

NDT Italiana S291 Electronic Photofluorometer



The **S291 Electronic Photofluorometer** is specially designed to carry out fluorescence measurements faster and easier with higher accuracy. It has unique features like the zero and calibration adjustment with fine sensitivity potentiometer and digital display.

The S291 can be used also for ultraviolet and thermal stability tests on liquid penetrants. It can also be used to measure the fluorescence of fluorescent and dual colored magnetic powders.

Measure of fluorescent brightness of penetrants as requested by AMS 2644 (replacing MIL-I-25135), ASTM E-1417 (replacing MIL-STD-6866), EN ISO 3452-2. The NDT S291 is listed in ASTM E-1135 and completely meets the EN 571-2.



PROCEDURE

- **Sample Holder** — Designed for insertion in the sample slot on the front of the photofluorometer. The sample holder comes with the instrument.
 - **Primary Light Filter** — The primary light source filter for the S291 photofluorometer is an integrally filtered long-wave 4-W lamp.
 - **Secondary Light Filters** — The S291 uses an OGR green and OB14 blue glass filter that is pre-installed.
 - All filters are installed by the manufacturer, so the instrument is ready for use.
1. Turn on the instrument and allow a 10 to 15 minute warm up.
 2. Compare the prepared papers under the black light and choose one of the brightest papers to set the instrument.
 3. Place the chosen paper in the sample holder and insert the holder into the sample port of the photofluorometer.
 4. Adjust the meter response to 80 by turning the “CAL” adjustment knob.
 5. Remove the sample holder and replace the fluorescent paper with an untreated blank paper and re-insert into the instrument.
 6. Adjust the meter response to 00 by turning the “Zero” adjustment knob.
 7. Remove the blank paper and insert the prepared sample for measurement. Alternate samples of test and standard material to minimize effect of any instrument drift that might occur.

CALCULATION

Calculate the fluorescence of the test material as a percentage of that, of the standard material by the formula.

$$X/S \times 100$$

Where:

X= the average of the test material reading

S= the average of the standard material reading

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SPECIFICATIONS

Digital Display	LED 000 ÷999
Drift	Negligible
Lamp	UV Lamp 4 Watt 365 nanometers
Primary and Secondary Filters	In accordance with Specifications
Zero and Calibration	Fine potentiometers continuously adjustable (10 turns)
Power Supply	220V/50Hz, 30VA (117V/60Hz)
Dimensions	260x210x130 mm
Weight	6.6lbs (3kg)
Reflectance Sample Holder	In accordance with Specifications