Standard Colorimetry. Definitions, Algorithms and Software. SDC-Society of Dyers and Colourists

Description: Colour is a sensation and as such it is a subjective and incommunicable quantity. Colour measurement is possible because we can create a correspondence between colour sensations and the light radiations that stimulate them. This correspondence concerns the physics of light radiation, the physiology of the visual process and the psychology of vision.

Historically, in parallel to standard colorimetry, systems for colour ordering have been developed that allow colour specifications in a very practical and concrete way, based on the direct vision of material colour samples arranged in colour atlases. Colour-ordering systems are sources of knowledge of colour vision, which integrate standard colorimetry.

Standard Colorimetry: Definitions, Algorithms and Software:

- Describes physiology and psychophysics useful to understand colorimetry
- Considers all the photometric and colorimetric systems standardized by CIE (XYZ, CIELAB, CIELUV, LMS)
- Presents colorimetric instrumentation in order to guide the reader toward colorimetric practice
- Discusses colorimetric computation to understand the meaning of numerical colour specification
- Considers colorimetry in colour syntheses and in imaging colour reproduction
- Includes ready-to-use, freely-available software, Colorimetric eXercise, which has multiple toolboxes dedicated to
  - displaying CIE systems, atlases, any colour and its whole numerical specification
  - colour-vision phenomena and tests

Standard Colorimetry: Definitions, Algorithms and Software is an accessible and valuable resource for students, lecturers, researchers and laboratory technicians in colour science and image technology.

Published in partnership with the Society of Dyers and Colourists (SDC). Find out more at <a href="company website"

Contents: Society of Dyers and Colourists xv

Preface xvii

1 Generalities on Colour and Colorimetry 1

1.1 Colour 1

1.2 Colorimetry 2

References 4

Bibliography 4

2 Optics for Colour Stimulus 5

2.1 Introduction 5

2.2 Electromagnetic Waves 7

2.3 Photons 11

2.4 Radiometric and Actinometric Quantities 11

2.5 Inverse Square Law 14
5.5.8 From the Ganglion Cells to the Visual Cortex 85
5.6 Visual System and Colorimetry 87
Bibliography 88
References 88
6 Colour Vision Psychophysics 91
6.1 Introduction 91
6.1.1 Psychophysics and Physiology 91
6.1.2 Visual Judgement 92
6.1.3 Modes of Colour Appearance and Viewing Situations 93
6.1.4 Colour Stimuli 95
6.1.5 Colour Attribute Matching 98
6.1.6 Visual Detection Threshold and Sensitivity 99
6.1.7 Scaling of Colour Attributes 100
6.2 Adaptation 103
6.2.1 Brightness Adaptation 105
6.2.2 Threshold in Dark Adaptation 106
6.3 Absolute Thresholds in Human Vision 108
6.4 Absolute Threshold and Spectral Sensitivity in Scotopic and Photopic Visions 108
6.4.1 Silent Substitution Method 109
6.5 Luminous Efficiency Function 113
6.5.1 Abney Additivity Law and Luminance 114
6.6 Light Adaptation and Sensitivity 116
6.7 Weber’s and Fechner’s Laws 118
6.7.1 Contrast Sensitivity 119
6.7.2 Fechner’s Scaling 119
6.8 Stevens’ Law 119
6.8.1 Brightness Scaling and Stevens’ Law 119
6.9 Fechner’s and Stevens’ Psychophysics 121
6.10 Wavelength Discrimination 121
6.11 Saturation Discrimination and Least Colorimetric Purity 123
6.12 Rushton’s Unvariance Principle and Scotopic Vision 124
6.13 Tristimulus Space 125

6.13.1 Rushton’s Univariance Principle and Grassmann’s Laws in Photopic Vision 126

6.13.2 Metamerism 130

6.13.3 Chromaticity 131

6.13.4 Reference Frames in Tristimulus Space 132

6.13.5 Measurement of the Colour-Matching Functions in the RGB Reference Frame 134

6.13.6 Luminance and Exner-Schrödinger’s Helligkeit Equation 139

6.13.7 Dichromats and Fundamental Reference Frame 141

6.13.8 Newton’s Centre of Gravity Rule and Chromaticity Diagram Properties 145

6.14 Lightness Scales 149

6.15 Helmholtz-Kohlrausch Effect 150

6.16 Colour Opponencies and Chromatic Valence 153

6.17 MacAdam’s Chromatic Discrimination Ellipses 155

6.18 Perceived Colour Difference 156

6.19 Abney’s and Bezold-Brücke’s Phenomena 161

6.20 Chromatic Adaptation and Colour Constancy 164

6.20.1 Asymmetric Colour Matching 165

6.20.2 Empirical Data 166

6.20.3 Von Kries’s Coefficient Law 166

6.20.4 Retinex 168

6.21 Colour Vision Psychophysics and Colorimetry 170

References 171

7 CIE Standard Photometry 177

7.1 Introduction 177

7.2 History of the Basic Photometric Unit 180

7.3 CIE 1924 Spectral Luminous Efficiency Function 180

7.4 CIE 1924 and CIE 1988 Standard Photometric Photopic Observers 181

7.5 Photometric and Radiometric Quantities 182

7.6 CIE 1951 Standard Scotopic Photometric Observer 185

7.7 CIE 2005 Photopic Photometric Observer with 10° Visual Field 185

7.8 CIE Fundamental Photopic Photometric Observer with 2°/10° Visual Field 185

7.8.1 Photopic Spectral Luminous Efficiency Functions for the 2° Fundamental Observer 186
9.6.2 MacLeod–Boynton’s Tristimulus Space and Chromaticity Diagram 229
9.7 CIE Colorimetric Specification of Primary and Secondary Light Sources 232
References 234

10 Chromaticity Diagram from Newton to the CIE 1931 Standard System 237
10.1 Introduction 237
10.2 Newton and the Centre of Gravity Rule 237
10.3 Material Colours and Impalpable Colours in the Eighteenth Century 243
10.4 Physiological Intuitions and the Centre of Gravity Rule Young, Grassmann, Helmholtz, Maxwell and Schrödinger 245
10.5 Conclusion 251
References 251

11 CIE Standard Psychometric Systems 253
11.1 Introduction to Psychometric Systems in Colour Vision 253
11.2 CIE Lightness L* 254
11.3 Psychometric Chromaticity Diagrams and Related Colour Spaces 255
11.3.1 CIE 1960 (u, v) UCS Psychometric Chromaticity Diagram 255
11.3.2 CIE 1964 (U*, V*, W*) Uniform Colour Space CIEUVW Colour Space 257
11.3.3 CIE 1976 (u*, v*) UCS Psychometric Chromaticity Diagram 257
11.3.4 CIE 1976 (L*, u*, v*) Colour Space CIELUV Colour Space 259
11.3.5 CIE 1976 (L*, a*, b*) Colour Space CIELAB Colour Space 261
11.4 Colour Difference Specification 264
11.4.1 Colour Difference Data 264
11.4.2 CIE 1976 Colour Difference Formulae 265
11.4.3 CMC(l : c) Colour Difference Formula 266
11.4.4 CIE 1994 Colour Difference Formula 267
11.4.5 CIEDE2000 Total Colour Difference Formula 268
11.4.6 Small Colour Differences in OSA UCS Space JUCS Space 270
11.4.7 Metamerism Indices 270
11.4.8 Daylight Simulator Evaluation and Special Metamerism Index: Change in Illuminant 273
11.5 Conclusion 276
References 276

12 Instruments and Colorimetric Computation 279
13.7 Imaging Instruments 343
13.7.1 Imaging Photometer 343
13.7.2 Colorimetric Camera 344
13.7.3 Multispectral and Hyperspectral Camera 344
References 346
14 Colour Order Systems and Atlases 349
14.1 Introduction 349
14.2 Colour Solid, Optimal Colours and Full Colours 351
14.2.1 MacAdam’s Limit 354
14.3 Ostwald’s Colour Order System and Atlas 354
14.3.1 Ostwald’s Hue Circle with Temperate Scale 355
14.3.2 Ostwald’s Semichrome 356
14.3.3 Ostwald’s Blackness, Whiteness and Purity 357
14.3.4 Ostwald’s Atlas 358
14.4 Munsell’s Colour Order System and Atlas 360
14.4.1 Munsell’s Instruments 362
14.4.2 Chromatic Tuning Fork 362
14.4.3 Munsell’s Value and Grey Scale 364
14.4.4 Munsell’s Hue 365
14.4.5 Munsell’s Value in Coloured Scales 367
14.4.6 Colour Sphere and Munsell’s Colour Specification 367
14.4.7 Munsell’s Chroma 369
14.4.8 Colour Tree 369
14.4.9 Munsell’s System and CIE Chromaticity Specification 369
14.4.10 Helmholtz-Kohlrausch’s Effect and Abney’s Hue Shift Phenomenon in the Munsell Atlas 371
14.4.11 Munsell’s Colour Atlas 371
14.5 DIN 6264’s Colour Order System and Atlas 372
14.6 OSA JUCS’s Colour Order System and Atlas 374
14.6.1 OSA JUCS’s Lightness 376
14.6.2 OSA JUCS’s (g, j) Coordinates 377
14.6.3 OSA JUCS’s Colour Difference Formula 379
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