VIBROCHROM 400 LENZING ⓘNSTRUMENTS

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?

The **Vibrochrom 400** has been developed out of Lenzings long term 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.

The **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 test results, putting a full range of formulas and parameters at your disposition.

VIBROCHROM 400

COLORIMETER

Scope:
User friendly, 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.

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 $BaSO_4$-powder.

Repeatability:
± 0.2% with white standard

Specimen dimensions:
Any width
max. depth: 130 mm
max. height: 100 mm
measuring aperture: 30 mm Ø

Power supply:
220 V / 50 Hz or
110 V / 60 Hz, ± 10%,
50 W

Evaluation software:
Included

Interface:
RS232 included

Dimensions:
Height: 460 mm
Width: 320 mm
Depth: 380 mm
Weight: 23 kg

Results are calculated by the computer and given as follows:

Indexes x, y, z	X, Y, Z	standard color values acc. to CIE
x — red		
y — green	Whiteness	according to different standards and formulas Berger, Ganz, Hunter, Hunter2, Cores, Stensby, Taube
z — blue		
Remission under visual light		
Rx — Remission of red color range	Tappi	Diffuse brightness of pulp (d/0° at a wavelength of 457mm)
Ry — Remission of green color range		
Rz — Remission of blue color range		
	G	Yellowness
Remission under ultraviolett light only (less 380 nm)		
dfRx — Remission of red color range	AI	Dyeability index (according to Lenzing standard)
dfRy — Remission of green color range		
dfRz — REmission of blue color range		
	$L^*, a^*, b^*, \triangle E$	definition of color according to CIELAB diagram; L:lightness, a:green-red axis,b:blue-yellow axis, $\triangle E$:color difference
Remission under visual and ultraviolett 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 — Fluorescense ($dF = Berger_{WITH}UV - Berger_{WITHOUT}UV$)		
	C, H	Chroma, Hue
	x, y	x=X(X+Y+Z); y=Y/(X+Y+Z)

Technical data and pictures are subject to change!