

Names and colorimetric characteristics of colour difference data sets

Group	Name	Short name and number of pairs	Mean colour difference ΔE^*_{ab}	Background Tristimulus value and lightness		Background Illuminance and luminance	
				Y	L*	E [lux]	L [cd/m ²]
SCD	WITT	WI_0418	1,38	24.9	57.0	1300	103
	RIT-DUPONT	RD_0312	1,40	10.8	39.4	2000	69
	LEEDS	LE_0307	1,6	18.0	49.5	1005	57
	BFD-P	BF_2776	3,0	19.9	51.8	1570	99
	BIGC-S-SG	SS_0446	3,04	18.6	50.3	958	56
TCD	WANG-M	WA_100	0,55	40.7	70.0	1100	142
	BIGC-T1-SG	1S_0890	1,10	18.6	50.3	958	56
	BIGC-T2-M	2M_0399	0,7	18.6	50.3	1036	61
	BIGC-T2-SG	2S_0446	1,1	18.6	50.3	1036	61
	BIGC-T2-G	2G_0379	0,8	18.6	50.3	1036	61
VCD	RICHTER	RI_0330	0,90	17.0	48.2	1108	60
	KITTELMANN	KI_0392	0,41	18.4	50.0	1022	60
	AVRAMOPOULOS	AV_0132	0,75	17.0	48.2	1108	60

Remarks:

Group SCD = Small Colour Differences

Group TCD = Threshold Colour Differences

Group VCD = Very small Colour Differences

Groups SCD and TCD use the CIE 10 degree observer

Group VCD uses the CIE 2 degree observer

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Visual and other characteristics of colour difference data sets

Short Name, number of pairs	Number of observers and replications	Illuminant or light source	Material properties	Scaling and comparison method
WI_0418 RD_0312 LE_0307 BF_2776 SS_0446	10-14 50 12-15 Mean>20 9 x 27	High quality D65 CCT = 6100 K D65 (ICS- <i>Texicon</i>) D65 (3 types) D65 (<i>GretagMb.</i>)	Gloss Paint Gloss Paint Matt Paint (textile) Print	Own grey scale Anchor pair grey scale ³⁾ Grey scale Own grey scale
WA_100 1S_0890 2M_0399 2S_0446 2G_0379	21 x 26 16 x 3 23 x 3 23 x 3 23 x 3	D65 (<i>GretagMb.II</i>) D65 (<i>GretagMb.II</i>) D65 D65 D65	Gloss Paint Gloss Paint Gloss Paint Gloss Paint Gloss Paint	fixed Yes/No ⁴⁾ fixed Yes/No ⁴⁾ fixed Pass/Fail ⁴⁾ fixed Pass/Fail ⁴⁾ fixed Pass/Fail ⁴⁾
RI_0330 KI_0392 AV_0132	7 x 3 31 4 x 3	D65 (258 pairs) ¹⁾ High quality D65 CCT = 4000 K ²⁾	light colours photo paper light colours	slider Yes/No ⁵⁾ slider Yes/No ⁵⁾ slider Yes/No ⁵⁾

Remarks:

¹⁾ 258 pairs are seen in surround D65 and 72 pairs in surround with CCT 4000K.

²⁾ large range 0,1<Y<200.

³⁾ grey scale and anchor pair.

⁴⁾ Pass/Fail decision of colour difference.

⁵⁾ Yes/No detection of colour difference.

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WE510-7N

TUB-test chart WE51; Colour difference experiments

Properties and download of the colour difference data sets SCD, TCD, and VCD

Name of data set, data file folder in internet, reference for the data set

Short Name, number of pairs	data file folder in internet ABCD ^{1) 2)}	line range of CIE XYZ data of pairs in internet file ABCD0-7R.PS ³⁾	Publication reference for the data set Author(s) and publication year
WI_0418 RD_0312 LE_0307 BF_2776 SS_0446	UE94 UE95 UE96 UE97 VE58	0268 to 0700 0268 to 0592 0268 to 0587 0268 to 3105 0238 to 0663	WITT, K. (1999) BERNS, R. S. et al. (1991) KIM, D. H. et al. (1997) LUO, M. R. et al. (1986) HUANG, M. et al. (2012)
WA_100 1S_0890 2M_0399 2S_0446 2G_0379	VE71 VE72 VE73 VE74 VE75	0238 to 0345 0238 to 1135 0238 to 0644 0238 to 0691 0238 to 0624	WANG, H. et al. (2012) HUANG, M. et al. (2012) HUANG, M. et al. (2010) HUANG, M. et al. (2010) HUANG, M. et al. (2010)
RI_0330 KI_0392 AV_0132	UE91 UE92 UE93	0268 to 0610 0268 to 0673 0268 to 0408	RICHTER, K. (1985) KITTELMANN, P. (2010) AVRAMOPOULOS, D. (1987)

Remarks:

¹⁾ Two servers allow the download of the data sets with the CIE XYZ data:

<http://130.149.60.45/~farbmetrik/ABCD/>

<http://farbe.li.tu-berlin.de/ABCD/>

²⁾ Data files are given in the formats: .TXT (text), .PS/.EPS (PostScript), and .PDF

³⁾ For only the CIE XYZ data of all sample pairs download the file ABCD0-7T.TXT

Use for download for example: <http://130.149.60.45/~farbmetrik/UE94/UE940-7T.TXT>

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Name of data set, data file folder in internet, reference for the data set

Short Name, number of pairs	data file folder in internet ABCD ^{1) 2)}	line range of CIE XYZ data of pairs in internet file ABCD0-7R.PS ³⁾	Publication reference for the data set Author(s) and publication year
WI_0418 RD_0312 LE_0307 BF_2776 SS_0446	WE94 WE95 WE96 WE97 WE98	0238 to 0663 0238 to 0557 0238 to 0552 0238 to 3021 0238 to 0663	WITT, K. (1999) BERNS, R. S. et al. (1991) KIM, D. H. et al. (1997) LUO, M. R. et al. (1986) HUANG, M. et al. (2012)
WA_100 1S_0890 2M_0399 2S_0446 2G_0379	WE71 WE72 WE73 WE74 WE75	0238 to 0345 0238 to 1135 0238 to 0644 0238 to 0691 0238 to 0624	WANG, H. et al. (2012) HUANG, M. et al. (2012) HUANG, M. et al. (2010) HUANG, M. et al. (2010) HUANG, M. et al. (2010)
RI_0330 KI_0392 AV_0132	WE91 WE92 WE93	0238 to 575 0238 to 0637 0238 to 0377	RICHTER, K. (1985) KITTELMANN, P. (2010) AVRAMOPOULOS, D. (1987)

Remarks:

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Use for download for example: <http://130.149.60.45/~farbmetrik/WE94/WE940-7T.TXT>

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input: w/rgb/cmyk -> w/rgb/cmyk-