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Recd 9 Feb 04 T/M

CALIBRATION CERTIFICATE

QUANTUM SENSOR

Calibration date	:	17-Dec-03
Calibrated by	:	G. v/d Wilt
Quantum sensor, type	:	PAR LITE
Serial no	:	030380
Sensitivity ($\pm 2\%$) in solar radiation at airmass 1.5	:	5.31 $\mu\text{V}/\mu\text{mol}/\text{s.m}^2$
Impedance	:	240 Ohm
Calibration procedure	:	Exact interchange of test PAR LITE and reference PAR LITE in a horizontal parallel beam from a Xenonlamp. Photosynthetic photon flux density approx. $400 \mu\text{mol}/\text{s.m}^2$. Instrument temperature approx. 25°C .
Hierarchy of traceability	:	The reference PAR LITE is calibrated against a standard of known illuminance, the photometric standard lamp of Osram type Wi 41/G with color temperature of 2856 K, which on his turn is calibrated yearly at the dutch standard laboratory NMI. From the known illuminance and the 2856 K spectrum the photosynthetic photon flux density is calculated: $6.122 \mu\text{mol}/\text{s.m}^2$. The sensitivity figure of the reference PAR LITE is made correct for hemispherical solar irradiance at airmass 1.5 (spectrum according international standard ISO 9845-1). The correction of the Correction applied to sensitivity figure was +1.2 %.

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