

Red-green dichromats' Basic Colour term use: Confusion lines and red-green residual activity.

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Colour Basic Color Terms (hereafter BCTs) use by dichromats and common observers was compared. For this comparison, two visual search tasks were used. Prototype task required pointing out the best exemplar of a BCT. Mapping task required pointing out all the stimuli that could be included in a BCT. A 102-stimuli set was used for both searching tasks. This set accurately represented all BCTs.

Dichromats obtained good results in the prototype searching task, especially for primary BCTs (red, green, yellow, blue, white and black). They predominantly selected stimuli included in the target BCT. More errors appeared in the mapping task. Frequently, these errors were stimuli that were similar in lightness and confusion line to some stimuli included in the target BCT. In any case, the number of errors was less than could be expected in "true dichromats", and evidence was obtained of Red-Green (R-G) mechanism residual activity: Error probability was reduced when the distance between a target stimulus and the target BCT prototype (on the same confusion line) was increased.

The relevance of our results is discussed in relation with the ergonomic utility of some devices. Such devices are used to attempt to emulate dichromats' vision assuming they have no R-G mechanism activity.

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