



Use your SDR Upside Down Measure O₂ consumption



Dear Max Mustermann

From a European perspective it makes complete sense, that researchers in Down Under used our well-proven SDR SensorDish® Reader upside down ... to measure the O₂ consumption rate of swimming leaves! Feel invited to learn more about this application.

Following this example, it is also very easy to measure oxygen in air for other applications, which should be of great interest especially to seed producers. You may determine e. g. seed vitality by measuring the oxygen consumption of single seeds or get insights in speed and uniformity of germination of a specific seed-lot - all this non-invasively.

Enjoy reading and do not hesitate to contact us in case of any questions!

Your PreSens Team

Measuring Leaf O₂ Consumption Rates with the SDR® SensorDish Reader

Adapted SDR Set-Up with Tubes and O₂ Sensor Spots in Screw Caps



Brendan O'Leary, ARC Centre for Plant Energy Biology, The University of Western Australia in Perth, Australia, tested, whether the influence of external metabolites on leaf O₂ consumption rates could be measured with the SDR. Specifically, it was previously observed in a screen of metabolite effects on leaf O₂ consumption rate (using Q2 by Astec Global) that 10 mM proline (Pro) causes an approximately two-fold stimulation of respiration rate over 14 hours. The key aspects of this measurement are its duration (> 14 h) and its dynamic nature, as he was interested in how rates change over time. Brian adapted the SDR set-up, so oxygen in the headspace of tubes containing the samples could be measured.

>> [Read the entire application note!](#)

Matching PreSens' products:

- [Oxygen Sensor Spots SP-PS5](#)
- [SDR SensorDish® Reader Basic Set](#)
- Mask for SensorVials (custom-made from a 3D printer by PreSens)

You would like to learn even more about PreSens Precision Sensing? Please visit our homepage www.presens.de and don't hesitate to contact us. Any feedback will be appreciated.

With kind regards

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