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Predictions Based on Munsell Notation. II. Principal Hue components
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For each pair of colors (j, k), the servers selected such a pair of Munsell grays (Na, Nb) that the lightness difference matched in size with the color difference, and the scaled value of color difference was defined as djk = ½ Va - Vb ½. On the basis of these data where (j, k) are limited in the range that can be matched by djk < 4.0 V, the procedure was presented to define predicted values jk for Munsell colors (j, k) between 4V and 7V directly from Euclidean distances jk between points Pj and Pk in the current Munsell solid. the procedure is more practical than the multidimensional scaling representation. Inter-point distances jk are measured by the unit of C in the (H, C) plane and the contributions to jk of 1C and IV differences are assumed to be 1 and 2.3. Precision of predictions, RMS = [mean of (djk- jk)]0.5, is 0.3 V (0.8 C) for 2-D color differences (Vj = Vk). For the set of data on 3-D color differences used in the present study, RMS -= 0.6 V (1.7C). These were compared with precisions of predictions by Judd, Adams-Nickerson formulae, CIE 1976(L*, u*, v*), and CIE94. Key words: Munsell color system, color difference, Multidimensional scaling.