

TestUV^{strip}

UV Measuring strips for UV dose measurements

The UV measuring strips TestUVstrip are made for measuring the UV radiation (dose) of different industrial UV light sources including

- UV medium pressure lamps (Hg, Fe- or Ga-doped)
- UV LEDs (395 nm)
- UVC Low pressure lamps (CCure and uv-fresh®)

The UV measuring strips are sensitive in the entire UV emission range, i.e. wavelengths between approx. 230 and approx. 400 nm.

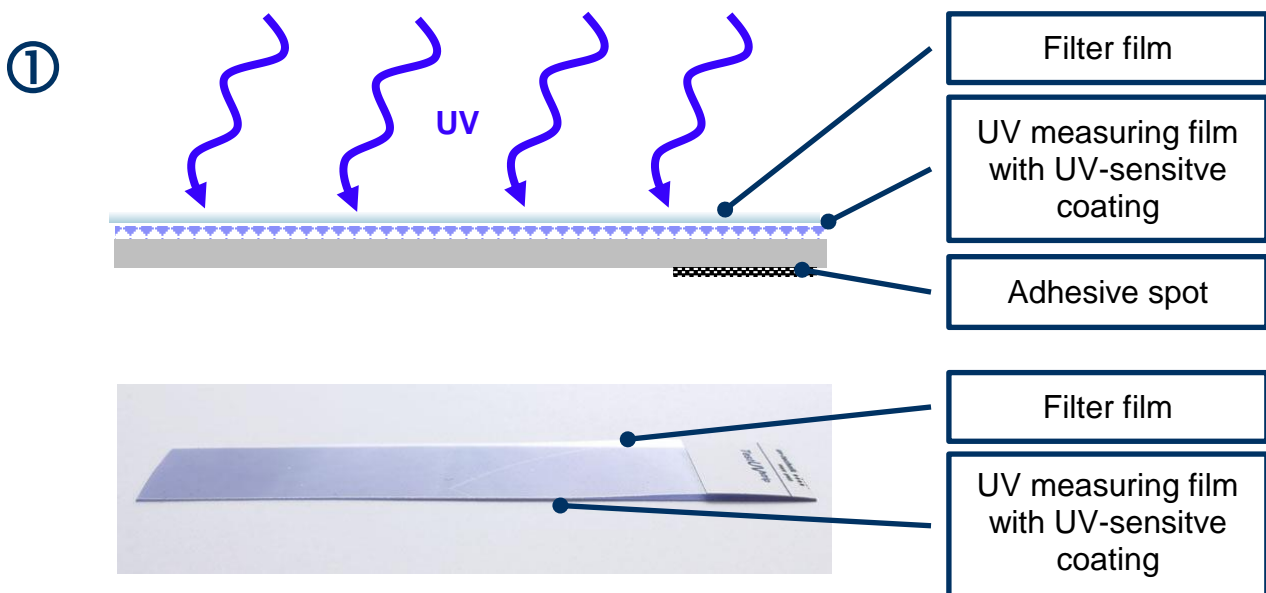


How the UV measuring strips TestUV^{strip} work

The UV measuring strips have a multi-layer structure: There is a matt white UV-sensitive layer on the carrier film, which begins to turn blue when exposed to UV radiation. The longer the UV measuring strips are exposed or the more intensive the UV radiation is, the bluer the UV measuring strips get. In order to be able to measure both small and high UV doses, measurements can be made with or without a filter film. The filter film covers the measuring film and can be easily removed by folding back or tearing off / cutting for the measuring process.

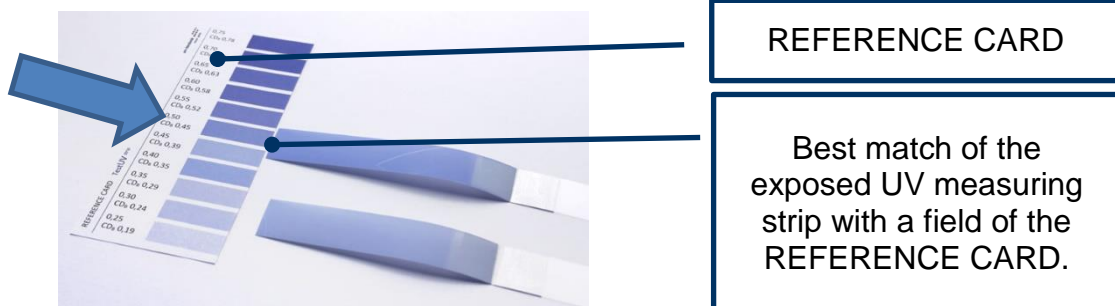
The UV radiation is determined in three steps:

1. Measurement with or without filter film
2. Determination of the resulting density / colour density (blue discolouration)
3. Evaluation by using the dose graphs



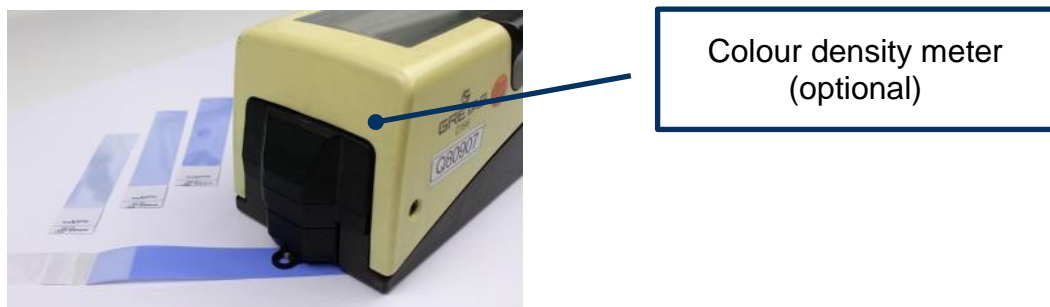
- ② The resulting density is determined by reading the blue discoloration from a reference color chart and a dose graph. Alternatively, an optional color density meter can be used instead:

- Determine the density using the enclosed REFERENCE CARD:



or

- Determination of the colour density using a commercially available colour density meter (optional):

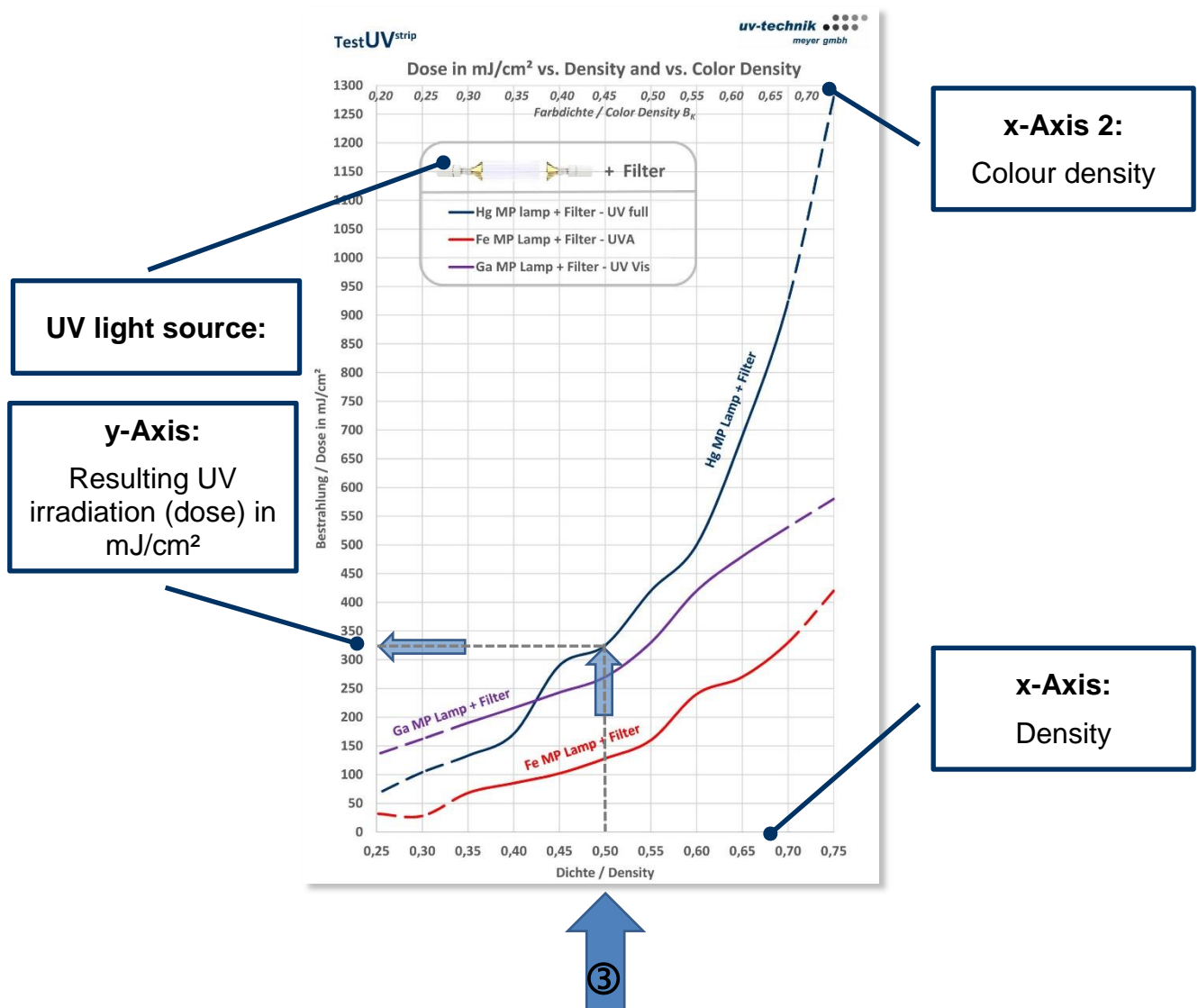


The following UV doses in mJ/cm² can be measured:

UV light source		Filter	Irradiation (Dose)		UV range
1.	UV medium pressure lamp				
	• Hg (with filter film)	✓	120 ...	900 mJ/cm ²	UV full
	• Fe (with filter film)	✓	50 ...	350 mJ/cm ²	UV-A
	• Ga (with filter film)	✓	180 ...	520 mJ/cm ²	UV-Vis
2.	UV medium pressure lamp at lower doses				
	• Hg (without filter film)	✗	10 ...	85 mJ/cm ²	UV full
	• Fe (without filter film)	✗	13 ...	75 mJ/cm ²	UV-A
3.	UV LED				
	395 nm (with filter film)	✓	500 ...	5900 mJ/cm ²	UV LED
4.	UVC low pressure lamp				
	UVC LP (without filter film)	✗	30 ...	380 mJ/cm ²	UVC LP (low pressure)

③ Evaluation

On the y-axis, the resulting UV-radiation (dose; mJ/cm^2) is read from the density or the colour density. There is a suitable dose graph for each uv light source:

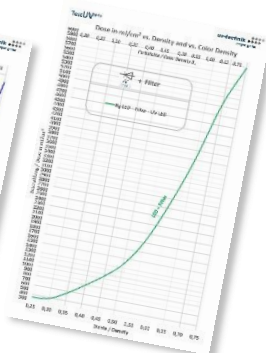
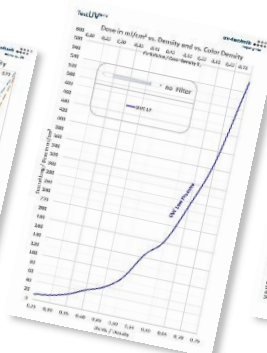
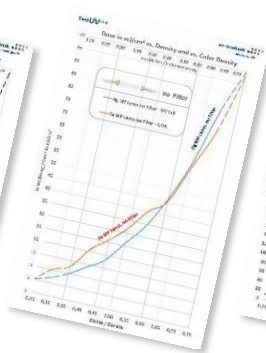
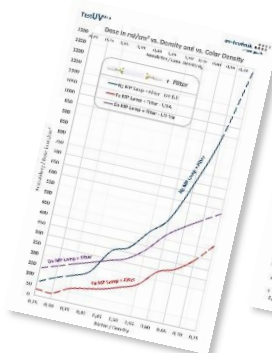
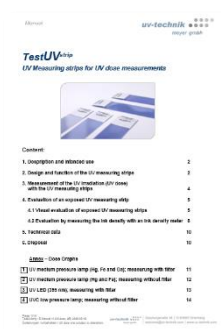


Example: Hg medium pressure lamp.

After the blue discoloration (step 1), the density is read off the reference card (step ②). At this density the UV irradiation is read off the dose graph (x-axis, value density 50) on the y-axis (step 3). In this example this is approx. $320 \text{ mJ}/\text{cm}^2$.

Delivery

- Zip lock bag
with 10 pcs. TestUV^{strip} UV measuring strips
- REFERENCE CARD
- Manual with four Dose graphs for UV medium pressure lamps (Hg, Fe, Ga), UV LED (395 nm) and UVC Low pressure lamps (CCure, uv-fresh®)



Technical data

Test UV ^{strip}	
Art. No.	A009227 (1 PU = 10 pcs. uv measuring strips)
Spectral range	Full UV; max. sensitivity at 330 nm
Measurable irradiations (doses)	4 to 60 mJ/cm ² (without filter film) 60 to 900/5900 mJ/cm ² (with filter film; UV lamp/UV LED (395 nm))
Size uv measuring strip	approx. 19 x 105 mm
Thicknesses	
UV measuring film	100 µm
Filter film	80 µm
Recommended storage temperature	2°C to 15 °C
Recommended storage time	max. 9 months from date of purchase



Please note that daylight can also expose the UV measuring strips over a longer period of time. Temperature has an additional influence on the measuring strips.



Therefore, the measuring strips must always be stored protected from light and heat.