



Join our Webinar:

Characterize Cell Growth in Shake Flasks Using Online Monitoring



Dear Dr. Max Mustermann

Feel cordially invited and join our free [webinar](#) on "Characterize Cell Growth in Shake Flasks Using Online Monitoring" on March 24th, 2020.

In this context, the latest [application note](#) describing the optimization of screening conditions with the SFR vario should also be of interest to you.

Enjoy reading and let your knowledge grow!

Your PreSens Team

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Our Webinar "**Characterize Cell growth in Shake Flasks Using Online Monitoring**" will not only give you general information on the PreSens' Measurement Principle with all sensors in one hardware and the biomass measurement mode of the SFR vario - it will also give you detailed insights to measurements based on the following cell examples:

- Microbial Cell: *E.Coli* and *S.cerevisiae*
- Mammalian Cell: *CHO*
- Plant Cell: Cultivation of *Vitis vinifera*

In this webinar **Dr. Gernot T. John**, Director Marketing & Innovations at PreSens, will welcome a special guest lecturer:

Dipl.- Ing. **Rüdiger W. Maschke**, Research Associate at the Zurich University of Applied Sciences.

Mr. Maschke, who studied Chemical Engineering at the Dresden University of Technology, has won several prizes for his diploma thesis. In his current position at the Biochemical Engineering and Cell Cultivation group, he has used the SFR vario for monitoring cell lines from different organisms. He evaluated the method of backscattered light measurements for growth characterization and will share his experience and the results he obtained with the SFR vario.



Date: Tuesday, March 24th, 2020
Time: 10:00 a.m. (CET) & 5:15 p.m. (CET)

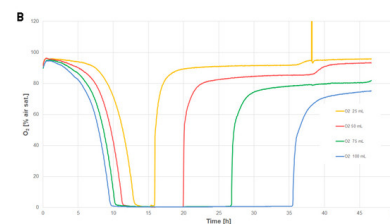
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SFR vario Discriminates Good from Bad in Shake Flasks -

Online Biomass and O₂ measurements help optimize screening conditions

Shake flasks are widely used for screenings of production strains. We used the SFR vario for simultaneous online monitoring of biomass and oxygen in GFP producing *C. glutamicum* shake flask cultures. Tests at different working volumes and with different flask designs were carried out to analyze the impact on biomass development and product yield. In non-baffled shake flasks higher filling volumes caused faster oxygen depletion and resulted in less product yield.



In non-baffled shake flasks higher filling volumes caused faster oxygen depletion and resulted in less product yield. After a metabolic switch, these cultures entered a linear growth phase during oxygen limitation, which was recorded in biomass measurements. Measurements in baffled shake flasks showed better oxygen transfer into the medium and the cultures returned approximately the same product yield at all filling volumes. They reached maximum biomass faster than in non-baffled flasks.

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

Related Products:

- [SFR vario](#)
- [Sensor Flask SFS](#)
- [PreSens Flask Studio](#)

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March 8 - 11, 2020

[6th Joint Conference of the DGHM & VAAM](#)

Leipzig, Germany, University of Leipzig

March 30 - April 1, 2020

[BioProScale Symposium 2020](#)

Berlin, Germany, Langenbeck-Virchow-Haus

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

Christina Schlauderer

Communications



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