## JOURNAL OF THE CHEMICAL SOCIETY ERRATA

Vol. 1952, page 4267, line 11. Insert after Under similar conditions, the phrase: but using $1 \%$ anly drous ethanolic potassium hydroxide for 20 min .

Vol. 1955, page 2287, line 8. For 2:3:4-tri-O-methyl-d-mannardiamide read 3(4)-O-methyl-D-mannardiamide.

Vol. 1958, page 2780 , line 6. For m. p. $113^{\circ}$ (decomp.) read m. p. $163^{\circ}$ (decomp.).
Vol. 1958, page 3568, Table 7. Interchange the headings cis and trans.
Vol. 1960, page 688, line $6^{*}$. For $\frac{2 m^{2}\left(m \sin ^{2} \alpha+1\right)}{M_{y}{ }^{2}}$ read $\frac{2 m\left(m \sin ^{2} \alpha+1\right)}{M_{y}{ }^{2}}$.
Vol. 1960, page 1700, 11 *. For 2535 read 2635.
Vol. 1960, page 1711, line 5*. For (IX) * read (VIII) *.
Vol. 1960, page 1947, Table. Numbering of the pyridazine ring should be clockwise from the nitrogen atom at present numbered 1, and not anticlockwise

Vol. 1960, page 1947, line 29. Pyrazine. For column headings: 12, 11, 22, 33, read 11, 12, 22, 23.
Vol. 1960, page 1947, line 12. For $Q_{x}$ read $Q_{x\left(\mathrm{AA}^{\prime}\right)}$.
Vol. 1960, page 2965, line 9 *. For N-o-nitrobenzoylbenzyamide read N-o-nitrobenzoylbenzamidine.
Vol. 1960, page 4154, line $10^{*}$. For PETN(trinitrophenylmethylnitramine), and tetryl, read PETN (pentaerythritol tetranitrate), and tetryl(trinitrophenylmethylnitramine).

Vol. 1960, page 4699, line 10. For 6-fluoro-1,2,3,4-tetrahydroharmaline (III) read 6-fluoro-1,2,3,4tetrahydroharman, and for 6 -fluoro-3,4-dihydroharmaline (IV) read 6 -fluoroharmalan.

Vol. 1960, page 4710 , line 5. For erythro-read threo- and for threo-read erythro-.
Vol. 1960, page 5044. In the column headings of the Table, add ( $0 \cdot 1 \mathrm{n}$ ) after HCl and NaOH .
Vol. 1960, page 5045, line 17 *. For D-sorbitylamine read D-ribitylamine.
Vol. 1960, page 5241, Figure. For wavelength ( $\mathrm{m} \mu$ ) read wavelength ( $\mu$ ).
Vol. 1961, p. 234, lines 17 and 19. The roman figures IX and VIII should be interchanged.
Vol. 1961, page 276, line 1 *. For reaction read interaction.
Vol. 1961, page 1174, line 6 *. Equation should read $\ldots \overline{\mathrm{Y}}: \mathrm{H}-\mathrm{Y} \stackrel{+}{\mathrm{M}} \overline{\mathrm{Y}}: \mathrm{H}-\mathrm{Y} \stackrel{\downarrow}{\mathrm{M}} \overline{\mathrm{Y}}: \mathrm{H}-\mathrm{Y} \ldots \Longrightarrow \ldots \mathrm{Y}-\mathrm{H}: \overline{\mathrm{Y}} \stackrel{\mathrm{I}}{\mathrm{I}} \mathrm{Y}-\mathrm{H}: \overline{\mathrm{Y}} \stackrel{\perp}{\mathrm{M}} \mathrm{Y}-\mathrm{H}: \overline{\mathrm{Y}} \ldots$
Vol. 1961, page 1730, line 9 *. For trimethylamine read triethylamine.
Vol. 1961, page 1783, line 26. For olefinic acid read anilino-acid.
Vol. 1961, page 1721, Table 3, 5th item. For Triphenylmethyl read diphenylmethyl; equation (12) should read $\chi=\left(\mathrm{R}_{2} \mathrm{Cl}^{+}\right) /(\mathrm{RCl})\left(\mathrm{Cl}^{-}\right)$.
Vol. 1961, page 1815, line 1. Replace paragraph beginning Ubiquinol $_{(50)}$ Mono(dibenzyl phosphate) by these two paragraphs:

Ubiquinol $_{(50)}$ Mono(dibenzyl Phosphate).-Ubiquinone ${ }_{(50)}(0.65 \mathrm{~g}$.) was dissolved in benzene ( 1 ml .) under nitrogen while dibenzyl phosphite ( 0.24 g ., 1.2 equiv.) in benzene ( 0.5 ml .) was added, followed by N -potassium t-butoxide in t-butyl alcohol $-10 \%$ benzene ( $0 \cdot 1 \mathrm{ml}$.). The dark solution became warm and practically decolorised. After being stirred for 1 hr . at room temperature, the mixture was diluted with ether and washed with water $\left(\mathrm{MgSO}_{4}\right.$ added to break the emulsion), $0 \cdot 2 \mathrm{~N}$-hydrochloric acid, and water. After filtration, the ethereal solution

## Errata.

was dried $\left(\mathrm{MgSO}_{4}\right)$ and evaporated, finally in vacuo. The residual colourless, oily ubiquinol mono(dibenzyl phosphate) ( 0.83 g .) crystallised on prolonged keeping, then having m. p. 37-45 ${ }^{\circ}$ (Found, in material dried in vacuo: $\mathrm{C}, 76.9 ; \mathrm{H}, 9.5 ; \mathrm{P}, 2.4 . \quad \mathrm{C}_{73} \mathrm{H}_{105} \mathrm{O}_{7} \mathrm{P}$ requires $\mathrm{C}, 77.9 ; \mathrm{H}$, $\mathbf{9 . 4}$; P, $\mathbf{2 . 5} \%$ ).

Ubiquinol ${ }_{(50)}$ Mono(dihydrogen Phosphate).-Ubiquinol dibenzyl phosphate (2.38 g.) in ethanol ( 30 ml .) was left at room temperature over charcoal ( 100 mg .)-Lindlar catalyst ( 100 mg .) for 1 hr . The solution was filtered and hydrogenolysed in presence of Lindlar catalyst ( 200 mg .). The theoretical volume of hydrogen ( 102 ml .) was absorbed in 19 hr ., two further additions of catalyst being necessary (in another experiment hydrogenolysis was complete in 5 hr .). After removal of the catalyst, by filtration, the solution was evaporated in vacuo, and then at $40^{\circ} / 0 \cdot 1$ mm for 3 hr . The residue ( 1.75 g .) eventually formed waxy crystals, m. p. ca. $40^{\circ}$ (Found, $\mathrm{C}, 74.5 ; \mathrm{H}, 9.8 ; \mathrm{P}, 3.0 . \quad \mathrm{C}_{59} \mathrm{H}_{93} \mathrm{O}_{7} \mathrm{P}$ requires $\mathrm{C}, 74.9 ; \mathrm{H}, 9.9 ; \mathrm{P}, 3.3 \%$ ), $\lambda_{\min }$. (in EtOH ) $250 \mathrm{~m} \mu(\varepsilon 370)$, $\lambda_{\max } 282 \mathrm{~m} \mu(\varepsilon 2,280)$. The compound was soluble in most common solvents and in dilute alkali. Paper chromatography on Whatman no. l paper previously treated with a $10 \%$ Silicone fluid in light petroleum, with ethanol-water-acetic acid (2:1:1) as solvent (ascending; 16 hr .; room temperature) gave a single ultraviolet-light-absorbent and phosphate spot of $R_{\mathrm{F}} \mathbf{0} .86$. Use of Whatman 3 MM paper [treated with a $5 \%$ silicone fluid solution; propan-1-olwater (4:1); ascending, 15 hr .; room temperature ${ }^{1}$ ] gave a single ultraviolet light absorbent and phosphate spot of $R_{\mathrm{F}} 0.87$ (ubiquinone $_{(50)}$ has $R_{\mathrm{F}} 0 \cdot 3$ ).
Ref.: ${ }^{1}$ Lester and Ramasarma, J. Biol. Chem., 1959, 234, 672.
Vol. 1961, page 1924, line 7 *.
For $K=\left[\mathrm{HReO}_{4}\left(\mathrm{Bu}_{3} \mathrm{PO}_{4}\right)_{4}\right]_{0} /\left[\mathrm{Bu}_{3} \mathrm{PO}_{4}\right]_{0}\left[\mathrm{H}^{+}\right]_{2}\left[\mathrm{ReO}_{4}{ }^{-}\right]_{2}$
yead $K=\left[\mathrm{HReO}_{4}\left(\mathrm{Bu}_{3} \mathrm{PO}_{4}\right)_{4}\right]_{0}\left[\mathrm{Bu}_{3} \mathrm{PO}_{4}\right]_{0}^{4}\left[\mathrm{H}^{+}\right]_{a}\left[\mathrm{ReO}_{4}^{-}\right]_{a}$.
Vol. 1961, page 2251, line $4^{*}$. For 2-methyl-1-naphthol read 1-methyl-2-naphthol.
Vol. 1961, page 2766, line 8. For monomethiodide read monohydriodide.
Vol. 1961, page 2768 , lines $8^{*-5}{ }^{*}$. For it gave only $2^{\prime}$-dimethylamino-2-biphenylyltrimethylammonium iodide, m. p. 250-251 ${ }^{\circ}$ (from ethanol) (lit., ${ }^{5}$ m. p. $190-192^{\circ}$ ) (Found: C, 53.8 ; H, 5.8; $\mathrm{N}, 7 \cdot 7$; ionic $\mathrm{I}, 32.7 \%$. Calc. for $\mathrm{C}_{17} \mathrm{H}_{13} \mathrm{IN}_{2}: \mathrm{C}, 53 \cdot 4 ; \mathrm{H}, 6 \cdot 1 ; \mathrm{N}, 7 \cdot 3$; ionic I, $33 \cdot 2 \%$ ) read it gave only the monohydriodide, m. p. 250-251 ${ }^{\circ}$ (from ethanol) (lit. ${ }^{5}$, m. p. 256-257 ${ }^{\circ}$ ) (Found: C, 51.8 ; $\mathrm{H}, 5.8 ; \mathrm{N}, 7 \cdot 7$; ionic I, $32.7 \%$. Calc. for $\mathrm{C}_{16} \mathrm{H}_{21} \mathrm{IN}_{2}$ : C, $52.5 ; \mathrm{H}, 5 \cdot 7 ; \mathrm{N}, 7 \cdot 6 ;$ ionic I, $34.5 \%$ ).
Vol. 1961, page 2801. For $N$-ethyl-2,2'- read $N$-ethyl-2,2- throughout the paper.
Vol. 1961, page 3039 , line 25 . For 103.9 kcal . mole ${ }^{-1}$ read 86.5 kcal . mole ${ }^{-1}$; and line 26 , for 98.2 kcal . mole ${ }^{-1}$ read $103.9 \mathrm{kcal} . \mathrm{mole}^{-1}$.

Vol. 1960, page 3405, line 8 , for $\left[1-{ }^{14} \mathrm{C}\right]$ mannose read $\left[{ }^{14} \mathrm{C}\right]$ mannose; page 3408 , line 2 , for $\mathrm{D}-\left[\mathrm{I}-{ }^{14} \mathrm{C}\right]$ mannose read $\mathrm{D}\left[{ }^{14} \mathrm{C}\right]$-mannose; page 3409 , Fig. 8, the scale for the rate of formation of carbon dioxide is $10^{20}$ molecules; page 3411 , lines 3 and 6 , for $\left[{ }^{14} \mathrm{C}\right]$ read $\left[1-{ }^{14} \mathrm{C}\right]$.

Vol. 1961, page 3484, line 3 of the summary. For (cycloheptadienyl) read (cycloheptatrienyl).
Vol. 1961, page 3807, formula (I). Interchange the subscripts $\alpha$ and $\beta$.
Vol. 1961, Papers No. 772 and 773, pages 3962 and 3970. Throughout, the dose-rates should be $\gamma$-rays: $10^{16} \mathrm{ev}$ ml..$^{-1}$ min. ${ }^{-1}$ and $X$-rays: $10^{17} \mathrm{ev} \mathrm{ml} .^{-1} \mathrm{~min} .^{-1}$ (instead of $10^{15} \mathrm{ev} \mathrm{ml} .^{-1} \mathrm{~min}^{-1}$ and $10^{16} \mathrm{ev} \mathrm{ml} .^{-1}$ min. ${ }^{-1}$ ).
Vol. 1961, pages 3964 and 3971. For $10^{-3}$ mole/l. on the ordinates of Figs. 1, 2; 1, 2, 3, read $10^{-6} \mathrm{~mole} / \mathrm{l}$.
Vol. 1961, page 3965, Table 4, bottom line. For $G$ (aldehyde) $1 \cdot 67$, read $3 \cdot 14$.
Vol. 1961, page 4327, line 5*. For monoxides read moloxides.
Vol. 1961, page 4492. Table 1, line 11 *. For (4•49) read (4•09).
Vol. 1961, page 4498, Table 5, line $9 *$. For monobenzyl read monobenzoyl.
Vol. 1961, page 4984, line 23. For $\tau$ read $\Gamma$; also delete two following paragraphs from: These vibrations may . . . to . . . is the trans pair.
Vol. 1961, page 5308, lines 10/II. For $N$-nitrosohydroxylamine read $N$-methyl- $N$-nitrosohydroxylamine.

* From bottom of main text.

