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CALIBRATION CERTIFICATE

QUANTUM SENSOR

Calibration date : 18-Jun-99

Calibrated by : F. de Wit

Quantum sensor, type : **PAR LITE**

Serial no : 990031

Sensitivity ($\pm 2\%$) : 5.08 $\mu\text{V}/\mu\text{mol}/\text{s.m}^2$
in solar radiation at airmass 1.5

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 $\mu\text{mol}/\text{s.m}^2$.

Correction applied to : 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 sensitivity figure was +1.2 %.