

β -Amino- β -chlorophenylpropionic Acids

β -Amino- β -(2-chlorophenyl)-propionic acid was prepared from 2-chlorobenzaldehyde, malonic acid and ammonium acetate by the general procedure of Johnson and Livak.¹ The product was extracted with hot ethyl alcohol to remove 2-chlorocinnamic acid, and the residue was recrystallized from hot water, in which it is sparingly soluble. The small chunky prisms melted about 245° with decomposition.

(1) Johnson and Livak, *THIS JOURNAL*, **68**, 301 (1936).

Anal. Calcd. for $C_9H_9ClNO_2$: C, 54.14; H, 5.05; N, 7.02. Found: C, 54.20; H, 5.16; N, 7.03.

β -Amino- β -(4-chlorophenyl)-propionic acid was prepared similarly. It crystallized from aqueous alcohol in small needles, m. p. about 245° with decomposition.

Anal. Calcd. for $C_9H_9ClNO_2$: C, 54.14; H, 5.05; N, 7.02. Found: C, 54.30; H, 5.18; N, 7.07.

CHEMISTRY LABORATORY
NATIONAL INSTITUTE OF HEALTH
BETHESDA, MARYLAND
NELSON K. RICHTMYER
RECEIVED APRIL 1, 1946

COMMUNICATIONS TO THE EDITOR

A HITHERTO UNOBSERVED PHENOMENON IN SOLUTIONS OF LONG-CHAIN SALTS IN METHANOL-WATER MIXTURES

Sir:

In the course of an investigation of the break-point in the conductivity curves of long chain salts in solution in methyl alcohol-water mixtures, certain cases have been found where, at low concentrations, the conductance apparently lies above the sum of the normal Λ_0 values of the constituent ions. For a given electrolyte of this type, the conductance in pure water falls off normally until the break-point is reached, when the conductance falls rapidly with increasing concentration. In pure methyl alcohol or in equimolar mixtures of methyl alcohol and water, the long chain salts behave like normal electrolytes over the entire range of concentration. For certain electrolytes in intermediate mixtures of methyl alcohol and water, however, the conductance appears to fall normally with concentration at very low concentration and, thereafter, rises to a maximum, after which it falls off again much in the same way as in water at concentrations above the break-point. Typical curves for *n*-octadecylpyridonium chloride in various methyl alcohol-water mixtures are shown in Fig. 1. As may be seen from the figure, the effect is greatest for mixtures containing approximately 15% methanol by weight.

The effect observed in these mixtures is, in certain respects, similar to that observed by Comar Robinson and H. E. Garrett¹ for solutions of sodium salts of certain dyes in aqueous solution. The results, however, are not, in all respects, identical. Also, in certain respects, the curves which we have found in alcohol-water mixtures are similar to those found by Malsch and Hartley² for aqueous solutions of cetylpyridonium chloride at high field strengths.

(1) C. Robinson and H. E. Garrett, *Trans. Faraday Soc.*, **39**, 77 (1939).

(2) G. S. Hartley, "Aqueous Solutions of Paraffin-chain Salts," *Actualités Scientifiques et Industrielles*, No. 387, Hermann et Cie., Paris, 1936.

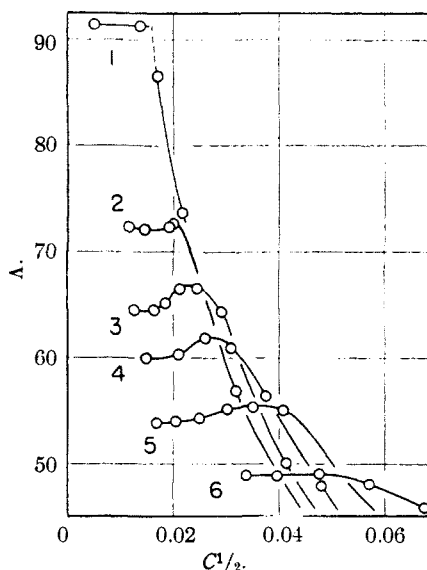


Fig. 1.—Conductance of *n*-octadecylpyridonium chloride in methyl alcohol-water mixtures: Curve 1, water; 2, 9.90% CH_3OH ; 3, 14.86% CH_3OH ; 4, 19.85% CH_3OH ; 5, 25.89% CH_3OH ; 6, 34.71% CH_3OH .

Further work is in progress along these lines and details will be published in the near future.

DEPARTMENT OF CHEMISTRY
BROWN UNIVERSITY
PROVIDENCE, R. I.

E. CHARLES EVERS
PHILIP F. GRIEGER
CHARLES A. KRAUS

RECEIVED MAY 22, 1946

LIGHT-FIELD ULTRAMICROPHOTOGRAPHY OF LYOGELS

Sir:

Recently we reported about the use of Kodachrome A film in the microphotography with ultra-illumination by incident light of lyogels (*THIS JOURNAL*, **68**, 153 (1946)).

We have now been able to test the Ansco color reversible film for the same purpose. The results are absolutely comparable.