Table 2. *Powder data for BPO_4 and $BAsO_4$ (Quartz forms)*

| | BPO$_4$ | | | | | BAsO$_4$ | | | | |
| | Mackenzie *et al.* | | Present work | | | Mackenzie *et al.* | | Present work | | |
Index	d_o	I	d_o	I	d_c	d_o	I	d_o	I	d_c
10·0	3·895 Å	s	3·878 Å	50	3·871 Å	3·964 Å	m	3·960 Å	25	3·951 Å
10·1	3·626	m	*		3·607	3·699	s	3·694	55	3·690
	3·363	vvw								
00·3	3·318	w	*		3·309	3·452	w	3·440	40	3·443
	3·204	vvw								
10·2	3·060	vs	3·051	100	3·052	3·145	vs	3·143	100	3·138
10·3	2·519	vvw	2·515	5	2·515	2·598	vw	2·600	5	2·596
11·0	2·239	m	2·244	30	2·235	2·281	w	2·281	20	2·281
11·1	2·183	vw	2·180	7	2·181	2·228	w	2·228	10	2·227
10·4	2·092	m	2·088	15	2·089	2·162	m	2·161	20	2·162
11·2	2·040	w	2·037	15	2·038	2·087	vw	2·088	10	2·087
20·0	1·936	vvw	1·938	10	1·935	1·976	w	1·975	20	1·975
20·1						1·941	vvw	1·941	3	1·940
11·3	1·852	vvw			1·852	1·901	vw	1·903	7	1·902
20·2	1·805	vw	1·800$_5$	20	1·803					
10·5	1·768	vvw	1·764	10	1·766	1·831	w	1·831	8	1·831
00·6								1·722	13	1·722
20·3	1·671	w			1·671			1·713	20	1·713
11·4	1·662	m	1·659$_3$	30	1·661	1·710	m	1·710	25	1·710
10·6								1·578	8	1·579
20·4	1·527	w	1·526$_6$	10	1·526	1·568	vw	1·570	5	1·569
11·5	1·485	vvw			1·484	1·530	vw	1·530	5	1·531
21·1	1·448	vw			1·447	1·476	vw	1·477	13	1·478
21·2	1·403	w	1·402$_4$	50	1·403	1·433	w	1·434	15	1·434

* Obscured in our patterns by presence of some cristobalite form, which gives peaks in this region.

guished. The two extra lines included by Mackenzie *et al.* (1959) appear to be due to such causes; their inclusion necessitated the adoption of the larger unit cell by Mackenzie *et al.* (1959), and obscured the relationship to quartz.

Refractive indices and density have also been determined directly. Except for the indices of BAsO$_4$ they differ only slightly from those obtained by Mackenzie *et al.* (1959), and very kindly communicated to us personally. Both sets of results are given in Table 1.

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