Kowa

Technology for Life Science

FM-700

Aqueous Flare Meter

Kowa's FM-700 is a unique, precise, non-invasive, objective, quantitative and follow-up tool to measure intraocular inflammation

The essential tool in the management of uveitis

Laser Flare Photometry is the only objective and quantitative method to reliably measure active inflammation in the anterior chamber.

The FM-700, Kowa's unique aqueous flare meter combined with a slit-lamp design, allows the doctor to improve assessment of inflammation and provide a consistent follow up to patients by enabling the in-vivo measurement of aqueous flare in a non-contact, non-invasive and painless manner.

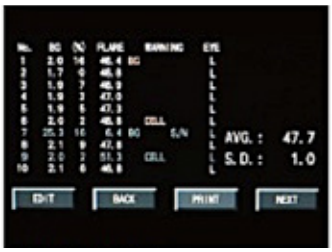
The quantitative and precise measurement of aqueous flare it provides is essential in the management of patients with uveitis and other ocular inflammatory diseases.

- **A direct slit lamp biomicroscopy view of the anterior chamber combined with laser flare photometry**
- **Accurate, quantitative protein density measurement using the latest laser light scattering technique**
- **Ideal for uveitis and research centres**

Kowa's FM-700 aqueous flare meter, has been designed to combine the ultimate in accuracy and efficiency providing fast detection of ocular inflammation and subclinical change of inflammation levels.

- **Easy alignment guide**
- **Precise results**
- **Non-contact, non-invasive measurement**
- **Comprehensive management of uveitis and other inflammatory diseases**

Graph Result

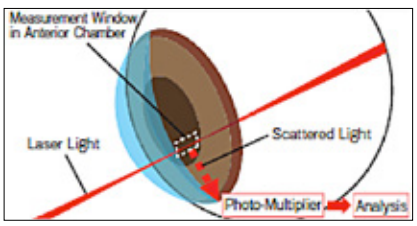


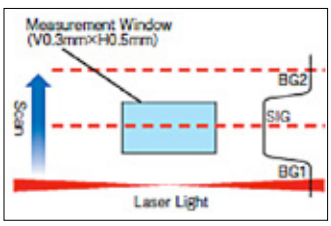
Report Result

Principle

An area within the anterior chamber guided by an alignment window is scanned with a laser beam. Background signal 1 (BG1) is obtained when the laser beam is located below the measurement window and background signal 2 (BG2) is obtained when the laser beam is located above the measurement window.

Both are scattered light noise from intraocular tissue and other parts of the anterior chamber whilst the flare signal (SIG) is a sum of scattered light from protein and scattered light noise from intraocular tissue and other parts of the anterior chamber. Thus, the intensity of the scattered light caused by the protein concentration in the aqueous humour of the anterior chamber is calculated using the formula: SIG-(BG1+BG2)/2. The result obtained from using this formula is called **'flare value'** and represented as **"Photon Count (PC)"** per millisecond.





Specifications

Type of microscope	Binocular stereoscopic microscope
Total magnification	7,10,16,26, 40 X
Dioptic range of ocular	±5D
Interpupillary distance adjustment range	55 to 72mm
Slit width	0 to 11mm continuously variable
Slit length / Aperature diameter	1 to 9mm continuously variable / Ø0.5mm, Ø11mm
Measurement range	1 to 500 photon counts / ms
Measurement accuracy	±5% (at around 80 photon counts / ms)
Light source	For observation: Halogen lamp (12V, 30W) For flare meter: Laser diode (640nm, 35μ W)
Light detector	Photomultiplier tube (PMT)
Printer	Printing method: Thermal line printer with automatic paper cutting function Printer paper: 58mm width
Monitor	4.3inch TFT colour LCD monitor
Interface	RS-232C
Dimensions / weight	600 (W) x 460(D) x 560 (H)mm / 25kg
Power supply	Input: AC100 - 230V, 50 / 60Hz. Power consumption: 60VA / 80VA (maximum)

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