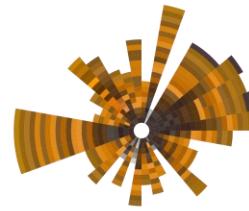


COLOR QUANTIFICATION R STUDIO



| | |
|-------------|---------|
| LinearGray | #000000 |
| CMYK | #B26504 |
| Rec709Luma | #F0E68C |
| Rec601Luma | #F0E68C |
| XYZ | #D52.29 |
| xyY | #D52.29 |
| LMS | #D52.29 |
| Lab | #D53.25 |
| CIELab | #D53.25 |
| Luv | #D53.25 |
| YPbPr | #D53.25 |
| YCC | #D53.25 |
| sRGB | #D53.25 |
| Rec601YCbCr | #D53.25 |
| LChab | #D53.25 |
| Log | #D53.25 |
| YIQ | #D53.25 |
| Luv | #D53.25 |
| Rec709YCbc | #D53.25 |
| DHta | #D53.25 |
| YCC | #D53.25 |
| LChuv | #D53.25 |
| YU | #D53.25 |
| HWB | #D53.25 |
| YCC | #D53.25 |
| HCL | #D53.25 |
| HSI | #D53.25 |
| HSV | #D53.25 |
| HSB | #D53.25 |
| Undefined | #D53.25 |
| Transparent | #D53.25 |
| CMY | #D53.25 |

Using different colourspace to reduce the colour used in images

colorspace hex hue sat value n

- 1 RGB #B26504 33.44828 0.9775281 0.6980392 594338 → In a RGB color space, hex #b26504 is composed of 69.8% red, 39.6% green and 1.6% blue. Whereas in a CMYK color space, it is composed of 0% cyan, 43.3% magenta, 97.8% yellow and 30.2% black. It has a hue angle of 33.4 degrees, a saturation of 95.6% and a lightness of 35.7%. **Dark orange [Brown tone]. POSITIVE.** <https://www.colorhexa.com/b26504>
- 2 RGB #C87506 34.32990 0.9700000 0.7843137 155594
- 3 RGB #493426 24.00000 0.4794521 0.2862745 122585
- 4 RGB #DE8A15 34.92537 0.9054054 0.8705882 24670
- 5 RGB #E79125 33.40206 0.8398268 0.9058824 413



| | |
|-------------|---------|
| CMYK | #AC5502 |
| YDbDr | #AC5502 |
| Rec709Luma | #F0E68C |
| Rec601Luma | #F0E68C |
| LinearGray | #000000 |
| XYZ | #D52.29 |
| xyY | #D52.29 |
| LMS | #D52.29 |
| Lab | #D53.25 |
| CIELab | #D53.25 |
| Luv | #D53.25 |
| YPbPr | #D53.25 |
| YCC | #D53.25 |
| HWB | #D53.25 |
| YCC | #D53.25 |
| HCL | #D53.25 |
| HSI | #D53.25 |
| HSV | #D53.25 |
| HSB | #D53.25 |
| Undefined | #D53.25 |
| Transparent | #D53.25 |
| CMY | #D53.25 |

Using different colourspace to reduce the colour used in images

colorspace hex hue sat value n

- 1 RGB #AC5502 29.29412 0.9883721 0.6745098 246961 → In a RGB color space, hex #ac5502 is composed of 67.5% red, 33.3% green and 0.8% blue. Whereas in a CMYK color space, it is composed of 0% cyan, 50.6% magenta, 98.8% yellow and 32.5% black. It has a hue angle of 29.3 degrees, a saturation of 97.7% and a lightness of 34.1%. **Dark orange [Brown tone]. POSITIVE.** <https://www.colorhexa.com/ac5502>
- 2 RGB #D27304 32.33010 0.9809524 0.8235294 98637
- 3 RGB #DE8D24 33.87097 0.8378378 0.8705882 36607
- 4 RGB #E67F04 32.65487 0.9826087 0.9019608 35596
- 5 RGB #EC9522 34.15842 0.8559322 0.9254902 4672
- 6 RGB #FDC032 41.97044 0.8023715 0.9921569 1127

COLOR QUANTIFICATION R STUDIO



| colorspace | hex | hue | sat | value | n |
|--------------|---------|---------|--------|--------|----|
| CMYK | #222222 | 211.100 | 24.123 | 7.6747 | 1 |
| LinearGray | #222222 | 211.100 | 24.123 | 7.6747 | 2 |
| Rec709Luma | #222222 | 211.100 | 24.123 | 7.6747 | 3 |
| Rec601Luma | #222222 | 211.100 | 24.123 | 7.6747 | 4 |
| xyY | #222222 | 211.100 | 24.123 | 7.6747 | 5 |
| XYZ | #222222 | 211.100 | 24.123 | 7.6747 | 6 |
| Luv | #222222 | 211.100 | 24.123 | 7.6747 | 7 |
| LMS | #222222 | 211.100 | 24.123 | 7.6747 | 8 |
| Lab | #222222 | 211.100 | 24.123 | 7.6747 | 9 |
| CIExy | #222222 | 211.100 | 24.123 | 7.6747 | 10 |
| YUV | #222222 | 211.100 | 24.123 | 7.6747 | 11 |
| YIQ | #222222 | 211.100 | 24.123 | 7.6747 | 12 |
| Rec709YCbCr | #222222 | 211.100 | 24.123 | 7.6747 | 13 |
| OHTA | #222222 | 211.100 | 24.123 | 7.6747 | 14 |
| sRGB | #222222 | 211.100 | 24.123 | 7.6747 | 15 |
| RGB | #222222 | 211.100 | 24.123 | 7.6747 | 16 |
| Rec709YUV | #222222 | 211.100 | 24.123 | 7.6747 | 17 |
| LChuv | #222222 | 211.100 | 24.123 | 7.6747 | 18 |
| YUV | #222222 | 211.100 | 24.123 | 7.6747 | 19 |
| YCC | #222222 | 211.100 | 24.123 | 7.6747 | 20 |
| Undefined | #222222 | 211.100 | 24.123 | 7.6747 | 21 |
| Transparency | #222222 | 211.100 | 24.123 | 7.6747 | 22 |
| sRGB | #222222 | 211.100 | 24.123 | 7.6747 | 23 |
| HSL | #222222 | 211.100 | 24.123 | 7.6747 | 24 |
| HSLP | #222222 | 211.100 | 24.123 | 7.6747 | 25 |
| HSV | #222222 | 211.100 | 24.123 | 7.6747 | 26 |
| CMY | #222222 | 211.100 | 24.123 | 7.6747 | 27 |

Using different colourspace to reduce the colour used in images

1 RGB #452316 16.59574 0.6811594 0.2705882 231389 → In a RGB color space, hex #452316 is composed of 27.1% red, 13.7% green and 8.6% blue. Whereas in a CMYK color space, it is composed of 0% cyan, 49.3% magenta, 68.1% yellow and 72.9% black. It has a hue angle of 16.6 degrees, a saturation of 51.6% and a lightness of 17.8%. **Very dark orange [Brown tone]. POSITIVE.** <https://www.colorhexa.com/452316>

- 2 RGB #C26D04 33.15789 0.9793814 0.7607843 228084
- 3 RGB #AF6711 32.65823 0.9028571 0.6862745 63423
- 4 RGB #B99124 43.89262 0.8054054 0.7254902 25268
- 5 RGB #C59C33 43.15068 0.7411168 0.7725490 21828
- 6 RGB #EBAD38 39.21788 0.7617021 0.9215686 10530
- 7 RGB #FOC856 44.41558 0.6416667 0.9411765 4478



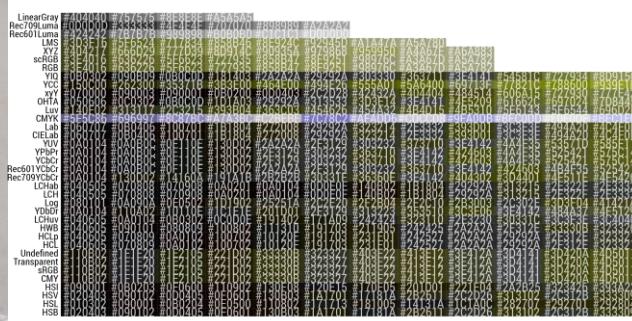
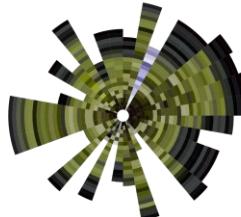
| colorspace | hex | hue | sat | value | n |
|--------------|---------|---------|--------|--------|----|
| CMYK | #222222 | 211.100 | 24.123 | 7.6747 | 1 |
| LinearGray | #222222 | 211.100 | 24.123 | 7.6747 | 2 |
| Rec709Luma | #222222 | 211.100 | 24.123 | 7.6747 | 3 |
| Rec601Luma | #222222 | 211.100 | 24.123 | 7.6747 | 4 |
| xyY | #222222 | 211.100 | 24.123 | 7.6747 | 5 |
| XYZ | #222222 | 211.100 | 24.123 | 7.6747 | 6 |
| Luv | #222222 | 211.100 | 24.123 | 7.6747 | 7 |
| LMS | #222222 | 211.100 | 24.123 | 7.6747 | 8 |
| Lab | #222222 | 211.100 | 24.123 | 7.6747 | 9 |
| CIExy | #222222 | 211.100 | 24.123 | 7.6747 | 10 |
| YUV | #222222 | 211.100 | 24.123 | 7.6747 | 11 |
| YIQ | #222222 | 211.100 | 24.123 | 7.6747 | 12 |
| Rec709YCbCr | #222222 | 211.100 | 24.123 | 7.6747 | 13 |
| OHTA | #222222 | 211.100 | 24.123 | 7.6747 | 14 |
| sRGB | #222222 | 211.100 | 24.123 | 7.6747 | 15 |
| RGB | #222222 | 211.100 | 24.123 | 7.6747 | 16 |
| Rec709YUV | #222222 | 211.100 | 24.123 | 7.6747 | 17 |
| LChuv | #222222 | 211.100 | 24.123 | 7.6747 | 18 |
| YUV | #222222 | 211.100 | 24.123 | 7.6747 | 19 |
| YCC | #222222 | 211.100 | 24.123 | 7.6747 | 20 |
| Undefined | #222222 | 211.100 | 24.123 | 7.6747 | 21 |
| Transparency | #222222 | 211.100 | 24.123 | 7.6747 | 22 |
| sRGB | #222222 | 211.100 | 24.123 | 7.6747 | 23 |
| HSL | #222222 | 211.100 | 24.123 | 7.6747 | 24 |
| HSLP | #222222 | 211.100 | 24.123 | 7.6747 | 25 |
| HSV | #222222 | 211.100 | 24.123 | 7.6747 | 26 |
| CMY | #222222 | 211.100 | 24.123 | 7.6747 | 27 |

Using different colourspace to reduce the colour used in images

1 RGB #B26003 31.88571 0.9831461 0.6980392 441139 → In a RGB color space, hex #b26003 is composed of 69.8% red, 37.6% green and 1.2% blue. Whereas in a CMYK color space, it is composed of 0% cyan, 46.1% magenta, 98.3% yellow and 30.2% black. It has a hue angle of 31.9 degrees, a saturation of 96.7% and a lightness of 35.5%. **Dark orange [Brown tone]. POSITIVE.** <https://www.colorhexa.com/b26003>

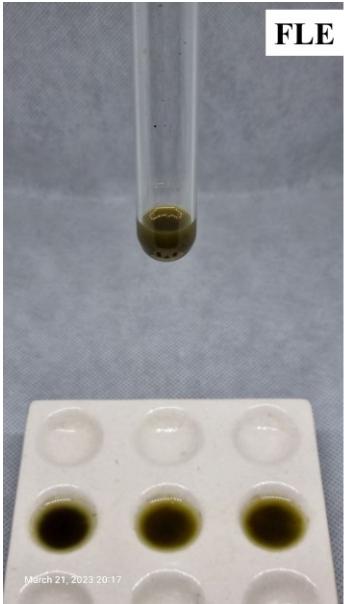
- 2 RGB #C76717 27.27273 0.8844221 0.7803922 248478
- 3 RGB #B6930A 47.79070 0.9450549 0.7137255 36040
- 4 RGB #ED7D1A 28.15166 0.8902954 0.9294118 31203
- 5 RGB #C99A1E 43.50877 0.8507463 0.7882353 14202
- 6 RGB #F29616 34.90909 0.9090909 0.9490196 3753
- 7 RGB #ECC74B 46.21118 0.6822034 0.9254902 2785

COLOR QUANTIFICATION R STUDIO



Using different colour space to reduce the colour used in images

COLOR QUANTIFICATION R STUDIO

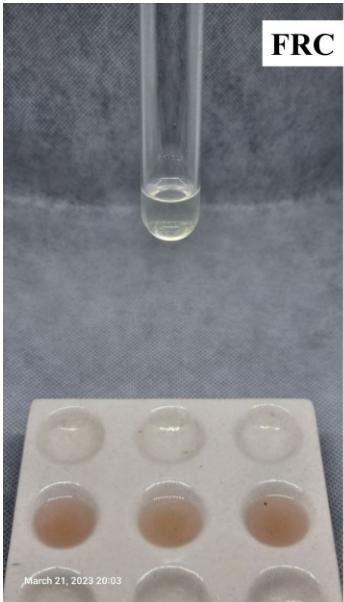


| colorspace | hex | hue | sat | value | n |
|-------------|---------|----------|-----------|-----------|---------|
| CMYK | #372B07 | 45.00000 | 0.8727273 | 0.2156863 | 273553 |
| LinearGray | 111111 | 210.040 | =0.00000 | 100.000 | |
| Rec709 | #372B07 | 45.00000 | 0.8727273 | 0.2156863 | 273553 |
| Rec601Luma | 535553 | 73.233 | =95.959 | #AEXAEF | #C2D2C2 |
| XYZ | 535553 | 73.233 | =95.959 | #AEXAEF | #C2D2C2 |
| YUV | 535553 | 73.233 | =95.959 | #AEXAEF | #C2D2C2 |
| YIQ | 535553 | 73.233 | =95.959 | #AEXAEF | #C2D2C2 |
| YCbCr | 535553 | 73.233 | =95.959 | #AEXAEF | #C2D2C2 |
| scRGB | 535553 | 73.233 | =95.959 | #AEXAEF | #C2D2C2 |
| Y | 535553 | 73.233 | =95.959 | #AEXAEF | #C2D2C2 |
| Rec709YCbCr | 535553 | 73.233 | =95.959 | #AEXAEF | #C2D2C2 |
| Rec601YCbCr | 535553 | 73.233 | =95.959 | #AEXAEF | #C2D2C2 |
| LChuv | 535553 | 73.233 | =95.959 | #AEXAEF | #C2D2C2 |
| LMS | 535553 | 73.233 | =95.959 | #AEXAEF | #C2D2C2 |
| Undefined | 535553 | 73.233 | =95.959 | #AEXAEF | #C2D2C2 |
| Transparent | 535553 | 73.233 | =95.959 | #AEXAEF | #C2D2C2 |
| TransGB | 535553 | 73.233 | =95.959 | #AEXAEF | #C2D2C2 |
| HWB | 300303 | 16.103 | =20.100 | #C2D2C2 | #332020 |
| CM | 300303 | 16.103 | =20.100 | #C2D2C2 | #332020 |
| LChab | 300303 | 16.103 | =20.100 | #C2D2C2 | #332020 |
| Lab | 300303 | 16.103 | =20.100 | #C2D2C2 | #332020 |
| HCL | 300303 | 16.103 | =20.100 | #C2D2C2 | #332020 |
| HSV | 300303 | 16.103 | =20.100 | #C2D2C2 | #332020 |
| HSB | 300303 | 16.103 | =20.100 | #C2D2C2 | #332020 |

Using different colourspace to reduce the colour used in images

1 RGB #372B07 45.00000 0.8727273 0.2156863 273553 → In a RGB color space, hex #372B07 is composed of 21.6% red, 16.9% green and 2.7% blue. Whereas in a CMYK color space, it is composed of 0% cyan, 21.8% magenta, 87.3% yellow and 78.4% black. It has a hue angle of 45 degrees, a saturation of 77.4% and a lightness of 12.2%. **Very dark yellow [Olive tone]. NEGATIVE.** <https://www.colorhexa.com/372b07>

- 2 RGB #8F8148 48.16901 0.4965035 0.5607843 21326
- 3 RGB #9D9367 48.88889 0.3439490 0.6156863 1838
- 4 RGB #B8AA8E 40.00000 0.2282609 0.7215686 269
- 5 RGB #BCAE93 39.51220 0.2180851 0.7372549 14



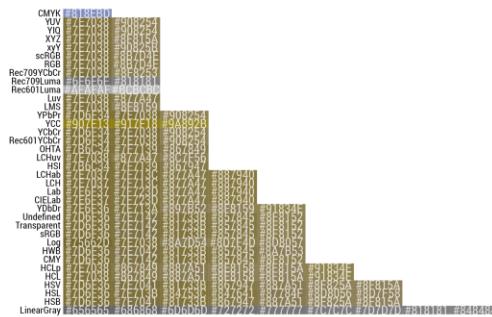
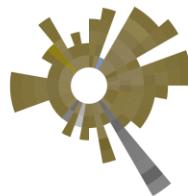
| colorspace | hex | hue | sat | value | n |
|-------------|--------|--------|---------|---------|---------|
| YUV | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| YIP | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| YCgCr | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| Rec709YCbCr | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| Rec601YCbCr | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| Rec601Luma | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| LinearGray | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| XYZ | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| YIQ | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| YCbCr | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| scRGB | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| Y | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| Rec709 | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| YCC | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| X | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| Y | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| Undefined | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| Transparent | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| TransGB | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| HWB | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| CM | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| LChab | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| Lab | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| HCL | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| HSV | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| HSB | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| LMS | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| YD9dr | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| Y | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| UV | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| xyY | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| Luv | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| HSV | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| HSI | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| HSB | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| HWB | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| CMY | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |
| LChuv | 517252 | 30.903 | =93.916 | #A9A9A9 | #C2C2C2 |

Using different colourspace to reduce the colour used in images

1 RGB #947760 26.53846 0.3513514 0.5803922 183589 → In a RGB color space, hex #947760 is composed of 58% red, 46.7% green and 37.6% blue. Whereas in a CMYK color space, it is composed of 0% cyan, 19.6% magenta, 35.1% yellow and 42% black. It has a hue angle of 26.5 degrees, a saturation of 21.3% and a lightness of 47.8%. **Mostly desaturated dark orange. POSITIVE.** <https://www.colorhexa.com/947760>

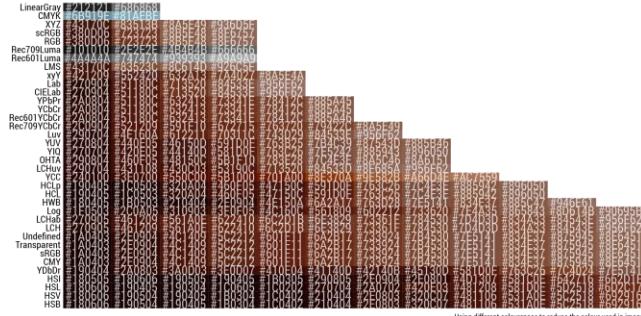
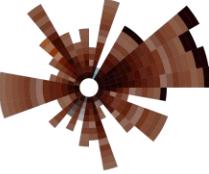
- 2 RGB #9E8B7E 24.37500 0.2025316 0.6196078 64307
- 3 RGB #87674C 27.45763 0.4370370 0.5294118 52553
- 4 RGB #A2938A 22.50000 0.1481481 0.6352941 2551

COLOR QUANTIFICATION R STUDIO



1 RGB #7E7038 48.00000 0.5555556 0.4941176 199939 → In a RGB color space, hex #7e7038 is composed of 49.4% red, 43.9% green and 22% blue. Whereas in a CMYK color space, it is composed of 0% cyan, 11.1% magenta, 55.6% yellow and 50.6% black. It has a hue angle of 48 degrees, a saturation of 38.5% and a lightness of 35.7%. **Dark moderate yellow. NEGATIVE.** <https://www.colorhexa.com/7e7038>

2 RGB #8B7D4E 46.22951 0.4388489 0.5450980 23861



1 RGB #44180D 12.00000 0.8088235 0.2666667 272021 → In a RGB color space, hex #44180d is composed of 26.7% red, 9.4% green and 5.1% blue. Whereas in a CMYK color space, it is composed of 0% cyan, 64.7% magenta, 80.9% yellow and 73.3% black. It has a hue angle of 12 degrees, a saturation of 67.9% and a lightness of 15.9%. **Very dark red. POSITIVE.** <https://www.colorhexa.com/44180d>

2 RGB #8C614C 19.6875 0.4571429 0.5490196 32779

COLOR QUANTIFICATION R STUDIO

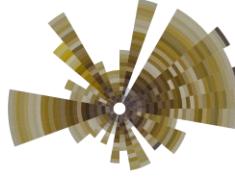


| colorspace | hex | hue | sat | value | n |
|-------------|---------|----------|-----------|-----------|--------|
| LinearGray | #324223 | 42.69231 | 0.9285714 | 0.2196078 | 264907 |
| Rec709Luma | #324223 | 42.69231 | 0.9285714 | 0.2196078 | 264907 |
| Rec601Luma | #324223 | 42.69231 | 0.9285714 | 0.2196078 | 264907 |
| DHTa | #324223 | 42.69231 | 0.9285714 | 0.2196078 | 264907 |
| Luv | #324223 | 42.69231 | 0.9285714 | 0.2196078 | 264907 |
| LChuv | #324223 | 42.69231 | 0.9285714 | 0.2196078 | 264907 |
| CMY | #324223 | 42.69231 | 0.9285714 | 0.2196078 | 264907 |
| YIQ | #324223 | 42.69231 | 0.9285714 | 0.2196078 | 264907 |
| YUV | #324223 | 42.69231 | 0.9285714 | 0.2196078 | 264907 |
| Lab | #324223 | 42.69231 | 0.9285714 | 0.2196078 | 264907 |
| CMYk | #324223 | 42.69231 | 0.9285714 | 0.2196078 | 264907 |
| Rec709YCbCr | #324223 | 42.69231 | 0.9285714 | 0.2196078 | 264907 |
| Rec601YCbCr | #324223 | 42.69231 | 0.9285714 | 0.2196078 | 264907 |
| HWB | #324223 | 42.69231 | 0.9285714 | 0.2196078 | 264907 |
| YMDr | #324223 | 42.69231 | 0.9285714 | 0.2196078 | 264907 |
| Underline | #324223 | 42.69231 | 0.9285714 | 0.2196078 | 264907 |
| Transparent | #324223 | 42.69231 | 0.9285714 | 0.2196078 | 264907 |
| Lab_dLW | #324223 | 42.69231 | 0.9285714 | 0.2196078 | 264907 |
| CIELuv | #324223 | 42.69231 | 0.9285714 | 0.2196078 | 264907 |
| LChab | #324223 | 42.69231 | 0.9285714 | 0.2196078 | 264907 |
| LM | #324223 | 42.69231 | 0.9285714 | 0.2196078 | 264907 |
| YCC | #324223 | 42.69231 | 0.9285714 | 0.2196078 | 264907 |
| HCLP | #324223 | 42.69231 | 0.9285714 | 0.2196078 | 264907 |
| HCL | #324223 | 42.69231 | 0.9285714 | 0.2196078 | 264907 |
| HSV | #324223 | 42.69231 | 0.9285714 | 0.2196078 | 264907 |
| HSL | #324223 | 42.69231 | 0.9285714 | 0.2196078 | 264907 |
| HSLB | #324223 | 42.69231 | 0.9285714 | 0.2196078 | 264907 |

Using different colourspace to reduce the colour used in images

1 RGB #382904 42.69231 0.9285714 0.2196078 264907 → In a RGB color space, hex #382904 is composed of 22% red, 16.1% green and 1.6% blue. Whereas in a CMYK color space, it is composed of 0% cyan, 26.8% magenta, 92.9% yellow and 78% black. It has a hue angle of 42.7 degrees, a saturation of 86.7% and a lightness of 11.8%. **Very dark orange [Brown tone]. NEGATIVE.** <https://www.colorhexa.com/382904>

2 RGB #8E7C36 47.72727 0.6197183 0.5568627 14093



| colorspace | hex | hue | sat | value | n |
|-------------|---------|----------|-----------|-----------|-------|
| LinearGray | #3A7A1A | 47.72727 | 0.6197183 | 0.5568627 | 14093 |
| Rec709Luma | #3A7A1A | 47.72727 | 0.6197183 | 0.5568627 | 14093 |
| Rec601Luma | #3A7A1A | 47.72727 | 0.6197183 | 0.5568627 | 14093 |
| DHTa | #3A7A1A | 47.72727 | 0.6197183 | 0.5568627 | 14093 |
| Luv | #3A7A1A | 47.72727 | 0.6197183 | 0.5568627 | 14093 |
| LChuv | #3A7A1A | 47.72727 | 0.6197183 | 0.5568627 | 14093 |
| CMY | #3A7A1A | 47.72727 | 0.6197183 | 0.5568627 | 14093 |
| YIQ | #3A7A1A | 47.72727 | 0.6197183 | 0.5568627 | 14093 |
| YUV | #3A7A1A | 47.72727 | 0.6197183 | 0.5568627 | 14093 |
| Lab | #3A7A1A | 47.72727 | 0.6197183 | 0.5568627 | 14093 |
| CMYk | #3A7A1A | 47.72727 | 0.6197183 | 0.5568627 | 14093 |
| Rec709YCbCr | #3A7A1A | 47.72727 | 0.6197183 | 0.5568627 | 14093 |
| Rec601YCbCr | #3A7A1A | 47.72727 | 0.6197183 | 0.5568627 | 14093 |
| HWB | #3A7A1A | 47.72727 | 0.6197183 | 0.5568627 | 14093 |
| YMDr | #3A7A1A | 47.72727 | 0.6197183 | 0.5568627 | 14093 |
| Underline | #3A7A1A | 47.72727 | 0.6197183 | 0.5568627 | 14093 |
| Transparent | #3A7A1A | 47.72727 | 0.6197183 | 0.5568627 | 14093 |
| Lab_dLW | #3A7A1A | 47.72727 | 0.6197183 | 0.5568627 | 14093 |
| CIELuv | #3A7A1A | 47.72727 | 0.6197183 | 0.5568627 | 14093 |
| LChab | #3A7A1A | 47.72727 | 0.6197183 | 0.5568627 | 14093 |
| LM | #3A7A1A | 47.72727 | 0.6197183 | 0.5568627 | 14093 |
| YCC | #3A7A1A | 47.72727 | 0.6197183 | 0.5568627 | 14093 |
| HCLP | #3A7A1A | 47.72727 | 0.6197183 | 0.5568627 | 14093 |
| HCL | #3A7A1A | 47.72727 | 0.6197183 | 0.5568627 | 14093 |
| HSV | #3A7A1A | 47.72727 | 0.6197183 | 0.5568627 | 14093 |
| HSL | #3A7A1A | 47.72727 | 0.6197183 | 0.5568627 | 14093 |
| HSLB | #3A7A1A | 47.72727 | 0.6197183 | 0.5568627 | 14093 |

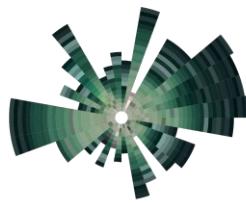
Using different colourspace to reduce the colour used in images

1 RGB #604E36 34.28571 0.4375000 0.3764706 327806 → In a RGB color space, hex #604e36 is composed of 37.6% red, 30.6% green and 21.2% blue. Whereas in a CMYK color space, it is composed of 0% cyan, 18.8% magenta, 43.8% yellow and 62.4% black. It has a hue angle of 34.3 degrees, a saturation of 28% and a lightness of 29.4%. **Very dark desaturated orange. POSITIVE TRITERPENOID.**

<https://www.colorhexa.com/604e36>

- 2 RGB #907D46 44.59459 0.5138889 0.5647059 48110
- 3 RGB #9D9372 46.04651 0.2738854 0.6156863 32541
- 4 RGB #AAA392 42.50000 0.1411765 0.6666667 31343

COLOR QUANTIFICATION R STUDIO

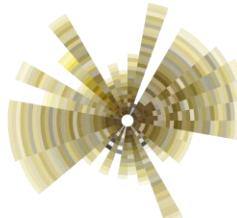


| | LinearGray | CMYK | Rec709Luma | Rec601Luma | Luv | xyY | YHtA | YCbCr | Rec709YCbCr | VPhyPr | Lab | CIELab | YUV | XYZ | scRGB | RGB | LMS | LMChab | LMChabC | LChab | LChabC | HCL | HCLC | YDobr | YDobrC | Undefined | Transparent | sRGB | HWB | CMY | HSL | HST | HSV | HSB | | | | | | | | | | |
|---|-------------|------------------------------------|--|------------|-----|-----|------|-------|-------------|--------|-----|--------|-----|-----|-------|-----|-----|--------|---------|-------|--------|-----|------|-------|--------|-----------|-------------|------|-----|-----|-----|-----|-----|-----|--|--|--|--|--|--|--|--|--|--|
| 1 | #305D4B | 156.0000 0.4838710 0.3647059 40938 | → In a RGB color space, hex #305d4b is composed of 18.8% red, 36.5% green and 29.4% blue. Whereas in a CMYK color space, it is composed of 48.4% cyan, 0% magenta, 19.4% yellow and 63.5% black. It has a hue angle of 156 degrees, a saturation of 31.9% and a lightness of 27.6%. Very dark desaturated cyan - lime green. POSITIVE STEROID. https://www.colorhexa.com/305d4b | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | RGB #8C9F84 | 102.2222 0.1698113 0.6235294 31481 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | RGB #7B9A7D | 123.8710 0.2012987 0.6039216 29118 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | RGB #95A68F | 104.3478 0.1385542 0.6509804 21458 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | RGB #82A18B | 137.4194 0.1925466 0.6313725 18005 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Using different colourspace to reduce the colour used in images

colorspace hex hue sat value n

- RGB #305D4B 156.0000 0.4838710 0.3647059 40938 → In a RGB color space, hex #305d4b is composed of 18.8% red, 36.5% green and 29.4% blue. Whereas in a CMYK color space, it is composed of 48.4% cyan, 0% magenta, 19.4% yellow and 63.5% black. It has a hue angle of 156 degrees, a saturation of 31.9% and a lightness of 27.6%. Very dark desaturated cyan - lime green. POSITIVE STEROID. <https://www.colorhexa.com/305d4b>
- RGB #8C9F84 102.2222 0.1698113 0.6235294 31481
- RGB #7B9A7D 123.8710 0.2012987 0.6039216 29118
- RGB #95A68F 104.3478 0.1385542 0.6509804 21458
- RGB #82A18B 137.4194 0.1925466 0.6313725 18005



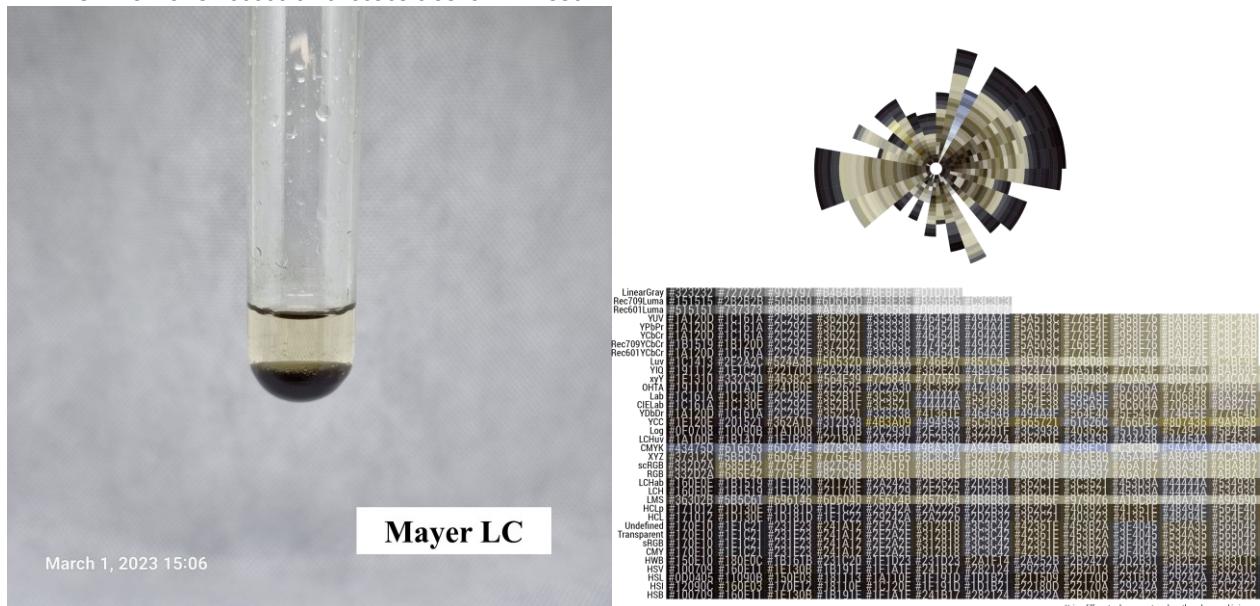
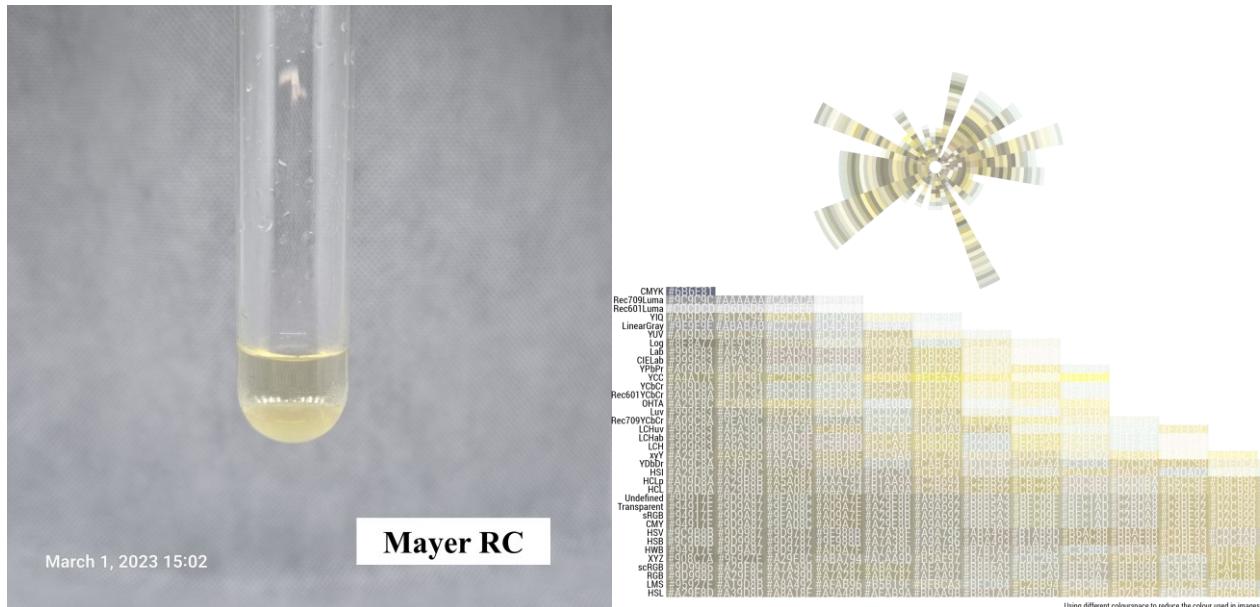
| | CMYK | Rec709Luma | Rec601Luma | LinearGray | VIO | YCbCr | Rec709YCbCr | Lab | CIELab | YUV | XYZ | scRGB | RGB | LMS | LMChab | LMChabC | LChab | LChabC | HCL | HCLC | YDobr | YDobrC | Undefined | Transparent | sRGB | HWB | CMY | HSL | HST | HSV | HSB | | | | | | | | | | | | | | |
|---|-------------|------------------------------------|--|------------|-----|-------|-------------|-----|--------|-----|-----|-------|-----|-----|--------|---------|-------|--------|-----|------|-------|--------|-----------|-------------|------|-----|-----|-----|-----|-----|-----|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| 1 | #8C9F84 | 102.2222 0.1698113 0.6235294 31481 | → In a RGB color space, hex #8c9f84 is composed of 102.22% red, 16.98% green and 62.35% blue. Whereas in a CMYK color space, it is composed of 0% cyan, 3.4% magenta, 17.6% yellow and 31% black. It has a hue angle of 48.4 degrees, a saturation of 66.7% and a lightness of 62.9%. Dark grayish yellow. NEGATIVE. https://www.colorhexa.com/b0aa91 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | RGB #ACA06D | 48.57143 0.3662791 0.6745098 98410 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | RGB #C0B684 | 50.00000 0.3125000 0.7529412 60093 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | RGB #6B572B | 41.25000 0.5981308 0.4196078 42645 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | RGB #D7CB8D | 50.27027 0.3441860 0.8431373 38429 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | RGB #928143 | 47.08861 0.5410959 0.5725490 37282 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | RGB #ECE7CB | 50.90909 0.1398305 0.9254902 28116 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | RGB #D5CC9F | 50.00000 0.2535211 0.8352941 22805 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Using different colourspace to reduce the colour used in images

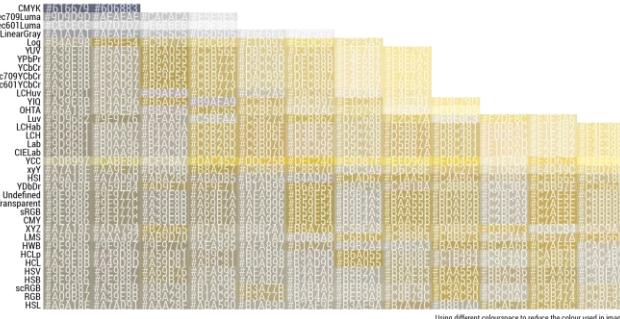
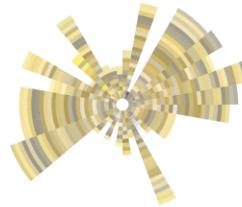
colorspace hex hue sat value n

- RGB #B0AA91 48.38710 0.1761364 0.6901961 421020 → In a RGB color space, hex #b0aa91 is composed of 69% red, 66.7% green and 56.9% blue. Whereas in a CMYK color space, it is composed of 0% cyan, 3.4% magenta, 17.6% yellow and 31% black. It has a hue angle of 48.4 degrees, a saturation of 16.4% and a lightness of 62.9%. Dark grayish yellow. NEGATIVE. <https://www.colorhexa.com/b0aa91>
- RGB #ACA06D 48.57143 0.3662791 0.6745098 98410
- RGB #C0B684 50.00000 0.3125000 0.7529412 60093
- RGB #6B572B 41.25000 0.5981308 0.4196078 42645
- RGB #D7CB8D 50.27027 0.3441860 0.8431373 38429
- RGB #928143 47.08861 0.5410959 0.5725490 37282
- RGB #ECE7CB 50.90909 0.1398305 0.9254902 28116
- RGB #D5CC9F 50.00000 0.2535211 0.8352941 22805

COLOR QUANTIFICATION R STUDIO

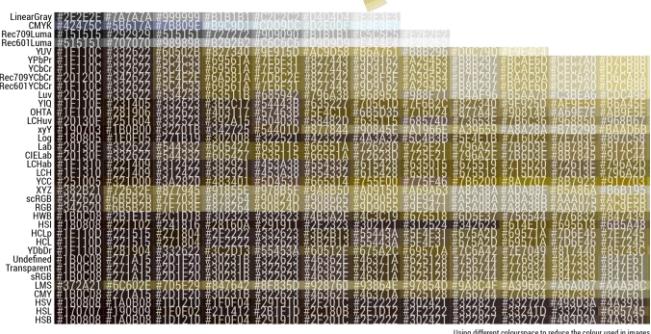
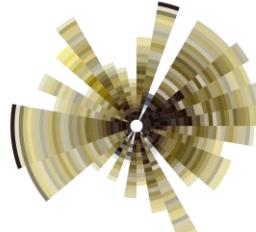


COLOR QUANTIFICATION R STUDIO



colorspace hex hue sat value n
1 RGB #AFAA97 47.50000 0.1371429 0.6862745 297948 → In a RGB color space, hex #afa97 is composed of 68.6% red, 66.7% green and 59.2% blue. Whereas in a CMYK color space, it is composed of 0% cyan, 2.9% magenta, 13.7% yellow and 31.4% black. It has a hue angle of 47.5 degrees, a saturation of 13% and a lightness of 63.9%. Dark grayish yellow. NEGATIVE. <https://www.colorhexa.com/afa97>

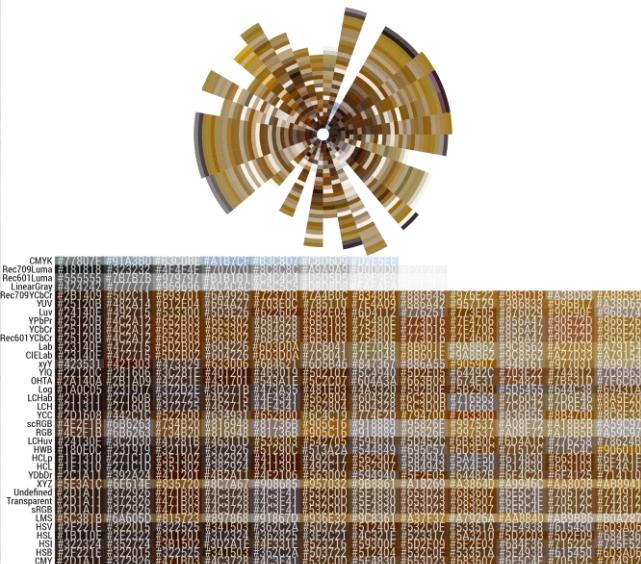
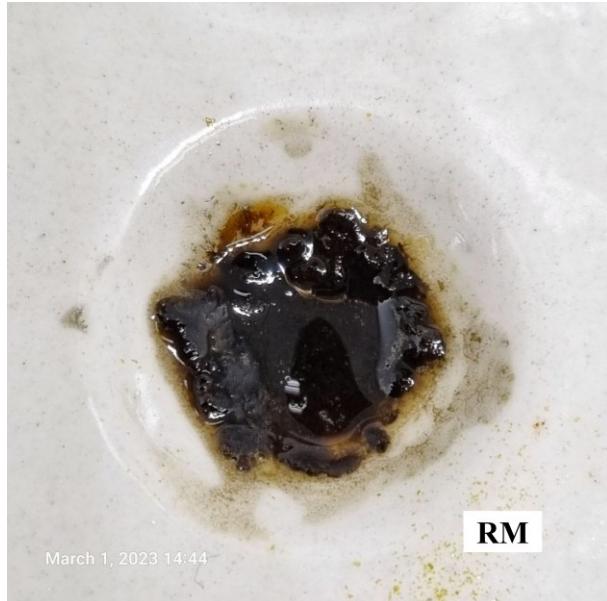
- 2 RGB #BFB8A2 45.51724 0.1518325 0.7490196 114526
- 3 RGB #C9B573 46.04651 0.4278607 0.7882353 93871
- 4 RGB #D5C180 45.88235 0.3990610 0.8352941 93299
- 5 RGB #ACA280 46.36364 0.2558140 0.6745098 60941
- 6 RGB #D6C898 46.45161 0.2897196 0.8392157 49485
- 7 RGB #EAD99B 47.08861 0.3376068 0.9176471 47638
- 8 RGB #EFE4C1 45.65217 0.1924686 0.9372549 12692



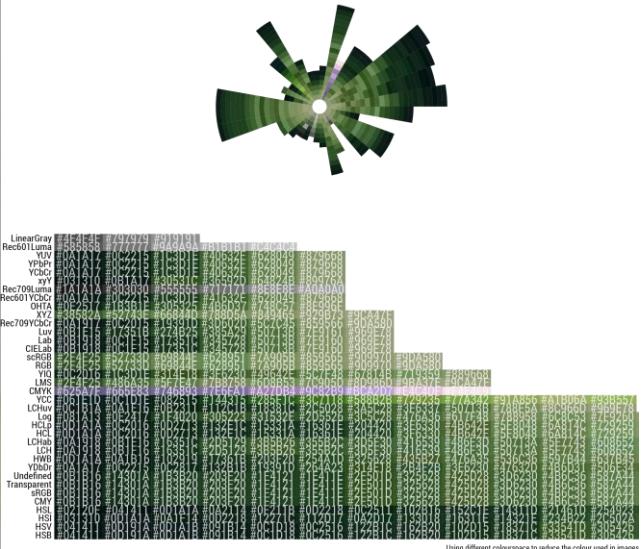
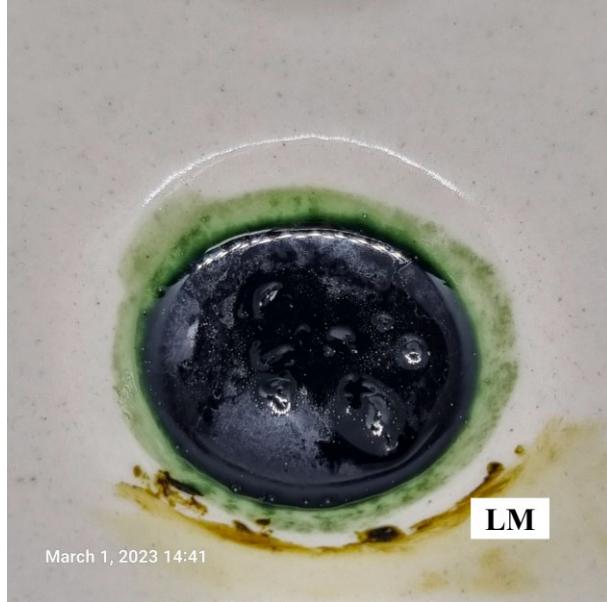
colorspace hex hue sat value n
1 RGB #B3AE95 50.00000 0.1675978 0.7019608 241731 → In a RGB color space, hex #b3ae95 is composed of 70.2% red, 68.2% green and 58.4% blue. Whereas in a CMYK color space, it is composed of 0% cyan, 2.8% magenta, 16.8% yellow and 29.8% black. It has a hue angle of 50 degrees, a saturation of 16.5% and a lightness of 64.3%. Grayish yellow. NEGATIVE. <https://www.colorhexa.com/b3ae95>

- 2 RGB #BEB99E 50.62500 0.1684211 0.7450980 179146
- 3 RGB #A4A3E8 38.82353 0.4594595 0.2901961 166805
- 4 RGB #A29561 48.00000 0.4012346 0.6352941 92918
- 5 RGB #C1B477 49.45946 0.3834197 0.7568627 34495
- 6 RGB #D2C687 50.40000 0.3571429 0.8235294 26161
- 7 RGB #C9C2A1 49.50000 0.1990050 0.7882353 22501
- 8 RGB #E0DBBF 50.90909 0.1473214 0.8784314 13243

COLOR QUANTIFICATION R STUDIO



2 RGB #9A7538 37.34694 0.63636364 0.6039216 55109
 3 RGB #AB966E 39.34426 0.35672515 0.6705882 23835
 4 RGB #918889 353.33333 0.06206897 0.5686275 10757
 5 RGB #B4A690 36.66667 0.20000000 0.7058824 7430
 6 RGB #C4AD93 31.83673 0.25000000 0.7686275 4223
 7 RGB #F2EBE2 33.75000 0.06611570 0.9490196 2975
 8 RGB #D0C1B3 28.96552 0.13942308 0.8156863 1549



COLOR QUANTIFICATION R STUDIO



| | | | | |
|-------------|---------|---------|---------|---------|
| CMYK | #141414 | #141414 | #141414 | #141414 |
| LinearGray | 221 | 219 | 218 | 217 |
| YUV | 221 | 219 | 218 | 217 |
| YPbPr | 221 | 219 | 218 | 217 |
| YCbCr | 221 | 219 | 218 | 217 |
| Luv | 221 | 219 | 218 | 217 |
| Rec709 | 221 | 219 | 218 | 217 |
| Rec601 | 221 | 219 | 218 | 217 |
| Rec501 | 221 | 219 | 218 | 217 |
| YIQ | 221 | 219 | 218 | 217 |
| LCMuv | 221 | 219 | 218 | 217 |
| XYZ | 221 | 219 | 218 | 217 |
| XY | 221 | 219 | 218 | 217 |
| YDIA | 221 | 219 | 218 | 217 |
| YUV | 221 | 219 | 218 | 217 |
| YCC | 221 | 219 | 218 | 217 |
| ScRGB | 221 | 219 | 218 | 217 |
| RGB | 221 | 219 | 218 | 217 |
| LMS | 221 | 219 | 218 | 217 |
| Lab | 221 | 219 | 218 | 217 |
| CIELab | 221 | 219 | 218 | 217 |
| YDMLab | 221 | 219 | 218 | 217 |
| Log | 221 | 219 | 218 | 217 |
| Lch | 221 | 219 | 218 | 217 |
| Undefined | 221 | 219 | 218 | 217 |
| Transparent | 221 | 219 | 218 | 217 |
| sRGB | 221 | 219 | 218 | 217 |
| CMYK | 221 | 219 | 218 | 217 |
| HCL | 221 | 219 | 218 | 217 |
| HCL | 221 | 219 | 218 | 217 |
| HWB | 221 | 219 | 218 | 217 |
| HSV | 221 | 219 | 218 | 217 |
| HSL | 221 | 219 | 218 | 217 |
| HSB | 221 | 219 | 218 | 217 |

Using different colourspace to reduce the colour used in images

colorspace hex hue sat value n

- 1 RGB #534C36 45.51724 0.3493976 0.3254902 651284 → In a RGB color space, hex #534c36 is composed of 32.5% red, 29.8% green and 21.2% blue. Whereas in a CMYK color space, it is composed of 0% cyan, 8.4% magenta, 34.9% yellow and 67.5% black. It has a hue angle of 45.5 degrees, a saturation of 21.2% and a lightness of 26.9%. **Very dark grayish yellow. POSITIVE TANNIN.** <https://www.colorhexa.com/534c36>
- 2 RGB #8C846F 43.44828 0.2071429 0.5490196 108153
- 3 RGB #9B9379 45.88235 0.2193548 0.6078431 83
- 4 RGB #A8A18C 45.00000 0.1666667 0.6588235 80



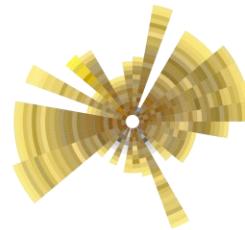
| | | | | |
|-------------|---------|---------|---------|---------|
| CMYK | #E9E9E9 | #E9E9E9 | #E9E9E9 | #E9E9E9 |
| LinearGray | 221 | 219 | 218 | 217 |
| YUV | 221 | 219 | 218 | 217 |
| YPbPr | 221 | 219 | 218 | 217 |
| YCbCr | 221 | 219 | 218 | 217 |
| Luv | 221 | 219 | 218 | 217 |
| Rec709 | 221 | 219 | 218 | 217 |
| Rec601 | 221 | 219 | 218 | 217 |
| Rec501 | 221 | 219 | 218 | 217 |
| YIQ | 221 | 219 | 218 | 217 |
| LCMuv | 221 | 219 | 218 | 217 |
| XYZ | 221 | 219 | 218 | 217 |
| XY | 221 | 219 | 218 | 217 |
| YDIA | 221 | 219 | 218 | 217 |
| YUV | 221 | 219 | 218 | 217 |
| YCC | 221 | 219 | 218 | 217 |
| ScRGB | 221 | 219 | 218 | 217 |
| RGB | 221 | 219 | 218 | 217 |
| LMS | 221 | 219 | 218 | 217 |
| Lab | 221 | 219 | 218 | 217 |
| CIELab | 221 | 219 | 218 | 217 |
| YDMLab | 221 | 219 | 218 | 217 |
| Log | 221 | 219 | 218 | 217 |
| Lch | 221 | 219 | 218 | 217 |
| Undefined | 221 | 219 | 218 | 217 |
| Transparent | 221 | 219 | 218 | 217 |
| sRGB | 221 | 219 | 218 | 217 |
| CMYK | 221 | 219 | 218 | 217 |
| HCL | 221 | 219 | 218 | 217 |
| HCL | 221 | 219 | 218 | 217 |
| HWB | 221 | 219 | 218 | 217 |
| HSV | 221 | 219 | 218 | 217 |
| HSL | 221 | 219 | 218 | 217 |
| HSB | 221 | 219 | 218 | 217 |

Using different colourspace to reduce the colour used in images

colorspace hex hue sat value n

- 1 RGB #AB975B 45.00000 0.4678363 0.6705882 742595 → In a RGB color space, hex #ab975b is composed of 67.1% red, 59.2% green and 35.7% blue. Whereas in a CMYK color space, it is composed of 0% cyan, 11.7% magenta, 46.8% yellow and 32.9% black. It has a hue angle of 45 degrees, a saturation of 32.3% and a lightness of 51.4%. **Dark moderate yellow. NEGATIVE TANNIN.** <https://www.colorhexa.com/ab975b>
- 2 RGB #9B7F42 41.12360 0.5741935 0.6078431 168439
- 3 RGB #CCBA8B 43.38462 0.3186275 0.8000000 71946
- 4 RGB #C2AC68 45.33333 0.4639175 0.7607843 44223
- 5 RGB #846126 37.65957 0.7121212 0.5176471 37888
- 6 RGB #E3D390 48.43373 0.3656388 0.8901961 3788
- 7 RGB #FEF5C0 51.29032 0.2440945 0.9960784 921

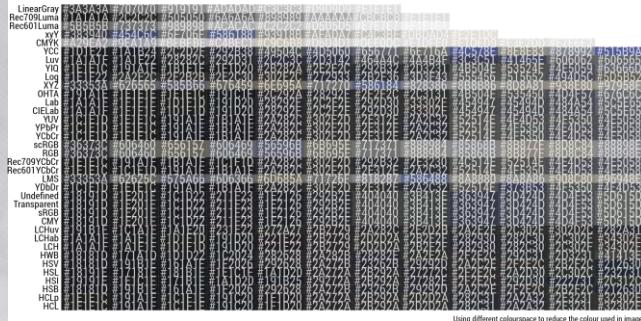
COLOR QUANTIFICATION R STUDIO



colorspace hex hue sat value n

1 RGB #AB9353 43.63636 0.5146199 0.6705882 614300 → In a RGB color space, hex #ab9353 is composed of 67.1% red, 57.6% green and 32.5% blue. Whereas in a CMYK color space, it is composed of 0% cyan, 14% magenta, 51.5% yellow and 32.9% black. It has a hue angle of 43.6 degrees, a saturation of 34.6% and a lightness of 49.8%. **Dark moderate orange. NEGATIVE TANNIN.** <https://www.colorhexa.com/ab9353>

- 2 RGB #9D8043 40.66667 0.5732484 0.6156863 280815
- 3 RGB #DAC266 47.58621 0.5321101 0.8549020 34716
- 4 RGB #875F22 36.23762 0.7481481 0.5294118 19449
- 5 RGB #C5AC55 46.60714 0.5685279 0.7725490 13908
- 6 RGB #EDD677 48.30508 0.4978903 0.9294118 1012



colorspace hex hue sat value n

1 RGB #3D3F43 220.00000 0.08955224 0.2627451 658478 → In a RGB color space, hex #3d3f43 is composed of 23.9% red, 24.7% green and 26.3% blue. Whereas in a CMYK color space, it is composed of 9% cyan, 6% magenta, 0% yellow and 73.7% black. It has a hue angle of 220 degrees, a saturation of 4.7% and a lightness of 25.1%. **Very dark grayish blue. POSITIVE TANNIN.** <https://www.colorhexa.com/3d3f43>

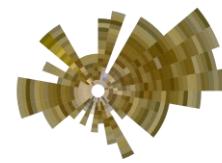
- 2 RGB #8586B8 230.00000 0.04316547 0.5450980 53290
- 3 RGB #8B877F 40.00000 0.08633094 0.5450980 17123
- 4 RGB #888984 72.00000 0.03649635 0.5372549 12079
- 5 RGB #9C9B96 50.00000 0.03846154 0.6117647 1622
- 6 RGB #8D8C84 53.33333 0.06382979 0.5529412 851
- 7 RGB #88898E 230.00000 0.04225352 0.5568627 327
- 8 RGB #C8C7C2 50.00000 0.03000000 0.7843137 230

COLOR QUANTIFICATION R STUDIO



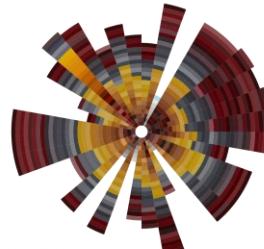
| colorspace | hex | hue | sat | value | n |
|----------------|---------|----------|-----------|-----------|--------|
| 1 RGB | #735B1E | 43.05882 | 0.7391304 | 0.4509804 | 636595 |
| 2 CMYK | | | | | |
| 3 Rec709Luma | #343434 | 0.0 | 0.0 | 0.0 | 1 |
| 4 Rec601Luma | #343434 | 0.0 | 0.0 | 0.0 | 1 |
| 5 LinearGray | #343434 | 0.0 | 0.0 | 0.0 | 1 |
| 6 Luv | #4C4C4C | 180.0 | 0.0 | 0.0 | 1 |
| 7 YIQ | #4C4C4C | 180.0 | 0.0 | 0.0 | 1 |
| 8 YPbPr | #4C4C4C | 180.0 | 0.0 | 0.0 | 1 |
| 9 YCrCb | #4C4C4C | 180.0 | 0.0 | 0.0 | 1 |
| 10 Rec709YCrCb | #4C4C4C | 180.0 | 0.0 | 0.0 | 1 |
| 11 Rec601YCrCb | #4C4C4C | 180.0 | 0.0 | 0.0 | 1 |
| 12 LChuv | #4C4C4C | 180.0 | 0.0 | 0.0 | 1 |
| 13 Lab | #4C4C4C | 180.0 | 0.0 | 0.0 | 1 |
| 14 Log | #4C4C4C | 180.0 | 0.0 | 0.0 | 1 |
| 15 N | #4C4C4C | 180.0 | 0.0 | 0.0 | 1 |
| 16 scRGB | #4C4C4C | 180.0 | 0.0 | 0.0 | 1 |
| 17 RGB | #4C4C4C | 180.0 | 0.0 | 0.0 | 1 |
| 18 LChab | #4C4C4C | 180.0 | 0.0 | 0.0 | 1 |
| 19 Lab | #4C4C4C | 180.0 | 0.0 | 0.0 | 1 |
| 20 CIELab | #4C4C4C | 180.0 | 0.0 | 0.0 | 1 |
| 21 YUV | #4C4C4C | 180.0 | 0.0 | 0.0 | 1 |
| 22 YCC | #4C4C4C | 180.0 | 0.0 | 0.0 | 1 |
| 23 Undefined | #4C4C4C | 180.0 | 0.0 | 0.0 | 1 |
| 24 Transparent | #4C4C4C | 180.0 | 0.0 | 0.0 | 1 |
| 25 HSL | #4C4C4C | 180.0 | 0.0 | 0.0 | 1 |
| 26 HSV | #4C4C4C | 180.0 | 0.0 | 0.0 | 1 |
| 27 HSI | #4C4C4C | 180.0 | 0.0 | 0.0 | 1 |
| 28 HSB | #4C4C4C | 180.0 | 0.0 | 0.0 | 1 |

Using different colourspace to reduce the colour used in images



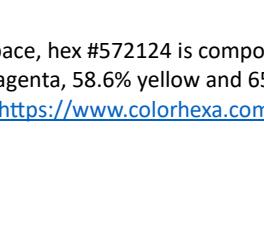
| colorspace | hex | hue | sat | value | n |
|----------------|---------|-----------|-----------|-----------|--------|
| 1 RGB | #572124 | 356.66667 | 0.6206897 | 0.3411765 | 715381 |
| 2 CMYK | | | | | |
| 3 Rec709Luma | #555555 | 0.0 | 0.0 | 0.0 | 1 |
| 4 Rec601Luma | #555555 | 0.0 | 0.0 | 0.0 | 1 |
| 5 LinearGray | #555555 | 0.0 | 0.0 | 0.0 | 1 |
| 6 Luv | #555555 | 180.0 | 0.0 | 0.0 | 1 |
| 7 YIQ | #555555 | 180.0 | 0.0 | 0.0 | 1 |
| 8 YPbPr | #555555 | 180.0 | 0.0 | 0.0 | 1 |
| 9 YCrCb | #555555 | 180.0 | 0.0 | 0.0 | 1 |
| 10 Rec709YCrCb | #555555 | 180.0 | 0.0 | 0.0 | 1 |
| 11 Rec601YCrCb | #555555 | 180.0 | 0.0 | 0.0 | 1 |
| 12 LChuv | #555555 | 180.0 | 0.0 | 0.0 | 1 |
| 13 Lab | #555555 | 180.0 | 0.0 | 0.0 | 1 |
| 14 Log | #555555 | 180.0 | 0.0 | 0.0 | 1 |
| 15 N | #555555 | 180.0 | 0.0 | 0.0 | 1 |
| 16 scRGB | #555555 | 180.0 | 0.0 | 0.0 | 1 |
| 17 RGB | #555555 | 180.0 | 0.0 | 0.0 | 1 |
| 18 LChab | #555555 | 180.0 | 0.0 | 0.0 | 1 |
| 19 Lab | #555555 | 180.0 | 0.0 | 0.0 | 1 |
| 20 CIELab | #555555 | 180.0 | 0.0 | 0.0 | 1 |
| 21 YUV | #555555 | 180.0 | 0.0 | 0.0 | 1 |
| 22 YCC | #555555 | 180.0 | 0.0 | 0.0 | 1 |
| 23 Undefined | #555555 | 180.0 | 0.0 | 0.0 | 1 |
| 24 Transparent | #555555 | 180.0 | 0.0 | 0.0 | 1 |
| 25 HSL | #555555 | 180.0 | 0.0 | 0.0 | 1 |
| 26 HSV | #555555 | 180.0 | 0.0 | 0.0 | 1 |
| 27 HSI | #555555 | 180.0 | 0.0 | 0.0 | 1 |
| 28 HSB | #555555 | 180.0 | 0.0 | 0.0 | 1 |

Using different colourspace to reduce the colour used in images

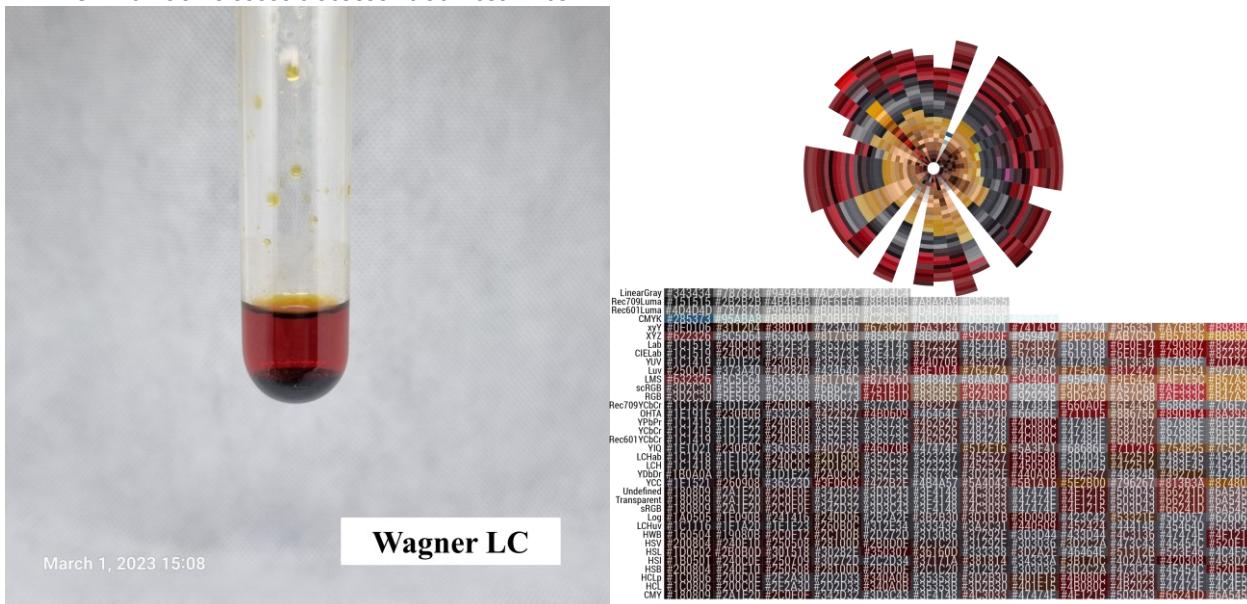
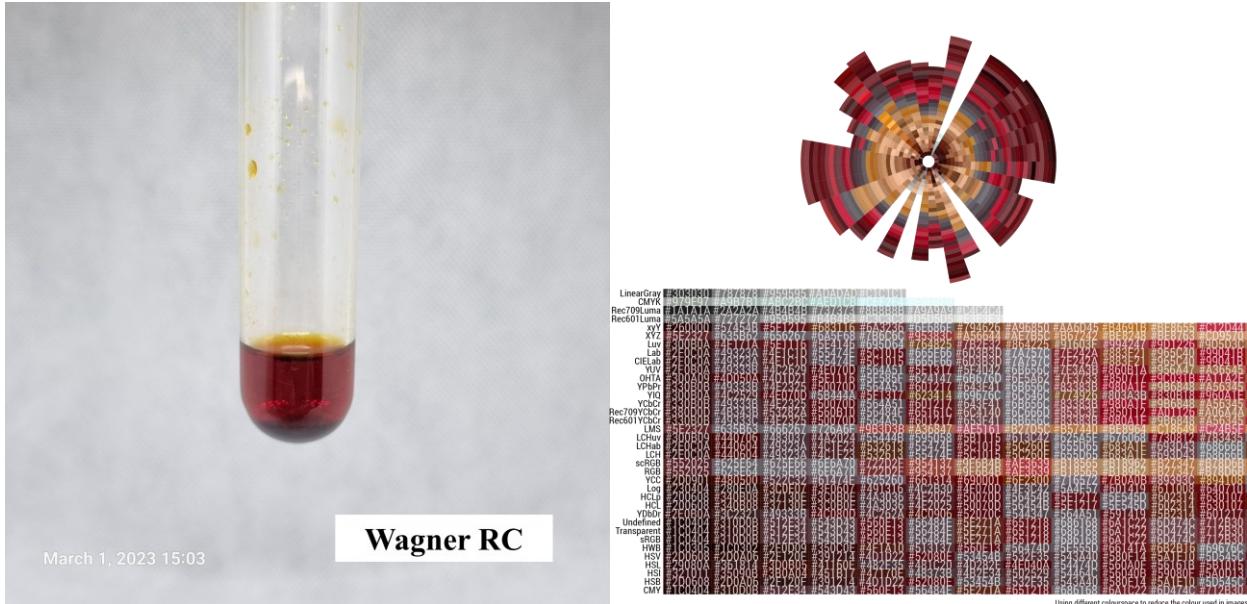


| colorspace | hex | hue | sat | value | n |
|----------------|---------|----------|-----------|-----------|-------|
| 1 RGB | #A36927 | 31.93548 | 0.7607362 | 0.6392157 | 69250 |
| 2 CMYK | | | | | |
| 3 Rec709Luma | #C1C1C1 | 0.0 | 0.0 | 0.0 | 1 |
| 4 Rec601Luma | #C1C1C1 | 0.0 | 0.0 | 0.0 | 1 |
| 5 LinearGray | #C1C1C1 | 0.0 | 0.0 | 0.0 | 1 |
| 6 Luv | #C1C1C1 | 180.0 | 0.0 | 0.0 | 1 |
| 7 YIQ | #C1C1C1 | 180.0 | 0.0 | 0.0 | 1 |
| 8 YPbPr | #C1C1C1 | 180.0 | 0.0 | 0.0 | 1 |
| 9 YCrCb | #C1C1C1 | 180.0 | 0.0 | 0.0 | 1 |
| 10 Rec709YCrCb | #C1C1C1 | 180.0 | 0.0 | 0.0 | 1 |
| 11 Rec601YCrCb | #C1C1C1 | 180.0 | 0.0 | 0.0 | 1 |
| 12 LChuv | #C1C1C1 | 180.0 | 0.0 | 0.0 | 1 |
| 13 Lab | #C1C1C1 | 180.0 | 0.0 | 0.0 | 1 |
| 14 Log | #C1C1C1 | 180.0 | 0.0 | 0.0 | 1 |
| 15 N | #C1C1C1 | 180.0 | 0.0 | 0.0 | 1 |
| 16 scRGB | #C1C1C1 | 180.0 | 0.0 | 0.0 | 1 |
| 17 RGB | #C1C1C1 | 180.0 | 0.0 | 0.0 | 1 |
| 18 LChab | #C1C1C1 | 180.0 | 0.0 | 0.0 | 1 |
| 19 Lab | #C1C1C1 | 180.0 | 0.0 | 0.0 | 1 |
| 20 CIELab | #C1C1C1 | 180.0 | 0.0 | 0.0 | 1 |
| 21 YUV | #C1C1C1 | 180.0 | 0.0 | 0.0 | 1 |
| 22 YCC | #C1C1C1 | 180.0 | 0.0 | 0.0 | 1 |
| 23 Undefined | #C1C1C1 | 180.0 | 0.0 | 0.0 | 1 |
| 24 Transparent | #C1C1C1 | 180.0 | 0.0 | 0.0 | 1 |
| 25 HSL | #C1C1C1 | 180.0 | 0.0 | 0.0 | 1 |
| 26 HSV | #C1C1C1 | 180.0 | 0.0 | 0.0 | 1 |
| 27 HSI | #C1C1C1 | 180.0 | 0.0 | 0.0 | 1 |
| 28 HSB | #C1C1C1 | 180.0 | 0.0 | 0.0 | 1 |

Using different colourspace to reduce the colour used in images



COLOR QUANTIFICATION R STUDIO



1 In a RGB color space, hex #5e2528 is composed of 36.9% red, 14.5% green and 15.7% blue. Whereas in a CMYK color space, it is composed of 0% cyan, 60.6% magenta, 57.4% yellow and 63.1% black. It has a hue angle of 356.8 degrees, a saturation of 43.5% and a lightness of 25.7%. **Very dark red. NEGATIVE.** <https://www.colorhexa.com/5e2528>

2 In a RGB color space, hex #a76343 is composed of 19.2% red, 20.0% green and 20.0% blue. Whereas in a CMYK color space, it is composed of 55.2% cyan, 44.8% magenta, 44.8% yellow and 70.6% black. It has a hue angle of 19.2 degrees, a saturation of 44.8% and a lightness of 19.2%. **Very dark red. NEGATIVE.** <https://www.colorhexa.com/a76343>

3 In a RGB color space, hex #b78d6b is composed of 26.8% red, 24.0% green and 24.0% blue. Whereas in a CMYK color space, it is composed of 52.0% cyan, 47.9% magenta, 47.9% yellow and 72.1% black. It has a hue angle of 26.8 degrees, a saturation of 47.9% and a lightness of 26.8%. **Very dark red. NEGATIVE.** <https://www.colorhexa.com/b78d6b>

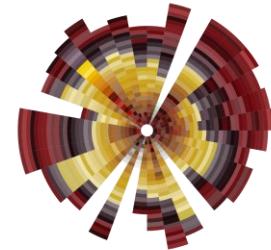
4 In a RGB color space, hex #c0794e is composed of 22.6% red, 59.3% green and 59.3% blue. Whereas in a CMYK color space, it is composed of 50.0% cyan, 37.5% magenta, 37.5% yellow and 42.1% black. It has a hue angle of 79.4 degrees, a saturation of 59.3% and a lightness of 59.3%. **Dark red. NEGATIVE.** <https://www.colorhexa.com/c0794e>

5 In a RGB color space, hex #cd956d is composed of 25.0% red, 59.3% green and 59.3% blue. Whereas in a CMYK color space, it is composed of 50.0% cyan, 37.5% magenta, 37.5% yellow and 42.1% black. It has a hue angle of 95.6 degrees, a saturation of 59.3% and a lightness of 59.3%. **Dark red. NEGATIVE.** <https://www.colorhexa.com/cd956d>

6 In a RGB color space, hex #e6b18d is composed of 24.2% red, 38.7% green and 56.9% blue. Whereas in a CMYK color space, it is composed of 55.1% cyan, 44.8% magenta, 44.8% yellow and 40.1% black. It has a hue angle of 118.1 degrees, a saturation of 56.9% and a lightness of 40.1%. **Dark red. NEGATIVE.** <https://www.colorhexa.com/e6b18d>

7 In a RGB color space, hex #f6bf9c is composed of 23.3% red, 36.6% green and 59.6% blue. Whereas in a CMYK color space, it is composed of 55.1% cyan, 44.8% magenta, 44.8% yellow and 40.1% black. It has a hue angle of 101.1 degrees, a saturation of 59.6% and a lightness of 40.1%. **Dark red. NEGATIVE.** <https://www.colorhexa.com/f6bf9c>

COLOR QUANTIFICATION R STUDIO

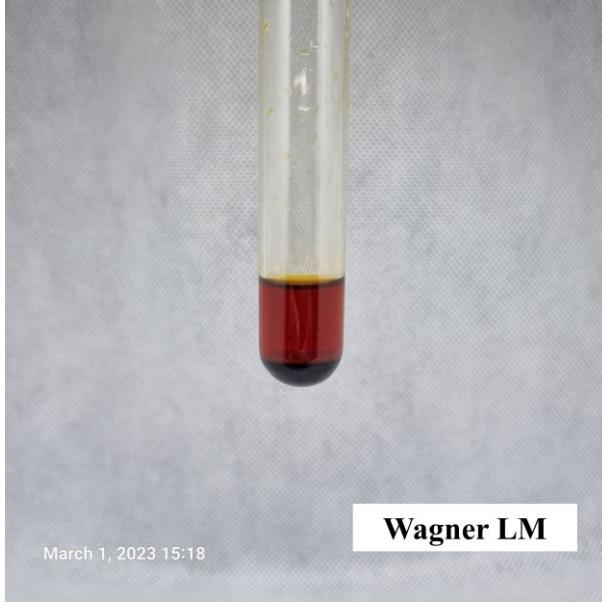


| | | | | | | | | | |
|------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| CMYK | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |
| LinearGray | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |
| Rec709Luma | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |
| Rec601Luma | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |
| XYZ | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |
| YUV | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |
| Rec709YUV | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |
| LChuv | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |
| Log | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |
| CIELab | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |
| YIO | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |
| scRGB | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |
| RGB | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |
| HSL | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |
| HSLP | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |
| HSV | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |
| HSB | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |
| CMY | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |

Using different colour space to reduce the colour used in images

1 RGB #69272B 356.363636 0.6285714 0.4117647 451939 → In a RGB color space, hex #69272b is composed of 41.2% red, 15.3% green and 16.9% blue. Whereas in a CMYK color space, it is composed of 0% cyan, 62.9% magenta, 59% yellow and 58.8% black. It has a hue angle of 356.4 degrees, a saturation of 45.8% and a lightness of 28.2%. Very dark red. NEGATIVE. <https://www.colorhexa.com/69272b>

- 2 RGB #944A3F 7.764706 0.5743243 0.5803922 279683
- 3 RGB #CCA737 45.100671 0.7303922 0.8000000 16350
- 4 RGB #BE852E 36.250000 0.7578947 0.7450980 16007
- 5 RGB #D7C167 48.214286 0.5209302 0.8431373 15314
- 6 RGB #B88C4E 35.094340 0.5760870 0.7215686 14708
- 7 RGB #E7D796 48.148148 0.3506494 0.9058824 3399



| | | | | | | | | | |
|------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| CMYK | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |
| LinearGray | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |
| Rec709Luma | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |
| Rec601Luma | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |
| XYZ | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |
| YUV | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |
| Rec709YUV | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |
| LChuv | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |
| Log | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |
| CIELab | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |
| YIO | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |
| scRGB | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |
| RGB | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |
| HSL | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |
| HSLP | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |
| HSV | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |
| HSB | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |
| CMY | #380808 | #777777 | #000000 | #BDBDBD | #C1C1C1 | #777777 | #380808 | #777777 | #380808 |

Using different colour space to reduce the colour used in images

1 RGB #682323 0.00000 0.6634615 0.4078431 595373 → In a RGB color space, hex #682323 is composed of 40.8% red, 13.7% green and 13.7% blue. Whereas in a CMYK color space, it is composed of 0% cyan, 66.3% magenta, 66.3% yellow and 59.2% black. It has a hue angle of 0 degrees, a saturation of 49.6% and a lightness of 27.3%. Very dark red. NEGATIVE. <https://www.colorhexa.com/682323>

- 2 RGB #985C2D 26.35514 0.7039474 0.5960784 128924
- 3 RGB #C2A446 45.48387 0.6391753 0.7607843 9937
- 4 RGB #B89631 44.88889 0.7336957 0.7215686 8024
- 5 RGB #D6C27B 46.81319 0.4252336 0.8392157 8011
- 6 RGB #BE862D 36.82759 0.7631579 0.7450980 4531

COLOR QUANTIFICATION R STUDIO

Produced by using color quantification algorithm in the environment of R Studio written as follows.

RStudio/2023.03.1+446 © 2009-2023 Posit Software, PBC.

"Cherry Blossom" Release (6e31ffc3, 2023-05-09) for windows

```
library(purrr)
library(tidyverse)
library(magick)
library(scales)
library(imager)
library(extrafont)
library(ggplot2)
#font_import(paths = "C:/Users/ASUS/AppData/Local/Microsoft/Windows/Fonts")
loadfonts(device = "win")

im <- image_read("Crop_W_MD_A.jpg")
im %>%
  image_resize("600") %>%
  image_quantize(max=100)
colorspace_types()
get_colorPal <- function(im, n=8, cs="RGB"){
  tmp <- im %>% image_resize("600") %>%
    image_quantize(max=n, colorspace=cs) %>%
    magick2cimg() %>%
    RGBtoHSV() %>%
    as.data.frame(wide="c") %>%
    mutate(hex=hsv(rescale(c.1, from=c(0,360)),c.2,c.3),
      hue = c.1,
      sat = c.2,
      value = c.3) %>%
    count(hex, hue, sat,value, sort=T) %>%
    mutate(colorspace = cs)

  return(tmp %>% select(colorspace,hex,hue,sat,value,n))
}

get_colorPal(im)

get_colorPal(im) %>% pull(hex)

params <- list(im=list(im),
  n=30,
  cs=colorspace_types()[-5])
my_colors <- pmap_df(params, get_colorPal)
my_colors %>%
  group_by(colorspace) %>%
  mutate(ypos=row_number(value)) %>%
  ggplot(aes(x=fct_infreq(colorspace), y=ypos, fill=hex)) +
  geom_tile() +
  geom_text(aes(label=hex), color="#fffffbbe",
    size=5, family="Roboto Condensed") +
  scale_fill_identity() +
  scale_y_continuous(breaks=NULL) +
  theme_void(base_family="Roboto Condensed") +
  coord_flip(ylim=c(1,12)) +
  theme(axis.text = element_text(color = "black", family="Roboto Condensed", hjust=1)) +
  labs(caption="Using different colourspace to reduce the colour used in images")
#ggsave("FMD_21.tiff", width = 10, height = 5)

#polarized
polar1 <- my_colors %>%
  group_by(colorspace) %>%
  mutate(ypos=row_number(hue)) %>%
  ggplot(aes(x=colorspace, y=ypos, fill=hex)) +
```

COLOR QUANTIFICATION R STUDIO

```
geom_tile() +  
scale_fill_identity() +  
scale_y_continuous(breaks=NULL) +  
theme_void() +  
coord_polar() +  
expand_limits(y=-1)  
  
polar2 <- my_colors %>%  
group_by(colorspace) %>%  
mutate(ypos=row_number(hue)) %>%  
ggplot(aes(x=colorspace, y=hue, fill=hex,  
           height=sat*hue, width=value, alpha=value)) +  
geom_tile() +  
scale_fill_identity() +  
scale_y_continuous(breaks=NULL) +  
theme_void() +  
coord_polar() +  
expand_limits(y=0) +  
scale_alpha_continuous(guide="none")  
  
polar3 <- my_colors %>%  
group_by(colorspace) %>%  
mutate(ypos=row_number(hue)) %>%  
ggplot(aes(x=colorspace, y=ypos, fill=hex, height=sat*value)) +  
geom_tile() +  
scale_fill_identity() +  
scale_y_continuous(breaks=NULL) +  
theme_void() +  
coord_polar() +  
expand_limits(y=0)  
  
fig_polar <- image_graph(width=600, height=600)  
polar1  
#polar2  
#polar3  
dev.off()  
image_append(fig_polar)  
ggsave("W_MD_A2.tiff", width = 10, height = 5)
```