Claims

1. A method of making an article having a desired color, the method comprising the steps of:

(a) providing a color array, said array comprising at least 36 color points, each color point having a color value, determined in accordance with the CIE (International Commission of l'Eclairage) system, each color point being independently composed of a resin mixture comprising at least two masterbatch resins and wherein the ratio of masterbatch resins in the resin mixture is adjusted to achieve the at least 36 color points;

(b) comparing the desired color with the color points on the color array and selecting a color point that substantially corresponds to the desired color of the article;

(c) identifying the resin mixture corresponding to said selected color point; and

(d) making the article using said identified resin mixture,

wherein the desired color has a CIE color value, as determined by spectral reflectance or transmittance, and

wherein said comparing step comprises selecting a color point from said color array, wherein a color difference value (ΔE) between said color point and the desired color is less than 6.

2. The method of claim 1 , wherein the color array comprises at least 144 color points, each color point having a color value, determined in accordance with the CIE system.

3. The method of claim 1, wherein each resin mixture comprises three to five masterbatch resins.

4. The method of any one of the preceding claims, wherein the desired color is determined based on the color of a reference object, wherein the reference object comprises a human tooth.

5. The method of any one of the preceding claims, wherein the comparing step further comprises determining the CIE color values of the color points on the color array by measuring the spectral reflectance or transmittance of the color point.

6. The method of claim 5, wherein a UV-VIS spectrophotometer is used in the measuring step.

7. The method of any one of the preceding claims, wherein the comparing step comprises selecting a color point wherein the color difference value (ΔE) between said color point and the desired color is less than 4, or less than 2.

8. The method of any one of the preceding claims, wherein the making step comprises using said identified resin mixture in a 3D printing process.

9. The method of claim 8, wherein the 3D printing process is selected from the group consisting of: stereolithography (SLA), Digital Light Processing (DLP) and Continuous Liquid Interface Production (CLIP).

10. The method of any one of the preceding claims, wherein said article is a dental article.