

Gebrauchsanweisung Instruction Sheet

468 01-33

Monochromatische Lichtfilter Hg-Lichtfilter

Monochromatic light filters Hg-light filters

Die Lichtfilter werden beispielsweise zur Monochromatisierung bei Versuchen zur Brechung, Interferenz, Beugung und Farbenlehre verwendet. Die Hg-Lichtfilter (468 30-33) eignen sich speziell zum Ausfiltern der sichtbaren Linien des Hg-Spektrums.

Die Transparenz (Durchlässigkeit in %) der einzelnen Filter kann aus der folgenden Tabelle oder aus den Diagrammen in Fig. 1-11 entnommen werden.

Zur Halterung der 5 cm x 5 cm großen Filter dient der Halter mit Federklappen (460 22). Da die Filter nur begrenzt wärmebeständig sind, sollen sie nicht in unmittelbarer Nähe der Lichtquelle (Hg-Hochdrucklampe mit Zubehör), sondern hinter dem Kondensator angeordnet werden.

The light filters are used to produce monochromatic light, for instance for experiments on refraction, diffraction, interference, and the study of colours. The light filters (468 30-33) are especially useful in filtering out the visible lines of the Hg spectrum.

The transparency (transmission in %) of the individual filters are shown in the following table and in the graphs Fig. 1-11.

The holder with spring clips (460 22) is used to support the 5 x 5 cm large filter. Since the resistance of the filters to heat is limited, they should not be set up in immediate proximity to the light source (e.g. mercury-vapour lamp with accessories), but on the far side of the condenser lens.

Kat.-Nr.	Farbe	λ_m 1)	τ 2)	Wellenlängenbereich 3)
468 01	dunkel-rot	720 nm	82%	660 nm
468 03	rot	720 nm	86%	635 nm
478 05	gelb	570 nm	5%	560-595 nm
468 07	gelb-grün	530 nm	13%	510-570 nm
478 09	blau-grün	520 nm	18%	490-550 nm
468 11	blau mit violett	450 nm	4%	405-470 nm
468 13	violett	440 nm	7%	390-465 nm
468 30*	gelb	580 nm	25%	560-620 nm
468 31*	grün	520 nm	13%	500-545 nm
468 32*	blau	450 nm	11%	425-480 nm; 710 nm
468 33*	violett	400 nm	5%	380-425 nm; 700 nm

Cat.-no.	colour	λ_m 1)	τ 2)	Wavelength range 3)
468 01	dark red	720 nm	82%	660 nm
468 03	red	720 nm	86%	635 nm
478 05	yellow	570 nm	5%	560-595 nm
468 07	yellow-green	530 nm	13%	510-570 nm
478 09	blue-green	520 nm	18%	490-550 nm
468 11	blue with violet	450 nm	4%	405-470 nm
468 13	violet	440 nm	7%	390-465 nm
468 30*	yellow	580 nm	25%	560-620 nm
468 31*	green	520 nm	13%	500-545 nm
468 32*	blue	450 nm	11%	425-480 nm; 710 nm
468 33*	violet	400 nm	5%	380-425 nm; 700 nm

1) λ_m Wellenlänge für max. Transmission

2) τ Transmissionsgrad bei λ_m

3) Wellenlängenbereich bei 20% der max. Transmission

* Filter für Quecksilberspektrum

1) λ_m Wavelength for max. transmission

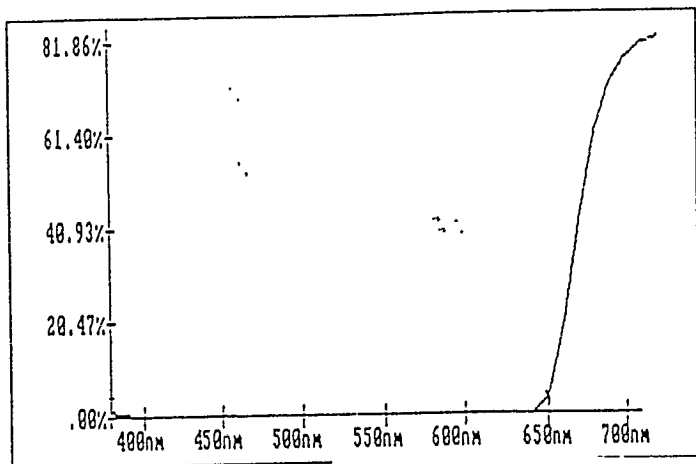
2) τ Transmission degree for λ_m

3) Wavelength range for 20% of the max. transmission

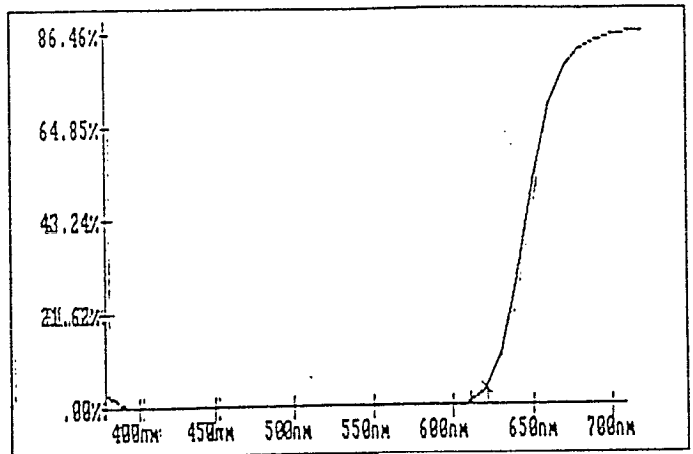
* Filter for mercury spectrum

Diagramme 1-11

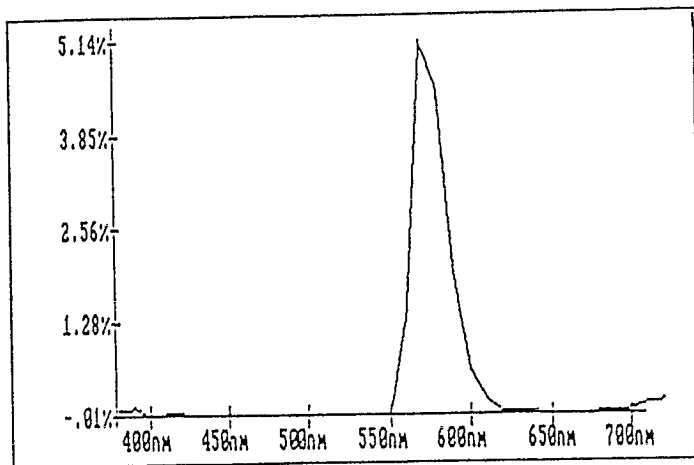
Diagram 1-11



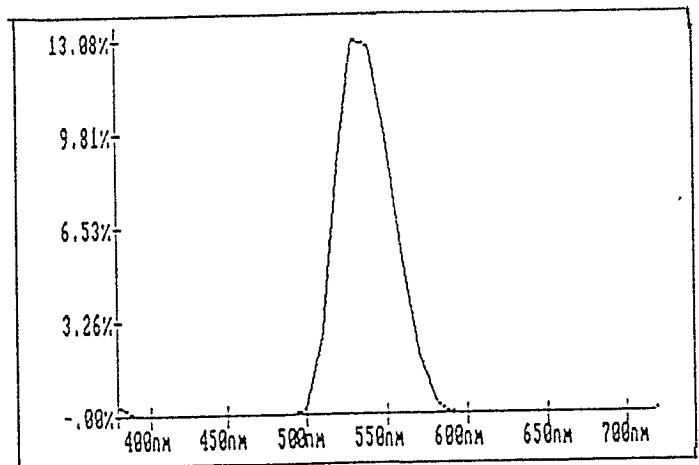
1 Filter dunkelrot (468 01)
dark-red filter (468 01)



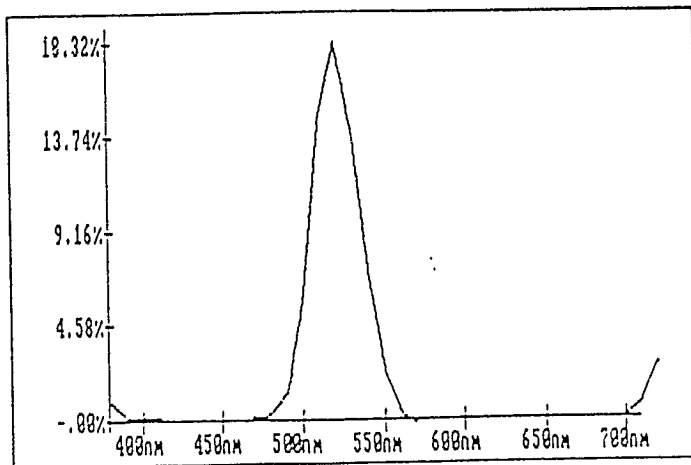
Filter rot (468 03)
red filter (468 03)



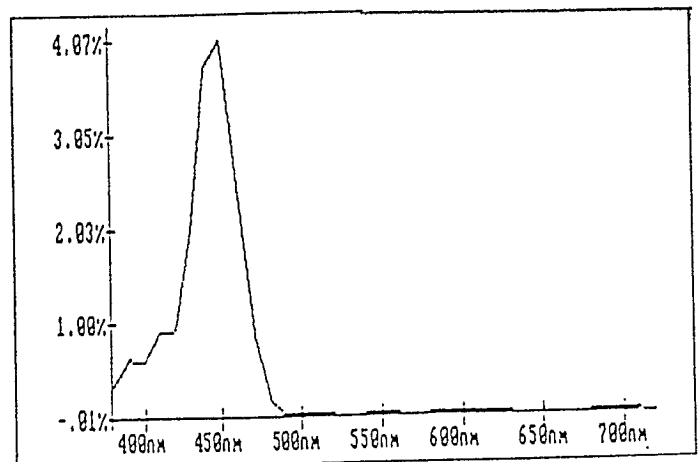
3 Filter gelb (468 05)
yellow filter (468 05)



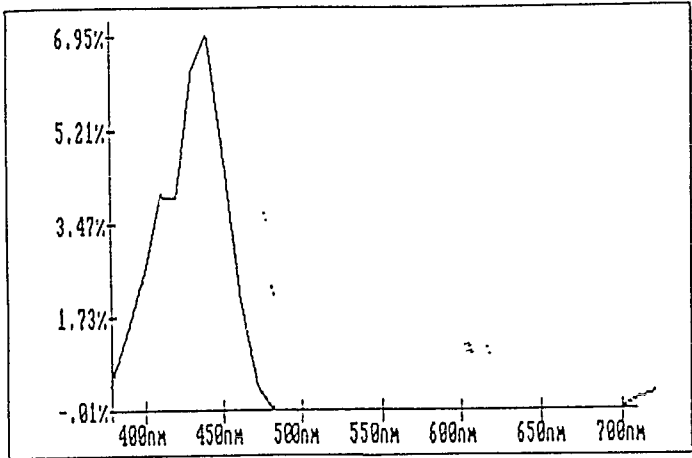
4 Filter gelb-grün (468 07)
yellow-green filter (468 07)



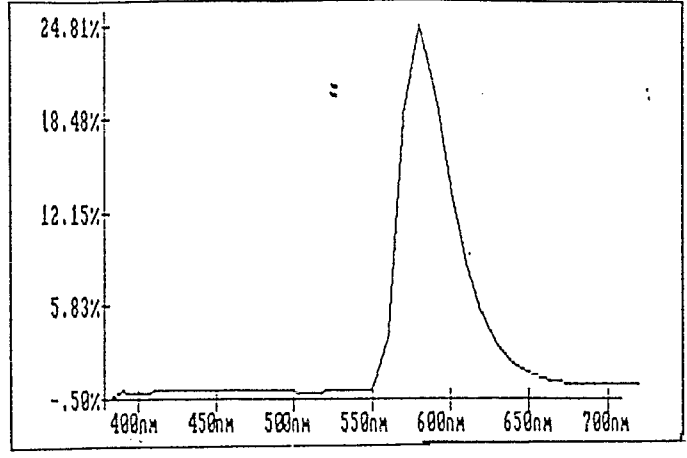
5 Filter blau-grün (468 09)
blue-green filter (468 09)



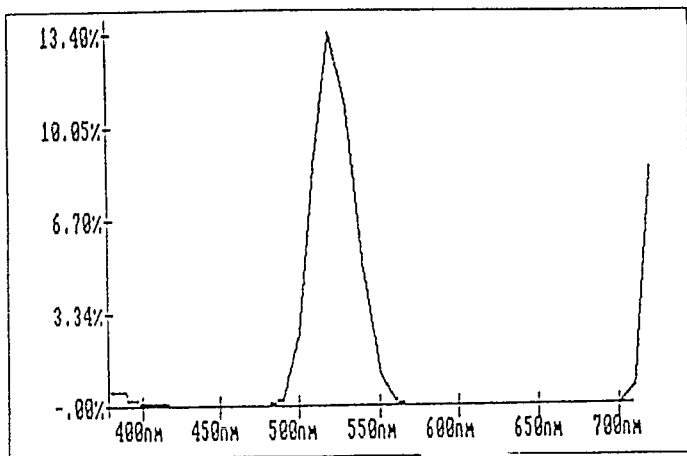
6 Filter blau-violett (468 11)
blue-violet filter (468 11)



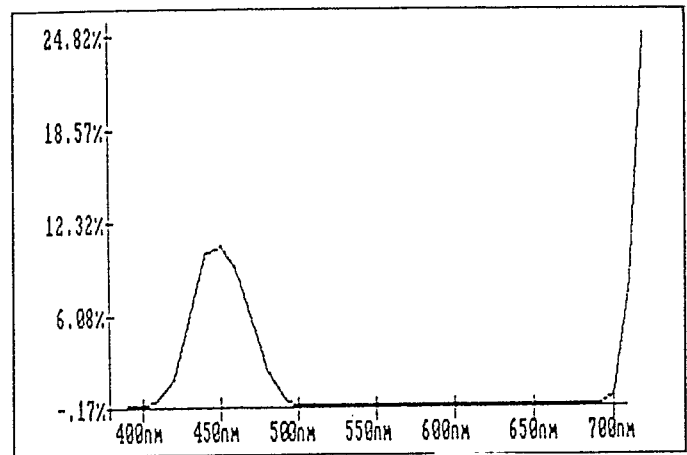
7 Filter violett (468 13)
violet filter (468 13)



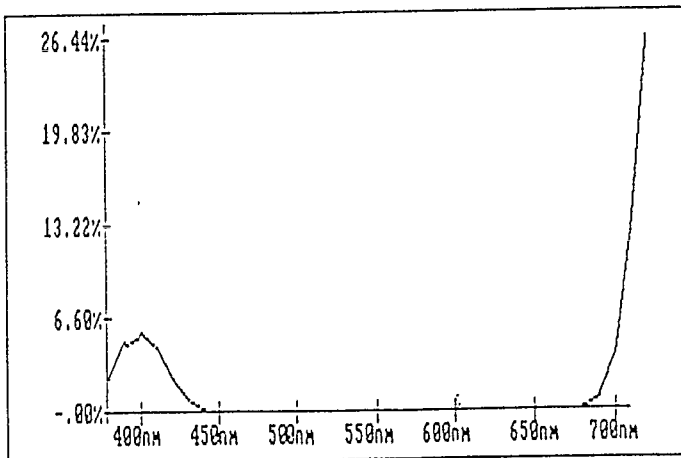
8 Filter gelb (468 30)
yellow filter (Hg) (468 30)



9 Filter grün (468 31)
green filter (468 31)



10 Filter blau (468 32)
blue filter (Hg) (468 32)



11 Filter violett (468 33)
violet filter (468 33)