



Gas Analysis Working Group (GAW)

Welcome and introduction to workshop, working group
and framework conditions

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Motivation for the Gas Analysis Working Group (GAW) and the way we work together

Motivation

Exchange and sharing information on recent methodologies in gas sampling and gas analysis for bioenergy processes (gasification, biogas, combustion, ...)

The way we work together

- **Websites, Wikis, Online Polls** and Virtual Task Boards (**VTB**) to provide information on current status of analytical technologies in the fields of interest
- **Workshops** and **Webinars** on all issues regarding gas sampling and analysis, as well as on general issues which are relevant for GAW
- **Working together in joint measurement campaigns** to gain and deepen specific knowledge and intensify direct personal exchange (**host site**).



Gas Analysis Working Groups: Since 2016

Here we are looking for your input. We want to concentrate on relevant issues. Therefore we will ask you to choose what is relevant for yourself or for your group. This feedback enables us to steer the activities in the best possible way.

Your participation in topical groups, Status of interest on:

Tar online measurement systems

- Tar online measurement systems
- Laser based/optical measurements of BTX+PAC

Sulphur measurement (technique and equipment)

- GC-X sulphur measurement (FPD, PFPD, SCD)
- Sulphur measurement with Micro-GC
- Low cost total sulphur measurement

FTIR

- FTIR measurement (technique & equipment)

Particle sampling and analysis

- On-line particle measurements

Supporting devices for gas sampling

- Design & operation of gas dilution systems

ELN & LIMS - electronic laboratory notebook & laboratory information management system

- ELN & LIMS

Further Information:

<http://www.gas-analysis-webinars.org/?q=node/26>



Home

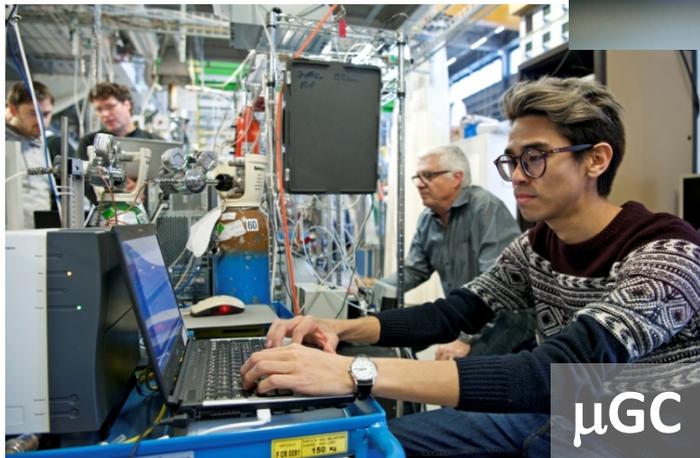
Webinars

Wiki

Working Group

Workshops

One of the highlights since last workshop in Amsterdam: Host site online tar measurement
Group managers, seniors, technicians and PhD students are working co-located together





An example for network management in one Working Group: Wiki

Logged in as: Serge Biollaz (serge) [Update Profile](#) [Log Out](#)

 **GAWiki**

[Recent Changes](#) [Media Manager](#) [Sitemap](#)

Trace: - [start](#)

Measurement campaign at the Paul-Scherrer-Institute (PSI) in Villigen/Switzerland

Time: week 43/2016 (October 24-28)

Aim: On-line measurements of tar species and mixtures of aromatic compounds supplied from test-gas generation systems Edit

Previous host site and individual activities

Generic learnings from round robin tests Have a look on following presentation, page 6 and following pages:
[GAW 2014 Berlin](#)

[Previous work](#)

Main objectives of this Round Robin test and host site

[Objectives](#)

Technical topics

- [applied sampling / analytical methods](#)
- [setup of the test gas generation systems](#)
- [requirements of the analytical tools](#)
- [literature](#)
- [questions, requests, open issues, to do's](#)

Table of Contents

- ◊ [Measurement campaign at the Paul-Scherrer-Institute \(PSI\) in Villigen/Switzerland](#)
- ◊ [Previous host site and individual activities](#)
- ◊ [Main objectives of this Round Robin test and host site](#)
- ◊ [Technical topics](#)
- ◊ [Infrastructural topics to run and operate this host site](#)
- ◊ [Measurements with On-line Systems and test gas generation system - TGG](#)
- ◊ [Results](#)
- ◊ [Publication of results](#)
- ◊ [IEA task meeting in Lucerne/CH October 26th](#)
- ◊ [Travel, Accomodation, Customs](#)
- ◊ [Task management](#)
 - ◊ [Meetings](#)
 - ◊ [Gantt Chart](#)
 - ◊ [KANBAN Board](#)
- ◊ [Training](#)

[start](#)

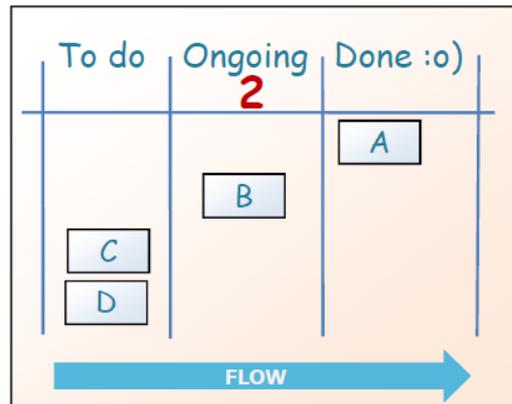







An example for network management in one Working Group: Virtual Task Boards (VTB)

With a Task Board the workflow is visualised
From To-do list to done



Virtual Task Board (VTB) for the working group

Host-site Tar-online PSI October 2016

- Review of results**
 - Online-Data LIF
 - Online-Data FID
 - Online-Data UV-VIS
- Further sample analysis**
 - GC-MS
 - GC-FID
- Comparison of results**
 - Presentation of non-technical results
 - Presentation of technical results
- Next**
 - GAW workshop presentation on "online..."
- WIP**
 - Planning of next steps
- Done**
 - EUBCE presentation on "online..."

<https://trello.com/b/DSMq70Ku/host-site-tar-online-psi-october-2016>



Outlook: General activities supporting knowledge transfer within GAW

Dissemination of publicly available information: [PhD thesis, papers, presentations](#)

Invite experts to present and discuss with other experts their newest results, which have been recently published. Identify and discuss open points

Norms and standards: [State of the art and future norms](#)

Invite experts to present and discuss with other experts the actual status of norms and standards. Identify and discuss open points

Best practice in experimentation: [Preparation, execution & evaluation](#)

Creating communities of people doing experimental work and share their experience on research facilities in the lab, pilot & demonstration plants and production plants

=> All these activities allow a much faster diffusion of knowledge within the community



Topic selection for GAW: Status 14.6.2017

This doodle poll gives the management team of GAW indications about the topics to be discussed in the near future. Our objective is to discuss challenging topics face-to-face. All issues which can be handled easily via Webinars have lower priority in our workshops and are addressed in WEBinars.

Please add comments below, if you would like to clarify a specific point or add further topics.

<http://doodle.com/poll/5r4iwn54suiza63r>

tar low cost measurement systems	tar high end measurement systems	tar online measurement systems	sulphur measurement (technique and equipment)	FTIR measurement (technique and equipment)	mGC measurement (technique and equipment)	Particle measurement (technique and equipment)	Test gas generators	host site status (learnings and outlook)	Diagnostic toolbox application: pyrolysis	Diagnostic toolbox application: combustion	Diagnostic toolbox application: biogas (AD)	Diagnostic cross topics for gasification, pyrolysis, combustion, biogas	GAW Wiki
26	12	30	32	27	28	21	14	9	4	1	6	30	10

- Tar online measurement systems: 30 votes
- Tar low cost measurement systems: 26 votes
- mGC measurement (technique and equipment): 28 votes
- FTIR measurement (technique and equipment): 27 votes
- Particle measurement (technique and equipment): 21 votes



Gas Analysis Webinars

[Home](#)[Webinars](#)[Wiki](#)[Working Group](#)[Workshops](#)

Time	Topic of discussion	Moderator	Web
08:30 - 09:00	Registration		-
09:00 – 09:20	Welcome and introduction to workshop, working group and framework conditions	Y. Neubauer	x
09.20 – 10:00	Updating the “Tar protocol” part 1	Y. Neubauer	x
10:00 – 10:30	Coffee break		-
10.30 – 11:00	SPA and the protocol Teil 2: <ul style="list-style-type: none">- application in industrial and pilots – Chalmers- wrap up of currently applied SPA variants; adaptation for additional species besides ‘tar’ only	n.n.	x



Home

Webinars

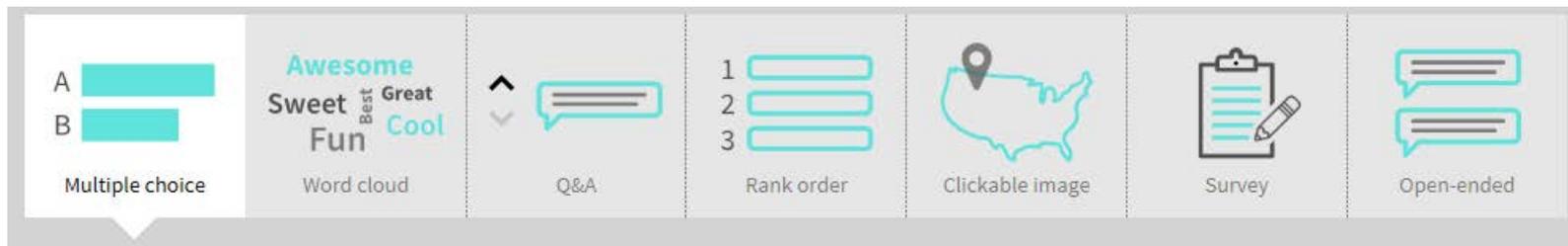
Wiki

Working Group

Workshops

Polls as a channel for asynchronous communication/feedback

 **Poll Everywhere** for all kind of poll



An example:
Open ended questions

What are the sub topics which are of most interest for you concerning online tar measurement (technique and equipment)?

 When poll is active, respond at PollEv.com/sergebiollaz342
 Text **SERGEBIOLLAZ342** to **+49 157 3598 1046** once to join

“Measuring PAH at low concentrations”
about 13 hours ago

“Measuring BTX at low concentrations”
about 13 hours ago

“optical measurement techniques”
about 12 hours ago

“LOW COSTS EQUIPMENT IN RATHER CLEAN GAS”
about 5 hours ago



“Coming together is a beginning,
Keeping together is progress.
Working together is success.”

*- Henry Ford
Founder, Ford Motor Company*