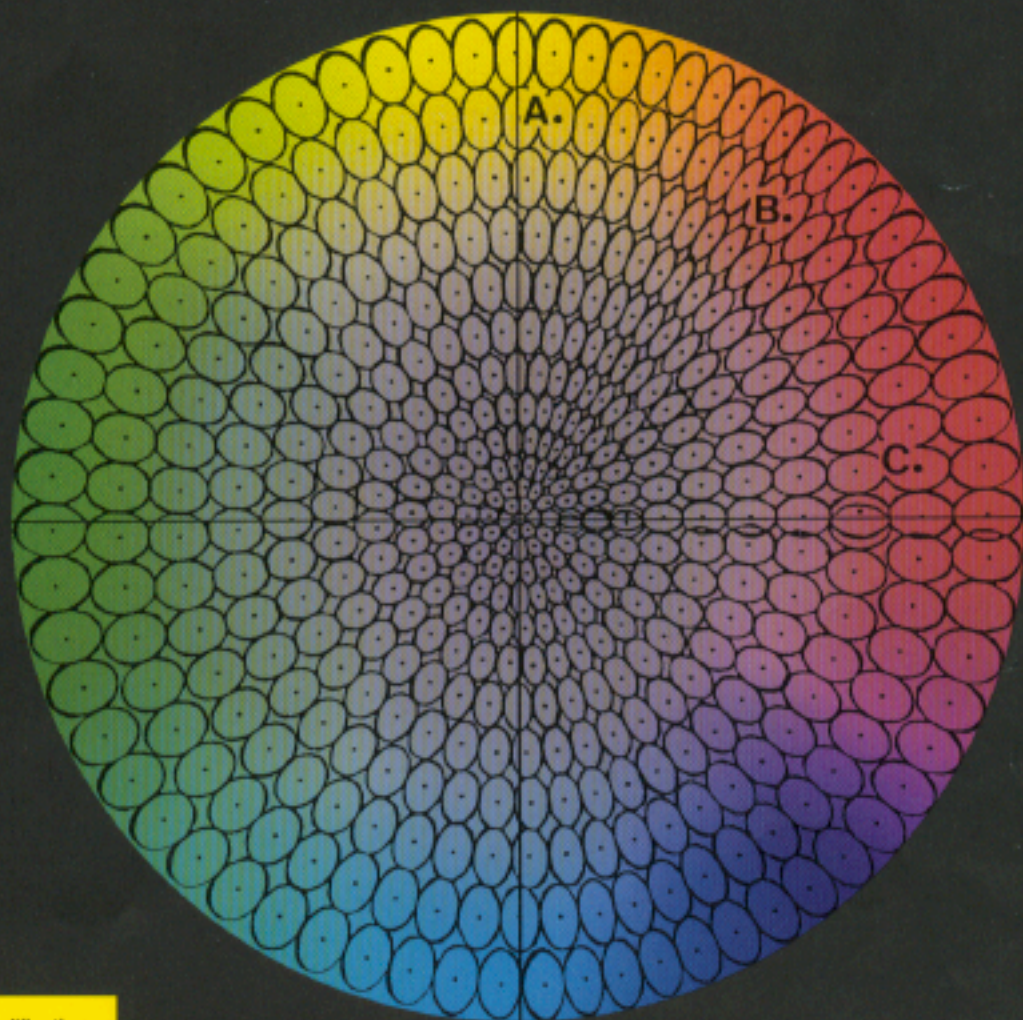


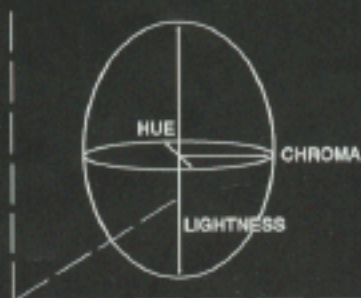
CMC Tolerancing



CMC tolerancing is a modification of CIELCH which provides better agreement between visual assessment and instrumentally measured color difference. The CMC ΔE calculation defines an ellipsoid, around the standard color, with semi-axes corresponding to hue (S_H), chroma (S_C) and lightness (S_L). The ellipsoid represents the volume of acceptance and varies in size and shape depending on position in color space.

In commercial situations, the amount of color difference that is considered acceptable is accounted for by applying a commercial factor (cf) to all dimensions of the ellipsoid. In this case, $\Delta E_{CMC} \leq cf$ is considered acceptable.

$$\Delta E_{CMC} = [(\Delta L^*/S_L)^2 + (\Delta C_{90}^*/S_C)^2 + (\Delta H_{90}^*/S_H)^2]^{1/2}$$



Recommended tolerance value for lightness factor (f) is two and for chromaticity

