

Glaser

3. On décrit les mesures faites par l'auteur avec un appareil fondé sur la méthode de résonance à radioondes courtes (de m. 4 à m. 22. Oscillateur des Usines radiotélégraphiques Marconi).

4. On a mesuré avec cet appareil des solutions aqueuses de gélatine électrolysée (concentr. jusqu'à 1%) et des solutions hydroalcooliques de glyadine (jusqu'à 4%). La constante diélectrique des solutions étudiées sera plus élevée que celle du solvant seulement au delà d'une certaine valeur de la longueur de l'onde employée dans la mesure.

Cette valeur (à 20° C. m. 10 pour la gélatine; à 25° C. m. 18 pour la glyadine) se déplace vers les ondes plus longues suivant la diminution de la température. On trouve des anomalies pour la gélatine à 50° C.

5. On débat ces résultats sur la base de nos actuelles connaissances sur la constitution des protéines en solution diluée.

Cavallaro, L.

"Dispersione delle radioonde nei sistemi proteici"

International cong of electro-radio-biology,
p. 341-350 (1934)

*(In Ital.
Eng. Summary)*

der Proteine in verdünnten Lösung werden

SUMMARY

1. The effect of anomalous dispersion is briefly related with the methods for its experimental study in the field of radio frequency with the measure of the dielectric constant at many wave lengths.

2. The Author resumes what was done in this field on the proteic systems and the conclusions drawn from this research on the dimensions and the hydration of the proteins in diluted solution.

3. The Author presents his measurements made with an apparatus based on the resonance method at short radio waves (m. 4 to m. 22. Oscillator of the Officine Radiotelegrafiche Marconi).

4. With this apparatus aqueous solutions of electrolysed gelatine

(concentr. to 1%) and alcohol-water solutions of gliadin (concentr. to 4%) are measured. The dielectric constant of these solutions is greater than that of the solvent only above a determined wave length value employed in the measurements. This value (at 20° C about m. 10 for gelatine; at 25° C about m. 18 for gliadin) is displaced towards the long waves with the diminution of the temperature. Anomalous values are found for gelatine at 50° C.

5. These results are discussed on the base of our present knowledge of the constitution of proteins in diluted solution.

BENELLI. - Rileva l'interesse della comunicazione Cavallaro che getta molta luce specialmente per quello che potrà essere l'avvento dell'uso delle onde elettromagnetiche in Biologia ed in ispecial modo l'uso delle microonde. Fa voti che la tecnica gli permetta di poter quanto prima ottenere microonde di 2 cm. atte a dimostrare la zona critica dell'acqua di cui alla relazione Cavallaro.

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