Through the kindness of Dr. Sheppard, we secured a sample of Eastman's highly purified gelatin, ${ }^{4}$ which proved to be practically ash-free and gave a Sörensen value of 4.7 in distilled water. We repeated the experiments exactly as described in the earlier paper, except for using a more dilute buffer solution so as to increase the sensitivity of the measurements. In all cases, the buffer solutions had a final concentration of 0.02 $M$ phosphoric acid plus sodium hydroxide to give the desired Sörensen value. The results obtained, at $7^{\circ}$, are shown in Fig. 1.

The second point of minimum, at 7.7 , stands out too sharply to be attributed to experimental error and we found that the results can easily be duplicated. Moreover, Mathews and Higley ${ }^{5}$ studied the absorption spectrum of gelatin with changing Sörensen value and found minimum values for the wave length of maximum absorption in the ultraviolet at $P_{\mathrm{H}} 4.68$ and 7.66 , coinciding with our points of minimum swelling. Since they used gelatin solutions, it was not necessary to use an extraneous buffer material. It is important to note that they used purified gelatin and regulated the Sörensen value by the simple addition of hydrochloric acid or sodium hydroxide.
That the two points of minimum have a real existence seems established, although the explanations offered as to the cause still remain in the controversial stage.

Laboratories of A. F. Gallun John Arthur Wilson and Sons Company

Erwin J. Kern
Milwaukee, Wisconsin
Received October 8, 1923

## ADDITIONS AND CORRECTIONS

1921, Volume 43

The Purification and Some Physical Properties of Certain Aliphatic Alcohols, by Roger F. Brunel, J. L. Crenshaw and Elise Tobin.
P. 565. In line 22 , instead of " $-0.00042 t^{3}$ " read " $0.0003671 t^{3}$."
P. 574. Table I, under columns headed $d_{4}^{25}$ and $M_{25}^{\mathrm{D}}$, read as follows.
$n$-Propyl alcohol iso-Butyl alcohol

| A | 0.79975 | A | 0.79762 |
| :---: | :---: | :---: | :---: |
| B | 0.79952 | B | 0.79762 |
| Most probable value | 0.7997 | C (Res.) | 0.79764 |
| $M_{25}^{\mathrm{D}}$ | 17.54 | Most probable value | 0.79763 |
|  |  | $M_{25}^{\text {D }}$ | 22.22 |
| sec-Butyl alcohol |  |  |  |
| A-III | 0.80228 |  |  |
| IV | 0.80234 |  |  |

[^0]Most probable value 0.80229
$M_{26}^{\mathrm{D}} \quad 22.14$
P. 575. Table II, under column headed $\mathrm{d}_{4}^{25}$, read as follows.
$n$-Propyl alcohol iso-Butyl alcohol
Authors' value $\quad 0.7997 \quad$ Authors' value
0.79763
P. 576. sec-Butyl alcohol

Authors' value $\quad 0.80229$
P. 577. In line 7 , for " $k=0.032368$ " read " $k=0.032368$."

1922, Volume 44
Ion Activities in Homogeneous Catalysis. The Formation of Para-chloro-acetanilide from Acetylchloro-amino-benzene, by Herbert S. Harned and Harry Seltz.
P. 1478. In Equation 1, instead of " $\mathrm{C}_{6} \mathrm{H}_{5} \mathrm{NClCOCH}_{3}{ }^{+}+\mathrm{H}+\mathrm{Cl}^{+}$" read " $\mathrm{C}_{6} \mathrm{H}_{5}-$ $\mathrm{NClCOCH}_{8}+\mathrm{H}^{+}+\mathrm{Cl}^{-} . "$
P. 1480. In the second line from the bottom, read " $\log F_{a}{ }^{\prime}=\alpha^{\prime} C-\beta^{\prime} C^{m \prime}$."
P. 1483. In the eleventh line of the text, read "whence $E_{c}$ is found to be $2.14 \times$ $10^{4}$ cals. between $25^{\circ}$ and $35^{\circ}$, and $1.93 \times 10^{4}$ cals.," etc.

A Study of the Velocity of Hydrolysis of Ethyl Acetate, by Herbert S. Harned and Robert Pfanstiel.
P. 2201. For $\frac{T_{0}^{\prime}-T}{T_{\mathrm{E}}}=x$ read $\frac{T_{0}^{\prime}-T_{\mathrm{A}}}{T_{\mathrm{E}}}=x$.

Examination of Neoarsphenamine. II. The Constitution of the French Drugs, by A. Douglas Macallum.
P. 2581. Table II, the last three lines should read:

Element or group
Bisulfite $\left(-\mathrm{CH}_{2} \mathrm{OSO}_{2} \mathrm{Na}\right)$
Av. \% found Molecular proportions

Total
$29.12 \quad 1.844$

Sulfonate $\left(-\mathrm{SO}_{3} \mathrm{Na}\right) \quad \overline{0.278}$
P. 25582. Note added by author (December 18, 1922).

The general sparing solubility of these compounds in alcohols is in agreement with an arseno structure, this property having been used at one time by Bart (Ger. pat. 270,568) to distinguish certain arseno compounds from the arsenoxides and arsines.

The Absorption of Carbon Monoxide by Cuprous Ammonium Carbonate and Formate Solutions, by Alfred T. Larson and Clark S. Teitsworth.
P. 2880. In line 26, instead of "moles per liter," read "equivalents per liter."
P. 2882. In Figs. 2 and 3, the axis of abscissa should be 4 cm . per scale division. In Fig. 2, the axis of ordinate should be 1.25 volumes per scale division.

Optically Active Dyes. I, by A. W. Ingersoll with Roger Adams.
P. 2933. In line 29, for "made up to 50 cc . in a mixture of" read "dissolved in a mixture of." In line 32 , for "made up to 50 cc . in a mixture of" read "dissolved in a mixture of."
P. 2934. In line 8, for "( 70 to $75 \%$ )" read " $(90$ to $95 \%)$."
P. 2935. In line 17, for " $l$-Ethyl $(p$-nitrobenzoylamino) acetic Acid" read " $l$ -Ethyl-phenyl( $p$-nitrobenzoylamino) Acetate."
P. 2936. In line 4, for " $d$-Ethyl( $p$-nitrobenzoylamino)acetic Acid" read " $d-$ Ethyl-phenyl(p-nitrobenzoylamino) Acetate."

Index of Authors. P. 2982. Omit line 7, ("McCollum, E. V., etc.").
Index of Subjects. P. 3004. Omit line reading "Nutrition, Newer Knowledge of (McCollum, book rev.)...... 2974.


[^0]:    ${ }^{4}$ For method of preparation, see Sheppard, Sweet and Benedict, This Journal, 44, 1858 (1922).
    ${ }^{5}$ Paper presented before the Leather and Gelatin Division at the 66th meeting of the American Chemical Society, Milwaukee, Wis., September 12, 1923.

