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INTER-SOCIETY COLOR COUNCIL

NEWS LETTER NO. 3

### Notice from the Secretary

At the December meeting of the Executive Committee, it was decided to continue issuing the News Letters as long as funds were available and adequate material with which to fill these letters was voluntarily supplied by the members of the Council. All of the material on hand is contained in the present communication. No additional letters can be furnished until more news items have been received.

The minutes of the Third Annual Meeting are being delayed, pending receipt of the reports of the different committees. As soon as these are in hand, they will be appended to the minutes and furnished to all delegates and associates,

M. R. P.

### W. B. VanArsdel, Research Department, Brown Company -

COLOR OF PAPER-PULP. Study of the factors influencing specification of nearly white colors on the multiple-disk machine used in the paper-pulp industry (see J.O.S.A. 21, No. 6, June 1931, p. 347) shows that while the disks themselves can be reproduced satisfactorily in different laboratories, other variables may affect the judgment of the operator to make readings systematically different by four or five units on the arbitrary scale. One such variable is the nature and position with respect to the disks of the "daylight" illuminant; the preferred color of the light is "north sky daylight", of color-temperature about 10000°, but that is not sufficient specification. Variations in spectral transmission between the blue filters sold by different manufacturers are sufficient to cause wide discrepancies. Another variable with an unexpectedly large effect is the color of the background of the disks. The preferred color is a medium gray, slightly bluish in hue.

PLACE OF PULP COLOR MEASUREMENT IN PAPER MAKING by L. C. Lewis - Paper Trade Journal, Vol. 97, December 7, 1933, pages 35 to 39. The article points out the usefulness of spectral reflectance measurements on paper-pulps, and suggests ways in which such measurements can be applied to paper-mill practice.

### Abstract

The methods for measuring reflectance of industrial products have been developed to such an extent within the past few years as to make possible:

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- 1. Such measurement in place of more complex and less certain "color" measurement.
- Research on reflectance in products and processes of a fundamental nature.

That reflectance measurement of pulp is productive of important results is shown by examples; considerable future usefulness is predicted.

### Forrest L. Dimmick, Psychology Laboratory, Hobart College -

The visibility curve of a single receptor cell has been determined for the eye of the horse-shoe crab (Limulus polyphemus). The method involved the registration of nerve impulses from single fibers of the optic nerve of this animal by means of a Matthews oscillograph. Visibility—defined as the reciprocal of the energy at any wavelength required to produce a constant frequency of nerve impulses—was plotted against wavelength. The resulting curve is similar in shape to that obtained in the human peripheral retina, but the maximum is at 525 millimicrons. Nerve impulses occur over a wavelength range of 425-690 millimicrons. Tests for color vision are now in progress.

### Clarence H. Graham, Clark University -

Experiments have been performed for the purpose of determining the influence of area upon the intensity-time relation for threshold excitation by white light of the peripheral human retina. The results of the experiment (in verification of Piéron) show that as the area of retinal image is increased the range of exposure times over which the product of intensity and time may be considered constant decreases. The shortening of the critical duration and the smoothing of the  $log\ It-log\ t$  curve at the critical duration with increased area are interpreted as due to synaptic effects in the retina, i.e., spatial and temporal summation at converging pathways.

### Dorothy Nickerson, U. S. Department of Agriculture -

A group located in Washington and Baltimore, consisting of Messrs, Bittinger, Gibson, Judd, Munsell and Miss Nickerson, sent out a general invitation to a number of people interested in color, to meet for dinner on November 21, 1933. The plan was to acquaint one another with color activities being conducted, and to discuss problems of mutual

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interest. Contrary to the expectation of the group on arrangements, a large number responded, approximately fifty persons attending. Each person present gave a brief outline covering his interest in color, and thus introduced himself to the group. It had been the idea to suggest such a meeting annually, but the enthusiasm which attended the first attempt led to the approval of holding three similar meetings each year.

### COMMITTEE APPOINTMENTS

The following committee appointments have been made:

Committee on Color Names -

Sidney M. Newhall, Yale University, Department of Psychology, New Haven, Conn.

Committee on Color Problems -

Sidney M. Newhall, Yale University, Department of Psychology, New Haven, Conn.

All notices, abstracts, and requests for further information regarding any of the items appearing in this letter, should be addressed to M. Rea Paul, 105 York Street, Brooklyn, New York

January 16th, 1934

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