$$ {}_3R^{(1)}_{3,0} = \frac{\sigma_4^{1/2}}{8C_1\sigma_2}(2C_1-C_2)(\mathscr{E}'^2_{\mathbf{h}_1}+\mathscr{E}'^2_{\mathbf{h}_2}+\mathscr{E}'^2_{\mathbf{h}_1+\mathbf{h}_2})+\varrho_1 , \quad (6\cdot13) $$

$$ {}_4R^{(1)}_{3,0} = \frac{\sigma_4^{1/2}}{8C_1\sigma_2}(2C_1-C_2)(\mathscr{E}'^2_{\mathbf{h}_1}+\mathscr{E}'^2_{\mathbf{h}_2}+\mathscr{E}'^2_{\mathbf{h}_1+\mathbf{h}_2})+\varrho_2 , \quad (6\cdot14) $$

and

$$ {}_5R^{(1)}_{3,0} = \frac{3\sigma_4^{1/2}}{8C_1\sigma_2}(2C_1-C_2)(\mathscr{E}'^2_{\mathbf{h}_1}+\mathscr{E}'^2_{\mathbf{h}_2}+\mathscr{E}'^2_{\mathbf{h}_1+\mathbf{h}_2})+\varrho_3 . \quad (6\cdot15) $$

For space groups $C2/m$ and $C2/c$, we have

$$ R^{(j)}_{i,0} = {}_1R^{(j)}_{i,0}+\ldots ; \quad i = 2, 3; \quad j = 0, 1 , \quad (6\cdot16) $$

where ${}_1R^{(0)}_{2,0}$, ${}_1R^{(0)}_{3,0}$, ${}_1R^{(1)}_{2,0}$ and ${}_1R^{(1)}_{3,0}$ are defined in 1*P* (1959).

For the six conventionally *C*-centered centrosymmetric space groups of the orthorhombic system, we have

$$ R^{(j)}_{i,0} = {}_1R^{(j)}_{i,0}+{}_3R^{(j)}_{i,0}+\ldots ; \quad i = 2, 3; \quad j = 0, 1 . \quad (6\cdot17) $$

For space groups $P4/m$, $P4_2/m$, $P4/n$, and $P4_2/n$, we have

$$ R^{(j)}_{i,0} = {}_1R^{(j)}_{i,0}+{}_4R^{(j)}_{i,0}+\ldots ; \quad i = 2, 3; \quad j = 0, 1 . \quad (6\cdot18) $$

For the sixteen remaining conventionally primitive centrosymmetric space groups in the tetragonal system, we have

$$ R^{(j)}_{i,0} = {}_1R^{(j)}_{i,0}+{}_5R^{(j)}_{i,0}+\ldots ; \quad i = 2, 3; \quad j = 0, 1 . \quad (6\cdot19) $$

It is seen that the remainder terms in the basic formulas are especially simple for the special case, $p = q = r = 2$. For this case, the formulas reduce to those obtainable by the algebraic methods proposed by us (1957).

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Short Communications

Contributions intended for publication under this heading should be expressly so marked; they should not exceed about 500 words; they should be forwarded in the usual way to the appropriate Co-editor; they will be published as speedily as possible; and proofs will not generally be submitted to authors. Publication will be quicker if the contributions are without illustrations.

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Crystallographic data for benzenearsonic acid.

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Crystals of benzenearsonic acid were grown by room temperature evaporation of an alcohol solution. They appeared as transparent orthorhombic prisms, elongated in the direction subsequently designated as the *c* axis. The prism form {110} was well-developed, but the terminal faces occurred as curved surfaces so they could not be identified. The dimensions of the unit cell, measured from rotation and Weissenberg photographs are as follows (λ of Cu $K\alpha$ = 1·5418 Å):

$a_0 = 14{\cdot}90\pm0{\cdot}03$, $b_0 = 10{\cdot}49\pm0{\cdot}03$, $c_0 = 4{\cdot}69\pm0{\cdot}02$ Å .

The reported density is 1·760 g.cm.$^{-3}$ (Lange's *Handbook of Chemistry*, ninth edition). The density calculated for four molecules of $C_6H_7O_3As$ per unit cell is 1·830 g.cm.$^{-3}$. The observed extinctions ($h00$ present only with $h = 2n$, $0k0$ present only with $k = 2n$, and $00l$ present only with $l = 2n$) determine the space group as $P2_12_12_1$. Powder diffraction data for benzenearsonic acid, obtained with a Norelco diffractometer using nickel-filtered Cu $K\alpha$ radiation, is given in Table 1.

Table 1. *Powder diffraction data for benzenearsonic acid*

d (Å)	I/I_0	d (Å)	I/I_0
8·51	98	2·87	7
6·07	15	2·82	5
5·25	40	2·62	3
4·94	100	2·52	1
4·51	5	2·49	2
4·29	5	2·42	2
4·13	6	2·27	3
3·97	4	2·25	3
3·75	26	2·20	3
3·62	20	2·15	2
3·51	1	2·09	6
3·41	3	2·03	3
3·24	3	1·98	2
3·18	22	1·94	3
3·05	2	1·91	2

Work on this substance is being continued to obtain the detailed structure of the crystal and the molecule.