

The photosynthetic performance of a cyanobacterium, *Nostoc* sp. Was analyzed under natural solar radiation in combination with several cut-off filters (WG 280, 295, 305, 320, 335, 345, GG 400, 420, 455, 475, OG 515, 530, 570, RG 645, 665; all Schott filter series) in Patagonia, Argentina. A portable PAM (pulse amplitude modulation) fluorometer was used to measure the photosynthetic quantum yield. In parallel, the irradiance of solar radiation was recorded in three wavelength ranges, UV-B (280 – 315 nm), UV-A(315 - 400 nm) and photosynthetically active radiation (PAR, 400 -700 nm). The cyanobacterium responded with photoinhibition to exposure of 30 min of solar radiation in combination with all cut-off filters except RG 645 and 665 (red-light). In red light there was an apparent increase in the photosynthetic quantum yield. In comparison to the samples covered with cut-off filters from 400 - 570 nm (blue, green and yellow light), the photoinhibition was more pronounced in the samples covered with cut-off filters from 280 - 345 nm (UV range). Recovery of photoinhibition takes place in dim light within several hours.