxatone is reported. Within experimental deviations, the oxazolidinone moiety of the title compound is planar and quasi coplanar with the adjacent phenyl ring [12.2 (5)°]. The sum of the angles at the N atom is 359.8°, indicating *sp*² hybridization of this atom. This is consistent with electron delocalization between the N atom and the carbonyl group [N—(C=O) 1.365 (4) Å] in the oxazolidinone ring. The lateral butoxy chain is all *trans*. As a result, the molecule is very flat with only the (R)-5-methoxymethyl chain and the terminal hydroxyl group out of the plane. The hydroxyl group is involved in the hydrogen bonding responsible for crystal cohesion.

Comment

In the course of our study of monoamine oxidase (MAO) inhibitors (Moureau *et al.*, 1992; Wouters, Perpete, Norberg, Evrard & Durant, 1994), we report here the X-ray structure of the title compound (I), a new reversible type-A MAO inhibitor and analogue of befloxatone (Koenig *et al.*, 1992).



Original inhibitors of monoamine oxidase (MAO) have been developed by Delalande Research (Groupe Synthelabo) in the aryloxazolidinone series. They belong to the (R)-5-methoxymethyl-3-aryloxazolidin-2-one family, are selective for the A form of the enzyme, are reversible and competitive against tyramine (Koenig *et al.*, 1992). Structure–activity results clearly revealed the crucial role that a hydroxybutoxy lateral chain has