http://fabrice.li.tu-berlin.de/gek3/gek3l01.txt ./ps; see vector graphic VG; start output see separate images of this page: http://fabrice.li.tu-berlin.de/gek3/gek3.htm

see similar files of the whole serie: http://fabrice.li.tu-berlin.de/gek3.htm
see also: http://fabrice.li.tu-berlin.de/gek3/color.li.tu-berlin.de.gek3.htm

TUB-tast chart (gek3; Hue circle with 80 steps and 21 steps of the *NCS* standard SS0191041:1998)
CIELAB, *TUBYAB* and λ_d data calculated from *CIEXYZ* data of the *NCS* standard

TUB-tast; gek3; gek3l01; gek3l0n1.txt ./ps; application for evaluation and measurement of display or print output; color=iha4ta

Cod.	i	X, Y, Z, x, y	$L^*, a^*, b^*, C^*_{ab}, h_{ab}, u^*, b^*, C^*_{uv}, h_{uv}$	$V, A, B, C_{gb}, B_{AP}, a, b, C_{AB}$	$R_g, r, \lambda_d, \lambda_c$	X, Y, Z	$L^*, a^*, b^*, C^*_{ab}, h_{ab}$	$X, A, B, C_{gb}, B_{AP}, a, b, C_{AB}$
0099−R00B	00	27.2 11.6 .4	0.677 0.289	40.6 85.6 50.8 99.6 30.7	0.291 −0.102 0.136	11.6 16.8 4.9	16.8 −28.5 2.342 −0.047 1.446	48
0099−Y95R	01	29.8 13.2 .4	0.687 0.305	43.1 85.0 69.3 109.6 39.2	0.287 −0.061 0.169	13.2 17.2 5.6	18.1 18.0 2.253 −0.01 1.371	43
0099−Y85R	02	32.6 15.0 .4	0.682 0.302	46.1 85.7 78.7 124.4 39.2	0.284 −0.03 0.183	15.0 18.4 6.4	19.4 20.3 2.163 −0.013 1.315	41
0099−Y85R	03	34.4 16.9 .4	0.671 0.329	48.1 80.2 92.9 115.4 46.0	0.278 0.0 0.225	16.9 18.4 7.3	19.8 21.8 2.039 0.0 1.173	41
0099−Y80R	04	36.3 18.8 .4	0.659 0.343	50.1 74.5 106.2 128.9 54.9	0.273 0.02 0.260	18.8 19.3 8.1	20.3 23.1 1.929 0.02 1.063	40
0099−Y75R	05	38.2 20.7 .4	0.647 0.352	52.7 73.0 89.5 115.5 50.8	0.269 −0.033 0.189	20.7 18.5 9.0	20.5 25.9 1.84 −0.001 0.99	37
0099−Y70R	06	40.0 22.7 .4	0.636 0.361	54.7 71.2 94.4 119.2 52.9	0.265 −0.02 0.192	22.7 18.4 9.8	20.7 28.5 1.785 0.0 0.93	35
0099−Y65R	07	41.7 24.7 .4	0.628 0.372	56.8 66.5 97.8 118.3 55.8	0.261 0.0 0.22	24.7 18.3 10.7	21.2 30.4 1.69 0.0 0.859	39
0099−Y60R	08	43.6 26.7 .4	0.618 0.382	58.9 62.7 101.2 118.5 58.2	0.257 0.0 0.221	26.7 17.9 11.5	21.7 32.3 1.619 0.0 0.799	38
0099−Y55R	09	44.6 28.9 .4	0.607 0.392	60.6 58.4 103.9 119.2 60.6	0.254 −0.024 0.194	28.9 17.2 12.5	21.3 36.6 1.547 0.0 0.739	38
0099−Y50R	10	46.2 31.2 .4	0.596 0.403	62.7 54.1 107.1 119.9 63.2	0.25 −0.026 0.191	31.2 16.5 13.5	21.4 39.3 1.48 0.0 0.685	37
0099−Y45R	11	47.6 33.6 .4	0.586 0.412	64.5 50.1 109.9 119.9 65.5	0.246 −0.027 0.186	33.6 15.7 14.5	21.4 42.6 1.417 0.0 0.635	36
0099−Y40R	12	50.4 37.0 .4	0.576 0.423	67.3 46.0 115.3 124.1 68.3	0.243 −0.022 0.195	37.0 16.1 16.1	22.2 46.4 1.363 0.0 0.6	37
0099−Y35R	13	52.1 40.5 .4	0.565 0.434	70.2 43.1 119.5 127.7 70.2	0.24 −0.02 0.194	40.5 15.4 17.4	22.5 50.6 1.309 0.0 0.564	36
0099−Y30R	14	56.3 44.8 .4	0.557 0.443	72.8 37.5 124.3 129.8 73.2	0.237 −0.024 0.191	44.8 13.6 19.5	23.8 54.7 1.257 0.0 0.532	36
0099−Y25R	15	58.2 49.3 .4	0.545 0.454	75.8 33.4 129.3 132.6 75.8	0.234 −0.024 0.191	49.3 13.2 21.4	24.0 59.4 1.202 0.0 0.502	35
0099−Y20R	16	63.0 54.8 .4	0.534 0.465	78.9 27.0 134.9 137.6 78.7	0.23 −0.023 0.192	54.8 11.0 23.8	26.2 65.3 1.15 0.0 0.478	35
0099−Y15R	17	65.1 60.4 .4	0.523 0.476	82.0 23.1 140.1 142.1 82.0	0.226 −0.022 0.191	60.4 9.5 26.3	27.4 71.1 1.093 0.0 0.452	34
0099−Y10R	18	70.7 68.0 .3	0.508 0.489	86.0 13.5 143.8 144.5 84.7	0.222 −0.034 0.181	68.0 6.1 29.5	30.1 78.3 1.039 −0.001 0.443	34
0099−Y05R	19	71.8 72.4 .5	0.496 0.5	88.2 6.5 144.9 145.0 87.4	0.219 −0.039 0.176	72.4 3.0 31.3	31.5 84.5 0.991 −0.002 0.434	34
0099−Y00R	20	77.3 77.1 .5	0.484 0.511	90.5 1.4 145.1 145.1 90.5	0.215 −0.037 0.174	77.1 0.0 33.2	33.2 90.1 0.944 −0.002 0.414	34
0099−G95Y	21	68.0 74.4 .6	0.475 0.519	89.1 −5.5 141.7 141.8 92.3	0.213 −0.046 0.169	74.4 −2.5 32.0	32.1 94.6 0.915 −0.003 0.432	33
0099−G90Y	22	63.1 73.1 .8	0.455 0.534	87.5 −14.6 136.5 137.2 93.1	0.211 −0.057 0.163	73.1 −7.4 30.5	31.9 97.3 0.885 −0.004 0.449	33
0099−G85Y	23	51.7 71.8 .9	0.459 0.534	87.9 −18.5 139.2 96.1	0.208 −0.048 0.167	71.8 −9.6 30.9	31.5 101.9 0.859 −0.004 0.44	33
0099−G80Y	24	40.8 70.3 .9	0.463 0.541	87.1 −18.3 148.4 149.6 97.6	0.207 −0.047 0.158	70.3 −7.6 30.3	31.3 104.7 0.805 −0.004 0.455	33
0099−G75Y	25	55.8 68.4 .6	0.447 0.548	86.2 −21.6 140.2 141.8 98.8	0.205 −0.042 0.173	68.4 −9.0 29.5	30.9 107.2 0.816 −0.002 0.452	33
0099−G70Y	26	56.8 68.2 .6	0.435 0.559	86.4 −23.4 143.4 145.3 101.4	0.203 −0.043 0.174	68.2 −9.8 29.4	30.9 109.8 0.773 −0.002 0.452	33
0099−G65Y	27	49.2 63.1 .6	0.435 0.559	83.6 −27.4 135.8 138.5 101.4	0.202 −0.043 0.172	63.2 −10.7 27.3	29.3 111.6 0.778 −0.003 0.464	32
0099−G60Y	28	45.5 60.0 .7	0.429 0.565	81.8 −30.2 131.8 135.2 103.0	0.2 −0.045 0.17	60.0 −11.3 25.8	28.3 113.8 0.759 −0.003 0.471	32
0099−G55Y	29	41.5 56.2 .7	0.423 0.572	79.8 −32.3 134.2 138.0 104.4	0.198 −0.042 0.173	56.2 −12.1 24.8	27.1 116.0 0.741 −0.003 0.472	32
0099−G50Y	30	37.1 52.2 .4	0.414 0.582	77.4 −36.8 127.4 132.7 106.2	0.196 −0.041 0.175	52.2 −12.3 22.5	25.7 118.9 0.711 −0.002 0.493	31
0099−G45Y	31	32.7 47.8 .4	0.406 0.589	74.4 −38.2 124.2 130.4 107.2	0.193 −0.039 0.173	47.8 −12.2 20.4	24.2 121.9 0.685 −0.002 0.492	31
0099−G40Y	32	28.6 44.5 .4	0.389 0.606	72.6 −46.4 119.8 128.5 111.2	0.189 −0.041 0.175	44.5 −13.5 19.2	23.6 125.4 0.643 −0.002 0.529	31
0099−G35Y	33	24.2 42.0 .4	0.374 0.617	71.1 −47.1 117.7 126.5 113.5	0.184 −0.037 0.172	42.0 −13.2 16.9	21.8 127.5 0.614 −0.002 0.533	31
0099−G30Y	34	20.9 38.5 .4	0.35 0.645	68.4 −50.1 113.3 129.1 118.6	0.179 −0.041 0.177	38.5 −15.6 16.6	22.8 133.3 0.543 −0.002 0.593	30
0099−G25Y	35	21.3 36.1 .4	0.335 0.662	67.1 −51.6 106.1 124.2 122.7	0.176 −0.035 0.173	36.1 −14.5 16.9	22.1 136.1 0.513 −0.002 0.593	30
0099−G20Y	36	13.9 34.3 .6	0.285 0.703	65.2 −86.4 103.7 135.0 129.9	0.162 −0.054 0.17	34.3 −18.6 14.7	23.8 141.8 0.405 −0.006 0.693	28
0099−G15Y	37	10.0 32.8 .6	0.231 0.755	64.0 −108.2 102.0 148.8 136.7	0.148 −0.054 0.175	32.8 −21.0 14.0	25.3 146.4 0.306 −0.006 0.773	27
0099−G10Y	38	7.1 31.5 .6	0.208 0.781	62.8 −113.6 97.0 134.3 141.0	0.139 −0.054 0.178	31.5 −21.5 12.9	25.1 149.6 0.247 −0.006 0.793	27
0099−G05Y	39	4.6 30.4 .6	0.113 0.741	62.0 −153.5 58.4 164.3 159.2	0.117 −0.121 0.136	30.4 −24.2 10.8	26.6 155.9 0.152 −0.078 0.873	22
0099−B95G	40	4.7 28.8 .4	0.123 0.703	59.6 −154.2 58.2 164.8 159.2	0.117 −0.121 0.136	28.8 −23.5 10.8	26.6 155.9 0.152 −0.078 0.873	22
0099−B95G	41	3.7 28.8 .4	0.073 0.565	60.6 −159.9 21.3 161.4 172.4	0.111 −0.18 0.111	28.8 −23.5 5.1	24.1 167.7 0.13 −0.255 0.839	19
0099−B90G	42	3.7 28.2 .4	0.073 0.565	60.6 −145.6 9.4 145.8 176.3	0.112 −0.203 0.112	28.2 −23.5 2.3	24.1 167.7 0.13 −0.255 0.839	19
0099−B85G	43	5.2 27.9 .85	0.085 0.452	59.8 −136.2 7.7 136.3 178.9	0.126 −0.21 0.091	27.9 −21.1 0.7	21.2 178.0 0.188 −0.408 0.762	18
0099−B80G	44	5.4 27.6 .5	0.088 0.441	59.5 −129.7 −5.5 129.9 182.5	0.13 −0.212 0.082	27.6 −20.4 −1.5	20.6 181.0 0.216 −0.492 0.745	18
0099−B75G	45	5.4 27.6 .5	0.088 0.441	59.5 −129.7 −5.5 129.9 182.5	0.13 −0.224 0.087	27.6 −20.4 −1.5	20.6 184.5 0.206 −0.492 0.745	18
0099−B70G	46	6.2 27.5 .36	0.087 0.391	59.4 −123.7 −9.1 124.1 184.3	0.133 −0.23 0.084	27.5 −19.8 −2.6	20.1 188.7 0.225 −0.533 0.731	17
0099−B65G	47	6.2 27.5 .36	0.087 0.391	59.4 −123.7 −9.1 124.1 184.3	0.133 −0.23 0.084	27.5 −19.8 −2.6	20.1 188.7 0.225 −0.533 0.731	17
0099−B60G	48	7.1 27.4 .42	0.092 0.356	59.3 −114.0 −16.1 115.2 188.1	0.14 −0.241 0.081	27.4 −18.8 −4.9	19.6 194.9 0.259 −0.617 0.714	17
0099−B55G	49	8.0 27.3 .5	0.097 0.327	59.2 −103.7 −19.5 105.5 190.7	0.143 −0.253 0.079	27.3 −17.5 −5.9	19.1 200.9 0.291 −0.699 0.699	17
0099−B50G	50	8.0 27.0 .48	0.096 0.325	59.0 −104.3 −23.0 106.9 192.5	0.146 −0.253 0.08	27.0 −17.6 −7.4	19.2 199.2 0.294 −0.711 0.711	17
0099−B45G	51	8.6 27.0 .5	0.103 0.299	59.0 −96.0 −26.4 99.4 195.3	0.153 −0.26 0.078	27.0 −16.6 −8.5	18.9 205.3 0.326 −0.782 0.683	16
0099−B40G	52	8.8 26.0 .53	0.099 0.295	58.0 −93.2 −29.9 98.0 197.9	0.152 −0.265 0.081	26.0 −15.8 −9.3	18.8 212.1 0.337 −0.819 0.724	16
0099−B35G	53	9.1 25.7 .5	0.107 0.27	57.7 −86.1 −33.7 92.5 201.6	0.156 −0.275 0.078	25.7 −15.0 −10.2	18.6 218.4 0.352 −0.854 0.692	16
0099−B30G	54	9.4 24.6 .59	0.101 0.261	56.7 −81.6 −37.7 90.1 204.8	0.159 −0.279 0.086	24.6 −13.8 −12.8	19.0 222.8 0.383 −0.958 0.772	16
0099−B25G	55	9.8 23.8 .62	0.103 0.248	55.8 −74.8 −41.9 85.9 209.3	0.163 −0.288 0.09	23.8 −12.6 −14.4	19.3 228.7 0.413 −1.044 0.812	16
0099−B20G	56	9.8 22.6 .6	0.103 0.228	54.6 −68.4 −45.2 82.2 213.5	0.166 −0.288 0.095	22.6 −11.3 −15.2	19.3 234.6 0.413 −1.044 0.812	16
0099−B15G	57	10.9 21.8 .68	0.107 0.215	53.8 −58.0 −51.1 77.5 221.4	0.174 −0.306 0.101	21.8 −9.7 −17.9	20.5 241.4 0.499 −1.259 0.941	15
0099−B10G	58	11.2 21.7 .68	0.106 0.204	53.7 −54.6 −52.6 75.8 224.1	0.176 −0.306 0.104	21.7 −9.3 −18.1	20.4 247.1 0.499 −1.259 0.941	15
0099−B05G	59	12.3 19.5 .74	0.113 0.179	51.3 −36.8 −62.4 72.6 239.4	0.188 −0.33 0.112	19.5 −6.1 −22.4	23.3 254.5 0.631 −1.583 1.192	15
0099−B00G	60	13.2 18.8 .82	0.123 0.167	50.8 −26.4 −71.5 76.2 249.8	0.203 −0.357 0.197	18.8 −3.9 −24.5	23.8 263.2 0.631 −1.583 1.192	15
0099−B95B	61	14.4 17.0 .89	0.14 0.141	48.2 −10.0 −76.5 77.3 262.5	0.208 −0.363 0.15	17.0 −1.6 −28.3	28.4 266.6 0.849 −2.105 1.674	14
0099−B90B	62	15.7 16.7 .96	0.161 0.141	47.9 −10.0 −84.4 84.7 263.4	0.22 −0.363 0.15	16.7 −1.6 −31.8	31.9 267.4 0.849 −2.105 1.674	14
0099−B85B	63	17.8 14.6 1.02	0.132 0.108	45.1 23.0 −91.0 93.9 284.1	0.234 −0.401 0.188	14.6 3.9 −34.7	35.0 276.5 1.22 −2.822 2.404	13
0099−B80B	64	20.0 13.6 1.06	0.148 0.097	43.7 40.2 −95.8 104.0 292.7	0.249 −0.415 0.204	13.6 7.0 −36.7	37.5 280.8 1.468 −3.139 2.754	13
0099−B75B	65	22.2 12.7 1.07	0.163 0.093	42.8 56.2 −98.2 113.4 299.9	0.263 −0.429 0.216	12.7 9.8 −38.3	39.5 284.2 1.468 −3.139 2.754	13
0099−B70B	66	24.5 11.9 1.06	0.172 0.083	41.1 72.6 −99.9 123.6 306.0	0.279 −0.433 0.228	11.9 13.2 −37.2	39.6 289.6 2.062 −3.567 3.325	11
0099−B65B	67	26.8 11.2 1.05	0.181 0.076	39.7 87.1 −100.5 133.6 311.4	0.296 −0.446 0.241	11.2 16.1 −36.7	39.6 294.9 2.062 −3.567 3.325	11
0099−B60B	68	30.8 10.5 1.02	0.201 0.075	38.7 107.5 −101.4 147.9 316.7	0.314 −0.446 0.252	10.5 20.8 −36.2	41.8 299.8 2.929 −3.889 3.982	12
0099−B55B	69	33.5 9.9 .93	0.218 0.07	37.6 122.8 −96.5 156.2 321.8	0.33 −0.44 0.253	9.9 24.1 −32.3	40.5 306.8 3.409 −3.72 4.105	11
0099−B50B	70	33.5 9.3 .73	0.289 0.08	36.6 126.8 −84.6 152.4 326.3	0.336 −0.416 0.235	9.3 24.7 −25.1	35.3 314.3 3.601 −3.147 3.794	10
0099−B45B	71	33.8 8.8 .52	0.323 0.083	36.5 127.9 −56.2 139.7 336.3	0.33 −0.33 0.183	8.8 24.4 −17.4	28.4 324.2 3.601 −3.147 3.794	10
0099−B40B	72	26.9 8.4 .36	0.364 0.076	35.9 114.2 −34.8 119.4 343.2	0.309 −0.28 0.146	8.4 20.9 −9.0	23.0 334.1 3.409 −3.72 4.105	11
0099−B35B	73	24.2 8.0 .24	0.427 0.141	34.0 101.6 −35.4 107.8 340.8	0.317 −0.303 0.135	8.0 16.6 −6.2	17.8 339.2 1.026 −1.223 1.222	21
0099−B30B	74	22.3 7.8 .18	0.456 0.144	33.7 93.7 −20.9 95.7 347.5	0.311 −0.277 0.126	7.8 14.3 −4.2	14.5 344.5 1.026 −1.223 1.222	21
0099−R25B	75	21.6 8.0 .11	0.515 0.093	33.9 90.4 −8.6 90.8 354.5	0.306 −0.236 0.094	8.0 14.1 −1.1	14.1 355.3 2.722 −0.58 1.779	18
0099−R20B	76	21.8 8.3 .04	0.616 0.104	34.6 88.4 2.2 88.4 1.4	0.306 −0.209 0.116	8.3 14.1 0.3	14.1 1.7 2.634 −0.585 1.693	19
0099−R15B	77	22.3 8.7 .6.2	0.6 0.124	35.4 87.1 11.8 87.9 7.7	0.3 −0.186 0.09	8.7 14.1 1.3	14.1 5.3 2.568 −0.283 1.625	18
0099−R10B	78	23.1 9.3 .4.2	0.603 0.254	36.6 85.7 22.9 88.7 15.0	0.297 −0.16 0.099	9.3 14.3 2.4	14.5 9.4 2.486 −0.181 1.557	17
0099−R05B	79	24.8 10.3 .2.7	0.657 0.272	38.3 85.4 35.5 92.5 22.6	0.294 −0.133 0.114	10.3 15.0 3.4	15.4 12.7 2.414 −0.103 1.501	17

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