

CHROMA MEMORY AND AGE

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Purpose: The aim is to study the effect of age changes on chroma of 5 reference tests, using the methods of simultaneous and successive color matching.

Method: We use 5 grey cardboard circle panels on which are arranged 20 comparative chips, chosen round 5 reference tests (violet 10PB 5/4, bluish green 10G 5/8, yellow green 5GY 5/6, orange 5YR 5/8, and pink 10RP 5/6, respectively), from Munsell Color Atlas. 75 normal trichromat men [25 preadolescents (mean age = 10.1 years), 25 young adults (mean age = 24.3), and 25 old adults (mean age = 69.5)], take part in the experiment. For simultaneous matching the observer chooses from among the comparative chips the one which most resembles the reference test, putting the reference test near to the comparison ones. By memory, the observer looks at the reference test for 5 sec in order to memorise it; after that time the observer is asked to recognize the comparison test equal to the memorized one, 15 sec, 15 min, and 24 hrs later.

Results and Conclusions: 1) By simultaneous matching, original chroma is matched well independent of age for violet and pink. For both greens and orange older adults matched worst than the rest of age groups. 2) By memory, if we consider the average of all delay times, we find that all groups remember original chroma of violet and yellow green well. For pink and bluish green young adults remember it better than the rest of groups. Finally, preadolescents remember orange chroma worse.

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