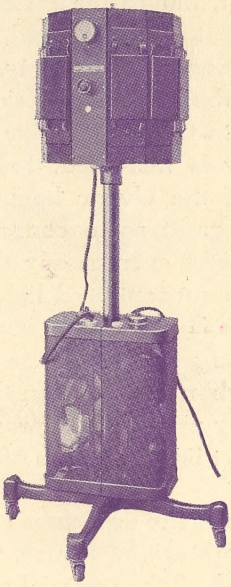
The Uviarc Test *for*

DYES TEXTILES PAINTS
INKS LEATHER PAPER



The
UVIARC TEST CABINET

COOPER HEWITT ELECTRIC CO.
HOBOKEN, N. J.

THE UVIARC TEST

THE UVIARC TEST provides a method for testing colored materials in a few hours in place of the lengthy, unreliable sunlight tests.

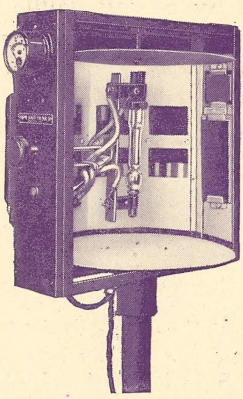
A light that is more rapid than sunlight is needed in the routine testing of materials for their resistance to its destructive action. The sunlight method is so slow as to defeat its own purpose in the control of factory products, or the examination of incoming materials. The Uviarc method is rapid, sure and economical. It solves the problem as follows:

Practically all of the color fading, rubber aging, sun-burning effects of sunlight are due not to the visible light, but to the invisible, ultra-violet or actinic light it contains; and, indeed, to the short wave portions of that ultra-violet light. The light from a carbon arc is very similar to sunlight and is subject to the same serious limitation that if the intensity is increased, to the ultra-violet effectiveness of the Uviarc lamp, the heat is in some cases so great as to completely mask the effects of the light even as any dry material can be fired by the concentrated light and heat of a sun glass. This is the case because the radiation from the quartz mercury arc as compared with that from a carbon arc, or from the sun, contains a relatively very much larger proportion of short wave ultra-violet light, and less of the heat waves.

The lengths of the exposures required for various types of work are, of course, variable according to the nature of the material and the test. In dye fading work where the attempt is to approximate the effects of certain arbitrary exposures to average direct sunlight the tests may ordinarily be made by a corresponding short exposure in the Uviarc Cabinet. For rigorous testing and purposes of calibration dye fading tests are made by the use of a standard sample as follows: Representative samples of a quality known to be satisfactory are exposed to average direct sunlight in accordance with the established practice in the textile and dye industry. The length of exposure

is varied, so that there is formed a standard series of test areas showing a complete range of effects. In subsequent tests a small portion of the material whose characteristic is known is tested with the unknown, and comparison from time to time with the standard allows every step of the testing process to be followed in a way impossible by any other method.

The Uviarc Test Cabinet incorporates the following features: The sample holders will hold a range of materials from yarn and thin silk to paint samples on wood. The holders are easily removable from the cabinet for examination. A number of exposures may be made on a single sample. The sample holder can be removed without exposing the operator in the slightest to the direct light of the Uviarc. The entire side of the cabinet may be removed for special work requiring the exposure of areas of several square feet at one time.



CLOSEUP, WITH ONE SIDE REMOVED, SHOWING INTERIOR OF CABINET

Salient features:

Twenty or more samples may be exposed at one time.

The sample holders provide a convenient method of obtaining various exposures on each sample under test.

The rate of fading averages 12 times that of sunlight, or a 30-day sunlight test, which would

require about two months, can be made in from 6 to 15 hours, depending on the material or dye.

Special ultra-violet glass is provided in the back panel to screen out the visible, so that paints, pigments, chemicals, minerals, gems, etc., may be viewed for fluorescence.

A meter is mounted on the front of the cabinet so the voltage may be noted.

The lamp is available 24 hours per day—365 days a year—thus making possible dependable, duplicate tests any time of day at any season of the year, and in any part of the country.

The cost of operation is small, as the lamp itself requires no trimming, and will operate without attention three or four times as long as the average incandescent lamp, consuming less than one kilowatt per hour.

The lamp may be removed from the cabinet for special work and will operate 45° from the vertical.

The Uviarc Test Cabinet can be supplied for either alternating or direct current.

Cooper Hewitt Electric Co.

HOBOKEN, NEW JERSEY

Boston: 161 Summer St.
Chicago: Old Colony Bldg.
Cincinnati: First National Bank Bldg.
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