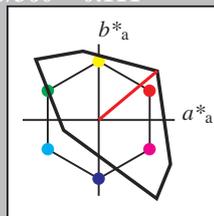


Input: Colorimetric Television Luminous System TLS00

for hue $h^* = lab^*h = 40/360 = 0.111$
 lab^*tch and lab^*nch

D65: hue O
 LCH*Ma: 51 100 40
 olv*Ma: 1.0 0.0 0.0

triangle lightness t^*



TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	50.5	76.92	64.55	100.42	40
YMa	92.66	-20.69	90.75	93.08	103
LMa	83.63	-82.75	79.9	115.04	136
CMa	86.88	-46.16	-13.55	48.12	196
VMa	30.39	76.06	-103.59	128.52	306
MMa	57.3	94.35	-58.41	110.97	328
NMa	0.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

%Gamut

$u^*_{rel} = 158$

%Regularity

$g^*_{H,rel} = 20$

$g^*_{C,rel} = 37$

relative Inform. Technology (IT)

olvi3*	1.0	1.0	1.0	(1.0)
cmyn3*	0.0	0.0	0.0	(0.0)
olvi4*	1.0	1.0	1.0	1.0
cmyn4*	0.0	0.0	0.0	0.0

standard and adapted CIELAB

LAB*LAB	95.41	0.0	0.0
LAB*LABa	95.41	0.0	0.0
LAB*TCHa	99.99	0.01	-

relative CIELAB lab*

lab*lab	1.0	0.0	0.0
lab*tch	1.0	0.0	-
lab*nch	0.0	0.0	-

relative Natural Colour (NC)

lab*lrj	1.0	0.0	0.0
lab*tce	1.0	0.0	-
lab*nce	0.0	0.0	-

relative Inform. Technology (IT)

olvi3*	0.5	0.5	0.5	(1.0)
cmyn3*	0.5	0.5	0.5	(0.0)
olvi4*	1.0	1.0	1.0	0.5
cmyn4*	0.0	0.0	0.0	0.5

standard and adapted CIELAB

LAB*LAB	47.72	0.0	0.0
LAB*LABa	47.72	0.0	0.0
LAB*TCHa	50.0	0.01	-

relative CIELAB lab*

lab*lab	0.5	0.0	0.0
lab*tch	0.5	0.0	-
lab*nch	0.5	0.0	-

relative Natural Colour (NC)

lab*lrj	0.5	0.0	0.0
lab*tce	0.5	0.0	-
lab*nce	0.5	0.0	-

relative Inform. Technology (IT)

olvi3*	0.0	0.0	0.0	(1.0)
cmyn3*	1.0	1.0	1.0	(0.0)
olvi4*	1.0	1.0	1.0	0.0
cmyn4*	0.0	0.0	0.0	1.0

standard and adapted CIELAB

LAB*LAB	0.03	0.0	0.0
LAB*LABa	0.03	0.0	0.0
LAB*TCHa	0.01	0.01	-

relative CIELAB lab*

lab*lab	0.0	0.0	0.0
lab*tch	0.0	0.0	-
lab*nch	1.0	0.0	-

relative Natural Colour (NC)

lab*lrj	0.0	0.0	0.0
lab*tce	0.0	0.0	-
lab*nce	1.0	0.0	-

$n^* = 1.0$

relative Inform. Technology (IT)

olvi3*	1.0	0.5	0.5	(1.0)
cmyn3*	0.0	0.5	0.5	(0.0)
olvi4*	1.0	0.5	0.5	1.0
cmyn4*	0.0	0.5	0.5	0.0

standard and adapted CIELAB

LAB*LAB	72.95	38.45	32.27
LAB*LABa	72.95	38.45	32.27
LAB*TCHa	75.0	50.2	40.0

relative CIELAB lab*

lab*lab	0.765	0.383	0.321
lab*tch	0.75	0.5	0.111
lab*nch	0.0	0.5	0.111

relative Natural Colour (NC)

lab*lrj	0.765	0.471	0.167
lab*tce	0.75	0.5	0.054
lab*nce	0.0	0.5	r21j

relative Inform. Technology (IT)

olvi3*	0.5	0.0	0.0	(1.0)
cmyn3*	0.5	1.0	1.0	(0.0)
olvi4*	1.0	0.5	0.5	0.5
cmyn4*	0.0	0.5	0.5	0.5

standard and adapted CIELAB

LAB*LAB	25.26	38.45	32.27
LAB*LABa	25.26	38.45	32.27
LAB*TCHa	25.01	50.2	40.0

relative CIELAB lab*

lab*lab	0.265	0.383	0.321
lab*tch	0.25	0.5	0.111
lab*nch	0.5	0.5	0.111

relative Natural Colour (NC)

lab*lrj	0.265	0.471	0.167
lab*tce	0.25	0.5	0.054
lab*nce	0.5	0.5	r21j

$n^* = 0.50$

relative Inform. Technology (IT)

olvi3*	1.0	0.0	0.0	(1.0)
cmyn3*	0.0	1.0	1.0	(0.0)
olvi4*	1.0	0.0	0.0	1.0
cmyn4*	0.0	1.0	1.0	0.0

standard and adapted CIELAB

LAB*LAB	50.5	76.9	64.54
LAB*LABa	50.5	76.9	64.54
LAB*TCHa	50.0	100.4	40.0

relative CIELAB lab*

lab*lab	0.529	0.766	0.643
lab*tch	0.5	1.0	0.111
lab*nch	0.0	1.0	0.111

relative Natural Colour (NC)

lab*lrj	0.529	0.942	0.335
lab*tce	0.5	1.0	0.054
lab*nce	0.0	1.0	r21j

$n^* = 0.00$

blackness n^*

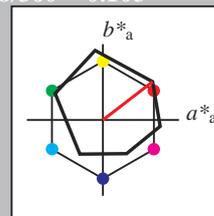
chromaticness c^*

Output: Colorimetric Offset Reflective System ORS18

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

D65: hue O
 LCH*Ma: 48 83 38
 olv*Ma: 1.0 0.0 0.0

triangle lightness t^*



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	47.94	65.39	50.52	82.63	38
YMa	90.37	-10.26	91.75	92.32	96
LMa	50.9	-62.83	34.96	71.91	151
CMa	58.62	-30.34	-45.01	54.3	236
VMa	25.72	31.1	-44.4	54.22	305
MMa	48.13	75.28	-8.36	75.74	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	64.57	25
JCIE	81.26	-2.16	67.76	67.79	92
GCIE	52.23	-42.25	11.76	43.87	164
BCIE	30.57	1.15	-46.84	46.86	271

%Gamut

$u^*_{rel} = 93$

%Regularity

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

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

relative Inform. Technology (IT)

olvi3*	1.0	1.0	1.0	(1.0)
cmyn3*	0.0	0.0	0.0	(0.0)
olvi4*	1.0	1.0	1.0	1.0
cmyn4*	0.0	0.0	0.0	0.0

standard and adapted CIELAB

LAB*LAB	95.41	-0.98	4.75
LAB*LABa	95.41	0.0	0.0
LAB*TCHa	99.99	0.01	-

relative CIELAB lab*

lab*lab	1.0	0.0	0.0
lab*tch	1.0	0.0	-
lab*nch	0.0	0.0	-

relative Natural Colour (NC)

lab*lrj	1.0	0.0	0.0
lab*tce	1.0	0.0	-
lab*nce	0.0	0.0	-

relative Inform. Technology (IT)

olvi3*	0.5	0.5	0.5	(1.0)
cmyn3*	0.5	0.5	0.5	(0.0)
olvi4*	1.0	1.0	1.0	0.5
cmyn4*	0.0	0.0	0.0	0.5

standard and adapted CIELAB

LAB*LAB	56.71	-0.24	2.14
LAB*LABa	56.71	0.0	0.0
LAB*TCHa	50.0	0.01	-

relative CIELAB lab*

lab*lab	0.5	0.0	0.0
lab*tch	0.5	0.0	-
lab*nch	0.5	0.0	-

relative Natural Colour (NC)

lab*lrj	0.5	0.0	0.0
lab*tce	0.5	0.0	-
lab*nce	0.5	0.0	-

relative Inform. Technology (IT)

olvi3*	0.0	0.0	0.0	(1.0)
cmyn3*	1.0	1.0	1.0	(0.0)
olvi4*	1.0	1.0	1.0	0.0
cmyn4*	0.0	0.0	0.0	1.0

standard and adapted CIELAB

LAB*LAB	18.02	0.5	-0.47
LAB*LABa	18.02	0.0	0.0
LAB*TCHa	0.01	0.01	-

relative CIELAB lab*

lab*lab	0.0	0.0	0.0
lab*tch	0.0	0.0	-
lab*nch	1.0	0.0	-

relative Natural Colour (NC)

lab*lrj	0.0	0.0	0.0
lab*tce	0.0	0.0	-
lab*nce	1.0	0.0	-

$n^* = 1.0$

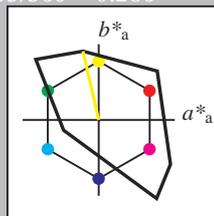
chromaticness c^*

Input: Colorimetric Television Luminous System TLS00

for hue $h^* = lab^*h = 103/360 = 0.286$
 lab^*tch and lab^*nch

D65: hue Y
 LCH*Ma: 93 93 103
 olv*Ma: 1.0 1.0 0.0

triangle lightness t^*



TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	50.5	76.92	64.55	100.42	40
YMa	92.66	-20.69	90.75	93.08	103
LMa	83.63	-82.75	79.9	115.04	136
CMa	86.88	-46.16	-13.55	48.12	196
VMa	30.39	76.06	-103.59	128.52	306
MMa	57.3	94.35	-58.41	110.97	328
NMa	0.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

%Gamut

$u^*_{rel} = 158$

%Regularity

$g^*_{H,rel} = 20$

$g^*_{C,rel} = 37$

relative Inform. Technology (IT)

olvi3*	1.0	1.0	1.0	(1.0)
cmyn3*	0.0	0.0	0.0	(0.0)
olvi4*	1.0	1.0	1.0	1.0
cmyn4*	0.0	0.0	0.0	0.0

standard and adapted CIELAB

LAB*LAB	95.41	0.0	0.0
LAB*LABa	95.41	0.0	0.0
LAB*TCHa	99.99	0.01	-

relative CIELAB lab*

lab*lab	1.0	0.0	0.0
lab*tch	1.0	0.0	-
lab*nch	0.0	0.0	-

relative Natural Colour (NC)

lab*lrj	1.0	0.0	0.0
lab*tce	1.0	0.0	-
lab*nce	0.0	0.0	-

relative Inform. Technology (IT)

olvi3*	0.5	0.5	0.5	(1.0)
cmyn3*	0.5	0.5	0.5	(0.0)
olvi4*	1.0	1.0	1.0	0.5
cmyn4*	0.0	0.0	0.0	0.5

standard and adapted CIELAB

LAB*LAB	47.72	0.0	0.0
LAB*LABa	47.72	0.0	0.0
LAB*TCHa	50.0	0.01	-

relative CIELAB lab*

lab*lab	0.5	0.0	0.0
lab*tch	0.5	0.0	-
lab*nch	0.5	0.0	-

relative Natural Colour (NC)

lab*lrj	0.5	0.0	0.0
lab*tce	0.5	0.0	-
lab*nce	0.5	0.0	-

relative Inform. Technology (IT)

olvi3*	0.0	0.0	0.0	(1.0)
cmyn3*	1.0	1.0	1.0	(0.0)
olvi4*	1.0	1.0	1.0	0.0
cmyn4*	0.0	0.0	0.0	1.0

standard and adapted CIELAB

LAB*LAB	0.03	0.0	0.0
LAB*LABa	0.03	0.0	0.0
LAB*TCHa	0.01	0.01	-

relative CIELAB lab*

lab*lab	0.0	0.0	0.0
lab*tch	0.0	0.0	-
lab*nch	1.0	0.0	-

relative Natural Colour (NC)

lab*lrj	0.0	0.0	0.0
lab*tce	0.0	0.0	-
lab*nce	1.0	0.0	-

$n^* = 1.0$

relative Inform. Technology (IT)

olvi3*	1.0	1.0	0.5	(1.0)
cmyn3*	0.0	0.0	0.5	(0.0)
olvi4*	1.0	1.0	0.5	1.0
cmyn4*	0.0	0.0	0.5	0.0

standard and adapted CIELAB

LAB*LAB	94.03	-10.34	45.37
LAB*LABa	94.03	-10.34	45.37
LAB*TCHa	75.0	46.53	102.85

relative CIELAB lab*

lab*lab	0.985	-0.11	0.487
lab*tch	0.75	0.5	0.286
lab*nch	0.0	0.5	0.286

relative Natural Colour (NC)

lab*lrj	0.985	-0.116	0.486
lab*tce	0.75	0.5	0.288
lab*nce	0.0	0.5	0.286

relative Inform. Technology (IT)

olvi3*	0.5	0.5	0.0	(1.0)
cmyn3*	0.5	0.5	1.0	(0.0)
olvi4*	1.0	1.0	0.5	0.5
cmyn4*	0.0	0.0	0.5	0.5

standard and adapted CIELAB

LAB*LAB	46.34	-10.34	45.37
LAB*LABa	46.34	-10.34	45.37
LAB*TCHa	25.01	46.53	102.85

relative CIELAB lab*

lab*lab	0.486	-0.11	0.487
lab*tch	0.25	0.5	0.286
lab*nch	0.5	0.5	0.286

relative Natural Colour (NC)

lab*lrj	0.486	-0.116	0.486
lab*tce	0.25	0.5	0.288
lab*nce	0.5	0.5	0.286

relative Inform. Technology (IT)

olvi3*	0.0	0.0	0.0	(1.0)
cmyn3*	1.0	1.0	1.0	(0.0)
olvi4*	1.0	1.0	1.0	0.0
cmyn4*	0.0	0.0	0.0	1.0

standard and adapted CIELAB

LAB*LAB	18.02	0.5	-0.47
LAB*LABa	18.02	0.0	0.0
LAB*TCHa	0.01	0.01	-

relative CIELAB lab*

lab*lab	0.0	0.0	0.0
lab*tch	0.0	0.0	-
lab*nch	1.0	0.0	-

relative Natural Colour (NC)

lab*lrj	0.0	0.0	0.0
lab*tce	0.0	0.0	-
lab*nce	1.0	0.0	-

$n^* = 1.0$

relative Inform. Technology (IT)

olvi3*	1.0	1.0	0.0	(1.0)
cmyn3*	0.0	0.0	1.0	(0.0)
olvi4*	1.0	1.0	0.0	1.0
cmyn4*	0.0	0.0	1.0	0.0

standard and adapted CIELAB

LAB*LAB	92.65	-20.69	90.73
LAB*LABa	92.65	-20.69	90.73
LAB*TCHa	50.0	93.06	102.85

relative CIELAB lab*

lab*lab	0.971	-0.221	0.975
lab*tch	0.5	1.0	0.286
lab*nch	0.0	1.0	0.286

relative Natural Colour (NC)

lab*lrj	0.971	-0.233	0.972
lab*tce	0.5	1.0	0.288
lab*nce	0.0	1.0	0.286

relative Inform. Technology (IT)

olvi3*	0.5	0.5	0.5	(1.0)
cmyn3*	0.5	0.5	0.5	(0.0)
olvi4*	1.0	1.0	1.0	0.5
cmyn4*	0.0	0.0	0.0	0.5

standard and adapted CIELAB

LAB*LAB	56.71	-0.24	2.14
LAB*LABa	56.71	0.0	0.0
LAB*TCHa	50.0	0.01	-

relative CIELAB lab*

lab*lab	0.5	0.0	0.0
lab*tch	0.5	0.0	-
lab*nch	0.5	0.0	-

relative Natural Colour (NC)

lab*lrj	0.5	0.0	0.0
lab*tce	0.5	0.0	-
lab*nce	0.5	0.0	-

$n^* = 0.0$

blackness n^*

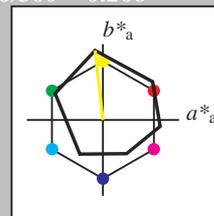
chromaticness c^*

Output: Colorimetric Offset Reflective System ORS18

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

D65: hue Y
 LCH*Ma: 90 92 96
 olv*Ma: 1.0 1.0 0.0

triangle lightness t^*



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	47.94	65.39	50.52	82.63	38
YMa	90.37	-10.26	91.75	92.32	96
LMa	50.9	-62.83	34.96	71.91	151
CMa	58.62	-30.34	-45.01	54.3	236
VMa	25.72	31.1	-44.4	54.22	305
MMa	48.13	75.28	-8.36	75.74	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	64.57	25
JCIE	81.26	-2.16	67.76	67.79	92
GCIE	52.23	-42.25	11.76	43.87	164
BCIE	30.57	1.15	-46.84	46.86	271

%Gamut

$u^*_{rel} = 93$

%Regularity

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

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

relative Inform. Technology (IT)

olvi3*	1.0	1.0	1.0	(1.0)
cmyn3*	0.0	0.0	0.0	(0.0)
olvi4*	1.0	1.0	1.0	1.0
cmyn4*	0.0	0.0	0.0	0.0

standard and adapted CIELAB

LAB*LAB	95.41	-0.98	4.75
LAB*LABa	95.41	0.0	0.0
LAB*TCHa	99.99	0.01	-

relative CIELAB lab*

lab*lab	1.0	0.0	0.0
lab*tch	1.0	0.0	-
lab*nch	0.0	0.0	-

relative Natural Colour (NC)

lab*lrj	1.0	0.0	0.0
lab*tce	1.0	0.0	-
lab*nce	0.0	0.0	-

relative Inform. Technology (IT)

olvi3*	0.5	0.5	0.5	(1.0)
cmyn3*	0.5	0.5	0.5	(0.0)
olvi4*	1.0	1.0	1.0	0.5
cmyn4*	0.0	0.0	0.0	0.5

standard and adapted CIELAB

LAB*LAB	92.88	-6.06	50.46
LAB*LABa	92.88	-5.12	45.87
LAB*TCHa	75.0	46.15	96.38

relative CIELAB lab*

lab*lab	0.967	-0.055	0.497
lab*tch	0.75	0.5	0.268
lab*nch	0.0	0.5	0.268

relative Natural Colour (NC)

lab*lrj	0.967	-0.048	0.497
lab*tce	0.75	0.5	0.266
lab*nce	0.0	0.5	0.268

relative Inform. Technology (IT)

olvi3*	0.5	0.5	0.0	(1.0)
cmyn3*	0.5	0.5	1.0	(0.0)
olvi4*	1.0	1.0	0.5	0.5
cmyn4*	0.0	0.0	0.5	0.5

standard and adapted CIELAB

LAB*LAB	54.19	-5.32	47.84
LAB*LABa	54.19	-5.12	45.87
LAB*TCHa	25.01	46.15	96.38

relative CIELAB lab*

lab*lab	0.467	-0.055	0.497
lab*tch	0.25	0.5	0.268
lab*nch	0.5	0.5	0.268

relative Natural Colour (NC)

lab*lrj	0.467	-0.048	0.497
lab*tce	0.25	0.5	0.266
lab*nce	0.5	0.5	0.268

$n^* = 0.0$

blackness n^*

chromaticness c^*

relative Inform. Technology (IT)

olvi3*	1.0	1.0	0.5	(1.0)
cmyn3*	0.0	0.0	0.5	(0.0)
olvi4*	1.0	1.0	0.5	1.0
cmyn4*	0.0	0.0	0.5	0.0

standard and adapted CIELAB

LAB*LAB	92.88	-6.06	50.46
LAB*LABa	92.88	-5.12	45.87
LAB*TCHa	75.0	46.15	96.38

relative CIELAB lab*

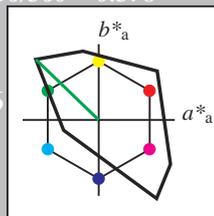
lab*lab	0.967	-0.055	0.497
lab*tch	0.75	0.5	0.268
lab*nch	0.0	0.5	0.268

Input: Colorimetric Television Luminous System TLS00

for hue $h^* = lab^*h = 136/360 = 0.378$
 lab^*tch and lab^*nch

D65: hue L
 LCH*Ma: 84 115 136
 olv*Ma: 0.0 1.0 0.0

triangle lightness t^*



TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	50.5	76.92	64.55	100.42	40
YMa	92.66	-20.69	90.75	93.08	103
LMa	83.63	-82.75	79.9	115.04	136
CMa	86.88	-46.16	-13.55	48.12	196
VMa	30.39	76.06	-103.59	128.52	306
MMa	57.3	94.35	-58.41	110.97	328
NMa	0.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

%Gamut

$u^*_{rel} = 158$

%Regularity

$g^*_{H,rel} = 20$

$g^*_{C,rel} = 37$

relative Inform. Technology (IT)

olvi3*	1.0	1.0	1.0	(1.0)
cmyn3*	0.0	0.0	0.0	(0.0)
olvi4*	1.0	1.0	1.0	1.0
cmyn4*	0.0	0.0	0.0	0.0

standard and adapted CIELAB

LAB*LAB	95.41	0.0	0.0
LAB*LABa	95.41	0.0	0.0
LAB*TCHa	99.99	0.01	-

relative CIELAB lab*

lab*lab	1.0	0.0	0.0
lab*tch	1.0	0.0	-
lab*nch	0.0	0.0	-

relative Natural Colour (NC)

lab*lrj	1.0	0.0	0.0
lab*tce	1.0	0.0	-
lab*nce	0.0	0.0	-

relative Inform. Technology (IT)

olvi3*	0.5	1.0	0.5	(1.0)
cmyn3*	0.5	0.0	0.5	(0.0)
olvi4*	0.5	1.0	0.5	1.0
cmyn4*	0.5	0.0	0.5	0.0

standard and adapted CIELAB

LAB*LAB	89.51	-41.36	39.94
LAB*LABa	89.51	-41.36	39.94
LAB*TCHa	75.0	57.51	136.01

relative CIELAB lab*

lab*lab	0.938	-0.359	0.347
lab*tch	0.75	0.5	0.378
lab*nch	0.0	0.5	0.378

relative Natural Colour (NC)

lab*lrj	0.938	-0.415	0.278
lab*tce	0.75	0.5	0.406
lab*nce	0.0	0.5	0.62g

relative Inform. Technology (IT)

olvi3*	0.5	0.5	0.5	(1.0)
cmyn3*	0.5	0.5	0.5	(0.0)
olvi4*	1.0	1.0	1.0	0.5
cmyn4*	0.0	0.0	0.0	0.5

standard and adapted CIELAB

LAB*LAB	47.72	0.0	0.0
LAB*LABa	47.72	0.0	0.0
LAB*TCHa	50.0	0.01	-

relative CIELAB lab*

lab*lab	0.5	0.0	0.0
lab*tch	0.5	0.0	-
lab*nch	0.5	0.0	-

relative Natural Colour (NC)

lab*lrj	0.5	0.0	0.0
lab*tce	0.5	0.0	-
lab*nce	0.5	0.0	-

relative Inform. Technology (IT)

olvi3*	0.0	0.5	0.0	(1.0)
cmyn3*	1.0	0.5	1.0	(0.0)
olvi4*	0.5	1.0	0.5	0.5
cmyn4*	0.5	0.0	0.5	0.5

standard and adapted CIELAB

LAB*LAB	41.82	-41.36	39.94
LAB*LABa	41.82	-41.36	39.94
LAB*TCHa	25.01	57.51	136.01

relative CIELAB lab*

lab*lab	0.438	-0.359	0.347
lab*tch	0.25	0.5	0.378
lab*nch	0.5	0.5	0.378

relative Natural Colour (NC)

lab*lrj	0.438	-0.415	0.278
lab*tce	0.25	0.5	0.406
lab*nce	0.5	0.5	0.62g

relative Inform. Technology (IT)

olvi3*	0.0	0.0	0.0	(1.0)
cmyn3*	1.0	1.0	1.0	(0.0)
olvi4*	1.0	1.0	1.0	0.0
cmyn4*	0.0	0.0	0.0	1.0

standard and adapted CIELAB

LAB*LAB	0.03	0.0	0.0
LAB*LABa	0.03	0.0	0.0
LAB*TCHa	0.01	0.01	-

relative CIELAB lab*

lab*lab	0.0	0.0	0.0
lab*tch	0.0	0.0	-
lab*nch	1.0	0.0	-

relative Natural Colour (NC)

lab*lrj	0.0	0.0	0.0
lab*tce	0.0	0.0	-
lab*nce	1.0	0.0	-

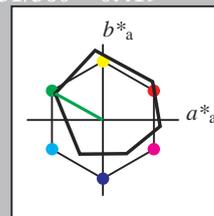
$n^* = 1.0$

Output: Colorimetric Offset Reflective System ORS18

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

D65: hue L
 LCH*Ma: 51 72 151
 olv*Ma: 0.0 1.0 0.0

triangle lightness t^*



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	47.94	65.39	50.52	82.63	38
YMa	90.37	-10.26	91.75	92.32	96
LMa	50.9	-62.83	34.96	71.91	151
CMa	58.62	-30.34	-45.01	54.3	236
VMa	25.72	31.1	-44.4	54.22	305
MMa	48.13	75.28	-8.36	75.74	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	64.57	25
JCIE	81.26	-2.16	67.76	67.79	92
GCIE	52.23	-42.25	11.76	43.87	164
BCIE	30.57	1.15	-46.84	46.86	271

%Gamut

$u^*_{rel} = 93$

%Regularity

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

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

relative Inform. Technology (IT)

olvi3*	1.0	1.0	1.0	(1.0)
cmyn3*	0.0	0.0	0.0	(0.0)
olvi4*	1.0	1.0	1.0	1.0
cmyn4*	0.0	0.0	0.0	0.0

standard and adapted CIELAB

LAB*LAB	95.41	-0.98	4.75
LAB*LABa	95.41	0.0	0.0
LAB*TCHa	99.99	0.01	-

relative CIELAB lab*

lab*lab	1.0	0.0	0.0
lab*tch	1.0	0.0	-
lab*nch	0.0	0.0	-

relative Natural Colour (NC)

lab*lrj	1.0	0.0	0.0
lab*tce	1.0	0.0	-
lab*nce	0.0	0.0	-

relative Inform. Technology (IT)

olvi3*	0.5	1.0	0.5	(1.0)
cmyn3*	0.5	0.0	0.5	(0.0)
olvi4*	0.5	1.0	0.5	1.0
cmyn4*	0.5	0.0	0.5	0.0

standard and adapted CIELAB

LAB*LAB	73.15	-31.96	20.73
LAB*LABa	73.15	-31.4	17.48
LAB*TCHa	75.0	35.95	150.91

relative CIELAB lab*

lab*lab	0.712	-0.436	0.243
lab*tch	0.75	0.5	0.419
lab*nch	0.0	0.5	0.419

relative Natural Colour (NC)

lab*lrj	0.712	-0.478	0.144
lab*tce	0.75	0.5	0.453
lab*nce	0.0	0.5	0.81g

relative Inform. Technology (IT)

olvi3*	0.5	0.5	0.5	(1.0)
cmyn3*	0.5	0.5	0.5	(0.0)
olvi4*	1.0	1.0	1.0	0.5
cmyn4*	0.0	0.0	0.0	0.5

standard and adapted CIELAB

LAB*LAB	56.71	-0.24	2.14
LAB*LABa	56.71	0.0	0.0
LAB*TCHa	50.0	0.01	-

relative CIELAB lab*

lab*lab	0.5	0.0	0.0
lab*tch	0.5	0.0	-
lab*nch	0.5	0.0	-

relative Natural Colour (NC)

lab*lrj	0.5	0.0	0.0
lab*tce	0.5	0.0	-
lab*nce	0.5	0.0	-

relative Inform. Technology (IT)

olvi3*	0.0	0.5	0.0	(1.0)
cmyn3*	1.0	0.5	1.0	(0.0)
olvi4*	0.5	1.0	0.5	0.5
cmyn4*	0.5	0.0	0.5	0.5

standard and adapted CIELAB

LAB*LAB	34.46	-31.22	18.12
LAB*LABa	34.46	-31.4	17.48
LAB*TCHa	25.01	35.95	150.91

relative CIELAB lab*

lab*lab	0.213	-0.436	0.243
lab*tch	0.25	0.5	0.419
lab*nch	0.5	0.5	0.419

relative Natural Colour (NC)

lab*lrj	0.213	-0.478	0.144
lab*tce	0.25	0.5	0.453
lab*nce	0.5	0.5	0.81g

relative Inform. Technology (IT)

olvi3*	0.0	1.0	0.0	(1.0)
cmyn3*	1.0	0.0	1.0	(0.0)
olvi4*	0.0	1.0	0.0	1.0
cmyn4*	1.0	0.0	1.0	0.0

standard and adapted CIELAB

LAB*LAB	50.9	-62.95	36.7
LAB*LABa	50.9	-62.81	34.95
LAB*TCHa	50.0	71.89	150.91

relative CIELAB lab*

lab*lab	0.425	-0.873	0.486
lab*tch	0.5	1.0	0.419
lab*nch	0.0	1.0	0.419

relative Natural Colour (NC)

lab*lrj	0.425	-0.956	0.289
lab*tce	0.5	1.0	0.453
lab*nce	0.0	1.0	0.81g

$n^* = 0.00$

$n^* = 0.00$

blackness n^*

chromaticness c^*

$n^* = 1.0$

blackness n^*

chromaticness c^*

relative Inform. Technology (IT)

olvi3*	0.0	0.0	0.0	(1.0)
cmyn3*	1.0	1.0	1.0	(0.0)
olvi4*	1.0	1.0	1.0	0.0
cmyn4*	0.0	0.0	0.0	1.0

standard and adapted CIELAB

LAB*LAB	18.02	0.5	-0.47
LAB*LABa	18.02	0.0	0.0
LAB*TCHa	0.01	0.01	-

relative CIELAB lab*

lab*lab	0.0	0.0	0.0
lab*tch	0.0	0.0	-
lab*nch	1.0	0.0	-

relative Natural Colour (NC)

lab*lrj	0.0	0.0	0.0
lab*tce	0.0	0.0	-
lab*nce	1.0	0.0	-

relative Inform. Technology (IT)

olvi3*	0.0	0.0	0.0	(1.0)
cmyn3*	1.0	1.0	1.0	(0.0)
olvi4*	1.0	1.0	1.0	0.0
cmyn4*	0.0	0.0	0.0	1.0

standard and adapted CIELAB

LAB*LAB	0.03	0.0	0.0
LAB*LABa	0.03	0.0	0.0
LAB*TCHa	0.01	0.01	-

relative CIELAB lab*

lab*lab	0.0	0.0	0.0
lab*tch	0.0	0.0	-
lab*nch	1.0	0.0	-

relative Natural Colour (NC)

lab*lrj	0.0	0.0	0.0
lab*tce	0.0	0.0	-
lab*nce	1.0	0.0	-

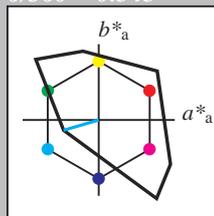
$n^* =$

Input: Colorimetric Television Luminous System TLS00

for hue $h^* = lab^*h = 196/360 = 0.545$
 lab^*tch and lab^*nch

D65: hue C
 LCH*Ma: 87 48 196
 olv*Ma: 0.0 1.0 1.0

triangle lightness t^*



TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	50.5	76.92	64.55	100.42	40
YMa	92.66	-20.69	90.75	93.08	103
LMa	83.63	-82.75	79.9	115.04	136
CMa	86.88	-46.16	-13.55	48.12	196
VMa	30.39	76.06	-103.59	128.52	306
MMa	57.3	94.35	-58.41	110.97	328
NMa	0.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

%Gamut

$u^*_{rel} = 158$

%Regularity

$g^*_{H,rel} = 20$

$g^*_{C,rel} = 37$

relative Inform. Technology (IT)

olvi3*	1.0	1.0	1.0	(1.0)
cmyn3*	0.0	0.0	0.0	(0.0)
olvi4*	1.0	1.0	1.0	1.0
cmyn4*	0.0	0.0	0.0	0.0

standard and adapted CIELAB

LAB*LAB	95.41	0.0	0.0
LAB*LABa	95.41	0.0	0.0
LAB*TCHa	99.99	0.01	-

relative CIELAB lab*

lab*lab	1.0	0.0	0.0
lab*tch	1.0	0.0	-
lab*nch	0.0	0.0	-

relative Natural Colour (NC)

lab*lrj	1.0	0.0	0.0
lab*tce	1.0	0.0	-
lab*nce	0.0	0.0	-

relative Inform. Technology (IT)

olvi3*	0.5	0.5	0.5	(1.0)
cmyn3*	0.5	0.5	0.5	(0.0)
olvi4*	1.0	1.0	1.0	0.5
cmyn4*	0.0	0.0	0.0	0.5

standard and adapted CIELAB

LAB*LAB	47.72	0.0	0.0
LAB*LABa	47.72	0.0	0.0
LAB*TCHa	50.0	0.01	-

relative CIELAB lab*

lab*lab	0.5	0.0	0.0
lab*tch	0.5	0.0	-
lab*nch	0.5	0.0	-

relative Natural Colour (NC)

lab*lrj	0.5	0.0	0.0
lab*tce	0.5	0.0	-
lab*nce	0.5	0.0	-

relative Inform. Technology (IT)

olvi3*	0.0	0.0	0.0	(1.0)
cmyn3*	1.0	1.0	1.0	(0.0)
olvi4*	1.0	1.0	1.0	0.0
cmyn4*	0.0	0.0	0.0	1.0

standard and adapted CIELAB

LAB*LAB	0.03	0.0	0.0
LAB*LABa	0.03	0.0	0.0
LAB*TCHa	0.01	0.01	-

relative CIELAB lab*

lab*lab	0.0	0.0	0.0
lab*tch	0.0	0.0	-
lab*nch	1.0	0.0	-

relative Natural Colour (NC)

lab*lrj	0.0	0.0	0.0
lab*tce	0.0	0.0	-
lab*nce	1.0	0.0	-

$n^* = 1.0$

relative Inform. Technology (IT)

olvi3*	0.5	1.0	1.0	(1.0)
cmyn3*	0.5	0.0	0.0	(0.0)
olvi4*	0.5	1.0	1.0	1.0
cmyn4*	0.5	0.0	0.0	0.0

standard and adapted CIELAB

LAB*LAB	91.14	-23.07	-6.77
LAB*LABa	91.14	-23.07	-6.77
LAB*TCHa	75.0	24.06	196.37

relative CIELAB lab*

lab*lab	0.955	-0.479	-0.14
lab*tch	0.75	0.5	0.545
lab*nch	0.0	0.5	0.545

relative Natural Colour (NC)

lab*lrj	0.955	-0.44	-0.234
lab*tce	0.75	0.5	0.578
lab*nce	0.0	0.5	g31b

relative Inform. Technology (IT)

olvi3*	0.0	0.5	0.5	(1.0)
cmyn3*	1.0	0.5	0.5	(0.0)
olvi4*	0.5	1.0	1.0	0.5
cmyn4*	0.5	0.0	0.0	0.5

standard and adapted CIELAB

LAB*LAB	43.45	-23.07	-6.77
LAB*LABa	43.45	-23.07	-6.77
LAB*TCHa	25.01	24.06	196.37

relative CIELAB lab*

lab*lab	0.455	-0.479	-0.14
lab*tch	0.25	0.5	0.545
lab*nch	0.5	0.5	0.545

relative Natural Colour (NC)

lab*lrj	0.455	-0.44	-0.234
lab*tce	0.25	0.5	0.578
lab*nce	0.5	0.5	g31b

$n^* = 0.50$

relative Inform. Technology (IT)

olvi3*	0.0	1.0	1.0	(1.0)
cmyn3*	1.0	0.0	0.0	(0.0)
olvi4*	0.0	1.0	1.0	1.0
cmyn4*	1.0	0.0	0.0	0.0

standard and adapted CIELAB

LAB*LAB	86.87	-46.15	-13.55
LAB*LABa	86.87	-46.15	-13.55
LAB*TCHa	50.0	48.11	196.37

relative CIELAB lab*

lab*lab	0.911	-0.958	-0.281
lab*tch	0.5	1.0	0.545
lab*nch	0.0	1.0	0.545

relative Natural Colour (NC)

lab*lrj	0.911	-0.881	-0.469
lab*tce	0.5	1.0	0.578
lab*nce	0.0	1.0	g31b

$n^* = 0.00$

$n^* = 1.0$

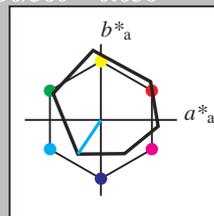
chromaticness c^*

Output: Colorimetric Offset Reflective System ORS18

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

D65: hue C
 LCH*Ma: 59 54 236
 olv*Ma: 0.0 1.0 1.0

triangle lightness t^*



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	47.94	65.39	50.52	82.63	38
YMa	90.37	-10.26	91.75	92.32	96
LMa	50.9	-62.83	34.96	71.91	151
CMa	58.62	-30.34	-45.01	54.3	236
VMa	25.72	31.1	-44.4	54.22	305
MMa	48.13	75.28	-8.36	75.74	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	64.57	25
JCIE	81.26	-2.16	67.76	67.79	92
GCIE	52.23	-42.25	11.76	43.87	164
BCIE	30.57	1.15	-46.84	46.86	271

%Gamut

$u^*_{rel} = 93$

%Regularity

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

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

relative Inform. Technology (IT)

olvi3*	1.0	1.0	1.0	(1.0)
cmyn3*	0.0	0.0	0.0	(0.0)
olvi4*	1.0	1.0	1.0	1.0
cmyn4*	0.0	0.0	0.0	0.0

standard and adapted CIELAB

LAB*LAB	95.41	-0.98	4.75
LAB*LABa	95.41	0.0	0.0
LAB*TCHa	99.99	0.01	-

relative CIELAB lab*

lab*lab	1.0	0.0	0.0
lab*tch	1.0	0.0	-
lab*nch	0.0	0.0	-

relative Natural Colour (NC)

lab*lrj	1.0	0.0	0.0
lab*tce	1.0	0.0	-
lab*nce	0.0	0.0	-

relative Inform. Technology (IT)

olvi3*	0.5	0.5	0.5	(1.0)
cmyn3*	0.5	0.5	0.5	(0.0)
olvi4*	1.0	1.0	1.0	0.5
cmyn4*	0.0	0.0	0.0	0.5

standard and adapted CIELAB

LAB*LAB	56.71	-0.24	2.14
LAB*LABa	56.71	0.0	0.0
LAB*TCHa	50.0	0.01	-

relative CIELAB lab*

lab*lab	0.5	0.0	0.0
lab*tch	0.5	0.0	-
lab*nch	0.5	0.0	-

relative Natural Colour (NC)

lab*lrj	0.5	0.0	0.0
lab*tce	0.5	0.0	-
lab*nce	0.5	0.0	-

relative Inform. Technology (IT)

olvi3*	0.0	0.0	0.0	(1.0)
cmyn3*	1.0	1.0	1.0	(0.0)
olvi4*	1.0	1.0	1.0	0.0
cmyn4*	0.0	0.0	0.0	1.0

standard and adapted CIELAB

LAB*LAB	18.02	0.5	-0.47
LAB*LABa	18.02	0.0	0.0
LAB*TCHa	0.01	0.01	-

relative CIELAB lab*

lab*lab	0.0	0.0	0.0
lab*tch	0.0	0.0	-
lab*nch	1.0	0.0	-

relative Natural Colour (NC)

lab*lrj	0.0	0.0	0.0
lab*tce	0.0	0.0	-
lab*nce	1.0	0.0	-

$n^* = 1.0$

relative Inform. Technology (IT)

olvi3*	0.0	0.5	0.5	(1.0)
cmyn3*	1.0	0.5	0.5	(0.0)
olvi4*	0.5	1.0	1.0	0.5
cmyn4*	0.5	0.0	0.0	0.5

standard and adapted CIELAB

LAB*LAB	38.32	-15.05	-21.6
LAB*LABa	38.32	-15.16	-22.5
LAB*TCHa	25.01	27.14	236.02

relative CIELAB lab*

lab*lab	0.762	-0.278	-0.414
lab*tch	0.75	0.5	0.656
lab*nch	0.0	0.5	0.656

relative Natural Colour (NC)

lab*lrj	0.762	-0.247	-0.433
lab*tce	0.75	0.5	0.667
lab*nce	0.0	0.5	g66b

$n^* = 0.50$

chromaticness c^*

relative Inform. Technology (IT)

olvi3*	0.0	1.0	1.0	(1.0)
cmyn3*	1.0	0.0	0.0	(0.0)
olvi4*	0.0	1.0	1.0	1.0
cmyn4*	1.0	0.0	0.0	0.0

standard and adapted CIELAB

LAB*LAB	58.62	-30.61	-42.73
LAB*LABa	58.62	-30.33	-45.01
LAB*TCHa	50.0	54.29	236.02

relative CIELAB lab*

lab*lab	0.525	-0.558	-0.828
lab*tch	0.5	1.0	0.656
lab*nch	0.0	1.0	0.656

relative Natural Colour (NC)

lab*lrj	0.525	-0.496	-0.867
lab*tce	0.5	1.0	0.667
lab*nce	0.0	1.0	g66b

$n^* = 0.00$

$n^* = 1.0$

chromaticness c^*

OE150-7, 3 step scales for constant CIELAB hue 196/360 = 0.545 (left)

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

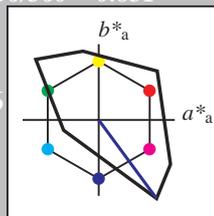
BAM-test chart OE15; Colorimetric systems TLS00 & ORS18
 D65: 2 coordinate data of 3 step colour scales for 10 hues

input: $cmY0^*_{setcmYkcolor}$
 output: $cmY0^*/000n^*_{setcmYkcolor}$

Input: Colorimetric Television Luminous System TLS00

for hue $h^* = lab^*h = 306/360 = 0.851$
 lab^*tch and lab^*nch

D65: hue V
 LCH*Ma: 30 129 306
 olv*Ma: 0.0 0.0 1.0
 triangle lightness t^*



TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	50.5	76.92	64.55	100.42	40
YMa	92.66	-20.69	90.75	93.08	103
LMa	83.63	-82.75	79.9	115.04	136
CMa	86.88	-46.16	-13.55	48.12	196
VMa	30.39	76.06	-103.59	128.52	306
MMa	57.3	94.35	-58.41	110.97	328
NMa	0.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

%Gamut
 $u^*_{rel} = 158$
 %Regularity
 $g^*_{H,rel} = 20$
 $g^*_{C,rel} = 37$

relative Inform. Technology (IT)
 $olvi3^* 1.0 1.0 1.0 (1.0)$
 $cmyn3^* 0.0 0.0 0.0 (0.0)$
 $olvi4^* 1.0 1.0 1.0 1.0$
 $cmyn4^* 0.0 0.0 0.0 0.0$

standard and adapted CIELAB
 $LAB^*LAB 95.41 0.0 0.0$
 $LAB^*LABa 95.41 0.0 0.0$
 $LAB^*TCHa 99.99 0.01 -$

relative CIELAB lab*
 $lab^*lab 1.0 0.0 0.0$
 $lab^*tch 1.0 0.0 -$
 $lab^*nch 0.0 0.0 -$

relative Natural Colour (NC)
 $lab^*lrj 1.0 0.0 0.0$
 $lab^*tce 1.0 0.0 -$
 $lab^*nce 0.0 0.0 -$

relative Inform. Technology (IT)
 $olvi3^* 0.5 0.5 0.5 (1.0)$
 $cmyn3^* 0.5 0.5 0.5 (0.0)$
 $olvi4^* 1.0 1.0 1.0 0.5$
 $cmyn4^* 0.0 0.0 0.0 0.5$

standard and adapted CIELAB
 $LAB^*LAB 47.72 0.0 0.0$
 $LAB^*LABa 47.72 0.0 0.0$
 $LAB^*TCHa 50.0 0.01 -$

relative CIELAB lab*
 $lab^*lab 0.5 0.0 0.0$
 $lab^*tch 0.5 0.0 -$
 $lab^*nch 0.5 0.0 -$

relative Natural Colour (NC)
 $lab^*lrj 0.5 0.0 0.0$
 $lab^*tce 0.5 0.0 -$
 $lab^*nce 0.5 0.0 -$

relative Inform. Technology (IT)
 $olvi3^* 0.0 0.0 0.0 (1.0)$
 $cmyn3^* 1.0 1.0 1.0 (0.0)$
 $olvi4^* 1.0 1.0 1.0 0.0$
 $cmyn4^* 0.0 0.0 0.0 1.0$

standard and adapted CIELAB
 $LAB^*LAB 0.03 0.0 0.0$
 $LAB^*LABa 0.03 0.0 0.0$
 $LAB^*TCHa 0.01 0.01 -$

relative CIELAB lab*
 $lab^*lab 0.0 0.0 0.0$
 $lab^*tch 0.0 0.0 -$
 $lab^*nch 1.0 0.0 -$

relative Natural Colour (NC)
 $lab^*lrj 0.0 0.0 0.0$
 $lab^*tce 0.0 0.0 -$
 $lab^*nce 1.0 0.0 -$

$n^* = 1.0$

relative Inform. Technology (IT)
 $olvi3^* 0.5 0.5 1.0 (1.0)$
 $cmyn3^* 0.5 0.5 0.0 (0.0)$
 $olvi4^* 0.5 0.5 1.0 1.0$
 $cmyn4^* 0.5 0.5 0.0 0.0$

standard and adapted CIELAB
 $LAB^*LAB 62.9 38.02 -51.78$
 $LAB^*LABa 62.9 38.02 -51.78$
 $LAB^*TCHa 75.0 64.25 306.29$

relative CIELAB lab*
 $lab^*lab 0.659 0.296 -0.402$
 $lab^*tch 0.75 0.5 0.851$
 $lab^*nch 0.0 0.5 0.851$

relative Natural Colour (NC)
 $lab^*lrj 0.659 0.23 -0.443$
 $lab^*tce 0.75 0.5 0.826$
 $lab^*nce 0.0 0.5 b30r$

relative Inform. Technology (IT)
 $olvi3^* 0.0 0.0 0.5 (1.0)$
 $cmyn3^* 1.0 1.0 0.5 (0.0)$
 $olvi4^* 0.5 0.5 1.0 0.5$
 $cmyn4^* 0.5 0.5 0.0 0.5$

standard and adapted CIELAB
 $LAB^*LAB 15.21 38.02 -51.78$
 $LAB^*LABa 15.21 38.02 -51.78$
 $LAB^*TCHa 25.01 64.25 306.29$

relative CIELAB lab*
 $lab^*lab 0.159 0.296 -0.402$
 $lab^*tch 0.25 0.5 0.851$
 $lab^*nch 0.5 0.5 0.851$

relative Natural Colour (NC)
 $lab^*lrj 0.159 0.23 -0.443$
 $lab^*tce 0.25 0.5 0.826$
 $lab^*nce 0.5 0.5 b30r$

$n^* = 0.50$

0.25 0.50 0.75 1.00

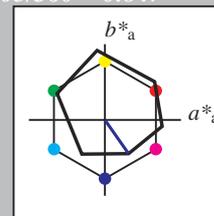
$n^* = 0.00$
 blackness n^*

chromaticness c^*

Output: Colorimetric Offset Reflective System ORS18

for hue $h^* = lab^*h = 305/360 = 0.847$
 lab^*tch and lab^*nch

D65: hue V
 LCH*Ma: 26 54 305
 olv*Ma: 0.0 0.0 1.0
 triangle lightness t^*



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	47.94	65.39	50.52	82.63	38
YMa	90.37	-10.26	91.75	92.32	96
LMa	50.9	-62.83	34.96	71.91	151
CMa	58.62	-30.34	-45.01	54.3	236
VMa	25.72	31.1	-44.4	54.22	305
MMa	48.13	75.28	-8.36	75.74	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	64.57	25
JCIE	81.26	-2.16	67.76	67.79	92
GCIE	52.23	-42.25	11.76	43.87	164
BCIE	30.57	1.15	-46.84	46.86	271

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

relative Inform. Technology (IT)
 $olvi3^* 1.0 1.0 1.0 (1.0)$
 $cmyn3^* 0.0 0.0 0.0 (0.0)$
 $olvi4^* 1.0 1.0 1.0 1.0$
 $cmyn4^* 0.0 0.0 0.0 0.0$

standard and adapted CIELAB
 $LAB^*LAB 95.41 -0.98 4.75$
 $LAB^*LABa 95.41 0.0 0.0$
 $LAB^*TCHa 99.99 0.01 -$

relative CIELAB lab*
 $lab^*lab 1.0 0.0 0.0$
 $lab^*tch 1.0 0.0 -$
 $lab^*nch 0.0 0.0 -$

relative Natural Colour (NC)
 $lab^*lrj 1.0 0.0 0.0$
 $lab^*tce 1.0 0.0 -$
 $lab^*nce 0.0 0.0 -$

relative Inform. Technology (IT)
 $olvi3^* 0.5 0.5 0.5 (1.0)$
 $cmyn3^* 0.5 0.5 0.5 (0.0)$
 $olvi4^* 1.0 1.0 1.0 0.5$
 $cmyn4^* 0.0 0.0 0.0 0.5$

standard and adapted CIELAB
 $LAB^*LAB 56.71 -0.24 2.14$
 $LAB^*LABa 56.71 0.0 0.0$
 $LAB^*TCHa 50.0 0.01 -$

relative CIELAB lab*
 $lab^*lab 0.5 0.0 0.0$
 $lab^*tch 0.5 0.0 -$
 $lab^*nch 0.5 0.0 -$

relative Natural Colour (NC)
 $lab^*lrj 0.5 0.0 0.0$
 $lab^*tce 0.5 0.0 -$
 $lab^*nce 0.5 0.0 -$

relative Inform. Technology (IT)
 $olvi3^* 0.5 0.5 1.0 (1.0)$
 $cmyn3^* 0.5 0.5 0.0 (0.0)$
 $olvi4^* 0.5 0.5 1.0 1.0$
 $cmyn4^* 0.5 0.5 0.0 0.0$

standard and adapted CIELAB
 $LAB^*LAB 60.56 15.23 -19.79$
 $LAB^*LABa 60.56 15.55 -22.19$
 $LAB^*TCHa 75.0 27.1 305.0$

relative CIELAB lab*
 $lab^*lab 0.55 0.287 -0.408$
 $lab^*tch 0.75 0.5 0.847$
 $lab^*nch 0.0 0.5 0.847$

relative Natural Colour (NC)
 $lab^*lrj 0.55 0.225 -0.446$
 $lab^*tce 0.75 0.5 0.824$
 $lab^*nce 0.0 0.5 b29r$

relative Inform. Technology (IT)
 $olvi3^* 0.0 0.0 0.5 (1.0)$
 $cmyn3^* 1.0 1.0 0.5 (0.0)$
 $olvi4^* 0.5 0.5 1.0 0.5$
 $cmyn4^* 0.5 0.5 0.0 0.5$

standard and adapted CIELAB
 $LAB^*LAB 21.87 15.97 -22.4$
 $LAB^*LABa 21.87 15.55 -22.19$
 $LAB^*TCHa 25.01 27.1 305.0$

relative CIELAB lab*
 $lab^*lab 0.05 0.287 -0.408$
 $lab^*tch 0.25 0.5 0.847$
 $lab^*nch 0.5 0.5 0.847$

relative Natural Colour (NC)
 $lab^*lrj 0.05 0.225 -0.446$
 $lab^*tce 0.25 0.5 0.824$
 $lab^*nce 0.5 0.5 b29r$

$n^* = 0.50$

0.25 0.50 0.75 1.00

$n^* = 0.00$
 blackness n^*

chromaticness c^*

$n^* = 1.0$

OE150-7, 3 step scales for constant CIELAB hue 306/360 = 0.851 (left)

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

BAM-test chart OE15; Colorimetric systems TLS00 & ORS18
 D65: 2 coordinate data of 3 step colour scales for 10 hues

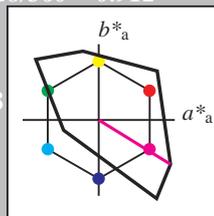
input: $cmY0^* setcmykcolor$
 output: $cmY0^*/000n^* setcmykcolor$

Input: Colorimetric Television Luminous System TLS00

for hue $h^* = lab^*h = 328/360 = 0.912$
 lab^*tch and lab^*nch

D65: hue M
 LCH*Ma: 57 111 328
 olv*Ma: 1.0 0.0 1.0

triangle lightness t^*



TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	50.5	76.92	64.55	100.42	40
YMa	92.66	-20.69	90.75	93.08	103
LMa	83.63	-82.75	79.9	115.04	136
CMa	86.88	-46.16	-13.55	48.12	196
VMa	30.39	76.06	-103.59	128.52	306
MMa	57.3	94.35	-58.41	110.97	328
NMa	0.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

%Gamut
 $u^*_{rel} = 158$
 %Regularity
 $g^*_{H,rel} = 20$
 $g^*_{C,rel} = 37$

relative Inform. Technology (IT)
 $olvi3^* 1.0 1.0 1.0 (1.0)$
 $cmyn3^* 0.0 0.0 0.0 (0.0)$
 $olvi4^* 1.0 1.0 1.0 1.0$
 $cmyn4^* 0.0 0.0 0.0 0.0$

standard and adapted CIELAB
 $LAB^*LAB 95.41 0.0 0.0$
 $LAB^*LABa 95.41 0.0 0.0$
 $LAB^*TCHa 99.99 0.01 -$

relative CIELAB lab*
 $lab^*lab 1.0 0.0 0.0$
 $lab^*tch 1.0 0.0 -$
 $lab^*nch 0.0 0.0 -$

relative Natural Colour (NC)
 $lab^*lrj 1.0 0.0 0.0$
 $lab^*tce 1.0 0.0 -$
 $lab^*nce 0.0 0.0 -$

relative Inform. Technology (IT)
 $olvi3^* 0.5 0.5 0.5 (1.0)$
 $cmyn3^* 0.5 0.5 0.5 (0.0)$
 $olvi4^* 1.0 1.0 1.0 0.5$
 $cmyn4^* 0.0 0.0 0.0 0.5$

standard and adapted CIELAB
 $LAB^*LAB 47.72 0.0 0.0$
 $LAB^*LABa 47.72 0.0 0.0$
 $LAB^*TCHa 50.0 0.01 -$

relative CIELAB lab*
 $lab^*lab 0.5 0.0 0.0$
 $lab^*tch 0.5 0.0 -$
 $lab^*nch 0.5 0.0 -$

relative Natural Colour (NC)
 $lab^*lrj 0.5 0.0 0.0$
 $lab^*tce 0.5 0.0 -$
 $lab^*nce 0.5 0.0 -$

relative Inform. Technology (IT)
 $olvi3^* 0.0 0.0 0.0 (1.0)$
 $cmyn3^* 1.0 1.0 1.0 (0.0)$
 $olvi4^* 1.0 1.0 1.0 0.0$
 $cmyn4^* 0.0 0.0 0.0 1.0$

standard and adapted CIELAB
 $LAB^*LAB 0.03 0.0 0.0$
 $LAB^*LABa 0.03 0.0 0.0$
 $LAB^*TCHa 0.01 0.01 -$

relative CIELAB lab*
 $lab^*lab 0.0 0.0 0.0$
 $lab^*tch 0.0 0.0 -$
 $lab^*nch 1.0 0.0 -$

relative Natural Colour (NC)
 $lab^*lrj 0.0 0.0 0.0$
 $lab^*tce 0.0 0.0 -$
 $lab^*nce 1.0 0.0 -$

$n^* = 1.0$

relative Inform. Technology (IT)
 $olvi3^* 1.0 0.5 1.0 (1.0)$
 $cmyn3^* 0.0 0.5 0.0 (0.0)$
 $olvi4^* 1.0 0.5 1.0 1.0$
 $cmyn4^* 0.0 0.5 0.0 0.0$

standard and adapted CIELAB
 $LAB^*LAB 76.35 47.17 -29.19$
 $LAB^*LABa 76.35 47.17 -29.19$
 $LAB^*TCHa 75.0 55.47 328.23$

relative CIELAB lab*
 $lab^*lab 0.8 0.425 -0.262$
 $lab^*tch 0.75 0.5 0.912$
 $lab^*nch 0.0 0.5 0.912$

relative Natural Colour (NC)
 $lab^*lrj 0.8 0.352 -0.354$
 $lab^*tce 0.75 0.5 0.874$
 $lab^*nce 0.0 0.5 b49r$

relative Inform. Technology (IT)
 $olvi3^* 0.5 0.0 0.5 (1.0)$
 $cmyn3^* 0.5 1.0 0.5 (0.0)$
 $olvi4^* 1.0 0.5 1.0 0.5$
 $cmyn4^* 0.0 0.5 0.0 0.5$

standard and adapted CIELAB
 $LAB^*LAB 28.66 47.17 -29.19$
 $LAB^*LABa 28.66 47.17 -29.19$
 $LAB^*TCHa 25.01 55.47 328.23$

relative CIELAB lab*
 $lab^*lab 0.3 0.425 -0.262$
 $lab^*tch 0.25 0.5 0.912$
 $lab^*nch 0.5 0.5 0.912$

relative Natural Colour (NC)
 $lab^*lrj 0.3 0.352 -0.354$
 $lab^*tce 0.25 0.5 0.874$
 $lab^*nce 0.5 0.5 b49r$

$n^* = 0.50$

relative Inform. Technology (IT)
 $olvi3^* 1.0 0.0 1.0 (1.0)$
 $cmyn3^* 0.0 1.0 0.0 (0.0)$
 $olvi4^* 1.0 0.0 1.0 1.0$
 $cmyn4^* 0.0 1.0 0.0 0.0$

standard and adapted CIELAB
 $LAB^*LAB 57.3 94.33 -58.4$
 $LAB^*LABa 57.3 94.33 -58.4$
 $LAB^*TCHa 50.0 110.95 328.23$

relative CIELAB lab*
 $lab^*lab 0.601 0.85 -0.525$
 $lab^*tch 0.5 1.0 0.912$
 $lab^*nch 0.0 1.0 0.912$

relative Natural Colour (NC)
 $lab^*lrj 0.601 0.703 -0.71$
 $lab^*tce 0.5 1.0 0.874$
 $lab^*nce 0.0 1.0 b49r$

$n^* = 0.00$

blackness n^*

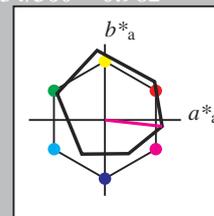
chromaticness c^*

Output: Colorimetric Offset Reflective System ORS18

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

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

triangle lightness t^*



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	47.94	65.39	50.52	82.63	38
YMa	90.37	-10.26	91.75	92.32	96
LMa	50.9	-62.83	34.96	71.91	151
CMa	58.62	-30.34	-45.01	54.3	236
VMa	25.72	31.1	-44.4	54.22	305
MMa	48.13	75.28	-8.36	75.74	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	64.57	25
JCIE	81.26	-2.16	67.76	67.79	92
GCIE	52.23	-42.25	11.76	43.87	164
BCIE	30.57	1.15	-46.84	46.86	271

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

relative Inform. Technology (IT)
 $olvi3^* 1.0 1.0 1.0 (1.0)$
 $cmyn3^* 0.0 0.0 0.0 (0.0)$
 $olvi4^* 1.0 1.0 1.0 1.0$
 $cmyn4^* 0.0 0.0 0.0 0.0$

standard and adapted CIELAB
 $LAB^*LAB 95.41 -0.98 4.75$
 $LAB^*LABa 95.41 0.0 0.0$
 $LAB^*TCHa 99.99 0.01 -$

relative CIELAB lab*
 $lab^*lab 1.0 0.0 0.0$
 $lab^*tch 1.0 0.0 -$
 $lab^*nch 0.0 0.0 -$

relative Natural Colour (NC)
 $lab^*lrj 1.0 0.0 0.0$
 $lab^*tce 1.0 0.0 -$
 $lab^*nce 0.0 0.0 -$

relative Inform. Technology (IT)
 $olvi3^* 0.5 0.5 0.5 (1.0)$
 $cmyn3^* 0.5 0.5 0.5 (0.0)$
 $olvi4^* 1.0 1.0 1.0 0.5$
 $cmyn4^* 0.0 0.0 0.0 0.5$

standard and adapted CIELAB
 $LAB^*LAB 56.71 -0.24 2.14$
 $LAB^*LABa 56.71 0.0 0.0$
 $LAB^*TCHa 50.0 0.01 -$

relative CIELAB lab*
 $lab^*lab 0.5 0.0 0.0$
 $lab^*tch 0.5 0.0 -$
 $lab^*nch 0.5 0.0 -$

relative Natural Colour (NC)
 $lab^*lrj 0.5 0.0 0.0$
 $lab^*tce 0.5 0.0 -$
 $lab^*nce 0.5 0.0 -$

relative Inform. Technology (IT)
 $olvi3^* 1.0 0.5 1.0 (1.0)$
 $cmyn3^* 0.0 0.5 0.0 (0.0)$
 $olvi4^* 1.0 0.5 1.0 1.0$
 $cmyn4^* 0.0 0.5 0.0 0.0$

standard and adapted CIELAB
 $LAB^*LAB 71.77 37.1 -1.01$
 $LAB^*LABa 71.77 37.63 -4.17$
 $LAB^*TCHa 75.0 37.86 353.66$

relative CIELAB lab*
 $lab^*lab 0.695 0.497 -0.054$
 $lab^*tch 0.75 0.5 0.982$
 $lab^*nch 0.0 0.5 0.982$

relative Natural Colour (NC)
 $lab^*lrj 0.695 0.454 -0.208$
 $lab^*tce 0.75 0.5 0.932$
 $lab^*nce 0.0 0.5 b72r$

relative Inform. Technology (IT)
 $olvi3^* 0.5 0.0 0.5 (1.0)$
 $cmyn3^* 0.5 1.0 0.5 (0.0)$
 $olvi4^* 1.0 0.5 1.0 0.5$
 $cmyn4^* 0.0 0.5 0.0 0.5$

standard and adapted CIELAB
 $LAB^*LAB 33.07 37.84 -3.62$
 $LAB^*LABa 33.07 37.63 -4.17$
 $LAB^*TCHa 25.01 37.86 353.66$

relative CIELAB lab*
 $lab^*lab 0.195 0.497 -0.054$
 $lab^*tch 0.25 0.5 0.982$
 $lab^*nch 0.5 0.5 0.982$

relative Natural Colour (NC)
 $lab^*lrj 0.195 0.454 -0.208$
 $lab^*tce 0.25 0.5 0.932$
 $lab^*nce 0.5 0.5 b72r$

$n^* = 0.50$

blackness n^*

chromaticness c^*

$n^* = 1.0$

relative Inform. Technology (IT)
 $olvi3^* 0.0 0.0 0.0 (1.0)$
 $cmyn3^* 1.0 1.0 1.0 (0.0)$
 $olvi4^* 1.0 1.0 1.0 0.0$
 $cmyn4^* 0.0 0.0 0.0 1.0$

standard and adapted CIELAB
 $LAB^*LAB 18.02 0.5 -0.47$
 $LAB^*LABa 18.02 0.0 0.0$
 $LAB^*TCHa 0.01 0.01 -$

relative CIELAB lab*
 $lab^*lab 0.0 0.0 0.0$
 $lab^*tch 0.0 0.0 -$
 $lab^*nch 1.0 0.0 -$

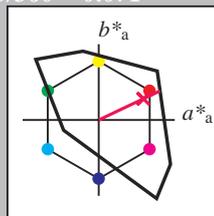
relative Natural Colour (NC)
 $lab^*lrj 0.0 0.0 0.0$
 $lab^*tce 0.0 0.0 -$
 $lab^*nce 1.0 0.0 -$

Input: Colorimetric Television Luminous System TLS00

for hue $h^* = lab^*h = 25/360 = 0.071$
 lab^*tch and lab^*nch

D65: hue R
 LCH*Ma: 52 89 25
 olv*Ma: 1.0 0.0 0.21

triangle lightness t^*



TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	50.5	76.92	64.55	100.42	40
YMa	92.66	-20.69	90.75	93.08	103
LMa	83.63	-82.75	79.9	115.04	136
CMa	86.88	-46.16	-13.55	48.12	196
VMa	30.39	76.06	-103.59	128.52	306
MMa	57.3	94.35	-58.41	110.97	328
NMa	0.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

%Gamut
 $u^*_{rel} = 158$
 %Regularity
 $g^*_{H,rel} = 20$
 $g^*_{C,rel} = 37$

relative Inform. Technology (IT)
 $olvi3^* 1.0 1.0 1.0 (1.0)$
 $cmyn3^* 0.0 0.0 0.0 (0.0)$
 $olvi4^* 1.0 1.0 1.0 (1.0)$
 $cmyn4^* 0.0 0.0 0.0 (0.0)$

standard and adapted CIELAB
 $LAB^*LAB 95.41 0.0 0.0$
 $LAB^*LABa 95.41 0.0 0.0$
 $LAB^*TCHa 99.99 0.01 -$

relative CIELAB lab*
 $lab^*lab 1.0 0.0 0.0$
 $lab^*tch 1.0 0.0 -$
 $lab^*nch 0.0 0.0 -$

relative Natural Colour (NC)
 $lab^*lrj 1.0 0.0 0.0$
 $lab^*tce 1.0 0.0 -$
 $lab^*nce 0.0 0.0 -$

relative Inform. Technology (IT)
 $olvi3^* 0.5 0.5 0.5 (1.0)$
 $cmyn3^* 0.5 0.5 0.5 (0.0)$
 $olvi4^* 1.0 1.0 1.0 (0.5)$
 $cmyn4^* 0.0 0.0 0.0 (0.5)$

standard and adapted CIELAB
 $LAB^*LAB 47.72 0.0 0.0$
 $LAB^*LABa 47.72 0.0 0.0$
 $LAB^*TCHa 50.0 0.01 -$

relative CIELAB lab*
 $lab^*lab 0.5 0.0 0.0$
 $lab^*tch 0.5 0.0 -$
 $lab^*nch 0.5 0.0 -$

relative Natural Colour (NC)
 $lab^*lrj 0.5 0.0 0.0$
 $lab^*tce 0.5 0.0 -$
 $lab^*nce 0.5 0.0 -$

relative Inform. Technology (IT)
 $olvi3^* 0.0 0.0 0.0 (1.0)$
 $cmyn3^* 1.0 1.0 1.0 (0.0)$
 $olvi4^* 1.0 1.0 1.0 (0.0)$
 $cmyn4^* 0.0 0.0 0.0 (1.0)$

standard and adapted CIELAB
 $LAB^*LAB 0.03 0.0 0.0$
 $LAB^*LABa 0.03 0.0 0.0$
 $LAB^*TCHa 0.01 0.01 -$

relative CIELAB lab*
 $lab^*lab 0.0 0.0 0.0$
 $lab^*tch 0.0 0.0 -$
 $lab^*nch 1.0 0.0 -$

relative Natural Colour (NC)
 $lab^*lrj 0.0 0.0 0.0$
 $lab^*tce 0.0 0.0 -$
 $lab^*nce 1.0 0.0 -$

$n^* = 1.0$

relative Inform. Technology (IT)
 $olvi3^* 1.0 0.5 0.606 (1.0)$
 $cmyn3^* 0.0 0.5 0.394 (0.0)$
 $olvi4^* 1.0 0.5 0.606 (1.0)$
 $cmyn4^* 0.0 0.5 0.394 (0.0)$

standard and adapted CIELAB
 $LAB^*LAB 73.67 40.3 19.2$
 $LAB^*LABa 73.67 40.3 19.2$
 $LAB^*TCHa 75.0 44.64 25.47$

relative CIELAB lab*
 $lab^*lab 0.772 0.451 0.215$
 $lab^*tch 0.75 0.5 0.071$
 $lab^*nch 0.0 0.5 0.071$

relative Natural Colour (NC)
 $lab^*lrj 0.772 0.5 0.0$
 $lab^*tce 0.75 0.5 1.0$
 $lab^*nce 0.0 0.5 0.99r$

relative Inform. Technology (IT)
 $olvi3^* 0.5 0.0 0.106 (1.0)$
 $cmyn3^* 0.5 1.0 0.894 (0.0)$
 $olvi4^* 1.0 0.5 0.606 (0.5)$
 $cmyn4^* 0.0 0.5 0.394 (0.5)$

standard and adapted CIELAB
 $LAB^*LAB 25.98 40.3 19.21$
 $LAB^*LABa 25.98 40.3 19.21$
 $LAB^*TCHa 25.01 44.65 25.49$

relative CIELAB lab*
 $lab^*lab 0.272 0.451 0.215$
 $lab^*tch 0.25 0.5 0.071$
 $lab^*nch 0.5 0.5 0.071$

relative Natural Colour (NC)
 $lab^*lrj 0.272 0.5 0.0$
 $lab^*tce 0.25 0.5 0.0$
 $lab^*nce 0.5 0.5 0.00j$

$n^* = 0.50$

relative Inform. Technology (IT)
 $olvi3^* 1.0 0.0 0.213 (1.0)$
 $cmyn3^* 0.0 1.0 0.787 (0.0)$
 $olvi4^* 1.0 0.0 0.213 (1.0)$
 $cmyn4^* 0.0 1.0 0.787 (0.0)$

standard and adapted CIELAB
 $LAB^*LAB 51.94 80.61 38.42$
 $LAB^*LABa 51.94 80.61 38.42$
 $LAB^*TCHa 50.0 89.29 25.48$

relative CIELAB lab*
 $lab^*lab 0.544 0.903 0.43$
 $lab^*tch 0.5 1.0 0.071$
 $lab^*nch 0.0 1.0 0.071$

relative Natural Colour (NC)
 $lab^*lrj 0.544 1.0 0.0$
 $lab^*tce 0.5 1.0 0.0$
 $lab^*nce 0.0 1.0 0.00j$

$n^* = 0.00$

blackness n^*

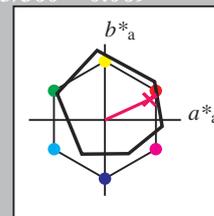
chromaticness c^*

Output: Colorimetric Offset Reflective System ORS18

for hue $h^* = lab^*h = 25/360 = 0.069$
 lab^*tch and lab^*nch

D65: hue R
 LCH*Ma: 48 75 25
 olv*Ma: 1.0 0.0 0.32

triangle lightness t^*



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	47.94	65.39	50.52	82.63	38
YMa	90.37	-10.26	91.75	92.32	96
LMa	50.9	-62.83	34.96	71.91	151
CMa	58.62	-30.34	-45.01	54.3	236
VMa	25.72	31.1	-44.4	54.22	305
MMa	48.13	75.28	-8.36	75.74	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	64.57	25
JCIE	81.26	-2.16	67.76	67.79	92
GCIE	52.23	-42.25	11.76	43.87	164
BCIE	30.57	1.15	-46.84	46.86	271

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

relative Inform. Technology (IT)
 $olvi3^* 1.0 1.0 1.0 (1.0)$
 $cmyn3^* 0.0 0.0 0.0 (0.0)$
 $olvi4^* 1.0 1.0 1.0 (1.0)$
 $cmyn4^* 0.0 0.0 0.0 (0.0)$

standard and adapted CIELAB
 $LAB^*LAB 95.41 -0.98 4.75$
 $LAB^*LABa 95.41 0.0 0.0$
 $LAB^*TCHa 99.99 0.01 -$

relative CIELAB lab*
 $lab^*lab 1.0 0.0 0.0$
 $lab^*tch 1.0 0.0 -$
 $lab^*nch 0.0 0.0 -$

relative Natural Colour (NC)
 $lab^*lrj 1.0 0.0 0.0$
 $lab^*tce 1.0 0.0 -$
 $lab^*nce 0.0 0.0 -$

relative Inform. Technology (IT)
 $olvi3^* 0.5 0.5 0.5 (1.0)$
 $cmyn3^* 0.5 0.5 0.5 (0.0)$
 $olvi4^* 1.0 1.0 1.0 (0.5)$
 $cmyn4^* 0.0 0.0 0.0 (0.5)$

standard and adapted CIELAB
 $LAB^*LAB 56.71 -0.24 2.14$
 $LAB^*LABa 56.71 0.0 0.0$
 $LAB^*TCHa 50.0 0.01 -$

relative CIELAB lab*
 $lab^*lab 0.5 0.0 0.0$
 $lab^*tch 0.5 0.0 -$
 $lab^*nch 0.5 0.0 -$

relative Natural Colour (NC)
 $lab^*lrj 0.5 0.0 0.0$
 $lab^*tce 0.5 0.0 -$
 $lab^*nce 0.5 0.0 -$

relative Inform. Technology (IT)
 $olvi3^* 0.5 0.0 0.0 (1.0)$
 $cmyn3^* 1.0 1.0 1.0 (0.0)$
 $olvi4^* 1.0 1.0 1.0 (0.0)$
 $cmyn4^* 0.0 0.0 0.0 (1.0)$

standard and adapted CIELAB
 $LAB^*LAB 18.02 0.5 -0.47$
 $LAB^*LABa 18.02 0.0 0.0$
 $LAB^*TCHa 0.01 0.01 -$

relative CIELAB lab*
 $lab^*lab 0.0 0.0 0.0$
 $lab^*tch 0.0 0.0 -$
 $lab^*nch 1.0 0.0 -$

relative Natural Colour (NC)
 $lab^*lrj 0.0 0.0 0.0$
 $lab^*tce 0.0 0.0 -$
 $lab^*nce 1.0 0.0 -$

$n^* = 1.0$

relative Inform. Technology (IT)
 $olvi3^* 1.0 0.5 0.661 (1.0)$
 $cmyn3^* 0.0 0.5 0.339 (0.0)$
 $olvi4^* 1.0 0.5 0.661 (1.0)$
 $cmyn4^* 0.0 0.5 0.339 (0.0)$

standard and adapted CIELAB
 $LAB^*LAB 71.7 33.75 18.92$
 $LAB^*LABa 71.7 34.28 15.76$
 $LAB^*TCHa 75.0 37.73 24.7$

relative CIELAB lab*
 $lab^*lab 0.694 0.454 0.209$
 $lab^*tch 0.75 0.5 0.069$
 $lab^*nch 0.0 0.5 0.069$

relative Natural Colour (NC)
 $lab^*lrj 0.694 0.5 0.0$
 $lab^*tce 0.75 0.5 1.0$
 $lab^*nce 0.0 0.5 0.99r$

relative Inform. Technology (IT)
 $olvi3^* 0.5 0.0 0.161 (1.0)$
 $cmyn3^* 0.5 1.0 0.839 (0.0)$
 $olvi4^* 1.0 0.5 0.661 (0.5)$
 $cmyn4^* 0.0 0.5 0.339 (0.5)$

standard and adapted CIELAB
 $LAB^*LAB 33.01 34.49 16.31$
 $LAB^*LABa 33.01 34.28 15.77$
 $LAB^*TCHa 25.01 37.73 24.7$

relative CIELAB lab*
 $lab^*lab 0.194 0.454 0.209$
 $lab^*tch 0.25 0.5 0.069$
 $lab^*nch 0.5 0.5 0.069$

relative Natural Colour (NC)
 $lab^*lrj 0.194 0.5 0.0$
 $lab^*tce 0.25 0.5 0.0$
 $lab^*nce 0.5 0.5 0.00j$

$n^* = 0.50$

relative Inform. Technology (IT)
 $olvi3^* 1.0 0.0 0.322 (1.0)$
 $cmyn3^* 0.0 1.0 0.678 (0.0)$
 $olvi4^* 1.0 0.0 0.322 (1.0)$
 $cmyn4^* 0.0 1.0 0.678 (0.0)$

standard and adapted CIELAB
 $LAB^*LAB 48.0 68.48 33.09$
 $LAB^*LABa 48.0 68.56 31.53$
 $LAB^*TCHa 50.0 75.47 24.7$

relative CIELAB lab*
 $lab^*lab 0.388 0.908 0.418$
 $lab^*tch 0.5 1.0 0.069$
 $lab^*nch 0.0 1.0 0.069$

relative Natural Colour (NC)
 $lab^*lrj 0.388 1.0 0.0$
 $lab^*tce 0.5 1.0 0.0$
 $lab^*nce 0.0 1.0 0.00j$

relative Inform. Technology (IT)
 $olvi3^* 0.5 0.0 0.161 (1.0)$
 $cmyn3^* 0.5 1.0 0.839 (0.0)$
 $olvi4^* 1.0 0.5 0.661 (0.5)$
 $cmyn4^* 0.0 0.5 0.339 (0.5)$

standard and adapted CIELAB
 $LAB^*LAB 33.01 34.49 16.31$
 $LAB^*LABa 33.01 34.28 15.77$
 $LAB^*TCHa 25.01 37.73 24.7$

relative CIELAB lab*
 $lab^*lab 0.194 0.454 0.209$
 $lab^*tch 0.25 0.5 0.069$
 $lab^*nch 0.5 0.5 0.069$

relative Natural Colour (NC)
 $lab^*lrj 0.194 0.5 0.0$
 $lab^*tce 0.25 0.5 0.0$
 $lab^*nce 0.5 0.5 0.00j$

$n^* = 0.00$

chromaticness c^*

OE150-7, 3 step scales for constant CIELAB hue 25/360 = 0.071 (left)

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

BAM-test chart OE15; Colorimetric systems TLS00 & ORS18
 D65: 2 coordinate data of 3 step colour scales for 10 hues

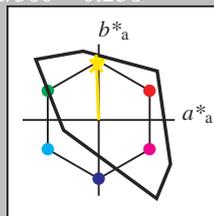
input: $cmY0^* setcmykcolor$
 output: $cmY0^*/000n^* setcmykcolor$

Input: Colorimetric Television Luminous System TLS00

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

D65: hue J
 LCH*Ma: 85 86 92
 olv*Ma: 1.0 0.82 0.0

triangle lightness t^*



TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	50.5	76.92	64.55	100.42	40
YMa	92.66	-20.69	90.75	93.08	103
LMa	83.63	-82.75	79.9	115.04	136
CMa	86.88	-46.16	-13.55	48.12	196
VMa	30.39	76.06	-103.59	128.52	306
MMa	57.3	94.35	-58.41	110.97	328
NMa	0.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

%Gamut

$u^*_{rel} = 158$

%Regularity

$g^*_{H,rel} = 20$

$g^*_{C,rel} = 37$

relative Inform. Technology (IT)

olvi3*	1.0	1.0	1.0	(1.0)
cmyn3*	0.0	0.0	0.0	(0.0)
olvi4*	1.0	1.0	1.0	1.0
cmyn4*	0.0	0.0	0.0	0.0

standard and adapted CIELAB

LAB*LAB	95.41	0.0	0.0
LAB*LABa	95.41	0.0	0.0
LAB*TCHa	99.99	0.01	-

relative CIELAB lab*

lab*lab	1.0	0.0	0.0
lab*tch	1.0	0.0	-
lab*nch	0.0	0.0	-

relative Natural Colour (NC)

lab*lrj	1.0	0.0	0.0
lab*tce	1.0	0.0	-
lab*nce	0.0	0.0	-

relative Inform. Technology (IT)

olvi3*	0.5	0.5	0.5	(1.0)
cmyn3*	0.5	0.5	0.5	(0.0)
olvi4*	1.0	1.0	1.0	0.5
cmyn4*	0.0	0.0	0.0	0.5

standard and adapted CIELAB

LAB*LAB	47.72	0.0	0.0
LAB*LABa	47.72	0.0	0.0
LAB*TCHa	50.0	0.01	-

relative CIELAB lab*

lab*lab	0.5	0.0	0.0
lab*tch	0.5	0.0	-
lab*nch	0.5	0.0	-

relative Natural Colour (NC)

lab*lrj	0.5	0.0	0.0
lab*tce	0.5	0.0	-
lab*nce	0.5	0.0	-

relative Inform. Technology (IT)

olvi3*	0.0	0.0	0.0	(1.0)
cmyn3*	1.0	1.0	1.0	(0.0)
olvi4*	1.0	1.0	1.0	0.0
cmyn4*	0.0	0.0	0.0	1.0

standard and adapted CIELAB

LAB*LAB	0.03	0.0	0.0
LAB*LABa	0.03	0.0	0.0
LAB*TCHa	0.01	0.01	-

relative CIELAB lab*

lab*lab	0.0	0.0	0.0
lab*tch	0.0	0.0	-
lab*nch	1.0	0.0	-

relative Natural Colour (NC)

lab*lrj	0.0	0.0	0.0
lab*tce	0.0	0.0	-
lab*nce	1.0	0.0	-

$n^* = 1.0$

relative Inform. Technology (IT)

olvi3*	1.0	0.912	0.5	(1.0)
cmyn3*	0.0	0.088	0.5	(0.0)
olvi4*	1.0	0.912	0.5	1.0
cmyn4*	0.0	0.088	0.5	0.0

standard and adapted CIELAB

LAB*LAB	90.31	-1.74	43.06
LAB*LABa	90.31	-1.74	43.06
LAB*TCHa	75.0	43.09	92.32

relative CIELAB lab*

lab*lab	0.947	-0.019	0.499
lab*tch	0.75	0.5	0.256
lab*nch	0.0	0.5	0.256

relative Natural Colour (NC)

lab*lrj	0.947	0.0	0.5
lab*tce	0.75	0.5	0.25
lab*nce	0.0	0.5	j00g

relative Inform. Technology (IT)

olvi3*	0.5	0.412	0.0	(1.0)
cmyn3*	0.5	0.588	1.0	(0.0)
olvi4*	1.0	0.912	0.5	0.5
cmyn4*	0.0	0.088	0.5	0.5

standard and adapted CIELAB

LAB*LAB	42.62	-1.73	43.05
LAB*LABa	42.62	-1.73	43.05
LAB*TCHa	25.01	43.09	92.31

relative CIELAB lab*

lab*lab	0.447	-0.019	0.499
lab*tch	0.25	0.5	0.256
lab*nch	0.5	0.5	0.256

relative Natural Colour (NC)

lab*lrj	0.447	0.0	0.5
lab*tce	0.25	0.5	0.25
lab*nce	0.5	0.5	r99j

relative Inform. Technology (IT)

olvi3*	0.0	0.0	0.0	(1.0)
cmyn3*	1.0	1.0	1.0	(0.0)
olvi4*	1.0	1.0	1.0	0.0
cmyn4*	0.0	0.0	0.0	1.0

standard and adapted CIELAB

LAB*LAB	18.02	0.5	-0.47
LAB*LABa	18.02	0.0	0.0
LAB*TCHa	0.01	0.01	-

relative CIELAB lab*

lab*lab	0.0	0.0	0.0
lab*tch	0.0	0.0	-
lab*nch	1.0	0.0	-

relative Natural Colour (NC)

lab*lrj	0.0	0.0	0.0
lab*tce	0.0	0.0	-
lab*nce	1.0	0.0	-

relative Inform. Technology (IT)

olvi3*	1.0	0.824	0.0	(1.0)
cmyn3*	0.0	0.176	1.0	(0.0)
olvi4*	1.0	0.824	0.0	1.0
cmyn4*	0.0	0.176	1.0	0.0

standard and adapted CIELAB

LAB*LAB	85.22	-3.47	86.11
LAB*LABa	85.22	-3.47	86.11
LAB*TCHa	50.0	86.18	92.32

relative CIELAB lab*

lab*lab	0.893	-0.039	0.999
lab*tch	0.5	1.0	0.256
lab*nch	0.0	1.0	0.256

relative Natural Colour (NC)

lab*lrj	0.893	0.0	1.0
lab*tce	0.5	1.0	0.25
lab*nce	0.0	1.0	j00g

relative Inform. Technology (IT)

olvi3*	0.5	0.5	0.5	(1.0)
cmyn3*	0.5	0.5	0.5	(0.0)
olvi4*	1.0	1.0	1.0	0.5
cmyn4*	0.0	0.0	0.0	0.5

standard and adapted CIELAB

LAB*LAB	56.71	-0.24	2.14
LAB*LABa	56.71	0.0	0.0
LAB*TCHa	50.0	0.01	-

relative CIELAB lab*

lab*lab	0.5	0.0	0.0
lab*tch	0.5	0.0	-
lab*nch	0.5	0.0	-

relative Natural Colour (NC)

lab*lrj	0.5	0.0	0.0
lab*tce	0.5	0.0	-
lab*nce	0.5	0.0	-

relative Inform. Technology (IT)

olvi3*	0.0	0.0	0.0	(1.0)
cmyn3*	1.0	1.0	1.0	(0.0)
olvi4*	1.0	1.0	1.0	0.0
cmyn4*	0.0	0.0	0.0	1.0

standard and adapted CIELAB

LAB*LAB	0.0	0.0	0.0
LAB*LABa	0.0	0.0	-
LAB*TCHa	1.0	0.0	-

relative CIELAB lab*

lab*lab	0.0	0.0	0.0
lab*tch	0.0	0.0	-
lab*nch	1.0	0.0	-

relative Natural Colour (NC)

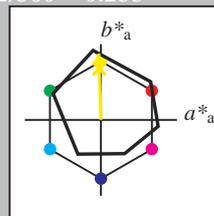
lab*lrj	0.0	0.0	0.0
lab*tce	0.0	0.0	-
lab*nce	1.0	0.0	-

Output: Colorimetric Offset Reflective System ORS18

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

D65: hue J
 LCH*Ma: 86 88 92
 olv*Ma: 1.0 0.9 0.0

triangle lightness t^*



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	47.94	65.39	50.52	82.63	38
YMa	90.37	-10.26	91.75	92.32	96
LMa	50.9	-62.83	34.96	71.91	151
CMa	58.62	-30.34	-45.01	54.3	236
VMa	25.72	31.1	-44.4	54.22	305
MMa	48.13	75.28	-8.36	75.74	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	64.57	25
JCIE	81.26	-2.16	67.76	67.79	92
GCIE	52.23	-42.25	11.76	43.87	164
BCIE	30.57	1.15	-46.84	46.86	271

%Gamut

$u^*_{rel} = 93$

%Regularity

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

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

relative Inform. Technology (IT)

olvi3*	1.0	1.0	1.0	(1.0)
cmyn3*	0.0	0.0	0.0	(0.0)
olvi4*	1.0	1.0	1.0	1.0
cmyn4*	0.0	0.0	0.0	0.0

standard and adapted CIELAB

LAB*LAB	95.41	-0.98	4.75
LAB*LABa	95.41	0.0	0.0
LAB*TCHa	99.99	0.01	-

relative CIELAB lab*

lab*lab	1.0	0.0	0.0
lab*tch	1.0	0.0	-
lab*nch	0.0	0.0	-

relative Natural Colour (NC)

lab*lrj	1.0	0.0	0.0
lab*tce	1.0	0.0	-
lab*nce	0.0	0.0	-

relative Inform. Technology (IT)

olvi3*	0.5	0.5	0.5	(1.0)
cmyn3*	0.5	0.5	0.5	(0.0)
olvi4*	1.0	1.0	1.0	0.5
cmyn4*	0.0	0.0	0.0	0.5

standard and adapted CIELAB

LAB*LAB	90.8	-2.3	48.29
LAB*LABa	90.8	-1.4	43.84
LAB*TCHa	75.0	43.86	91.85

relative CIELAB lab*

lab*lab	0.94	-0.015	0.5
lab*tch	0.75	0.5	0.255
lab*nch	0.0	0.5	0.255

relative Natural Colour (NC)

lab*lrj	0.94	0.0	0.5
lab*tce	0.75	0.5	0.25
lab*nce	0.0	0.5	j00g

relative Inform. Technology (IT)

olvi3*	0.5	0.5	0.5	(1.0)
cmyn3*	0.5	0.5	0.5	(0.0)
olvi4*	1.0	1.0	1.0	0.5
cmyn4*	0.0	0.0	0.0	0.5

standard and adapted CIELAB

LAB*LAB	52.1	-1.55	45.67
LAB*LABa	52.1	-1.39	43.83
LAB*TCHa	25.01	43.86	91.84

relative CIELAB lab*

lab*lab	0.44	-0.015	0.5
lab*tch	0.25	0.5	0.255
lab*nch	0.5	0.5	0.255

relative Natural Colour (NC)

lab*lrj	0.44	0.0	0.5
lab*tce	0.25	0.5	0.25
lab*nce	0.5	0.5	r99j

relative Inform. Technology (IT)

olvi3*	0.0	0.0	0.0	(1.0)
cmyn3*	1.0	1.0	1.0	(0.0)
olvi4*	1.0	1.0	1.0	0.0
cmyn4*	0.0	0.0	0.0	1.0

standard and adapted CIELAB

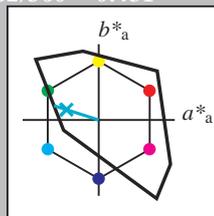
LAB*LAB	0.0	0.0	0.0
LAB*LABa	0.0	0.0	-
LAB*TCHa	1.0	0.0	-

Input: Colorimetric Television Luminous System TLS00

for hue $h^* = lab^*h = 162/360 = 0.451$
 lab^*tch and lab^*nch

D65: hue G
 LCH*Ma: 86 62 162
 olv*Ma: 0.0 1.0 0.65

triangle lightness t^*



TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	50.5	76.92	64.55	100.42	40
YMa	92.66	-20.69	90.75	93.08	103
LMa	83.63	-82.75	79.9	115.04	136
CMa	86.88	-46.16	-13.55	48.12	196
VMa	30.39	76.06	-103.59	128.52	306
MMa	57.3	94.35	-58.41	110.97	328
NMa	0.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

%Gamut

$u^*_{rel} = 158$

%Regularity

$g^*_{H,rel} = 20$

$g^*_{C,rel} = 37$

relative Inform. Technology (IT)
 olvi3* 1.0 1.0 1.0 (1.0)
 cmyn3* 0.0 0.0 0.0 (0.0)
 olvi4* 1.0 1.0 1.0 1.0
 cmyn4* 0.0 0.0 0.0 0.0

standard and adapted CIELAB
 LAB*LAB 95.41 0.0 0.0
 LAB*LABa 95.41 0.0 0.0
 LAB*TCHa 99.99 0.01 -

relative CIELAB lab*
 lab*lab 1.0 0.0 0.0
 lab*tch 1.0 0.0 -
 lab*nch 0.0 0.0 -

relative Natural Colour (NC)
 lab*lrj 1.0 0.0 0.0
 lab*tce 1.0 0.0 -
 lab*nce 0.0 0.0 -

relative Inform. Technology (IT)
 olvi3* 0.5 1.0 0.826 (1.0)
 cmyn3* 0.5 0.0 0.174 (0.0)
 olvi4* 0.5 1.0 0.827 1.0
 cmyn4* 0.5 0.0 0.173 0.0

standard and adapted CIELAB
 LAB*LAB 90.57 -29.42 9.43
 LAB*LABa 90.57 -29.42 9.43
 LAB*TCHa 75.0 30.9 162.23

relative CIELAB lab*
 lab*lab 0.949 -0.475 0.153
 lab*tch 0.75 0.5 0.451
 lab*nch 0.0 0.5 0.451

relative Natural Colour (NC)
 lab*lrj 0.949 -0.499 0.0
 lab*tce 0.75 0.5 0.5
 lab*nce 0.0 0.5 g00b

relative Inform. Technology (IT)
 olvi3* 0.5 0.5 0.5 (1.0)
 cmyn3* 0.5 0.5 0.5 (0.0)
 olvi4* 1.0 1.0 1.0 0.5
 cmyn4* 0.0 0.0 0.0 0.5

standard and adapted CIELAB
 LAB*LAB 47.72 0.0 0.0
 LAB*LABa 47.72 0.0 0.0
 LAB*TCHa 50.0 0.01 -

relative CIELAB lab*
 lab*lab 0.5 0.0 0.0
 lab*tch 0.5 0.0 -
 lab*nch 0.5 0.0 -

relative Natural Colour (NC)
 lab*lrj 0.5 0.0 0.0
 lab*tce 0.5 0.0 -
 lab*nce 0.5 0.0 -

relative Inform. Technology (IT)
 olvi3* 0.0 0.0 0.0 (1.0)
 cmyn3* 1.0 1.0 1.0 (0.0)
 olvi4* 1.0 1.0 1.0 0.0
 cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
 LAB*LAB 0.03 0.0 0.0
 LAB*LABa 0.03 0.0 0.0
 LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
 lab*lab 0.0 0.0 0.0
 lab*tch 0.0 0.0 -
 lab*nch 1.0 0.0 -

relative Natural Colour (NC)
 lab*lrj 0.0 0.0 0.0
 lab*tce 0.0 0.0 -
 lab*nce 1.0 0.0 -

$n^* = 1.0$

relative Inform. Technology (IT)
 olvi3* 0.0 0.5 0.326 (1.0)
 cmyn3* 1.0 0.5 0.674 (0.0)
 olvi4* 0.5 1.0 0.826 0.5
 cmyn4* 0.5 0.0 0.174 0.5

standard and adapted CIELAB
 LAB*LAB 42.88 -29.42 9.44
 LAB*LABa 42.88 -29.42 9.44
 LAB*TCHa 25.01 30.91 162.22

relative CIELAB lab*
 lab*lab 0.449 -0.475 0.153
 lab*tch 0.25 0.5 0.451
 lab*nch 0.5 0.5 0.451

relative Natural Colour (NC)
 lab*lrj 0.449 -0.499 0.0
 lab*tce 0.25 0.5 0.5
 lab*nce 0.5 0.5 199g

$n^* = 0.50$

relative Inform. Technology (IT)
 olvi3* 0.0 1.0 0.653 (1.0)
 cmyn3* 1.0 0.0 0.347 (0.0)
 olvi4* 0.0 1.0 0.653 1.0
 cmyn4* 1.0 0.0 0.347 0.0

standard and adapted CIELAB
 LAB*LAB 85.74 -58.84 18.87
 LAB*LABa 85.74 -58.84 18.87
 LAB*TCHa 50.0 61.8 162.23

relative CIELAB lab*
 lab*lab 0.899 -0.951 0.305
 lab*tch 0.5 1.0 0.451
 lab*nch 0.0 1.0 0.451

relative Natural Colour (NC)
 lab*lrj 0.899 -0.999 0.0
 lab*tce 0.5 1.0 0.5
 lab*nce 0.0 1.0 g00b

$n^* = 0.00$

blackness n^*

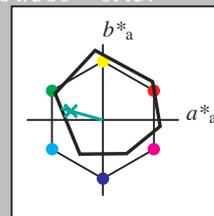
chromaticness c^*

Output: Colorimetric Offset Reflective System ORS18

for hue $h^* = lab^*h = 164/360 = 0.457$
 lab^*tch and lab^*nch

D65: hue G
 LCH*Ma: 53 57 164
 olv*Ma: 0.0 1.0 0.25

triangle lightness t^*



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	47.94	65.39	50.52	82.63	38
YMa	90.37	-10.26	91.75	92.32	96
LMa	50.9	-62.83	34.96	71.91	151
CMa	58.62	-30.34	-45.01	54.3	236
VMa	25.72	31.1	-44.4	54.22	305
MMa	48.13	75.28	-8.36	75.74	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	64.57	25
JCIE	81.26	-2.16	67.76	67.79	92
GCIE	52.23	-42.25	11.76	43.87	164
BCIE	30.57	1.15	-46.84	46.86	271

%Gamut

$u^*_{rel} = 93$

%Regularity

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

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

relative Inform. Technology (IT)
 olvi3* 1.0 1.0 1.0 (1.0)
 cmyn3* 0.0 0.0 0.0 (0.0)
 olvi4* 1.0 1.0 1.0 1.0
 cmyn4* 0.0 0.0 0.0 0.0

standard and adapted CIELAB
 LAB*LAB 95.41 -0.98 4.75
 LAB*LABa 95.41 0.0 0.0
 LAB*TCHa 99.99 0.01 -

relative CIELAB lab*
 lab*lab 1.0 0.0 0.0
 lab*tch 1.0 0.0 -
 lab*nch 0.0 0.0 -

relative Natural Colour (NC)
 lab*lrj 1.0 0.0 0.0
 lab*tce 1.0 0.0 -
 lab*nce 0.0 0.0 -

relative Inform. Technology (IT)
 olvi3* 0.5 1.0 0.623 (1.0)
 cmyn3* 0.5 0.0 0.377 (0.0)
 olvi4* 0.5 1.0 0.623 1.0
 cmyn4* 0.5 0.0 0.377 0.0

standard and adapted CIELAB
 LAB*LAB 74.1 -27.98 10.94
 LAB*LABa 74.1 -27.4 7.62
 LAB*TCHa 75.0 28.45 164.46

relative CIELAB lab*
 lab*lab 0.725 -0.481 0.134
 lab*tch 0.75 0.5 0.457
 lab*nch 0.0 0.5 0.457

relative Natural Colour (NC)
 lab*lrj 0.725 -0.499 0.0
 lab*tce 0.75 0.5 0.5
 lab*nce 0.0 0.5 g00b

relative Inform. Technology (IT)
 olvi3* 0.5 0.5 0.5 (1.0)
 cmyn3* 0.5 0.5 0.5 (0.0)
 olvi4* 1.0 1.0 1.0 0.5
 cmyn4* 0.0 0.0 0.0 0.5

standard and adapted CIELAB
 LAB*LAB 56.71 -0.24 2.14
 LAB*LABa 56.71 0.0 0.0
 LAB*TCHa 50.0 0.01 -

relative CIELAB lab*
 lab*lab 0.5 0.0 0.0
 lab*tch 0.5 0.0 -
 lab*nch 0.5 0.0 -

relative Natural Colour (NC)
 lab*lrj 0.5 0.0 0.0
 lab*tce 0.5 0.0 -
 lab*nce 0.5 0.0 -

relative Inform. Technology (IT)
 olvi3* 0.0 0.5 0.123 (1.0)
 cmyn3* 1.0 0.5 0.877 (0.0)
 olvi4* 0.5 1.0 0.623 0.5
 cmyn4* 0.5 0.0 0.377 0.5

standard and adapted CIELAB
 LAB*LAB 35.41 -27.24 8.34
 LAB*LABa 35.41 -27.4 7.63
 LAB*TCHa 25.01 28.46 164.44

relative CIELAB lab*
 lab*lab 0.225 -0.481 0.134
 lab*tch 0.25 0.5 0.457
 lab*nch 0.5 0.5 0.457

relative Natural Colour (NC)
 lab*lrj 0.225 -0.499 0.0
 lab*tce 0.25 0.5 0.5
 lab*nce 0.5 0.5 199g

$n^* = 0.50$

blackness n^*

chromaticness c^*

relative Inform. Technology (IT)
 olvi3* 0.0 0.0 0.0 (1.0)
 cmyn3* 1.0 1.0 1.0 (0.0)
 olvi4* 1.0 1.0 1.0 0.0
 cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
 LAB*LAB 18.02 0.5 -0.47
 LAB*LABa 18.02 0.0 0.0
 LAB*TCHa 0.01 0.01 -

relative CIELAB lab*
 lab*lab 0.0 0.0 0.0
 lab*tch 0.0 0.0 -
 lab*nch 1.0 0.0 -

relative Natural Colour (NC)
 lab*lrj 0.0 0.0 0.0
 lab*tce 0.0 0.0 -
 lab*nce 1.0 0.0 -

$n^* = 1.0$

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

input: $cmY0^* setcmykcolor$
 output: $cmY0^*/000n^* setcmykcolor$

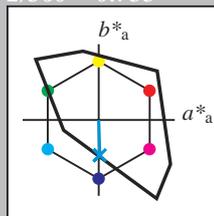
BAM-test chart OE15; Colorimetric systems TLS00 & ORS18
 D65: 2 coordinate data of 3 step colour scales for 10 hues

Input: Colorimetric Television Luminous System TLS00

for hue $h^* = lab^*h = 272/360 = 0.755$
 lab^*tch and lab^*nch

D65: hue B
 LCH*Ma: 65 49 272
 olv*Ma: 0.0 0.61 1.0

triangle lightness t^*



TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	50.5	76.92	64.55	100.42	40
YMa	92.66	-20.69	90.75	93.08	103
LMa	83.63	-82.75	79.9	115.04	136
CMa	86.88	-46.16	-13.55	48.12	196
VMa	30.39	76.06	-103.59	128.52	306
MMa	57.3	94.35	-58.41	110.97	328
NMa	0.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	-2.88	71.56	71.62	92
GCIE	52.23	-42.41	13.6	44.55	162
BCIE	30.57	1.41	-46.46	46.49	272

%Gamut

$u^*_{rel} = 158$

%Regularity

$g^*_{H,rel} = 20$

$g^*_{C,rel} = 37$

relative Inform. Technology (IT)

olvi3*	1.0	1.0	1.0	(1.0)
cmyn3*	0.0	0.0	0.0	(0.0)
olvi4*	1.0	1.0	1.0	1.0
cmyn4*	0.0	0.0	0.0	0.0

standard and adapted CIELAB

LAB*LAB	95.41	0.0	0.0
LAB*LABa	95.41	0.0	0.0
LAB*TCHa	99.99	0.01	-

relative CIELAB lab*

lab*lab	1.0	0.0	0.0
lab*tch	1.0	0.0	-
lab*nch	0.0	0.0	-

relative Natural Colour (NC)

lab*lrj	1.0	0.0	0.0
lab*tce	1.0	0.0	-
lab*nce	0.0	0.0	-

relative Inform. Technology (IT)

olvi3*	0.5	0.5	0.5	(1.0)
cmyn3*	0.5	0.5	0.5	(0.0)
olvi4*	1.0	1.0	1.0	0.5
cmyn4*	0.0	0.0	0.0	0.5

standard and adapted CIELAB

LAB*LAB	47.72	0.0	0.0
LAB*LABa	47.72	0.0	0.0
LAB*TCHa	50.0	0.01	-

relative CIELAB lab*

lab*lab	0.5	0.0	0.0
lab*tch	0.5	0.0	-
lab*nch	0.5	0.0	-

relative Natural Colour (NC)

lab*lrj	0.5	0.0	0.0
lab*tce	0.5	0.0	-
lab*nce	0.5	0.0	-

relative Inform. Technology (IT)

olvi3*	0.0	0.0	0.0	(1.0)
cmyn3*	1.0	1.0	1.0	(0.0)
olvi4*	1.0	1.0	1.0	0.0
cmyn4*	0.0	0.0	0.0	1.0

standard and adapted CIELAB

LAB*LAB	0.03	0.0	0.0
LAB*LABa	0.03	0.0	0.0
LAB*TCHa	0.01	0.01	-

relative CIELAB lab*

lab*lab	0.0	0.0	0.0
lab*tch	0.0	0.0	-
lab*nch	1.0	0.0	-

relative Natural Colour (NC)

lab*lrj	0.0	0.0	0.0
lab*tce	0.0	0.0	-
lab*nce	1.0	0.0	-

$n^* = 1.0$

relative Inform. Technology (IT)

olvi3*	0.5	0.805	1.0	(1.0)
cmyn3*	0.5	0.195	0.0	(0.0)
olvi4*	0.5	0.805	1.0	1.0
cmyn4*	0.5	0.195	0.0	0.0

standard and adapted CIELAB

LAB*LAB	80.13	0.73	-24.31
LAB*LABa	80.13	0.73	-24.31
LAB*TCHa	75.0	24.33	271.72

relative CIELAB lab*

lab*lab	0.84	0.015	-0.499
lab*tch	0.75	0.5	0.755
lab*nch	0.0	0.5	0.755

relative Natural Colour (NC)

lab*lrj	0.84	0.0	-0.499
lab*tce	0.75	0.5	0.75
lab*nce	0.0	0.5	g99b

relative Inform. Technology (IT)

olvi3*	0.0	0.305	0.5	(1.0)
cmyn3*	1.0	0.695	0.5	(0.0)
olvi4*	0.5	0.805	1.0	0.5
cmyn4*	0.5	0.195	0.0	0.5

standard and adapted CIELAB

LAB*LAB	32.44	0.74	-24.32
LAB*LABa	32.44	0.74	-24.32
LAB*TCHa	25.01	24.34	271.75

relative CIELAB lab*

lab*lab	0.34	0.015	-0.499
lab*tch	0.25	0.5	0.755
lab*nch	0.5	0.5	0.755

relative Natural Colour (NC)

lab*lrj	0.34	0.0	-0.499
lab*tce	0.25	0.5	0.75
lab*nce	0.5	0.5	600r

$n^* = 0.50$

chromaticness c^*

relative Inform. Technology (IT)

olvi3*	0.0	0.61	1.0	(1.0)
cmyn3*	1.0	0.39	0.0	(0.0)
olvi4*	0.0	0.61	1.0	1.0
cmyn4*	1.0	0.39	0.0	0.0

standard and adapted CIELAB

LAB*LAB	64.86	1.47	-48.64
LAB*LABa	64.86	1.47	-48.64
LAB*TCHa	50.0	48.67	271.74

relative CIELAB lab*

lab*lab	0.68	0.03	-0.998
lab*tch	0.5	1.0	0.755
lab*nch	0.0	1.0	0.755

relative Natural Colour (NC)

lab*lrj	0.68	0.0	-0.999
lab*tce	0.5	1.0	0.75
lab*nce	0.0	1.0	g99b

$n^* = 0.00$

blackness n^*

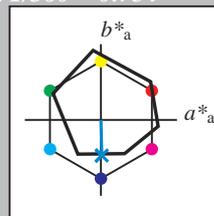
chromaticness c^*

Output: Colorimetric Offset Reflective System ORS18

for hue $h^* = lab^*h = 271/360 = 0.754$
 lab^*tch and lab^*nch

D65: hue B
 LCH*Ma: 42 45 271
 olv*Ma: 0.0 0.49 1.0

triangle lightness t^*



ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
OMa	47.94	65.39	50.52	82.63	38
YMa	90.37	-10.26	91.75	92.32	96
LMa	50.9	-62.83	34.96	71.91	151
CMa	58.62	-30.34	-45.01	54.3	236
VMa	25.72	31.1	-44.4	54.22	305
MMa	48.13	75.28	-8.36	75.74	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	64.57	25
JCIE	81.26	-2.16	67.76	67.79	92
GCIE	52.23	-42.25	11.76	43.87	164
BCIE	30.57	1.15	-46.84	46.86	271

%Gamut

$u^*_{rel} = 93$

%Regularity

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

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

relative Inform. Technology (IT)

olvi3*	1.0	1.0	1.0	(1.0)
cmyn3*	0.0	0.0	0.0	(0.0)
olvi4*	1.0	1.0	1.0	1.0
cmyn4*	0.0	0.0	0.0	0.0

standard and adapted CIELAB

LAB*LAB	95.41	-0.98	4.75
LAB*LABa	95.41	0.0	0.0
LAB*TCHa	99.99	0.01	-

relative CIELAB lab*

lab*lab	1.0	0.0	0.0
lab*tch	1.0	0.0	-
lab*nch	0.0	0.0	-

relative Natural Colour (NC)

lab*lrj	1.0	0.0	0.0
lab*tce	1.0	0.0	-
lab*nce	0.0	0.0	-

relative Inform. Technology (IT)

olvi3*	0.5	0.5	0.5	(1.0)
cmyn3*	0.5	0.5	0.5	(0.0)
olvi4*	1.0	1.0	1.0	0.5
cmyn4*	0.0	0.0	0.0	0.5

standard and adapted CIELAB

LAB*LAB	56.71	-0.24	2.14
LAB*LABa	56.71	0.0	0.0
LAB*TCHa	50.0	0.01	-

relative CIELAB lab*

lab*lab	0.5	0.0	0.0
lab*tch	0.5	0.0	-
lab*nch	0.5	0.0	-

relative Natural Colour (NC)

lab*lrj	0.5	0.0	0.0
lab*tce	0.5	0.0	-
lab*nce	0.5	0.0	-

relative Inform. Technology (IT)

olvi3*	0.5	0.744	1.0	(1.0)
cmyn3*	0.5	0.256	0.0	(0.0)
olvi4*	0.5	0.744	1.0	1.0
cmyn4*	0.5	0.256	0.0	0.0

standard and adapted CIELAB

LAB*LAB	68.6	0.07	-19.39
LAB*LABa	68.6	0.55	-22.34
LAB*TCHa	75.0	22.36	271.4

relative CIELAB lab*

lab*lab	0.654	0.012	-0.499
lab*tch	0.75	0.5	0.754
lab*nch	0.0	0.5	0.754

relative Natural Colour (NC)

lab*lrj	0.654	0.0	-0.499
lab*tce	0.75	0.5	0.75
lab*nce	0.0	0.5	g99b

relative Inform. Technology (IT)

olvi3*	0.0	0.244	0.5	(1.0)
cmyn3*	1.0	0.756	0.5	(0.0)
olvi4*	0.5	0.744	1.0	0.5
cmyn4*	0.5	0.256	0.0	0.5

standard and adapted CIELAB

LAB*LAB	29.9	0.82	-22.01
LAB*LABa	29.9	0.55	-22.34
LAB*TCHa	25.01	22.36	271.42

relative CIELAB lab*

lab*lab	0.154	0.012	-0.499
lab*tch	0.25	0.5	0.754
lab*nch	0.5	0.5	0.754

relative Natural Colour (NC)

lab*lrj	0.154	0.0	-0.499
lab*tce	0.25	0.5	0.75
lab*nce	0.5	0.5	600r

$n^* = 0.00$

blackness n^*

chromaticness c^*

relative Inform. Technology (IT)

olvi3*	0.0	0.0	0.0	(1.0)
cmyn3*	1.0	1.0	1.0	(0.0)
olvi4*	1.0	1.0	1.0	0.0
cmyn4*	0.0	0.0	0.0	1.0

standard and adapted CIELAB

LAB*LAB	18.02	0.5	-0.47
LAB*LABa	18.02	0.0	0.0
LAB*TCHa	0.01	0.01	-

relative CIELAB lab*

lab*lab	0.0	0.0	0.0
lab*tch	0.0	0.0	-
lab*nch	1.0	0.0	-

relative Natural Colour (NC)

lab*lrj	0.0	0.0	0.0
lab*tce	0.0	0.0	-
lab*nce	1.0	0.0	-

$n^* = 1.0$