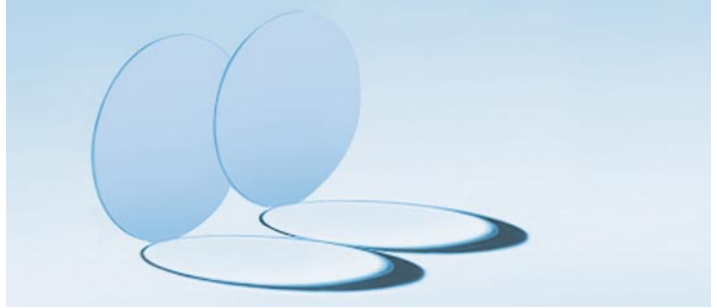


CAN YOU RECOGNIZE THE DIFFERENCE IN COLOUR?

This is no longer necessary, since visual classification of colour of ophthalmic sun glasses is a thing of the past.



FAST AND PRECISE COLOUR VALUE DETERMINATION



The TFM-1 instrument - newly developed by tec5 and production proofed - replaces the human eye as a visual inspection device in everyday use.

The LensColour Analyser TFM-1 allows the fast and accurate determination

- of the colour values L^* , a^* , and b^* ,
- the UV transmission value $T_{UV 380nm}$, and
- the light transmission T_V in accordance with DIN EN ISO 8930-3, as well as,
- the UV transmission value, $T_{UV 400nm}$, following to the above procedure.

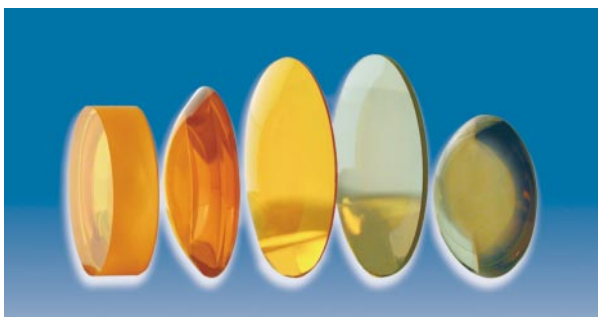
APPLICATION ORIENTED DESIGN



The LensColour Analyser was developed in close collaboration with Rodenstock.

Your advantage: A measurement system precisely meeting the demands of the production and development of ophthalmic lenses.

REFRACTIVE POWER INDEPENDENT MEASUREMENTS



- Toroidal and aspheric lenses
- Refractive power of ± 20 diopters

The innovative instrument design allows the exact determination of colourmetric data of flat, single, bifocal, and multifocal lenses with refractive power of up to ± 20 diopters.

A collimated optical beam of approx. 8mm in diameter evaluates a large measurement area.

LENSCOLOUR ANALYSER TFM-1

Eliminates the visual
inspection of colour and
reduces costs
significantly

TIME AND COST ADVANTAGES



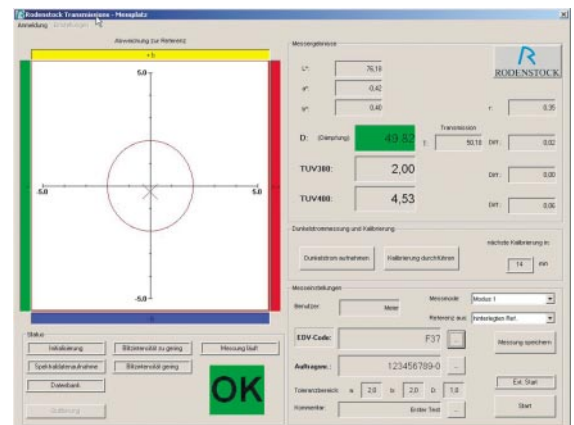
The application of the LensColour Analyser leads to considerable advantages in time and cost:

- in dye bath development,
- in production of stock glasses,
- in obtaining customer specified tinting.

EASY AND FAST DETERMINATION OF PRODUCTION STATUS

The graphic display of the relative deviation of the colour values a^* and b^* from the given reference, as well as the display of the tolerance range, allows a fast and convenient assessment of the production status.

The spectra data are transferred from the TFM-1 to the control and processing PC via a USB interface. Specially developed application software computes the required values, compares them on demand with saved references, and provides graphic and numeric displays.



CENTRAL DATA MANAGEMENT AND FILING

The management and storage of measurement and reference data can be done either with a local or a central SQL database.

The saving of the measurement values in connection with a unique order number assures an unmistakable association with the related order, which is a requirement for flawless documentation of the production process.

Entering of the order number by means of a barcode scanner is available as an option.





TECHNICAL DATA

Range of Applicability	Lens types	planar, single, bifocal, multifocal	
	Sphere	- 20 dpt to + 20 dpt	
	Lens thickness	0.5 - 15 mm	
	Lens diameter	30 - 100 mm	
Performance	Spectral range	280 - 780 nm	
	Spectral resolution	5 nm	
	Spectral accuracy	< 0.2 nm	
	Transmission range	5 - 100%	
	Transmission resolution	0.5%	
	Transmission accuracy	< ± 0.3%	
	Measurement time	1.5 sec	
Colourmetric data	L*a*b* (D65)		
	UV transmission Tuv 380 and light transmission Tv according DIN EN ISO 8980-3		
	UV transmission Tuv 400 following DIN EN ISO 8980-3		
	Reproducibility L*a*b*	< ± 0.1	
Physical	Dimensions	Height	540 mm
		Width	220 mm
		Depth	300 mm
	Weight	15.5 kg	
	Light source	Xe flash lamp	
	Operating conditions	10 - 40°C	
	Storage conditions	0 - 60°C	
Electrical	Line voltage	100 - 230 VAC	
	Frequency	47 to 63 Hz, single phase	
	Power	max. 100 W	
	Fuse rating	2A slow blow	
Interface	USB port	2.0 (1.1 compatible)	

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