

# VIBROCHROM 400 LENZING *i* NSTRUMENTS

## COLORIMETER



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.

STAPLE FIBER TESTING

*The Testing Company*

### 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<sub>4</sub>-powder.

### Repeatability:

± 0.2% with white standard

### Specimen dimensions:

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

### Dimensions:

Height: 460 mm  
Width: 320 mm  
Depth: 330 mm  
Weight: 23 kg

### Evaluation software:

Included

### Interface:

RS232 included

### Power supply:

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

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                                 | G              | Yellowness  |
| Ry Remission of green color range                               |                |   |
| Rz Remission of blue color range                                | AI             | Dyeability index (according to Lenzing standard)  |
| Remission under ultraviolet light only (less 380 nm)            |                |   |
| dfRx Remission of red color range                               | L*, a*, b*, ΔE | definition of color according to CIELAB diagram; L:lightness, a:green-red axis, b:blue-yellow axis, ΔE:color difference |
| dfRy Remission of green color range                             |                |   |
| dfRz REmission of blue color range                              |                |   |
| Remission under visual and ultraviolet light                    |                |   |
| fRx Remission of red color range                                | L*, u*, v*     | definition of color according to CIELUV diagram   |
| fRy Remission of green color range                              |                |   |
| fRz Remission of blue color range                               |                |   |
| df, dfRz Fluorescence   | C, H           | Chroma, Hue   |
| (dF = Berger <sub>WITH</sub> UV - Berger <sub>WITHOUT</sub> UV) | x, y           | x=X/(X+Y+Z); y=Y/(X+Y+Z)  |