

3-tuple encoding to HSV

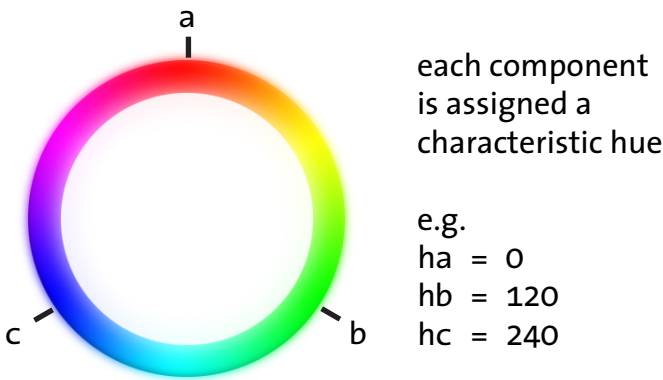
Baran et al. (2007) Bioinformatics 8:72

A 3-tuple (a,b,c) is encoded to a color.

Each component in the tuple is assigned a characteristic hue.

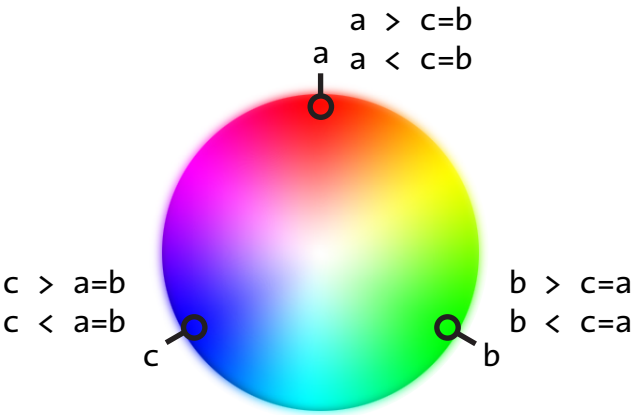
The hue, saturation and value that encodes the (a,b,c) tuple is based on the largest pair-wise difference and relative relationship between tuple components.

The hue emphasizes the component that is the most different. Saturation and value emphasize large absolute difference.

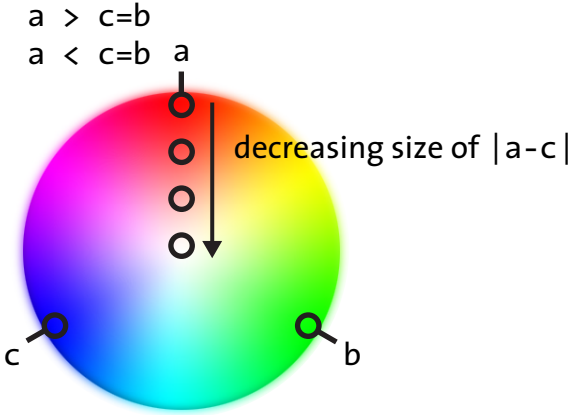


Below are examples of color encodings for a given relationship between variables. The encoding is not sensitive to direction of relationship (e.g. $a > c = b$ and $a < c = b$)

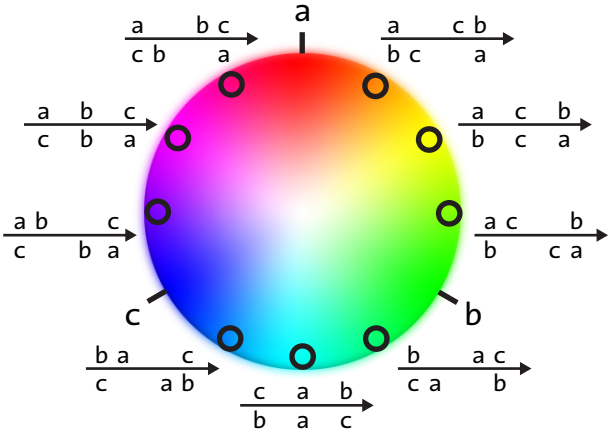
When two components are equal, hue is the characteristic hue of the different component.



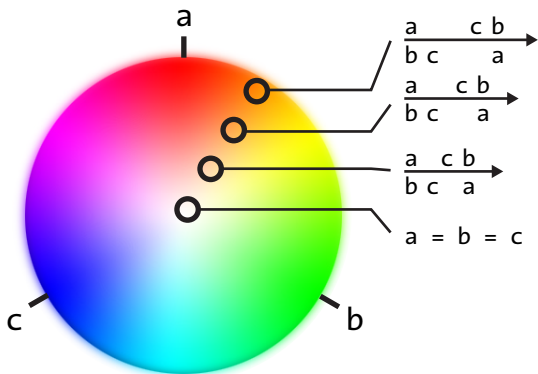
Saturation and value are used to encode the size of the largest difference.



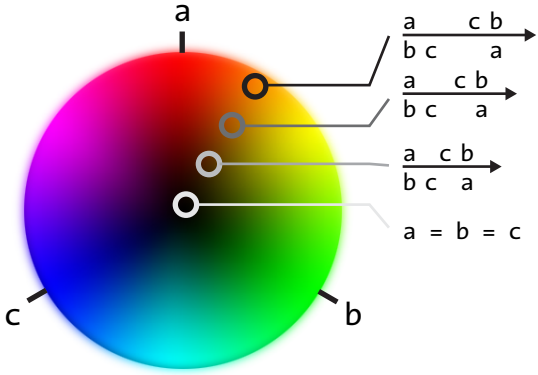
Hue is closest to the characteristic hue of the component that is most different.



Saturation is proportional to the maximum difference.



Value is proportional to the maximum difference.



Saturation and value can be assigned to vary across different ranges of maximum difference (d).

