



Do you need a user friendly color and whiteness measuring instrument for your production control? Are you looking for a reliable instrument which despite its simplicity can be used for a wide range of materials and products?

Vibrochrom 400 was developed out of Lenzing AGs long time experience in measuring whiteness and color difference. Therefore operating has been reduced to basic steps, which are simple and easily understandable. In this way casual mistakes

are avoided and the results are accurate and reliable, as required for production control in the everyday routines in the laboratory.

Vibrochrom 400 is a flexible instrument for reliable and quick determination of whiteness, color difference and fluorescence, which can be used for staple fibers and filament yarns as well as for fabrics, paper, granules, paints and powder etc. The software offers flexible evaluation of your the results, with a wide range of formulas and parameters at your disposition.

Scope:

Userfriendly, flexible instrument for the easy determination of color difference, whiteness, yellowness and fluorescence of different materials (fiber, filament, granules, powder, etc.)

Method:

Vibrochrom 400 is a tristimulus colorimeter with dual beam principle, which measures according to ISO 2469 and DIN 5033. The sample is illuminated by flashlights and the reflection is measured and evaluated.

Results*

are calculated by the computer and given as follows (shown below)

Illumination:

CIE standard source D65 flash light (without ultraviolet radiant energy). As an option, a second flash light emitting ultraviolet light for determination of fluorescence is offered.

Calibration:

With black (velvet coated cup) and white (teflon or ceramic) working standards for 0 - 100 %. The calibration is referenced to absolute values based on BaSO₄-powder.

Repeatability:

± 0.2 % with white standard

Specimen dimensions:

Any width
max. depth: 130 mm
max. height: 115 mm
measuring aperture: 30 mm Ø

Power supply:

230 / 115 VAC ± 10 %,
50 / 60 Hz, 50 W

Evaluation software:

Included

Interface:

RS232 included

Dimensions:

Height: 460 mm
Width: 320 mm
Depth: 380 mm
Weight: 25 kg

*Results:

Indexes x, y, z

x red
y green
z blue

Whiteness

according to different standards and formulas like Berger, Ganz, Hunter, Hunter2, Cores, Stensby, Taube

Remission under visual light

Rx Remission of red color range
Ry Remission of green color range
Rz Remission of blue color range

Tappi
(Optional)

Diffuse brightness of pulp (d/0° at a wavelength of 457nm)

G

Yellowness

Remission under ultraviolet light only (less 380 nm)

dfRx Remission of red color range
dfRy Remission of green color range
dfRz Remission of blue color range

AI

Dyeability index (according to Lenzing standard)

L*, a*, b*, ΔE

definition of color according to CIELAB diagram; L: lightness, a: green-red axis, b: blue-yellow axis, ΔE: color difference

Remission under visual and ultraviolet light

fRx Remission of red color range
fRy Remission of green color range
fRz Remission of blue color range

L*, u*, v*

definition of color according to CIELUV diagram

df, dfRz

Fluorescence
(df = Berger_{WITH UV} - Berger_{WITHOUT UV})

C, H

Chroma, Hue

x, y

x=X/(X+Y+Z); y=Y/(X+Y+Z)

X, Y, Z standard color values acc. to CIE

Technical data and pictures are subject to change!

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