Table 1. *X-ray powder diffraction data for procaine hydrochloride*

d_o (Å)	$I/I_{max.}$	*hkl*	d_c from *a*, *b*, *c* (Å)
12·52	0·04	020	12·52
6·91	0·40	111	6·89
		040	6·26
6·25	0·40	220	6·23
		121	6·22
		131	5·44
5·45	1·00	201	5·42
4·98	0·04	221	4·98
4·72	0·04	240	4·72
4·47	0·08	320	4·47
		002	4·14
4·11	1·00	151	4·11
		311	4·09
		321	3·93
3·94	0·20	112	3·93
		331	3·71
3·70	0·20	032	3·71
		251	3·68
		132	3·59
3·56	0·20	400	3·59
		341	3·45
3·44	0·04	420	3·45
		232	3·29
3·27	0·16	401	3·29
		171	3·20
3·20	0·20	351	3·19
		152	3·11
3·11	0·20	312	3·11

Table 1 (*cont.*)

d_o (Å)	$I/I_{max.}$	*hkl*	d_c from *a*, *b*, *c* (Å)
2·93	0·12	332	2·93
2·87	0·02	181	2·87
2·79	0·02	520	2·80
2·70	0·16	402	2·71
2·66	0·16	422	2·65
2·59	0·20	203	2·58
2·52	0·04	—	—
2·37	0·08	—	—
2·28	0·08	—	—
2·18	0·04	—	—
2·16	0·04	—	—
2·08	0·04	—	—
2·05	0·04	—	—
2·00	0·04	—	—
1·937	0·02	—	—
1·903	0·02	—	—
1·840	0·02	—	—
1·794	0·04	—	—
1·740	0·02	—	—
1·711	0·02	—	—

camera 114·6 mm. in diameter with copper radiation and nickel filter. A wavelength value of 1·540 Å was used in the calculations.

Reference

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The unit cell and space group of thorium *tetrakis*-dibenzoylmethane.

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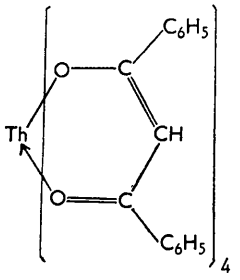
The preparation of thorium *tetrakis*-dibenzoylmethane (I) has been described elsewhere (Comyns, 1957). It crystal-



(I)

lized from toluene as pale yellow orthorhombic tablets showing straight extinction between crossed Nicols: elongated [001], tabular {100}.

The density was determined by flotation in aqueous K_2HgI_4.

Oscillation photographs, and zero-, first-, and second-layer equi-inclination Weissenberg photographs taken about the *c* axis confirmed the orthorhombic symmetry. Cu $K\alpha$ radiation (λ = 1·542 Å) was used.

The cell-dimensions were:

$$a = 20{\cdot}4 \pm 0{\cdot}1,\ b = 10{\cdot}33 \pm 0{\cdot}05,\ c = 23{\cdot}2 \pm 0{\cdot}1 \text{ Å}.$$

The calculated density, assuming 4 molecules per unit cell, is 1·53±0·01 g.cm.$^{-3}$; the experimental value was 1·52 g.cm.$^{-3}$. The following classes of reflexion were observed to be systematically absent: 0*kl*, $l \neq 2n$; *h*0*l*, $l \neq 2n$; *hk*0, $h+k \neq 2n$. Also, all reflexions *hkl* with $l \neq 2n$ were observed to be weak. The space group is thus *Pccn* (No. 56) and the thorium atoms lie in the fourfold special positions (*d*) or (*c*), these differing only in the choice of origin. The point symmetry of these positions is 2, and the molecules therefore each possess a twofold axis. This sheds little light on the stereochemistry of eight-fold coordination (Marchi, Fernelius & McReynolds, 1943; Nyholm, 1954), since most of the possible models have twofold axes.

No further work on this compound is contemplated.

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