Scope

The BioTech 2011 conference will provide an interdisciplinary discussion forum for experts in the field of (bio)process analytics and sensor technology. It aims to bring together scientists and professionals from both industry and academia.

Trends in inline analysis of pH and dissolved oxygen
The reliable measurement of pH and oxygen is among the most important tasks in bioprocess control. New sensor technologies have recently been applied for these parameters, including novel optical or electrochemical sensing principles as well as the introduction of 'intelligent' sensing systems. Will these innovations help users to achieve accurate, traceable measurements?

Sensors in the PAT framework
The FDA has encouraged biopharmaceutical companies to use PAT (Process Analytical Technology) as a tool for faster, better and cheaper biomanufacturing processes. Where and how can sensors help to achieve this goal? Will PAT applications improve quality and reduce costs, or are they yet another FDA validation burden?

Sensors for disposable bioreactors
Building on the BioTech 2010 conference, this year's event will again address the use of single-use devices in biotechnology, with a special focus on methods for on-line monitoring of crucial parameters. With the rising influence of disposable bioreactors in R&D and production, new sensing principles have been developed. Can they meet user's expectations?

Target participants of the BioTech 2011 conference are those using or planning to use disposables in industry and R&D, specialists in sensor technology and process analytics, process engineers from the pharmaceutical industry and related sectors, and students in the field of biotechnology and pharmaceutical sciences. By taking part in the conference, participants will gain a comprehensive understanding of trends, limitations and opportunities of sensors for bioprocess analytics.

Committees

Scientific Committee

Dieter Beckmann	Institute for Bioprocessing and Analytical Measurement Techniques, Heiligenstadt
Caspar Demuth	Institute of Biotechnology, ZHAW, Wädenswil
Oreste Ghisalba	CTI, Berne
Michael Jeitziner	Sigma Aldrich, Buchs
Cathy Kroll	Swiss Biotech Association

Organising Committee

Daniel Gygax	Biotechnet Switzerland
Gérard Hopfgartner	Swiss Chemical Society, Division of Analytical Chemistry
Philipp Kutter	Mayor of Wädenswil
Tobias Merseburger	Institute of Biotechnology, ZHAW, Wädenswil
Beat Ritschard	Zurich Parkside
Stefan Spichiger	ZHAW Alumni

Thursday, 1 September 2011

Visions and trends in sensor research

09.00-09.30	Registration and coffee
Session Chair	Caspar Demuth, ZHAW
09.30-09.50	**Welcome message** Tobias Merseburger, ZHAW Wädenswil
09.50-10.30	**Advances in sensor technology enabling disposable biomanufacturing** Govind Rao, Center for Advanced Sensor Technology, University of Maryland, Baltimore (USA)
10.30-11.00	**pH sensing with AlGaN and GaN based ISFETs** Volker Cimalla, Fraunhofer-Institut für Angewandte Festkörperphysik, Freiburg (D)
11.00-11.30	**Field-effect devices as microelectronic transducers for charge and ion sensing** Michael J. Schöning, Institute of Nano- and Biotechnologies, Aachen University of Applied Sciences, Jülich (D)
11.30-12.00	**Reference-free ion sensing** Silvia Generelli, CSEM Centre Suisse d'Electronique et de Microtechnique, Landquart (CH)
12.00-13.30	Lunch, exhibition and posters

Trends in in-line measurements: the industry's viewpoint

Session Chair	Daniel Gygax, Biotechnet Switzerland
13.30-14.00	**Intelligent sensors** Jörg Pochert, Hamilton Bonaduz AG, Bonaduz (CH)
14.00-14.30	**Calibration-free, solid-state pH measurements for 21st century biopharma applications and beyond** Gregory Wildgoose, School of Chemistry, University of East Anglia, Norwich (UK)
14.30-15.00	**Fully automated pH measurement techniques for applications in life science and biotechnology** Martin Freudenberger, Endress+Hauser Conducta, Gerlingen (D)
15.00-15.30	Coffee break and exhibition

Thursday, 1 September 2011

Sensors in the PAT framework

Session Chair	Tobias Merseburger, ZHAW
15.30-16.00	**Real-time transformation of data to knowledge - preferably using soft sensors** Christoph Herwig, Institute of Chemical Engineering, Vienna University of Technology, Vienna (A)
16.00-16.30	**PAT and QbD in the pharmaceutical industry: implementation and regulatory perspective** Andreas Schneider, Roche Diagnostics (Switzerland) AG, Rotkreuz (CH)
16.30-17.00	**Analytical methods for cell and process development** Wolfgang Budach, Process Development Bioinformatics, Novartis Pharma AG, Basel (CH)
17.00-18.30	Exhibition and poster session
19.00	Conference dinner

Friday, 2 September 2011

Application of sensors for disposable bioreactors

08.30-09.00	Registration
Session Chair	Cathy Kroll, Swiss Biotech Association
09.00-09.30	**Challenges in online analytics** Henry Weichert, Sartorius Stedim Biotech GmbH, Göttingen (D)
09.30-10.00	**Single-use sensors in the environment of disposable bioreactors with applications in fermentation processes** Wolfgang Paul, Pharma Research and Early Development (pRED), Roche Diagnostics GmbH, Penzberg (D)
10.00-10.30	**Scale-up and scale-down approaches for new bioprocesses: systems, techniques, sensors** Peter Neubauer, TU Berlin, Berlin (D)
10.30-11.00	Coffee break and exhibition

Friday, 2 September 2011

Sensors for disposable bioreactors: challenges and perspectives

Session Chair	Ursula Spichiger-Keller, C-Cit AG
11.00-11.30	**Happy bugs make better drugs: improving single-use bioproduction with flexible control** Barbara Paldus, Finesse Solutions, San Jose (USA)
11.30-12.00	**Optical chemical sensors in biotechnology: status quo and perspectives** Gernot T. John, PreSens Precision Sensing GmbH, Regensburg (D)
12.00-12.30	**Process analytics in single-use bioreactors and mixing devices** Kurt Hiltbrunner, Mettler Toledo, Process Analytics, Urdorf (CH)
12.30-13.00	**In situ and offline measurement of glucose and lactate in disposable bioreactors, a comparison of methods and effects** Stefan Spichiger, C-Cit AG, Wädenswil (CH)
13.00-14.30	Lunch, exhibition and posters

Synthesis, summary and outlook

Session Chair	Caspar Demuth, ZHAW
14.30-15.00	**Biomimetic sensors for the bioprocess control** Frieder W. Scheller, University of Potsdam, Potsdam (D)
15.00-15.30	**Synthesis and closing remarks** Caspar Demuth, ZHAW Wädenswil
15.30-16.30	Farewell aperitif
19.00	Alumni get-together

Event partners

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SCS Swiss Chemical Society

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KNONAUER AMT
HÖFE
EINSIEDELN
ZUG

WTT KONSORTIUM

Registration

Please register online at the conference website:
www.biotech2011.ch/registration

Fees

	before 1 August 2011	after 1 August 2011
1 and 2 September 2011 (2 days)	CHF 250.-	CHF 300.-
1 or 2 September (1 day)	CHF 150.-	CHF 200.-

The conference fee includes a copy of the abstract book, coffee breaks, lunches, dinner on Thursday as well as VAT. Accommodation is not included.

Submission of abstracts

Abstracts of oral contributions or posters should be submitted by e-mail to the scientific committee (caspar.demuth@zhaw.ch).

Please follow the format guidelines at www.biotech2011.ch/submission.

Deadlines

1 June 2011	Submission of abstracts
8 June 2011	Notification of acceptance of abstracts
1 August 2011	Early registration deadline
22 August 2011	Registration and payment deadline

Contact

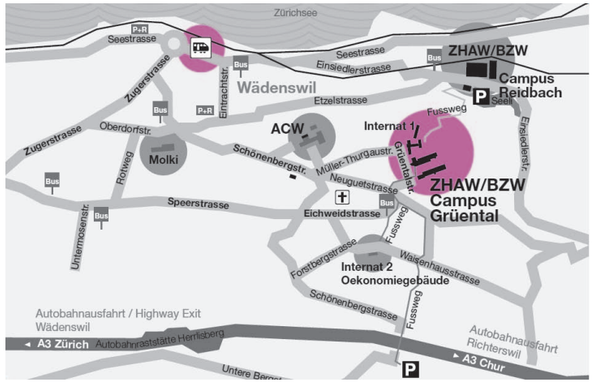
Participants	Irène Tinguely, +41 58 934 59 80
Exhibitors and sponsors	Marianne Ernst, +41 58 934 57 50

Postal address

Zurich University of Applied Sciences
School of Life Sciences and Facility Management
Grüental, CH-8820 Wädenswil
Switzerland

Venue

BioTech2011 will be held at the ZHAW School of Life Sciences and Facility Management in Wädenswil/Zurich. The Campus Grüental can be easily reached by public transport.



How to find us – from Zurich to Wädenswil

By train (for details, see www.sbb.ch)

- From the Zurich main railway station (Hauptbahnhof) to Wädenswil: trains five times an hour (S2, S8, Interregio), travel time 20-30 minutes
- From Zurich airport to Wädenswil: direct trains every 30 minutes (S2), travel time 35 minutes

By car
Leave the A3 motorway (Zurich-Chur) at the exit 'Wädenswil' and follow the sign 'ZHAW Tagung'.

From Wädenswil railway station to ZHAW Grüental Campus

- By public transport: buses number 123 and 126 to the bus stop 'Hochschule'
- By taxi from Wädenswil railway station (approximately CHF 15.- one way): Wädi Taxi +41 44 780 52 52 or City Taxi +44 780 77 77

Accommodation

For recommended hotels, see www.biotech2011.ch.

Zurich University of Applied Sciences

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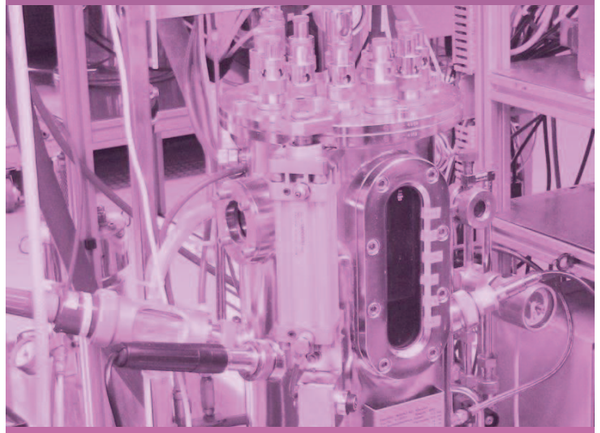

BioTech 2011

Chemical Sensors Forum

Bioprocess Analytics and Sensor Technology

1 & 2 September 2011

Campus Grüental,
Zurich University of Applied Sciences

Wädenswil, Switzerland

www.biotech2011.ch