

Input: Colorimetric Reflective System MRS18a

for hue  $h^* = lab^*h = 31/360 = 0.086$

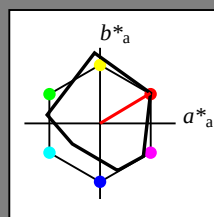
$lab^*ich$  and  $lab^*nch$

D65: hue R

LCH\*Ma: 50 78 31

rgb\*Ma: 1.0 0.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

MRS18a; adapted (a) CIELAB data

|        | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------|-------------|---------|---------|--------------|--------------|
| RMa    | 49.63       | 66.8    | 40.02   | 77.87        | 31           |
| JMa    | 90.7        | -7.27   | 93.19   | 93.48        | 94           |
| GMa    | 52.11       | -69.93  | 11.26   | 70.85        | 171          |
| G50BMa | 45.03       | -36.65  | -27.13  | 45.61        | 217          |
| BMa    | 36.65       | 23.26   | -62.27  | 66.49        | 290          |
| B50RMa | 34.94       | 57.27   | -43.6   | 71.99        | 323          |
| NMa    | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| WMa    | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE   | 39.92       | 58.67   | 27.97   | 64.99        | 25           |
| JCIE   | 81.26       | -2.91   | 71.56   | 71.62        | 92           |
| GCIE   | 52.23       | -42.47  | 13.58   | 44.6         | 162          |
| BCIE   | 30.57       | 1.33    | -46.48  | 46.51        | 272          |

Output: Colorimetric Reflective System ORS18

for hue  $h^* = lab^*h = 38/360 = 0.105$

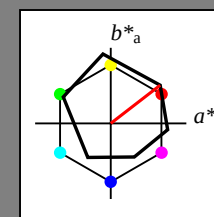
$lab^*ich$  and  $lab^*nch$

D65: hue O

LCH\*Ma: 48 83 38

rgb\*Ma: 1.0 0.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

ORS18; adapted (a) CIELAB data

|        | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------|-------------|---------|---------|--------------|--------------|
| RMa    | 47.94       | 65.37   | 50.52   | 82.62        | 38           |
| JMa    | 90.37       | -10.27  | 91.77   | 92.34        | 96           |
| GMa    | 50.9        | -62.79  | 34.95   | 71.87        | 151          |
| G50BMa | 58.62       | -30.35  | -45.01  | 54.3         | 236          |
| BMa    | 25.71       | 31.11   | -44.42  | 54.24        | 305          |
| B50RMa | 48.13       | 75.27   | -8.35   | 75.73        | 354          |
| NMa    | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| WMa    | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE   | 39.92       | 58.66   | 26.98   | 64.56        | 25           |
| JCIE   | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| GCIE   | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| BCIE   | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

1,00

0,75

0,50

0,25

0,00

$n^* = 1,00$

chromaticness  $c^*$

$n^* = 0,50$

blackness  $n^*$

$n^* = 0,00$

1,00

0,75

0,50

0,25

0,00

$n^* = 1,00$

$n^* = 0,75$

$n^* = 0,50$

$n^* = 0,25$

$n^* = 0,00$

chromaticness  $c^*$

TE660-7, 3 step scales for constant CIELAB hue 31/360 = 0.086 (left)

5 step scales for constant CIELAB hue 38/360 = 0.105 (right)

BAM-test chart TE66; Colorimetric systems MRS18a & ORS18 input:  $olv^* setrgbcolor$

D65: 3 and 5 step colour scales for 10 hues

output: no change compared to input

Input: Colorimetric Reflective System MRS18a

for hue  $h^* = lab^*h = 94/360 = 0.262$

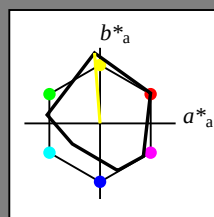
$lab^*ich$  and  $lab^*nch$

D65: hue J

LCH\*Ma: 91 93 94

rgb\*Ma: 1.0 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

MRS18a; adapted (a) CIELAB data

|        | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------|-------------|---------|---------|--------------|--------------|
| RMa    | 49.63       | 66.8    | 40.02   | 77.87        | 31           |
| JMa    | 90.7        | -7.27   | 93.19   | 93.48        | 94           |
| GMa    | 52.11       | -69.93  | 11.26   | 70.85        | 171          |
| G50BMa | 45.03       | -36.65  | -27.13  | 45.61        | 217          |
| BMa    | 36.65       | 23.26   | -62.27  | 66.49        | 290          |
| B50RMa | 34.94       | 57.27   | -43.6   | 71.99        | 323          |
| NMa    | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| WMa    | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE   | 39.92       | 58.67   | 27.97   | 64.99        | 25           |
| JCIE   | 81.26       | -2.91   | 71.56   | 71.62        | 92           |
| GCIE   | 52.23       | -42.47  | 13.58   | 44.6         | 162          |
| BCIE   | 30.57       | 1.33    | -46.48  | 46.51        | 272          |

Output: Colorimetric Reflective System ORS18

for hue  $h^* = lab^*h = 96/360 = 0.268$

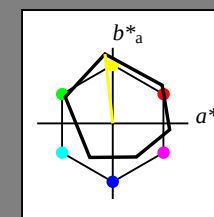
$lab^*ich$  and  $lab^*nch$

D65: hue Y

LCH\*Ma: 90 92 96

rgb\*Ma: 1.0 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

ORS18; adapted (a) CIELAB data

|        | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------|-------------|---------|---------|--------------|--------------|
| RMa    | 47.94       | 65.37   | 50.52   | 82.62        | 38           |
| JMa    | 90.37       | -10.27  | 91.77   | 92.34        | 96           |
| GMa    | 50.9        | -62.79  | 34.95   | 71.87        | 151          |
| G50BMa | 58.62       | -30.35  | -45.01  | 54.3         | 236          |
| BMa    | 25.71       | 31.11   | -44.42  | 54.24        | 305          |
| B50RMa | 48.13       | 75.27   | -8.35   | 75.73        | 354          |
| NMa    | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| WMa    | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE   | 39.92       | 58.66   | 26.98   | 64.56        | 25           |
| JCIE   | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| GCIE   | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| BCIE   | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

1,00

0,75

0,50

0,25

0,00

$n^* = 1,00$

$n^* = 0,50$

blackness  $n^*$

chromaticness  $c^*$

1,00

0,75

0,50

0,25

0,00

$n^* = 1,00$

$n^* = 0,75$

$n^* = 0,50$

$n^* = 0,25$

$n^* = 0,00$

blackness  $n^*$

chromaticness  $c^*$

TE660-7, 3 step scales for constant CIELAB hue 94/360 = 0.262 (left)

5 step scales for constant CIELAB hue 96/360 = 0.268 (right)

BAM-test chart TE66; Colorimetric systems MRS18a & ORS18 input:  $olv^* setrgbcolor$

D65: 3 and 5 step colour scales for 10 hues

output: no change compared to input

Input: Colorimetric Reflective System MRS18a

for hue  $h^* = lab^*h = 171/360 = 0.475$

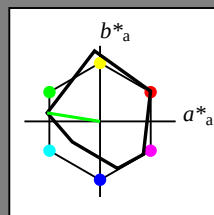
$lab^*ich$  and  $lab^*nch$

D65: hue G

LCH\*Ma: 52 71 171

rgb\*Ma: 0.0 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

MRS18a; adapted (a) CIELAB data

|        | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------|-------------|---------|---------|--------------|--------------|
| RMa    | 49.63       | 66.8    | 40.02   | 77.87        | 31           |
| JMa    | 90.7        | -7.27   | 93.19   | 93.48        | 94           |
| GMa    | 52.11       | -69.93  | 11.26   | 70.85        | 171          |
| G50BMa | 45.03       | -36.65  | -27.13  | 45.61        | 217          |
| BMa    | 36.65       | 23.26   | -62.27  | 66.49        | 290          |
| B50RMa | 34.94       | 57.27   | -43.6   | 71.99        | 323          |
| NMa    | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| WMa    | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE   | 39.92       | 58.67   | 27.97   | 64.99        | 25           |
| JCIE   | 81.26       | -2.91   | 71.56   | 71.62        | 92           |
| GCIE   | 52.23       | -42.47  | 13.58   | 44.6         | 162          |
| BCIE   | 30.57       | 1.33    | -46.48  | 46.51        | 272          |

Output: Colorimetric Reflective System ORS18

for hue  $h^* = lab^*h = 151/360 = 0.419$

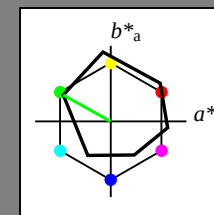
$lab^*ich$  and  $lab^*nch$

D65: hue L

LCH\*Ma: 51 72 151

rgb\*Ma: 0.0 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

ORS18; adapted (a) CIELAB data

|        | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------|-------------|---------|---------|--------------|--------------|
| RMa    | 47.94       | 65.37   | 50.52   | 82.62        | 38           |
| JMa    | 90.37       | -10.27  | 91.77   | 92.34        | 96           |
| GMa    | 50.9        | -62.79  | 34.95   | 71.87        | 151          |
| G50BMa | 58.62       | -30.35  | -45.01  | 54.3         | 236          |
| BMa    | 25.71       | 31.11   | -44.42  | 54.24        | 305          |
| B50RMa | 48.13       | 75.27   | -8.35   | 75.73        | 354          |
| NMa    | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| WMa    | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE   | 39.92       | 58.66   | 26.98   | 64.56        | 25           |
| JCIE   | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| GCIE   | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| BCIE   | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

1,00

0,75

0,50

0,25

0,00

$n^* = 1,00$

$n^* = 0,50$

blackness  $n^*$

chromaticness  $c^*$

1,00

0,75

0,50

0,25

0,00

$n^* = 1,00$

$n^* = 0,75$

$n^* = 0,50$

$n^* = 0,25$

$n^* = 0,00$

blackness  $n^*$

chromaticness  $c^*$

TE660-7, 3 step scales for constant CIELAB hue 171/360 = 0.475 (left)

5 step scales for constant CIELAB hue 151/360 = 0.419 (right)

BAM-test chart TE66; Colorimetric systems MRS18a & ORS18 input:  $olv^* setrgbcolor$

D65: 3 and 5 step colour scales for 10 hues

output: no change compared to input

Input: Colorimetric Reflective System MRS18a

for hue  $h^* = lab^*h = 217/360 = 0.601$

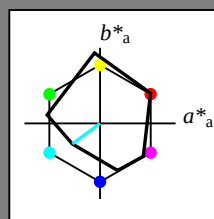
$lab^*ich$  and  $lab^*nch$

D65: hue G50B

LCH\*Ma: 45 46 217

rgb\*Ma: 0.0 1.0 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

MRS18a; adapted (a) CIELAB data

|        | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------|-------------|---------|---------|--------------|--------------|
| RMa    | 49.63       | 66.8    | 40.02   | 77.87        | 31           |
| JMa    | 90.7        | -7.27   | 93.19   | 93.48        | 94           |
| GMa    | 52.11       | -69.93  | 11.26   | 70.85        | 171          |
| G50BMa | 45.03       | -36.65  | -27.13  | 45.61        | 217          |
| BMa    | 36.65       | 23.26   | -62.27  | 66.49        | 290          |
| B50RMa | 34.94       | 57.27   | -43.6   | 71.99        | 323          |
| NMa    | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| WMa    | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE   | 39.92       | 58.67   | 27.97   | 64.99        | 25           |
| JCIE   | 81.26       | -2.91   | 71.56   | 71.62        | 92           |
| GCIE   | 52.23       | -42.47  | 13.58   | 44.6         | 162          |
| BCIE   | 30.57       | 1.33    | -46.48  | 46.51        | 272          |

Output: Colorimetric Reflective System ORS18

for hue  $h^* = lab^*h = 236/360 = 0.656$

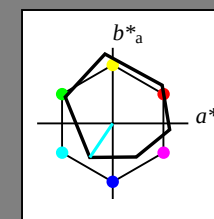
$lab^*ich$  and  $lab^*nch$

D65: hue C

LCH\*Ma: 59 54 236

rgb\*Ma: 0.0 1.0 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

ORS18; adapted (a) CIELAB data

|        | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------|-------------|---------|---------|--------------|--------------|
| RMa    | 47.94       | 65.37   | 50.52   | 82.62        | 38           |
| JMa    | 90.37       | -10.27  | 91.77   | 92.34        | 96           |
| GMa    | 50.9        | -62.79  | 34.95   | 71.87        | 151          |
| G50BMa | 58.62       | -30.35  | -45.01  | 54.3         | 236          |
| BMa    | 25.71       | 31.11   | -44.42  | 54.24        | 305          |
| B50RMa | 48.13       | 75.27   | -8.35   | 75.73        | 354          |
| NMa    | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| WMa    | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE   | 39.92       | 58.66   | 26.98   | 64.56        | 25           |
| JCIE   | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| GCIE   | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| BCIE   | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

1,00

0,75

0,50

0,25

0,00

$n^* = 1,00$

$n^* = 0,50$

blackness  $n^*$

chromaticness  $c^*$

1,00

0,75

0,50

0,25

0,00

$n^* = 1,00$

$n^* = 0,75$

$n^* = 0,50$

$n^* = 0,25$

$n^* = 0,00$

blackness  $n^*$

chromaticness  $c^*$

TE660-7, 3 step scales for constant CIELAB hue 217/360 = 0.601 (left)

5 step scales for constant CIELAB hue 236/360 = 0.656 (right)

BAM-test chart TE66; Colorimetric systems MRS18a & ORS18 input:  $olv^* setrgbcolor$

D65: 3 and 5 step colour scales for 10 hues

output: no change compared to input

Input: Colorimetric Reflective System MRS18a

for hue  $h^* = \text{lab}^*h = 290/360 = 0.807$

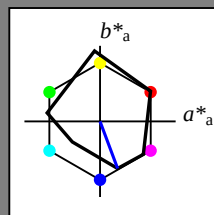
$\text{lab}^*ich$  and  $\text{lab}^*nch$

D65: hue B

LCH\*Ma: 37 66 290

rgb\*Ma: 0.0 0.0 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{\text{rel}} = 92$

%Regularity

$g^*_{H,\text{rel}} = 42$

$g^*_{C,\text{rel}} = 49$

MRS18a; adapted (a) CIELAB data

|        | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------|-------------|---------|---------|--------------|--------------|
| RMa    | 49.63       | 66.8    | 40.02   | 77.87        | 31           |
| JMa    | 90.7        | -7.27   | 93.19   | 93.48        | 94           |
| GMa    | 52.11       | -69.93  | 11.26   | 70.85        | 171          |
| G50BMa | 45.03       | -36.65  | -27.13  | 45.61        | 217          |
| BMa    | 36.65       | 23.26   | -62.27  | 66.49        | 290          |
| B50RMa | 34.94       | 57.27   | -43.6   | 71.99        | 323          |
| NMa    | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| WMa    | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE   | 39.92       | 58.67   | 27.97   | 64.99        | 25           |
| JCIE   | 81.26       | -2.91   | 71.56   | 71.62        | 92           |
| GCIE   | 52.23       | -42.47  | 13.58   | 44.6         | 162          |
| BCIE   | 30.57       | 1.33    | -46.48  | 46.51        | 272          |

Output: Colorimetric Reflective System ORS18

for hue  $h^* = \text{lab}^*h = 305/360 = 0.847$

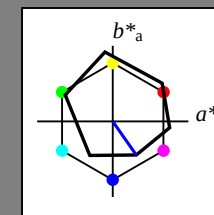
$\text{lab}^*ich$  and  $\text{lab}^*nch$

D65: hue V

LCH\*Ma: 26 54 305

rgb\*Ma: 0.0 0.0 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{\text{rel}} = 93$

%Regularity

$g^*_{H,\text{rel}} = 57$

$g^*_{C,\text{rel}} = 59$

ORS18; adapted (a) CIELAB data

|        | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------|-------------|---------|---------|--------------|--------------|
| RMa    | 47.94       | 65.37   | 50.52   | 82.62        | 38           |
| JMa    | 90.37       | -10.27  | 91.77   | 92.34        | 96           |
| GMa    | 50.9        | -62.79  | 34.95   | 71.87        | 151          |
| G50BMa | 58.62       | -30.35  | -45.01  | 54.3         | 236          |
| BMa    | 25.71       | 31.11   | -44.42  | 54.24        | 305          |
| B50RMa | 48.13       | 75.27   | -8.35   | 75.73        | 354          |
| NMa    | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| WMa    | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE   | 39.92       | 58.66   | 26.98   | 64.56        | 25           |
| JCIE   | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| GCIE   | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| BCIE   | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

1,00

0,75

0,50

0,25

0,00

$n^* = 1,00$

$n^* = 0,50$

chromaticness  $c^*$

blackness  $n^*$

$n^* = 0,00$

1,00

0,75

0,50

0,25

0,00

$n^* = 1,00$

$n^* = 0,75$

$n^* = 0,50$

$n^* = 0,25$

$n^* = 0,00$

chromaticness  $c^*$

blackness  $n^*$

TE660-7, 3 step scales for constant CIELAB hue 290/360 = 0.807 (left)

5 step scales for constant CIELAB hue 305/360 = 0.847 (right)

BAM-test chart TE66; Colorimetric systems MRS18a & ORS18 input:  $olv^* \text{ setrgbcolor}$

D65: 3 and 5 step colour scales for 10 hues

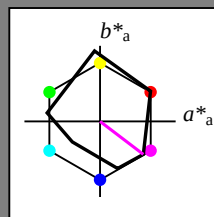
output: no change compared to input

Input: Colorimetric Reflective System MRS18a

for hue  $h^* = lab^*h = 323/360 = 0.896$   
 $lab^*ich$  and  $lab^*nch$

D65: hue B50R  
LCH\*Ma: 35 72 323  
rgb\*Ma: 1.0 0.0 1.0

triangle lightness  $t^*$



%Gamut  
 $u^*_{rel} = 92$   
%Regularity  
 $g^*_{H,rel} = 42$   
 $g^*_{C,rel} = 49$

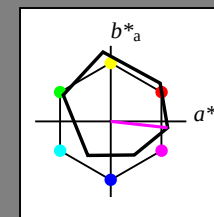
| MRS18a; adapted (a) CIELAB data |             |         |         |              |              |
|---------------------------------|-------------|---------|---------|--------------|--------------|
|                                 | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| RMa                             | 49.63       | 66.8    | 40.02   | 77.87        | 31           |
| JMa                             | 90.7        | -7.27   | 93.19   | 93.48        | 94           |
| GMa                             | 52.11       | -69.93  | 11.26   | 70.85        | 171          |
| G50BMa                          | 45.03       | -36.65  | -27.13  | 45.61        | 217          |
| BMa                             | 36.65       | 23.26   | -62.27  | 66.49        | 290          |
| B50RMa                          | 34.94       | 57.27   | -43.6   | 71.99        | 323          |
| NMa                             | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| WMa                             | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE                            | 39.92       | 58.67   | 27.97   | 64.99        | 25           |
| JCIE                            | 81.26       | -2.91   | 71.56   | 71.62        | 92           |
| GCIE                            | 52.23       | -42.47  | 13.58   | 44.6         | 162          |
| BCIE                            | 30.57       | 1.33    | -46.48  | 46.51        | 272          |

Output: Colorimetric Reflective System ORS18

for hue  $h^* = lab^*h = 354/360 = 0.982$   
 $lab^*ich$  and  $lab^*nch$

D65: hue M  
LCH\*Ma: 48 76 354  
rgb\*Ma: 1.0 0.0 1.0

triangle lightness  $t^*$



%Gamut  
 $u^*_{rel} = 93$   
%Regularity  
 $g^*_{H,rel} = 57$   
 $g^*_{C,rel} = 59$

| ORS18; adapted (a) CIELAB data |             |         |         |              |              |
|--------------------------------|-------------|---------|---------|--------------|--------------|
|                                | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| RMa                            | 47.94       | 65.37   | 50.52   | 82.62        | 38           |
| JMa                            | 90.37       | -10.27  | 91.77   | 92.34        | 96           |
| GMa                            | 50.9        | -62.79  | 34.95   | 71.87        | 151          |
| G50BMa                         | 58.62       | -30.35  | -45.01  | 54.3         | 236          |
| BMa                            | 25.71       | 31.11   | -44.42  | 54.24        | 305          |
| B50RMa                         | 48.13       | 75.27   | -8.35   | 75.73        | 354          |
| NMa                            | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| WMa                            | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE                           | 39.92       | 58.66   | 26.98   | 64.56        | 25           |
| JCIE                           | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| GCIE                           | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| BCIE                           | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

1,00

0,75

0,50

0,25

0,00

$n^* = 1,00$

chromaticness  $c^*$

$n^* = 0,50$

blackness  $n^*$

$n^* = 0,00$

1,00

0,75

0,50

0,25

0,00

$n^* = 1,00$

$n^* = 0,75$

$n^* = 0,50$

$n^* = 0,25$

$n^* = 0,00$

blackness  $n^*$

chromaticness  $c^*$

TE660-7, 3 step scales for constant CIELAB hue 323/360 = 0.896 (left)

5 step scales for constant CIELAB hue 354/360 = 0.982 (right)

BAM-test chart TE66; Colorimetric systems MRS18a & ORS18 input:  $olv^* setrgbcolor$   
D65: 3 and 5 step colour scales for 10 hues

output: no change compared to input

Input: Colorimetric Reflective System MRS18a

for hue  $h^* = \text{lab}^*h = 25/360 = 0.071$

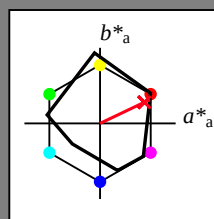
$\text{lab}^*ich$  and  $\text{lab}^*nch$

D65: hue R

LCH\*Ma: 48 73 25

rgb\*Ma: 1.0 0.0 0.1

triangle lightness  $t^*$



%Gamut

$u^*_{\text{rel}} = 92$

%Regularity

$g^*_{H,\text{rel}} = 42$

$g^*_{C,\text{rel}} = 49$

MRS18a; adapted (a) CIELAB data

|        | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------|-------------|---------|---------|--------------|--------------|
| RMa    | 49.63       | 66.8    | 40.02   | 77.87        | 31           |
| JMa    | 90.7        | -7.27   | 93.19   | 93.48        | 94           |
| GMa    | 52.11       | -69.93  | 11.26   | 70.85        | 171          |
| G50BMa | 45.03       | -36.65  | -27.13  | 45.61        | 217          |
| BMa    | 36.65       | 23.26   | -62.27  | 66.49        | 290          |
| B50RMa | 34.94       | 57.27   | -43.6   | 71.99        | 323          |
| NMa    | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| WMa    | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE   | 39.92       | 58.67   | 27.97   | 64.99        | 25           |
| JCIE   | 81.26       | -2.91   | 71.56   | 71.62        | 92           |
| GCIE   | 52.23       | -42.47  | 13.58   | 44.6         | 162          |
| BCIE   | 30.57       | 1.33    | -46.48  | 46.51        | 272          |

Output: Colorimetric Reflective System ORS18

for hue  $h^* = \text{lab}^*h = 25/360 = 0.069$

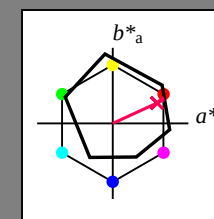
$\text{lab}^*ich$  and  $\text{lab}^*nch$

D65: hue R

LCH\*Ma: 48 75 25

rgb\*Ma: 1.0 0.0 0.32

triangle lightness  $t^*$



%Gamut

$u^*_{\text{rel}} = 93$

%Regularity

$g^*_{H,\text{rel}} = 57$

$g^*_{C,\text{rel}} = 59$

ORS18; adapted (a) CIELAB data

|        | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------|-------------|---------|---------|--------------|--------------|
| RMa    | 47.94       | 65.37   | 50.52   | 82.62        | 38           |
| JMa    | 90.37       | -10.27  | 91.77   | 92.34        | 96           |
| GMa    | 50.9        | -62.79  | 34.95   | 71.87        | 151          |
| G50BMa | 58.62       | -30.35  | -45.01  | 54.3         | 236          |
| BMa    | 25.71       | 31.11   | -44.42  | 54.24        | 305          |
| B50RMa | 48.13       | 75.27   | -8.35   | 75.73        | 354          |
| NMa    | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| WMa    | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE   | 39.92       | 58.66   | 26.98   | 64.56        | 25           |
| JCIE   | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| GCIE   | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| BCIE   | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

1,00

0,75

0,50

0,25

0,00

$n^* = 1,00$

$n^* = 0,50$

blackness  $n^*$

chromaticness  $c^*$

1,00

0,75

0,50

0,25

0,00

$n^* = 1,00$

$n^* = 0,75$

$n^* = 0,50$

$n^* = 0,25$

$n^* = 0,00$

blackness  $n^*$

chromaticness  $c^*$

TE660-7, 3 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.069 (right)

BAM-test chart TE66; Colorimetric systems MRS18a & ORS18 input:  $olv^* \text{ setrgbcolor}$

D65: 3 and 5 step colour scales for 10 hues

output: no change compared to input

Input: Colorimetric Reflective System MRS18a

for hue  $h^* = lab^*h = 92/360 = 0.256$

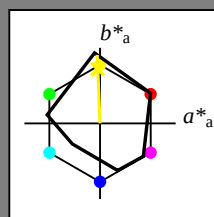
$lab^*ich$  and  $lab^*nch$

D65: hue J

LCH\*Ma: 89 91 92

rgb\*Ma: 1.0 0.95 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 92$

%Regularity

$g^*_{H,rel} = 42$

$g^*_{C,rel} = 49$

MRS18a; adapted (a) CIELAB data

|        | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------|-------------|---------|---------|--------------|--------------|
| RMa    | 49.63       | 66.8    | 40.02   | 77.87        | 31           |
| JMa    | 90.7        | -7.27   | 93.19   | 93.48        | 94           |
| GMa    | 52.11       | -69.93  | 11.26   | 70.85        | 171          |
| G50BMa | 45.03       | -36.65  | -27.13  | 45.61        | 217          |
| BMa    | 36.65       | 23.26   | -62.27  | 66.49        | 290          |
| B50RMa | 34.94       | 57.27   | -43.6   | 71.99        | 323          |
| NMa    | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| WMa    | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE   | 39.92       | 58.67   | 27.97   | 64.99        | 25           |
| JCIE   | 81.26       | -2.91   | 71.56   | 71.62        | 92           |
| GCIE   | 52.23       | -42.47  | 13.58   | 44.6         | 162          |
| BCIE   | 30.57       | 1.33    | -46.48  | 46.51        | 272          |

Output: Colorimetric Reflective System ORS18

for hue  $h^* = lab^*h = 92/360 = 0.255$

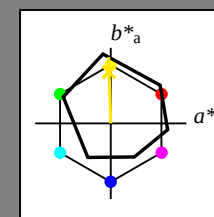
$lab^*ich$  and  $lab^*nch$

D65: hue J

LCH\*Ma: 86 88 92

rgb\*Ma: 1.0 0.9 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

$g^*_{C,rel} = 59$

ORS18; adapted (a) CIELAB data

|        | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------|-------------|---------|---------|--------------|--------------|
| RMa    | 47.94       | 65.37   | 50.52   | 82.62        | 38           |
| JMa    | 90.37       | -10.27  | 91.77   | 92.34        | 96           |
| GMa    | 50.9        | -62.79  | 34.95   | 71.87        | 151          |
| G50BMa | 58.62       | -30.35  | -45.01  | 54.3         | 236          |
| BMa    | 25.71       | 31.11   | -44.42  | 54.24        | 305          |
| B50RMa | 48.13       | 75.27   | -8.35   | 75.73        | 354          |
| NMa    | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| WMa    | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE   | 39.92       | 58.66   | 26.98   | 64.56        | 25           |
| JCIE   | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| GCIE   | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| BCIE   | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

1,00

0,75

0,50

0,25

0,00

$n^* = 1,00$

$n^* = 0,50$

blackness  $n^*$

$n^* = 0,00$

chromaticness  $c^*$

1,00

0,75

0,50

0,25

0,00

$n^* = 1,00$

$n^* = 0,75$

$n^* = 0,50$

$n^* = 0,25$

$n^* = 0,00$

blackness  $n^*$

chromaticness  $c^*$

TE660-7, 3 step scales for constant CIELAB hue 92/360 = 0.256 (left)

5 step scales for constant CIELAB hue 92/360 = 0.255 (right)

BAM-test chart TE66; Colorimetric systems MRS18a & ORS18 input:  $olv^* setrgbcolor$

D65: 3 and 5 step colour scales for 10 hues

output: no change compared to input



Input: Colorimetric Reflective System MRS18a

for hue  $h^* = \text{lab}^*h = 162/360 = 0.451$

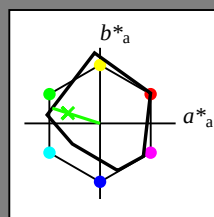
$\text{lab}^*ich$  and  $\text{lab}^*nch$

D65: hue G

LCH\*Ma: 56 66 162

rgb\*Ma: 0.11 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{\text{rel}} = 92$

%Regularity

$g^*_{H,\text{rel}} = 42$

$g^*_{C,\text{rel}} = 49$

MRS18a; adapted (a) CIELAB data

|        | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------|-------------|---------|---------|--------------|--------------|
| RMa    | 49.63       | 66.8    | 40.02   | 77.87        | 31           |
| JMa    | 90.7        | -7.27   | 93.19   | 93.48        | 94           |
| GMa    | 52.11       | -69.93  | 11.26   | 70.85        | 171          |
| G50BMa | 45.03       | -36.65  | -27.13  | 45.61        | 217          |
| BMa    | 36.65       | 23.26   | -62.27  | 66.49        | 290          |
| B50RMa | 34.94       | 57.27   | -43.6   | 71.99        | 323          |
| NMa    | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| WMa    | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE   | 39.92       | 58.67   | 27.97   | 64.99        | 25           |
| JCIE   | 81.26       | -2.91   | 71.56   | 71.62        | 92           |
| GCIE   | 52.23       | -42.47  | 13.58   | 44.6         | 162          |
| BCIE   | 30.57       | 1.33    | -46.48  | 46.51        | 272          |

Output: Colorimetric Reflective System ORS18

for hue  $h^* = \text{lab}^*h = 164/360 = 0.457$

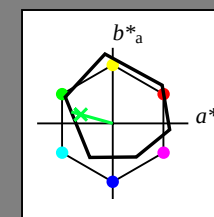
$\text{lab}^*ich$  and  $\text{lab}^*nch$

D65: hue G

LCH\*Ma: 53 57 164

rgb\*Ma: 0.0 1.0 0.25

triangle lightness  $t^*$



%Gamut

$u^*_{\text{rel}} = 93$

%Regularity

$g^*_{H,\text{rel}} = 57$

$g^*_{C,\text{rel}} = 59$

ORS18; adapted (a) CIELAB data

|        | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------|-------------|---------|---------|--------------|--------------|
| RMa    | 47.94       | 65.37   | 50.52   | 82.62        | 38           |
| JMa    | 90.37       | -10.27  | 91.77   | 92.34        | 96           |
| GMa    | 50.9        | -62.79  | 34.95   | 71.87        | 151          |
| G50BMa | 58.62       | -30.35  | -45.01  | 54.3         | 236          |
| BMa    | 25.71       | 31.11   | -44.42  | 54.24        | 305          |
| B50RMa | 48.13       | 75.27   | -8.35   | 75.73        | 354          |
| NMa    | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| WMa    | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE   | 39.92       | 58.66   | 26.98   | 64.56        | 25           |
| JCIE   | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| GCIE   | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| BCIE   | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

1,00

0,75

0,50

0,25

0,00

$n^* = 1,00$

$n^* = 0,50$

$n^* = 0,00$   
blackness  $n^*$

chromaticness  $c^*$

1,00

0,75

0,50

0,25

0,00

$n^* = 1,00$

$n^* = 0,75$

$n^* = 0,50$

$n^* = 0,25$

$n^* = 0,00$

blackness  $n^*$

chromaticness  $c^*$

TE660-7, 3 step scales for constant CIELAB hue 162/360 = 0.451 (left)

5 step scales for constant CIELAB hue 164/360 = 0.457 (right)

BAM-test chart TE66; Colorimetric systems MRS18a & ORS18 input:  $olv^* \text{ setrgbcolor}$

D65: 3 and 5 step colour scales for 10 hues

output: no change compared to input

Input: Colorimetric Reflective System MRS18a

for hue  $h^* = \text{lab}^*h = 272/360 = 0.755$

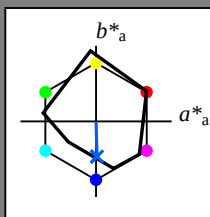
$\text{lab}^*ich$  and  $\text{lab}^*nch$

D65: hue B

LCH\*Ma: 40 49 272

rgb\*Ma: 0.0 0.36 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{\text{rel}} = 92$

%Regularity

$g^*_{H,\text{rel}} = 42$

$g^*_{C,\text{rel}} = 49$

MRS18a; adapted (a) CIELAB data

|        | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------|-------------|---------|---------|--------------|--------------|
| RMa    | 49.63       | 66.8    | 40.02   | 77.87        | 31           |
| JMa    | 90.7        | -7.27   | 93.19   | 93.48        | 94           |
| GMa    | 52.11       | -69.93  | 11.26   | 70.85        | 171          |
| G50BMa | 45.03       | -36.65  | -27.13  | 45.61        | 217          |
| BMa    | 36.65       | 23.26   | -62.27  | 66.49        | 290          |
| B50RMa | 34.94       | 57.27   | -43.6   | 71.99        | 323          |
| NMa    | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| WMa    | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE   | 39.92       | 58.67   | 27.97   | 64.99        | 25           |
| JCIE   | 81.26       | -2.91   | 71.56   | 71.62        | 92           |
| GCIE   | 52.23       | -42.47  | 13.58   | 44.6         | 162          |
| BCIE   | 30.57       | 1.33    | -46.48  | 46.51        | 272          |

Output: Colorimetric Reflective System ORS18

for hue  $h^* = \text{lab}^*h = 271/360 = 0.754$

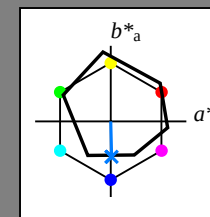
$\text{lab}^*ich$  and  $\text{lab}^*nch$

D65: hue B

LCH\*Ma: 42 45 271

rgb\*Ma: 0.0 0.49 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{\text{rel}} = 93$

%Regularity

$g^*_{H,\text{rel}} = 57$

$g^*_{C,\text{rel}} = 59$

ORS18; adapted (a) CIELAB data

|        | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|--------|-------------|---------|---------|--------------|--------------|
| RMa    | 47.94       | 65.37   | 50.52   | 82.62        | 38           |
| JMa    | 90.37       | -10.27  | 91.77   | 92.34        | 96           |
| GMa    | 50.9        | -62.79  | 34.95   | 71.87        | 151          |
| G50BMa | 58.62       | -30.35  | -45.01  | 54.3         | 236          |
| BMa    | 25.71       | 31.11   | -44.42  | 54.24        | 305          |
| B50RMa | 48.13       | 75.27   | -8.35   | 75.73        | 354          |
| NMa    | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| WMa    | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE   | 39.92       | 58.66   | 26.98   | 64.56        | 25           |
| JCIE   | 81.26       | -2.17   | 67.76   | 67.79        | 92           |
| GCIE   | 52.23       | -42.26  | 11.75   | 43.87        | 164          |
| BCIE   | 30.57       | 1.15    | -46.84  | 46.87        | 271          |

1,00

0,75

0,50

0,25

0,00

0,25

$n^* = 0,50$

chromaticness  $c^*$

$n^* = 1,00$

blackness  $n^*$

$n^* = 0,00$

1,00

0,75

0,50

0,25

0,00

$n^* = 0,50$

$n^* = 0,75$

chromaticness  $c^*$

$n^* = 1,00$

blackness  $n^*$

$n^* = 0,25$

$n^* = 0,00$

TE660-7, 3 step scales for constant CIELAB hue 272/360 = 0.755 (left)

5 step scales for constant CIELAB hue 271/360 = 0.754 (right)

BAM-test chart TE66; Colorimetric systems MRS18a & ORS18 input:  $olv^* \text{ setrgbcolor}$

D65: 3 and 5 step colour scales for 10 hues

output: no change compared to input