

**Ostwald optimal colours (o), maximum (m)  $C_{AB}$  for P60,  $Y_N=0$ ,  $Y_W=90$ ,  $Y_m=520\_770$**

| $i_1, \lambda_1$ | $i_2, \lambda_2$ | $Y$   | $A$    | $B$    | $C_{AB}$ | $a$    | $b$     | $h_{xy}$ | $i_d, \lambda_d$ | $i_c, \lambda_c$ | Code |
|------------------|------------------|-------|--------|--------|----------|--------|---------|----------|------------------|------------------|------|
| 0 405            | 32 563           | 53.56 | −50.83 | −37.27 | 63.03    | 0.5907 | −0.6965 | 216.2    | 16 483           | 38 590           | Cm   |
| 6 435            | 32 563           | 54.12 | −60.57 | −18.04 | 63.2     | 0.5227 | −0.5515 | 196.5    | 17 487           | 44 621           |      |
| 10 450           | 33 565           | 54.2  | −74.1  | 11.55  | 74.99    | 0.4236 | −0.3329 | 171.1    | 19 497           | −1 497c          |      |
| 11 460           | 33 566           | 55.45 | −77.42 | 20.13  | 79.99    | 0.4119 | −0.2729 | 165.4    | 20 502           | −1 502c          |      |
| 13 465           | 33 568           | 56.12 | −81.71 | 33.7   | 88.38    | 0.388  | −0.1779 | 157.5    | 22 513           | −1 513c          |      |
| 14 470           | 34 570           | 57.09 | −83.01 | 39.7   | 92.02    | 0.3888 | −0.1399 | 154.4    | 24 521           | −1 521c          | Gm   |
| 15 475           | 34 574           | 59.7  | −83.37 | 46.41  | 95.41    | 0.4118 | −0.1072 | 150.8    | 25 529           | −1 529c          |      |
| 15 480           | 36 580           | 63.87 | −82.5  | 50.76  | 96.86    | 0.4537 | −0.1002 | 148.3    | 27 535           | −1 535c          |      |
| 17 485           | 39 595           | 70.8  | −72.25 | 63.39  | 96.12    | 0.5622 | −0.06   | 138.7    | 29 549           | −1 549c          |      |
| 18 490           | −1 490c          | 85.0  | −25.38 | 79.98  | 83.91    | 0.8509 | −0.0418 | 107.6    | 33 566           | 11 459           | max  |
| 19 495           | −1 495c          | 83.76 | −22.46 | 80.01  | 83.11    | 0.8631 | −0.036  | 105.6    | 33 567           | 12 461           |      |
| 20 500           | −1 500c          | 82.2  | −18.71 | 79.42  | 81.59    | 0.8793 | −0.0316 | 103.2    | 33 568           | 12 464           |      |
| 22 510           | −1 510c          | 77.89 | −8.53  | 76.28  | 76.76    | 0.9265 | −0.0264 | 96.3     | 34 570           | 13 469           |      |
| 24 520           | −1 520c          | 71.91 | 4.55   | 70.72  | 70.87    | 0.9957 | −0.0247 | 86.3     | 34 572           | 14 473           | Ym   |
| 25 530           | −1 529c          | 68.43 | 11.56  | 67.29  | 68.27    | 1.038  | −0.0248 | 80.2     | 34 574           | 15 475           |      |
| 27 540           | −1 539c          | 60.8  | 25.33  | 59.57  | 64.73    | 1.137  | −0.0262 | 66.9     | 35 578           | 15 478           |      |
| 29 545           | −1 545c          | 52.69 | 37.52  | 51.21  | 63.48    | 1.2552 | −0.0294 | 53.7     | 36 582           | 16 480           |      |
| 29 550           | −1 549c          | 52.69 | 37.52  | 51.21  | 63.48    | 1.2552 | −0.0294 | 53.7     | 36 582           | 16 480           |      |
| 30 555           | −1 554c          | 48.59 | 42.61  | 46.95  | 63.4     | 1.3211 | −0.0316 | 47.7     | 36 584           | 16 481           |      |
| 32 560           | −1 560c          | 40.5  | 50.12  | 38.52  | 63.21    | 1.4654 | −0.0376 | 37.5     | 37 589           | 16 483           |      |
| 32 563           | 0 405            | 46.43 | 50.84  | 37.27  | 63.04    | 1.4083 | −0.097  | 36.2     | 38 590           | 16 483           | Rm   |
| 32 563           | 6 435            | 45.87 | 60.57  | 18.04  | 63.2     | 1.4985 | −0.2608 | 16.5     | 44 621           | 17 487           |      |
| 33 565           | 10 450           | 45.79 | 74.08  | −11.55 | 74.98    | 1.6175 | −0.519  | 351.1    | −1 497c          | 19 497           |      |
| 33 566           | 11 460           | 44.54 | 77.4   | −20.13 | 79.98    | 1.6655 | −0.5989 | 345.4    | −1 502c          | 20 502           |      |
| 33 568           | 13 465           | 43.87 | 81.68  | −33.69 | 88.36    | 1.7151 | −0.7253 | 337.5    | −1 513c          | 22 513           |      |
| 34 570           | 14 470           | 42.9  | 82.98  | −39.69 | 91.99    | 1.7441 | −0.7882 | 334.4    | −1 521c          | 24 521           | Mm   |
| 34 574           | 15 475           | 40.29 | 83.34  | −46.39 | 95.38    | 1.7977 | −0.8786 | 330.8    | −1 529c          | 25 529           |      |
| 36 580           | 15 480           | 36.12 | 82.47  | −50.74 | 96.83    | 1.8835 | −0.9799 | 328.3    | −1 535c          | 27 535           |      |
| 39 595           | 17 485           | 29.19 | 72.22  | −63.36 | 96.08    | 1.9601 | −1.2864 | 318.7    | −1 549c          | 29 549           |      |
| −1 490c          | 18 490           | 14.99 | 25.36  | −79.92 | 83.85    | 1.6471 | −2.5507 | 287.6    | 11 459           | 33 566           | min  |
| −1 495c          | 19 495           | 16.23 | 22.44  | −79.96 | 83.05    | 1.5234 | −2.3881 | 285.6    | 12 461           | 33 567           |      |
| −1 500c          | 20 500           | 17.79 | 18.7   | −79.37 | 81.54    | 1.3907 | −2.2019 | 283.2    | 12 464           | 33 568           |      |
| −1 510c          | 22 510           | 22.1  | 8.53   | −76.24 | 76.72    | 1.1247 | −1.7979 | 276.3    | 13 469           | 34 570           |      |
| −1 520c          | 24 520           | 28.08 | −4.55  | −70.7  | 70.84    | 0.9055 | −1.4253 | 266.3    | 14 473           | 34 572           | Bm   |
| −1 529c          | 25 530           | 31.56 | −11.56 | −67.27 | 68.25    | 0.8238 | −1.2706 | 260.2    | 15 475           | 34 574           |      |
| −1 539c          | 27 540           | 39.19 | −25.32 | −59.55 | 64.72    | 0.7119 | −1.0259 | 246.9    | 15 478           | 35 578           |      |
| −1 545c          | 29 545           | 47.3  | −37.51 | −51.2  | 63.47    | 0.6531 | −0.8511 | 233.7    | 16 480           | 36 582           |      |
| −1 549c          | 29 550           | 47.3  | −37.51 | −51.2  | 63.47    | 0.6531 | −0.8511 | 233.7    | 16 480           | 36 582           |      |
| −1 554c          | 30 555           | 51.4  | −42.6  | −46.94 | 63.4     | 0.6388 | −0.7834 | 227.7    | 16 481           | 36 584           |      |
| −1 560c          | 32 560           | 59.49 | −50.11 | −38.52 | 63.21    | 0.6334 | −0.6771 | 217.5    | 16 483           | 37 589           |      |
| W0 380           | 770              | 89.99 | 0.0    | 0.0    | 0.0      | 0.9704 | −0.4181 | 0.0      | $B_c=1,000$      |                  |      |
| N0 380           | 770              | 3.59  | 0.0    | 0.0    | 0.0      | 0.9704 | −0.4181 | 0.0      | $x_c=0,000$      |                  |      |

**Ostwald optimal colours (o), maximum (m)  $C_{AB}$  for P55,  $Y_N=0$ ,  $Y_W=90$ ,  $Y_m=520\_770$**

| $i_1, \lambda_1$ | $i_2, \lambda_2$ | $Y$   | $A$    | $B$    | $C_{AB}$ | $a$    | $b$     | $h_{xy}$ | $i_d, \lambda_d$ | $i_c, \lambda_c$ | Code |
|------------------|------------------|-------|--------|--------|----------|--------|---------|----------|------------------|------------------|------|
| 1 405            | 32 564           | 53.53 | -53.38 | -33.72 | 63.14    | 0.5754 | -0.6358 | 212.2    | 16 484           | 38 591           | Cm   |
| 6 435            | 32 564           | 54.05 | -61.78 | -17.18 | 64.13    | 0.517  | -0.511  | 195.5    | 17 488           | 44 620           |      |
| 9 450            | 33 565           | 54.21 | -71.06 | 2.96   | 71.13    | 0.4499 | -0.3619 | 177.6    | 18 494           | -1 494c          |      |
| 11 460           | 33 567           | 55.19 | -76.92 | 17.46  | 78.87    | 0.4168 | -0.2572 | 167.2    | 20 502           | -1 502c          |      |
| 13 465           | 33 568           | 55.8  | -80.9  | 29.99  | 86.28    | 0.3943 | -0.1688 | 159.6    | 22 513           | -1 513c          |      |
| 14 470           | 34 570           | 56.61 | -82.0  | 35.44  | 89.33    | 0.3949 | -0.1334 | 156.6    | 24 520           | -1 520c          | Gm   |
| 15 475           | 34 574           | 58.99 | -82.35 | 41.46  | 92.2     | 0.4159 | -0.1026 | 153.2    | 25 529           | -1 529c          |      |
| 16 480           | 36 580           | 62.08 | -81.09 | 47.31  | 93.88    | 0.4517 | -0.0789 | 149.7    | 27 536           | -1 536c          |      |
| 17 485           | 38 592           | 68.99 | -73.25 | 56.13  | 92.28    | 0.5496 | -0.0583 | 142.5    | 29 547           | -1 547c          |      |
| 17 490           | -1 489c          | 86.27 | -24.86 | 72.7   | 76.83    | 0.859  | -0.0467 | 108.8    | 33 566           | 11 456           | max  |
| 19 495           | -1 495c          | 84.12 | -19.97 | 73.59  | 76.26    | 0.8793 | -0.0338 | 105.1    | 33 567           | 12 462           |      |
| 19 500           | -1 499c          | 84.12 | -19.97 | 73.59  | 76.26    | 0.8793 | -0.0338 | 105.1    | 33 567           | 12 462           |      |
| 21 510           | -1 509c          | 80.75 | -11.84 | 72.11  | 73.08    | 0.9155 | -0.0265 | 99.3     | 33 569           | 13 467           |      |
| 24 520           | -1 520c          | 72.63 | 6.34   | 65.55  | 65.86    | 1.0092 | -0.0228 | 84.4     | 34 573           | 14 474           | Ym   |
| 26 530           | -1 530c          | 65.55 | 20.16  | 59.11  | 62.45    | 1.0973 | -0.0231 | 71.1     | 35 576           | 15 477           |      |
| 27 540           | -1 539c          | 61.69 | 26.89  | 55.51  | 61.69    | 1.1486 | -0.0238 | 64.1     | 35 578           | 15 479           |      |
| 28 545           | -1 544c          | 57.71 | 33.25  | 51.76  | 61.52    | 1.2047 | -0.025  | 57.2     | 36 580           | 16 480           |      |
| 30 550           | -1 550c          | 49.55 | 44.19  | 44.01  | 62.37    | 1.3309 | -0.0285 | 44.8     | 37 585           | 16 482           |      |
| 30 555           | -1 554c          | 49.55 | 44.19  | 44.01  | 62.37    | 1.3309 | -0.0285 | 44.8     | 37 585           | 16 482           |      |
| 32 560           | -1 560c          | 41.43 | 51.79  | 36.25  | 63.22    | 1.4742 | -0.0338 | 34.9     | 38 590           | 16 484           |      |
| 32 564           | 1 405            | 46.46 | 53.39  | 33.72  | 63.15    | 1.4339 | -0.0934 | 32.2     | 38 591           | 16 484           | Rm   |
| 32 564           | 6 435            | 45.94 | 61.78  | 17.18  | 64.13    | 1.5122 | -0.2341 | 15.5     | 44 620           | 17 488           |      |
| 33 565           | 9 450            | 45.78 | 71.06  | -2.96  | 71.12    | 1.5951 | -0.4097 | 357.6    | -1 494c          | 18 494           |      |
| 33 567           | 11 460           | 44.8  | 76.9   | -17.46 | 78.86    | 1.6609 | -0.5397 | 347.2    | -1 502c          | 20 502           |      |
| 33 568           | 13 465           | 44.19 | 80.88  | -29.98 | 86.26    | 1.7063 | -0.6552 | 339.6    | -1 513c          | 22 513           |      |
| 34 570           | 14 470           | 43.38 | 81.98  | -35.43 | 89.31    | 1.7302 | -0.7105 | 336.6    | -1 520c          | 24 520           | Mm   |
| 34 574           | 15 475           | 41.0  | 82.33  | -41.45 | 92.17    | 1.7775 | -0.7882 | 333.2    | -1 529c          | 25 529           |      |
| 36 580           | 16 480           | 37.91 | 81.06  | -47.29 | 93.85    | 1.8294 | -0.8827 | 329.7    | -1 536c          | 27 536           |      |
| 38 592           | 17 485           | 31.0  | 73.22  | -56.11 | 92.25    | 1.9189 | -1.1077 | 322.5    | -1 547c          | 29 547           |      |
| -1 489c          | 17 490           | 13.72 | 24.84  | -72.65 | 76.78    | 1.6982 | -2.5011 | 288.8    | 11 456           | 33 566           | min  |
| -1 495c          | 19 495           | 15.87 | 19.95  | -73.55 | 76.21    | 1.4773 | -2.2375 | 285.1    | 12 462           | 33 567           |      |
| -1 499c          | 19 500           | 15.87 | 19.95  | -73.55 | 76.21    | 1.4773 | -2.2375 | 285.1    | 12 462           | 33 567           |      |
| -1 509c          | 21 510           | 19.24 | 11.84  | -72.08 | 73.04    | 1.2204 | -1.8818 | 279.3    | 13 467           | 33 569           |      |
| -1 520c          | 24 520           | 27.36 | -6.34  | -65.53 | 65.84    | 0.8815 | -1.3419 | 264.4    | 14 474           | 34 573           | Bm   |
| -1 530c          | 26 530           | 34.44 | -20.16 | -59.1  | 62.44    | 0.7401 | -1.0701 | 251.1    | 15 477           | 35 576           |      |
| -1 539c          | 27 540           | 38.3  | -26.88 | -55.5  | 61.67    | 0.6934 | -0.9635 | 244.1    | 15 479           | 35 578           |      |
| -1 544c          | 28 545           | 42.28 | -33.24 | -51.75 | 61.51    | 0.6598 | -0.8734 | 237.2    | 16 480           | 36 580           |      |
| -1 550c          | 30 550           | 50.44 | -44.18 | -44.0  | 62.36    | 0.6239 | -0.7327 | 224.8    | 16 482           | 37 585           |      |
| -1 554c          | 30 555           | 50.44 | -44.18 | -44.0  | 62.36    | 0.6239 | -0.7327 | 224.8    | 16 482           | 37 585           |      |
| -1 560c          | 32 560           | 58.56 | -51.79 | -36.25 | 63.22    | 0.6205 | -0.6314 | 214.9    | 16 484           | 38 590           |      |
| W0 380           | 770              | 90.0  | 0.0    | 0.0    | 0.0      | 0.9742 | -0.3838 | 0.0      | $B_c=1,000$      |                  |      |
| N0 380           | 770              | 3.6   | 0.0    | 0.0    | 0.0      | 0.9742 | -0.3838 | 0.0      | $x_c=0,000$      |                  |      |

| Ostwald optimal colours (o), maximum (m) $C_{AB}$ for P50, $Y_N=0$ , $Y_W=90$ , $Y_m=520\_770$ |                  |         |        |        |          |        |         |          |                  |                  |         |     |  |
|------------------------------------------------------------------------------------------------|------------------|---------|--------|--------|----------|--------|---------|----------|------------------|------------------|---------|-----|--|
| $i_1, \lambda_1$                                                                               | $i_2, \lambda_2$ | $Y$     | $A$    | $B$    | $C_{AB}$ | $a$    | $b$     | $h_{xy}$ | $i_d, \lambda_d$ | $i_c, \lambda_c$ | Code    |     |  |
| 0                                                                                              | 405              | 33 565  | 52.86  | -55.33 | -31.51   | 63.67  | 0.5622  | -0.5843  | 209.6            | 17 485           | 38 592  | Cm  |  |
| 7                                                                                              | 435              | 33 565  | 53.24  | -65.38 | -11.15   | 66.33  | 0.4897  | -0.4296  | 189.6            | 18 490           | -1 490c |     |  |
| 9                                                                                              | 450              | 33 566  | 54.01  | -71.22 | 1.64     | 71.24  | 0.4534  | -0.3337  | 178.6            | 19 495           | -1 495c |     |  |
| 11                                                                                             | 460              | 33 568  | 54.89  | -76.51 | 14.64    | 77.9   | 0.4233  | -0.2392  | 169.1            | 20 502           | -1 502c |     |  |
| 12                                                                                             | 465              | 33 569  | 55.73  | -78.85 | 21.13    | 81.63  | 0.415   | -0.1942  | 164.9            | 21 507           | -1 507c |     |  |
| 14                                                                                             | 470              | 34 571  | 56.07  | -81.01 | 30.87    | 86.69  | 0.4031  | -0.1257  | 159.1            | 24 520           | -1 520c | Gm  |  |
| 15                                                                                             | 475              | 34 574  | 58.2   | -81.36 | 36.17    | 89.04  | 0.4218  | -0.0973  | 156.0            | 25 528           | -1 528c |     |  |
| 16                                                                                             | 480              | 35 579  | 61.34  | -80.11 | 41.57    | 90.25  | 0.4585  | -0.0748  | 152.5            | 27 536           | -1 536c |     |  |
| 16                                                                                             | 485              | 37 589  | 67.88  | -75.48 | 47.21    | 89.03  | 0.5361  | -0.0676  | 147.9            | 28 544           | -1 544c |     |  |
| 17                                                                                             | 490              | 47 636  | 83.91  | -33.01 | 63.13    | 71.24  | 0.8235  | -0.0449  | 117.6            | 33 565           | -1 565c |     |  |
| 19                                                                                             | 495              | -1 495c | 84.54  | -17.25 | 66.46    | 68.66  | 0.8993  | -0.0314  | 104.5            | 33 568           | 12 462  | max |  |
| 20                                                                                             | 500              | -1 500c | 83.11  | -13.78 | 66.17    | 67.59  | 0.9146  | -0.0274  | 101.7            | 33 569           | 13 465  |     |  |
| 21                                                                                             | 510              | -1 509c | 81.32  | -9.44  | 65.35    | 66.03  | 0.9344  | -0.0244  | 98.2             | 34 570           | 13 468  |     |  |
| 24                                                                                             | 520              | -1 520c | 73.48  | 8.26   | 59.75    | 60.32  | 1.0259  | -0.0206  | 82.1             | 34 574           | 14 474  | Ym  |  |
| 26                                                                                             | 530              | -1 530c | 66.55  | 21.88  | 54.11    | 58.37  | 1.1124  | -0.0207  | 67.9             | 35 577           | 15 478  |     |  |
| 28                                                                                             | 540              | -1 540c | 58.82  | 34.91  | 47.59    | 59.03  | 1.2183  | -0.0222  | 53.7             | 36 581           | 16 481  |     |  |
| 28                                                                                             | 545              | -1 544c | 58.82  | 34.91  | 47.59    | 59.03  | 1.2183  | -0.0222  | 53.7             | 36 581           | 16 481  |     |  |
| 30                                                                                             | 550              | -1 550c | 50.71  | 45.92  | 40.65    | 61.33  | 1.3431  | -0.0252  | 41.5             | 37 585           | 16 483  |     |  |
| 30                                                                                             | 555              | -1 554c | 50.71  | 45.92  | 40.65    | 61.33  | 1.3431  | -0.0252  | 41.5             | 37 585           | 16 483  |     |  |
| 32                                                                                             | 560              | -1 560c | 42.57  | 53.68  | 33.65    | 63.35  | 1.4852  | -0.0297  | 32.0             | 38 590           | 17 485  |     |  |
| 33                                                                                             | 565              | 0 405   | 47.13  | 55.33  | 31.51    | 63.68  | 1.4505  | -0.0784  | 29.6             | 38 592           | 17 485  | Rm  |  |
| 33                                                                                             | 565              | 7 435   | 46.75  | 65.38  | 11.15    | 66.32  | 1.5403  | -0.2504  | 9.6              | -1 490c          | 18 490  |     |  |
| 33                                                                                             | 566              | 9 450   | 45.98  | 71.21  | -1.64    | 71.23  | 1.6004  | -0.3601  | 358.6            | -1 495c          | 19 495  |     |  |
| 33                                                                                             | 568              | 11 460  | 45.1   | 76.5   | -14.63   | 77.89  | 1.6594  | -0.4757  | 349.1            | -1 502c          | 20 502  |     |  |
| 33                                                                                             | 569              | 12 465  | 44.26  | 78.83  | -21.12   | 81.62  | 1.6934  | -0.5368  | 344.9            | -1 507c          | 21 507  |     |  |
| 34                                                                                             | 571              | 14 470  | 43.92  | 80.99  | -30.86   | 86.67  | 1.7185  | -0.6269  | 339.1            | -1 520c          | 24 520  | Mm  |  |
| 34                                                                                             | 574              | 15 475  | 41.79  | 81.33  | -36.16   | 89.01  | 1.7594  | -0.692   | 336.0            | -1 528c          | 25 528  |     |  |
| 35                                                                                             | 579              | 16 480  | 38.65  | 80.08  | -41.55   | 90.22  | 1.8096  | -0.7759  | 332.5            | -1 536c          | 27 536  |     |  |
| 37                                                                                             | 589              | 16 485  | 32.11  | 75.45  | -47.2    | 89.0   | 1.9206  | -0.9337  | 327.9            | -1 544c          | 28 544  |     |  |
| 47                                                                                             | 636              | 17 490  | 16.08  | 32.99  | -63.09   | 71.2   | 1.8015  | -1.9149  | 297.6            | -1 565c          | 33 565  |     |  |
| -1 495c                                                                                        | 19 495           | 15.45   | 17.24  | -66.42 | 68.62    | 1.4272 | -2.0652 | 284.5    | 12 462           | 33 568           | min     |     |  |
| -1 500c                                                                                        | 20 500           | 16.88   | 13.77  | -66.14 | 67.55    | 1.3073 | -1.9129 | 281.7    | 13 465           | 33 569           |         |     |  |
| -1 509c                                                                                        | 21 510           | 18.67   | 9.44   | -65.32 | 66.0     | 1.1831 | -1.7449 | 278.2    | 13 468           | 34 570           |         |     |  |
| -1 520c                                                                                        | 24 520           | 26.51   | -8.26  | -59.73 | 60.3     | 0.8562 | -1.2469 | 262.1    | 14 474           | 34 574           | Bm      |     |  |
| -1 530c                                                                                        | 26 530           | 33.44   | -21.88 | -54.1  | 58.35    | 0.7192 | -0.9929 | 247.9    | 15 478           | 35 577           |         |     |  |
| -1 540c                                                                                        | 28 540           | 41.17   | -34.9  | -47.59 | 59.02    | 0.6418 | -0.8082 | 233.7    | 16 481           | 36 581           |         |     |  |
| -1 544c                                                                                        | 28 545           | 41.17   | -34.9  | -47.59 | 59.02    | 0.6418 | -0.8082 | 233.7    | 16 481           | 36 581           |         |     |  |
| -1 550c                                                                                        | 30 550           | 49.28   | -45.91 | -40.65 | 61.33    | 0.6082 | -0.6758 | 221.5    | 16 483           | 37 585           |         |     |  |
| -1 554c                                                                                        | 30 555           | 49.28   | -45.91 | -40.65 | 61.33    | 0.6082 | -0.6758 | 221.5    | 16 483           | 37 585           |         |     |  |
| -1 560c                                                                                        | 32 560           | 57.42   | -53.67 | -33.65 | 63.35    | 0.607  | -0.5803 | 212.0    | 17 485           | 38 590           |         |     |  |
| W0                                                                                             | 380              | 770     | 90.0   | 0.0    | 0.0      | 0.0    | 0.9809  | -0.3459  | 0.0              | $B_c=1,000$      |         |     |  |
| N0                                                                                             | 380              | 770     | 3.6    | 0.0    | 0.0      | 0.0    | 0.9809  | -0.3459  | 0.0              | $x_c=0,000$      |         |     |  |

**Ostwald optimal colours (o), maximum (m)  $C_{AB}$  for P45,  $Y_N=0$ ,  $Y_W=90$ ,  $Y_m=520\_770$**

| $i_1, \lambda_1$ | $i_2, \lambda_2$ | $Y$   | $A$    | $B$    | $C_{AB}$ | $a$    | $b$     | $h_{xy}$ | $i_d, \lambda_d$ | $i_c, \lambda_c$ | Code |
|------------------|------------------|-------|--------|--------|----------|--------|---------|----------|------------------|------------------|------|
| 1 405            | 33 566           | 52.74 | −58.24 | −27.46 | 64.39    | 0.5501 | −0.5125 | 205.2    | 17 487           | 38 593           | Cm   |
| 7 435            | 33 567           | 53.09 | −66.54 | −10.68 | 67.39    | 0.4904 | −0.3847 | 189.1    | 18 491           | −1 491c          |      |
| 10 450           | 33 568           | 53.63 | −73.81 | 5.63   | 74.02    | 0.4412 | −0.2621 | 175.6    | 19 499           | −1 499c          |      |
| 12 460           | 33 569           | 54.32 | −77.93 | 16.64  | 79.69    | 0.4179 | −0.1816 | 167.9    | 21 507           | −1 507c          |      |
| 13 465           | 34 570           | 54.38 | −79.27 | 21.3   | 82.08    | 0.4087 | −0.1475 | 164.9    | 22 512           | −1 512c          |      |
| 13 470           | 34 571           | 55.8  | −79.52 | 22.37  | 82.61    | 0.4217 | −0.1438 | 164.2    | 22 514           | −1 514c          | Gm   |
| 15 475           | 34 574           | 57.32 | −80.44 | 30.56  | 86.05    | 0.4304 | −0.0909 | 159.1    | 25 528           | −1 528c          |      |
| 15 480           | 35 578           | 60.46 | −80.03 | 32.94  | 86.54    | 0.4623 | −0.0862 | 157.6    | 26 532           | −1 532c          |      |
| 17 485           | 37 587           | 64.69 | −75.07 | 40.52  | 85.3     | 0.5276 | −0.0536 | 151.6    | 28 544           | −1 544c          |      |
| 17 490           | 42 611           | 77.39 | −52.64 | 50.16  | 72.71    | 0.7196 | −0.0449 | 136.3    | 31 559           | −1 559c          |      |
| 19 495           | −1 495c          | 85.02 | −14.31 | 58.55  | 60.27    | 0.9244 | −0.0287 | 103.7    | 33 569           | 12 463           | max  |
| 20 500           | −1 500c          | 83.68 | −11.01 | 58.42  | 59.45    | 0.9391 | −0.0249 | 100.6    | 34 570           | 13 466           |      |
| 22 510           | −1 510c          | 79.89 | −1.85  | 56.73  | 56.76    | 0.9824 | −0.0201 | 91.8     | 34 572           | 14 471           |      |
| 24 520           | −1 520c          | 74.47 | 10.28  | 53.24  | 54.22    | 1.047  | −0.0182 | 79.0     | 34 574           | 15 475           | Ym   |
| 26 530           | −1 530c          | 67.75 | 23.68  | 48.46  | 53.94    | 1.1315 | −0.0181 | 63.9     | 35 578           | 15 479           |      |
| 27 540           | −1 539c          | 64.04 | 30.31  | 45.74  | 54.87    | 1.1811 | −0.0185 | 56.4     | 35 579           | 16 480           |      |
| 29 545           | −1 545c          | 56.19 | 42.54  | 39.87  | 58.31    | 1.2946 | −0.0203 | 43.1     | 36 583           | 16 483           |      |
| 29 550           | −1 549c          | 56.19 | 42.54  | 39.87  | 58.31    | 1.2946 | −0.0203 | 43.1     | 36 583           | 16 483           |      |
| 30 555           | −1 554c          | 52.13 | 47.79  | 36.82  | 60.33    | 1.3584 | −0.0216 | 37.6     | 37 585           | 16 484           |      |
| 31 560           | −1 559c          | 48.05 | 52.25  | 33.73  | 62.2     | 1.4267 | −0.0233 | 32.8     | 37 588           | 17 485           |      |
| 33 566           | 1 405            | 47.25 | 58.24  | 27.46  | 64.39    | 1.4848 | −0.0716 | 25.2     | 38 593           | 17 487           | Rm   |
| 33 567           | 7 435            | 46.9  | 66.53  | 10.68  | 67.39    | 1.5591 | −0.213  | 9.1      | −1 491c          | 18 491           |      |
| 33 568           | 10 450           | 46.36 | 73.8   | −5.63  | 74.01    | 1.6284 | −0.3528 | 355.6    | −1 499c          | 19 499           |      |
| 33 569           | 12 460           | 45.67 | 77.91  | −16.64 | 79.67    | 1.6741 | −0.4499 | 347.9    | −1 507c          | 21 507           |      |
| 34 570           | 13 465           | 45.61 | 79.25  | −21.29 | 82.07    | 1.6868 | −0.4909 | 344.9    | −1 512c          | 22 512           |      |
| 34 571           | 13 470           | 44.19 | 79.51  | −22.37 | 82.59    | 1.7114 | −0.5067 | 344.2    | −1 514c          | 22 514           | Mm   |
| 34 574           | 15 475           | 42.67 | 80.42  | −30.55 | 86.03    | 1.7456 | −0.5905 | 339.1    | −1 528c          | 25 528           |      |
| 35 578           | 15 480           | 39.53 | 80.01  | −32.93 | 86.52    | 1.8013 | −0.6374 | 337.6    | −1 532c          | 26 532           |      |
| 37 587           | 17 485           | 35.3  | 75.04  | −40.5  | 85.28    | 1.8421 | −0.7632 | 331.6    | −1 544c          | 28 544           |      |
| 42 611           | 17 490           | 22.6  | 52.62  | −50.14 | 72.68    | 1.9229 | −1.1914 | 316.3    | −1 559c          | 31 559           |      |
| −1 495c          | 19 495           | 14.97 | 14.3   | −58.52 | 60.24    | 1.3738 | −1.8674 | 283.7    | 12 463           | 33 569           | min  |
| −1 500c          | 20 500           | 16.31 | 11.01  | −58.39 | 59.42    | 1.2617 | −1.7356 | 280.6    | 13 466           | 34 570           |      |
| −1 510c          | 22 510           | 20.1  | 1.85   | −56.71 | 56.74    | 1.0286 | −1.4324 | 271.8    | 14 471           | 34 572           |      |
| −1 520c          | 24 520           | 25.52 | −10.28 | −53.22 | 54.21    | 0.8305 | −1.1384 | 259.0    | 15 475           | 34 574           | Bm   |
| −1 530c          | 26 530           | 32.24 | −23.68 | −48.45 | 53.93    | 0.6979 | −0.9054 | 243.9    | 15 479           | 35 578           |      |
| −1 539c          | 27 540           | 35.95 | −30.31 | −45.73 | 54.87    | 0.6544 | −0.813  | 236.4    | 16 480           | 35 579           |      |
| −1 545c          | 29 545           | 43.8  | −42.54 | −39.87 | 58.3     | 0.6033 | −0.6682 | 223.1    | 16 483           | 36 583           |      |
| −1 549c          | 29 550           | 43.8  | −42.54 | −39.87 | 58.3     | 0.6033 | −0.6682 | 223.1    | 16 483           | 36 583           |      |
| −1 554c          | 30 555           | 47.86 | −47.79 | −36.82 | 60.33    | 0.5923 | −0.6119 | 217.6    | 16 484           | 37 585           |      |
| −1 559c          | 31 560           | 51.94 | −52.25 | −33.73 | 62.19    | 0.5894 | −0.5639 | 212.8    | 17 485           | 37 588           |      |
| W0 380           | 770              | 90.0  | 0.0    | 0.0    | 0.0      | 0.9917 | −0.3042 | 0.0      | $B_c=1,000$      |                  |      |
| N0 380           | 770              | 3.6   | 0.0    | 0.0    | 0.0      | 0.9917 | −0.3042 | 0.0      | $x_c=0,000$      |                  |      |

**Ostwald optimal colours (o), maximum (m)  $C_{AB}$  for P40,  $Y_N=0$ ,  $Y_W=90$ ,  $Y_m=520\_770$**

| $i_1, \lambda_1$ | $i_2, \lambda_2$ | $Y$   | $A$    | $B$    | $C_{AB}$ | $a$    | $b$     | $h_{xy}$ | $i_d, \lambda_d$ | $i_c, \lambda_c$ | Code |
|------------------|------------------|-------|--------|--------|----------|--------|---------|----------|------------------|------------------|------|
| 0 405            | 33 568           | 52.58 | -61.26 | -23.82 | 65.73    | 0.543  | -0.4399 | 201.2    | 17 488           | 38 594           | Cm   |
| 7 435            | 33 568           | 52.87 | -68.13 | -10.01 | 68.86    | 0.4936 | -0.3344 | 188.3    | 18 493           | -1 493c          |      |
| 10 450           | 33 569           | 53.33 | -74.23 | 3.59   | 74.32    | 0.4523 | -0.2317 | 177.2    | 19 499           | -1 499c          |      |
| 12 460           | 34 570           | 53.28 | -77.42 | 12.55  | 78.43    | 0.4278 | -0.1644 | 170.7    | 21 507           | -1 507c          |      |
| 13 465           | 34 571           | 53.83 | -78.58 | 16.9   | 80.38    | 0.4251 | -0.133  | 167.8    | 22 512           | -1 512c          |      |
| 14 470           | 34 572           | 54.75 | -79.33 | 20.89  | 82.04    | 0.4294 | -0.106  | 165.2    | 23 519           | -1 519c          | Gm   |
| 14 475           | 34 574           | 56.7  | -79.77 | 22.15  | 82.78    | 0.4463 | -0.1023 | 164.4    | 24 522           | -1 522c          |      |
| 15 480           | 35 578           | 58.85 | -79.36 | 26.33  | 83.62    | 0.4696 | -0.0797 | 161.6    | 26 531           | -1 531c          |      |
| 17 485           | 37 585           | 62.11 | -76.01 | 32.33  | 82.61    | 0.5194 | -0.0504 | 156.9    | 28 543           | -1 543c          |      |
| 17 490           | 40 600           | 71.73 | -63.89 | 38.54  | 74.62    | 0.6527 | -0.0437 | 148.8    | 30 554           | -1 554c          |      |
| 19 495           | -1 495c          | 85.57 | -11.18 | 49.84  | 51.08    | 0.9567 | -0.0256 | 102.6    | 34 571           | 12 464           | max  |
| 20 500           | -1 500c          | 84.33 | -8.08  | 49.86  | 50.51    | 0.9706 | -0.0221 | 99.2     | 34 571           | 13 467           |      |
| 21 510           | -1 509c          | 82.76 | -4.16  | 49.48  | 49.66    | 0.9889 | -0.0195 | 94.8     | 34 572           | 13 469           |      |
| 24 520           | -1 520c          | 75.67 | 12.33  | 45.96  | 47.59    | 1.0742 | -0.0157 | 74.9     | 35 575           | 15 476           | Ym   |
| 26 530           | -1 530c          | 69.21 | 25.48  | 42.11  | 49.22    | 1.1562 | -0.0153 | 58.8     | 35 578           | 16 480           |      |
| 27 540           | -1 539c          | 65.61 | 32.07  | 39.88  | 51.17    | 1.2045 | -0.0155 | 51.1     | 36 580           | 16 481           |      |
| 29 545           | -1 545c          | 57.91 | 44.38  | 35.0   | 56.53    | 1.3156 | -0.0168 | 38.2     | 36 584           | 16 484           |      |
| 29 550           | -1 549c          | 57.91 | 44.38  | 35.0   | 56.53    | 1.3156 | -0.0168 | 38.2     | 36 584           | 16 484           |      |
| 31 555           | -1 555c          | 49.83 | 54.37  | 29.82  | 62.01    | 1.4455 | -0.0192 | 28.7     | 37 588           | 17 486           |      |
| 32 560           | -1 560c          | 45.75 | 58.08  | 27.2   | 64.13    | 1.5168 | -0.0208 | 25.0     | 38 591           | 17 487           |      |
| 33 568           | 0 405            | 47.41 | 61.26  | 23.82  | 65.73    | 1.5259 | -0.0576 | 21.2     | 38 594           | 17 488           | Rm   |
| 33 568           | 7 435            | 47.12 | 68.13  | 10.01  | 68.86    | 1.5873 | -0.1736 | 8.3      | -1 493c          | 18 493           |      |
| 33 569           | 10 450           | 46.66 | 74.22  | -3.59  | 74.31    | 1.6453 | -0.2894 | 357.2    | -1 499c          | 19 499           |      |
| 34 570           | 12 460           | 46.71 | 77.4   | -12.54 | 78.41    | 1.6719 | -0.3661 | 350.7    | -1 507c          | 21 507           |      |
| 34 571           | 13 465           | 46.16 | 78.57  | -16.9  | 80.37    | 1.6899 | -0.4051 | 347.8    | -1 512c          | 22 512           |      |
| 34 572           | 14 470           | 45.24 | 79.32  | -20.89 | 82.02    | 1.7102 | -0.4434 | 345.2    | -1 519c          | 23 519           | Mm   |
| 34 574           | 14 475           | 43.29 | 79.75  | -22.15 | 82.77    | 1.7458 | -0.4633 | 344.4    | -1 522c          | 24 522           |      |
| 35 578           | 15 480           | 41.14 | 79.34  | -26.32 | 83.6     | 1.7805 | -0.5146 | 341.6    | -1 531c          | 26 531           |      |
| 37 585           | 17 485           | 37.88 | 75.99  | -32.32 | 82.58    | 1.8114 | -0.5999 | 336.9    | -1 543c          | 28 543           |      |
| 40 600           | 17 490           | 28.26 | 63.87  | -38.53 | 74.59    | 1.913  | -0.804  | 328.8    | -1 554c          | 30 554           |      |
| -1 495c          | 19 495           | 14.42 | 11.17  | -49.82 | 51.06    | 1.3189 | -1.6404 | 282.6    | 12 464           | 34 571           | min  |
| -1 500c          | 20 500           | 15.66 | 8.08   | -49.84 | 50.49    | 1.2155 | -1.5316 | 279.2    | 13 467           | 34 571           |      |
| -1 509c          | 21 510           | 17.23 | 4.16   | -49.46 | 49.64    | 1.1056 | -1.4065 | 274.8    | 13 469           | 34 572           |      |
| -1 520c          | 24 520           | 24.32 | -12.33 | -45.95 | 47.58    | 0.8062 | -1.0143 | 254.9    | 15 476           | 35 575           | Bm   |
| -1 530c          | 26 530           | 30.78 | -25.47 | -42.1  | 49.21    | 0.6779 | -0.8058 | 238.8    | 16 480           | 35 578           |      |
| -1 539c          | 27 540           | 34.38 | -32.07 | -39.87 | 51.17    | 0.6359 | -0.7225 | 231.1    | 16 481           | 36 580           |      |
| -1 545c          | 29 545           | 42.08 | -44.38 | -35.0  | 56.52    | 0.5871 | -0.5913 | 218.2    | 16 484           | 36 584           |      |
| -1 549c          | 29 550           | 42.08 | -44.38 | -35.0  | 56.52    | 0.5871 | -0.5913 | 218.2    | 16 484           | 36 584           |      |
| -1 555c          | 31 555           | 50.16 | -54.37 | -29.82 | 62.01    | 0.5755 | -0.4965 | 208.7    | 17 486           | 37 588           |      |
| -1 560c          | 32 560           | 54.24 | -58.08 | -27.2  | 64.13    | 0.5807 | -0.4593 | 205.0    | 17 487           | 38 591           |      |
| W0 380           | 770              | 90.0  | 0.0    | 0.0    | 0.0      | 1.009  | -0.2586 | 0.0      | $B_c=1,000$      |                  |      |
| N0 380           | 770              | 3.6   | 0.0    | 0.0    | 0.0      | 1.009  | -0.2586 | 0.0      | $x_c=0,000$      |                  |      |

**Ostwald optimal colours (o), maximum (m)  $C_{AB}$  for P35,  $Y_N=0$ ,  $Y_W=90$ ,  $Y_m=520\_770$**

| $i_1, \lambda_1$ | $i_2, \lambda_2$ | $Y$   | $A$    | $B$    | $C_{AB}$ | $a$    | $b$     | $h_{xy}$ | $i_d, \lambda_d$ | $i_c, \lambda_c$ | Code |
|------------------|------------------|-------|--------|--------|----------|--------|---------|----------|------------------|------------------|------|
| 1 405            | 34 570           | 51.69 | −64.87 | −19.6  | 67.77    | 0.5343 | −0.3614 | 196.8    | 18 490           | 39 596           | Cm   |
| 7 435            | 34 570           | 51.92 | −69.87 | −9.41  | 70.5     | 0.4981 | −0.2822 | 187.6    | 18 494           | 47 638           |      |
| 9 450            | 34 571           | 52.37 | −73.08 | −2.3   | 73.11    | 0.4782 | −0.2272 | 181.8    | 19 498           | −1 498c          |      |
| 12 460           | 34 572           | 52.73 | −77.25 | 8.87   | 77.75    | 0.4504 | −0.1423 | 173.4    | 21 507           | −1 507c          |      |
| 12 465           | 34 572           | 53.37 | −77.43 | 9.21   | 77.98    | 0.4561 | −0.1406 | 173.2    | 21 508           | −1 508c          |      |
| 14 470           | 34 573           | 53.91 | −78.91 | 15.68  | 80.46    | 0.4509 | −0.0933 | 168.7    | 23 519           | −1 519c          | Gm   |
| 14 475           | 35 575           | 54.86 | −79.1  | 16.17  | 80.74    | 0.4596 | −0.0917 | 168.4    | 24 520           | −1 520c          |      |
| 15 480           | 35 578           | 57.07 | −78.92 | 19.69  | 81.34    | 0.4832 | −0.0716 | 165.9    | 26 530           | −1 530c          |      |
| 17 485           | 36 583           | 59.83 | −76.21 | 24.51  | 80.06    | 0.5269 | −0.0458 | 162.1    | 28 542           | −1 542c          |      |
| 18 490           | 38 593           | 66.26 | −68.33 | 29.02  | 74.24    | 0.6239 | −0.0344 | 156.9    | 30 552           | −1 552c          |      |
| 19 495           | 52 661           | 85.38 | −11.45 | 39.95  | 41.56    | 0.9827 | −0.0224 | 105.9    | 34 572           | 12 460           | max  |
| 20 500           | −1 500c          | 85.09 | −5.08  | 40.54  | 40.85    | 1.0125 | −0.0191 | 97.1     | 34 573           | 13 468           |      |
| 22 510           | −1 510c          | 81.87 | 3.06   | 39.86  | 39.98    | 1.0513 | −0.0149 | 85.6     | 34 574           | 14 473           |      |
| 23 520           | −1 519c          | 79.68 | 8.35   | 39.03  | 39.91    | 1.0783 | −0.0137 | 77.9     | 35 576           | 15 475           | Ym   |
| 26 530           | −1 530c          | 71.0  | 27.11  | 35.01  | 44.28    | 1.1891 | −0.0124 | 52.2     | 35 579           | 16 481           |      |
| 27 540           | −1 539c          | 67.55 | 33.66  | 33.3   | 47.35    | 1.2357 | −0.0125 | 44.6     | 36 581           | 16 483           |      |
| 29 545           | −1 545c          | 60.08 | 46.12  | 29.48  | 54.74    | 1.3435 | −0.0133 | 32.5     | 37 585           | 17 486           |      |
| 29 550           | −1 549c          | 60.08 | 46.12  | 29.48  | 54.74    | 1.3435 | −0.0133 | 32.5     | 37 585           | 17 486           |      |
| 31 555           | −1 555c          | 52.1  | 56.52  | 25.35  | 61.95    | 1.4703 | −0.015  | 24.1     | 37 589           | 17 488           |      |
| 32 560           | −1 560c          | 48.02 | 60.5   | 23.23  | 64.81    | 1.5403 | −0.0161 | 21.0     | 38 591           | 17 489           |      |
| 34 570           | 1 405            | 48.3  | 64.87  | 19.6   | 67.77    | 1.5735 | −0.0473 | 16.8     | 39 596           | 18 490           | Rm   |
| 34 570           | 7 435            | 48.07 | 69.86  | 9.41   | 70.49    | 1.6176 | −0.1313 | 7.6      | 47 638           | 18 494           |      |
| 34 571           | 9 450            | 47.62 | 73.07  | 2.3    | 73.11    | 1.6501 | −0.1903 | 1.8      | −1 498c          | 19 498           |      |
| 34 572           | 12 460           | 47.26 | 77.23  | −8.87  | 77.74    | 1.69   | −0.2847 | 353.4    | −1 507c          | 21 507           |      |
| 34 572           | 12 465           | 46.62 | 77.42  | −9.21  | 77.97    | 1.7006 | −0.2887 | 353.2    | −1 508c          | 21 508           |      |
| 34 573           | 14 470           | 46.08 | 78.9   | −15.67 | 80.44    | 1.7213 | −0.3457 | 348.7    | −1 519c          | 23 519           | Mm   |
| 35 575           | 14 475           | 45.13 | 79.09  | −16.17 | 80.72    | 1.7373 | −0.353  | 348.4    | −1 520c          | 24 520           |      |
| 35 578           | 15 480           | 42.92 | 78.9   | −19.68 | 81.32    | 1.7716 | −0.3931 | 345.9    | −1 530c          | 26 530           |      |
| 36 583           | 17 485           | 40.16 | 76.19  | −24.5  | 80.04    | 1.7953 | −0.4537 | 342.1    | −1 542c          | 28 542           |      |
| 38 593           | 18 490           | 33.73 | 68.31  | −29.02 | 74.22    | 1.8463 | −0.5537 | 336.9    | −1 552c          | 30 552           |      |
| 52 661           | 19 495           | 14.61 | 11.44  | −39.94 | 41.55    | 1.3497 | −1.3026 | 285.9    | 12 460           | 34 572           | min  |
| −1 500c          | 20 500           | 14.9  | 5.08   | −40.52 | 40.84    | 1.1728 | −1.2974 | 277.1    | 13 468           | 34 573           |      |
| −1 510c          | 22 510           | 18.12 | −3.06  | −39.85 | 39.97    | 0.9687 | −1.0891 | 265.6    | 14 473           | 34 574           |      |
| −1 519c          | 23 520           | 20.31 | −8.35  | −39.02 | 39.9     | 0.8718 | −0.9778 | 257.9    | 15 475           | 35 576           | Bm   |
| −1 530c          | 26 530           | 28.99 | −27.11 | −35.01 | 44.28    | 0.6623 | −0.6927 | 232.2    | 16 481           | 35 579           |      |
| −1 539c          | 27 540           | 32.44 | −33.66 | −33.29 | 47.35    | 0.6213 | −0.6202 | 224.6    | 16 483           | 36 581           |      |
| −1 545c          | 29 545           | 39.91 | −46.12 | −29.48 | 54.74    | 0.5742 | −0.5051 | 212.5    | 17 486           | 37 585           |      |
| −1 549c          | 29 550           | 39.91 | −46.12 | −29.48 | 54.74    | 0.5742 | −0.5051 | 212.5    | 17 486           | 37 585           |      |
| −1 555c          | 31 555           | 47.89 | −56.52 | −25.35 | 61.95    | 0.5643 | −0.4214 | 204.1    | 17 488           | 37 589           |      |
| −1 560c          | 32 560           | 51.97 | −60.5  | −23.23 | 64.81    | 0.5707 | −0.3884 | 201.0    | 17 489           | 38 591           |      |
| W0 380           | 770              | 89.99 | 0.0    | 0.0    | 0.0      | 1.0364 | −0.2096 | 0.0      | $B_c=1,000$      |                  |      |
| N0 380           | 770              | 3.59  | 0.0    | 0.0    | 0.0      | 1.0364 | −0.2096 | 0.0      | $x_c=0,000$      |                  |      |

| Ostwald optimal colours (o), maximum (m) $C_{AB}$ for P30, $Y_N=0$ , $Y_W=90$ , $Y_m=520\_770$ |                  |       |        |        |          |        |         |          |                  |                  |      |  |  |
|------------------------------------------------------------------------------------------------|------------------|-------|--------|--------|----------|--------|---------|----------|------------------|------------------|------|--|--|
| $i_1, \lambda_1$                                                                               | $i_2, \lambda_2$ | $Y$   | $A$    | $B$    | $C_{AB}$ | $a$    | $b$     | $h_{xy}$ | $i_d, \lambda_d$ | $i_c, \lambda_c$ | Code |  |  |
| 0 405                                                                                          | 34 573           | 51.22 | -68.72 | -15.15 | 70.38    | 0.5434 | -0.2765 | 192.4    | 18 493           | 39 598           | Cm   |  |  |
| 6 435                                                                                          | 34 573           | 51.43 | -71.22 | -10.2  | 71.95    | 0.5261 | -0.2375 | 188.1    | 19 495           | 42 612           |      |  |  |
| 10 450                                                                                         | 34 573           | 51.68 | -75.66 | -0.31  | 75.66    | 0.4945 | -0.1605 | 180.2    | 20 502           | -1 502c          |      |  |  |
| 12 460                                                                                         | 34 574           | 52.01 | -77.74 | 5.37   | 77.92    | 0.4823 | -0.1168 | 176.0    | 21 508           | -1 508c          |      |  |  |
| 13 465                                                                                         | 34 574           | 52.35 | -78.54 | 8.08   | 78.96    | 0.48   | -0.0963 | 174.1    | 22 512           | -1 512c          |      |  |  |
| 14 470                                                                                         | 35 575           | 52.26 | -78.76 | 10.29  | 79.43    | 0.4773 | -0.0793 | 172.5    | 23 518           | -1 518c          | Gm   |  |  |
| 15 475                                                                                         | 35 576           | 53.17 | -78.75 | 12.54  | 79.74    | 0.4877 | -0.0637 | 170.9    | 25 525           | -1 525c          |      |  |  |
| 16 480                                                                                         | 35 579           | 54.74 | -78.39 | 14.69  | 79.76    | 0.5073 | -0.0507 | 169.3    | 26 533           | -1 533c          |      |  |  |
| 17 485                                                                                         | 36 582           | 56.86 | -76.94 | 16.75  | 78.74    | 0.5389 | -0.0403 | 167.7    | 28 540           | -1 540c          |      |  |  |
| 18 490                                                                                         | 37 589           | 61.42 | -72.77 | 19.51  | 75.34    | 0.6062 | -0.031  | 164.9    | 29 549           | -1 549c          |      |  |  |
| 19 495                                                                                         | 41 606           | 71.0  | -55.49 | 24.06  | 60.48    | 0.7675 | -0.0225 | 156.5    | 32 561           | -1 561c          |      |  |  |
| 20 500                                                                                         | -1 500c          | 85.97 | -2.17  | 30.6   | 30.68    | 1.07   | -0.0157 | 94.0     | 35 575           | 13 469           | max  |  |  |
| 21 510                                                                                         | -1 509c          | 84.73 | 1.13   | 30.62  | 30.64    | 1.0855 | -0.0136 | 87.8     | 35 576           | 14 472           |      |  |  |
| 24 520                                                                                         | -1 520c          | 78.86 | 15.82  | 29.17  | 33.18    | 1.1604 | -0.0101 | 61.5     | 35 578           | 15 479           | Ym   |  |  |
| 25 530                                                                                         | -1 529c          | 76.2  | 21.89  | 28.28  | 35.76    | 1.195  | -0.0097 | 52.2     | 36 580           | 16 481           |      |  |  |
| 28 540                                                                                         | -1 540c          | 66.53 | 41.21  | 24.72  | 48.06    | 1.3279 | -0.0095 | 30.9     | 36 584           | 17 486           |      |  |  |
| 29 545                                                                                         | -1 545c          | 62.86 | 47.43  | 23.31  | 52.85    | 1.3819 | -0.0098 | 26.1     | 37 586           | 17 488           |      |  |  |
| 30 550                                                                                         | -1 550c          | 59.03 | 53.23  | 21.82  | 57.53    | 1.4408 | -0.0102 | 22.2     | 37 588           | 17 489           |      |  |  |
| 31 555                                                                                         | -1 555c          | 55.07 | 58.42  | 20.28  | 61.84    | 1.5045 | -0.0108 | 19.1     | 38 590           | 18 490           |      |  |  |
| 32 560                                                                                         | -1 560c          | 51.03 | 62.81  | 18.69  | 65.54    | 1.5725 | -0.0116 | 16.5     | 38 592           | 18 491           |      |  |  |
| 34 573                                                                                         | 0 405            | 48.77 | 68.72  | 15.15  | 70.37    | 1.6437 | -0.0338 | 12.4     | 39 598           | 18 493           | Rm   |  |  |
| 34 573                                                                                         | 6 435            | 48.56 | 71.22  | 10.2   | 71.95    | 1.6667 | -0.0741 | 8.1      | 42 612           | 19 495           |      |  |  |
| 34 573                                                                                         | 10 450           | 48.31 | 75.65  | 0.31   | 75.65    | 1.7064 | -0.1555 | 0.2      | -1 502c          | 20 502           |      |  |  |
| 34 574                                                                                         | 12 460           | 47.98 | 77.73  | -5.37  | 77.91    | 1.7281 | -0.2029 | 356.0    | -1 508c          | 21 508           |      |  |  |
| 34 574                                                                                         | 13 465           | 47.64 | 78.53  | -8.08  | 78.95    | 1.7395 | -0.226  | 354.1    | -1 512c          | 22 512           |      |  |  |
| 35 575                                                                                         | 14 470           | 47.73 | 78.75  | -10.29 | 79.42    | 1.74   | -0.2444 | 352.5    | -1 518c          | 23 518           | Mm   |  |  |
| 35 576                                                                                         | 15 475           | 46.82 | 78.73  | -12.54 | 79.73    | 1.7527 | -0.2653 | 350.9    | -1 525c          | 25 525           |      |  |  |
| 35 579                                                                                         | 16 480           | 45.25 | 78.37  | -14.69 | 79.74    | 1.7729 | -0.288  | 349.3    | -1 533c          | 26 533           |      |  |  |
| 36 582                                                                                         | 17 485           | 43.13 | 76.92  | -16.74 | 78.72    | 1.7935 | -0.3134 | 347.7    | -1 540c          | 28 540           |      |  |  |
| 37 589                                                                                         | 18 490           | 38.57 | 72.75  | -19.51 | 75.32    | 1.8346 | -0.3605 | 344.9    | -1 549c          | 29 549           |      |  |  |
| 41 606                                                                                         | 19 495           | 28.99 | 55.47  | -24.06 | 60.47    | 1.8456 | -0.4901 | 336.5    | -1 561c          | 32 561           |      |  |  |
| -1 500c                                                                                        | 20 500           | 14.02 | 2.17   | -30.6  | 30.67    | 1.1422 | -1.0308 | 274.0    | 13 469           | 35 575           | min  |  |  |
| -1 509c                                                                                        | 21 510           | 15.26 | -1.13  | -30.61 | 30.63    | 1.0503 | -0.9601 | 267.8    | 14 472           | 35 576           |      |  |  |
| -1 520c                                                                                        | 24 520           | 21.13 | -15.82 | -29.16 | 33.18    | 0.7807 | -0.7102 | 241.5    | 15 479           | 35 578           | Bm   |  |  |
| -1 529c                                                                                        | 25 530           | 23.79 | -21.89 | -28.27 | 35.76    | 0.7121 | -0.6335 | 232.2    | 16 481           | 36 580           |      |  |  |
| -1 540c                                                                                        | 28 540           | 33.46 | -41.21 | -24.72 | 48.06    | 0.5875 | -0.4536 | 210.9    | 17 486           | 36 584           |      |  |  |
| -1 545c                                                                                        | 29 545           | 37.13 | -47.43 | -23.31 | 52.85    | 0.5692 | -0.4092 | 206.1    | 17 488           | 37 586           |      |  |  |
| -1 550c                                                                                        | 30 550           | 40.96 | -53.23 | -21.82 | 57.53    | 0.5603 | -0.3712 | 202.2    | 17 489           | 37 588           |      |  |  |
| -1 555c                                                                                        | 31 555           | 44.92 | -58.42 | -20.28 | 61.84    | 0.5599 | -0.3387 | 199.1    | 18 490           | 38 590           |      |  |  |
| -1 560c                                                                                        | 32 560           | 48.96 | -62.81 | -18.69 | 65.54    | 0.5669 | -0.3109 | 196.5    | 18 491           | 38 592           |      |  |  |
| W0 380                                                                                         | 770              | 90.0  | 0.0    | 0.0    | 0.0      | 1.0801 | -0.1581 | 0.0      | $B_c=1,000$      |                  |      |  |  |
| N0 380                                                                                         | 770              | 3.6   | 0.0    | 0.0    | 0.0      | 1.0801 | -0.1581 | 0.0      | $x_c=0,000$      |                  |      |  |  |

**Ostwald optimal colours (o), maximum (m)  $C_{AB}$  for P25,  $Y_N=0$ ,  $Y_W=90$ ,  $Y_m=520\_770$**

| $i_1, \lambda_1$ | $i_2, \lambda_2$ | $Y$   | $A$    | $B$    | $C_{AB}$ | $a$    | $b$     | $h_{xy}$ | $i_d, \lambda_d$ | $i_c, \lambda_c$ | Code |
|------------------|------------------|-------|--------|--------|----------|--------|---------|----------|------------------|------------------|------|
| 1 405            | 35 576           | 49.8  | -72.99 | -10.51 | 73.74    | 0.5653 | -0.1908 | 188.1    | 19 497           | 40 601           | Cm   |
| 6 435            | 35 576           | 49.94 | -74.35 | -7.78  | 74.76    | 0.556  | -0.1686 | 185.9    | 19 499           | 42 611           |      |
| 10 450           | 35 577           | 50.11 | -77.06 | -1.61  | 77.08    | 0.5364 | -0.1192 | 181.1    | 20 504           | -1 504c          |      |
| 11 460           | 35 577           | 50.41 | -77.81 | 0.31   | 77.81    | 0.5342 | -0.1038 | 179.7    | 21 506           | -1 506c          |      |
| 13 465           | 35 577           | 50.55 | -78.85 | 3.99   | 78.95    | 0.5276 | -0.0747 | 177.0    | 22 513           | -1 513c          |      |
| 14 470           | 35 578           | 50.92 | -79.15 | 5.68   | 79.35    | 0.5297 | -0.0617 | 175.8    | 23 518           | -1 518c          | Gm   |
| 15 475           | 35 579           | 51.52 | -79.24 | 7.2    | 79.57    | 0.5363 | -0.0504 | 174.8    | 25 525           | -1 525c          |      |
| 16 480           | 36 580           | 51.92 | -78.93 | 8.43   | 79.38    | 0.5435 | -0.0413 | 173.8    | 26 531           | -1 531c          |      |
| 17 485           | 36 582           | 53.69 | -77.94 | 9.82   | 78.56    | 0.5708 | -0.0331 | 172.8    | 27 539           | -1 539c          |      |
| 18 490           | 37 586           | 56.27 | -75.95 | 11.24  | 76.78    | 0.6116 | -0.0264 | 171.5    | 29 546           | -1 546c          |      |
| 18 495           | 38 594           | 62.51 | -71.25 | 12.89  | 72.4     | 0.6956 | -0.0238 | 169.7    | 30 553           | -1 553c          |      |
| 20 500           | 44 620           | 75.83 | -38.16 | 17.53  | 41.99    | 0.9502 | -0.0138 | 155.3    | 34 570           | -1 570c          |      |
| 21 510           | -1 509c          | 85.96 | 3.19   | 20.63  | 20.87    | 1.1664 | -0.0103 | 81.2     | 35 578           | 14 474           | max  |
| 24 520           | -1 520c          | 81.0  | 16.47  | 20.04  | 25.94    | 1.2329 | -0.0073 | 50.5     | 36 581           | 16 481           | Ym   |
| 25 530           | -1 529c          | 78.68 | 22.19  | 19.56  | 29.58    | 1.2643 | -0.0068 | 41.4     | 36 582           | 16 484           |      |
| 28 540           | -1 540c          | 69.94 | 41.18  | 17.48  | 44.74    | 1.387  | -0.0063 | 22.9     | 37 586           | 17 489           |      |
| 28 545           | -1 544c          | 69.94 | 41.18  | 17.48  | 44.74    | 1.387  | -0.0063 | 22.9     | 37 586           | 17 489           |      |
| 29 550           | -1 549c          | 66.52 | 47.59  | 16.61  | 50.4     | 1.4377 | -0.0064 | 19.2     | 37 588           | 18 491           |      |
| 30 555           | -1 554c          | 62.89 | 53.73  | 15.67  | 55.96    | 1.4932 | -0.0066 | 16.2     | 37 589           | 18 492           |      |
| 32 560           | -1 560c          | 55.14 | 64.38  | 13.64  | 65.81    | 1.6186 | -0.0073 | 11.9     | 38 594           | 18 494           |      |
| 35 576           | 1 405            | 50.19 | 72.98  | 10.51  | 73.74    | 1.7332 | -0.0225 | 8.1      | 40 601           | 19 497           | Rm   |
| 35 576           | 6 435            | 50.05 | 74.35  | 7.78   | 74.75    | 1.7457 | -0.0441 | 5.9      | 42 611           | 19 499           |      |
| 35 577           | 10 450           | 49.88 | 77.05  | 1.61   | 77.07    | 1.7694 | -0.0934 | 1.1      | -1 504c          | 20 504           |      |
| 35 577           | 11 460           | 49.58 | 77.8   | -0.31  | 77.8     | 1.7792 | -0.1088 | 359.7    | -1 506c          | 21 506           |      |
| 35 577           | 13 465           | 49.44 | 78.84  | -3.99  | 78.94    | 1.7894 | -0.1387 | 357.0    | -1 513c          | 22 513           |      |
| 35 578           | 14 470           | 49.08 | 79.13  | -5.68  | 79.34    | 1.7965 | -0.1526 | 355.8    | -1 518c          | 23 518           | Mm   |
| 35 579           | 15 475           | 48.47 | 79.23  | -7.2   | 79.56    | 1.8054 | -0.1658 | 354.8    | -1 525c          | 25 525           |      |
| 36 580           | 16 480           | 48.07 | 78.92  | -8.43  | 79.37    | 1.8082 | -0.1765 | 353.8    | -1 531c          | 26 531           |      |
| 36 582           | 17 485           | 46.3  | 77.93  | -9.81  | 78.55    | 1.8248 | -0.1911 | 352.8    | -1 539c          | 27 539           |      |
| 37 586           | 18 490           | 43.72 | 75.94  | -11.24 | 76.77    | 1.8463 | -0.2092 | 351.5    | -1 546c          | 29 546           |      |
| 38 594           | 18 495           | 37.48 | 71.23  | -12.89 | 72.39    | 1.9117 | -0.2439 | 349.7    | -1 553c          | 30 553           |      |
| 44 620           | 20 500           | 24.16 | 38.15  | -17.52 | 41.98    | 1.783  | -0.3964 | 335.3    | -1 570c          | 34 570           |      |
| -1 509c          | 21 510           | 14.03 | -3.18  | -20.62 | 20.87    | 1.0606 | -0.694  | 261.2    | 14 474           | 35 578           | min  |
| -1 520c          | 24 520           | 18.99 | -16.47 | -20.04 | 25.94    | 0.8046 | -0.5283 | 230.5    | 16 481           | 36 581           | Bm   |
| -1 529c          | 25 530           | 21.31 | -22.18 | -19.56 | 29.58    | 0.7352 | -0.4734 | 221.4    | 16 484           | 36 582           |      |
| -1 540c          | 28 540           | 30.05 | -41.18 | -17.48 | 44.74    | 0.6034 | -0.339  | 202.9    | 17 489           | 37 586           |      |
| -1 544c          | 28 545           | 30.05 | -41.18 | -17.48 | 44.74    | 0.6034 | -0.339  | 202.9    | 17 489           | 37 586           |      |
| -1 549c          | 29 550           | 33.47 | -47.59 | -16.61 | 50.4     | 0.5828 | -0.3048 | 199.2    | 18 491           | 37 588           |      |
| -1 554c          | 30 555           | 37.1  | -53.73 | -15.67 | 55.97    | 0.5723 | -0.2753 | 196.2    | 18 492           | 37 589           |      |
| -1 560c          | 32 560           | 44.85 | -64.39 | -13.64 | 65.82    | 0.5773 | -0.228  | 191.9    | 18 494           | 38 594           |      |
| W0 380           | 770              | 90.0  | 0.0    | 0.0    | 0.0      | 1.1515 | -0.1063 | 0.0      | $B_c=1,000$      |                  |      |
| N0 380           | 770              | 3.6   | 0.0    | 0.0    | 0.0      | 1.1515 | -0.1063 | 0.0      | $x_c=0,000$      |                  |      |