

Universität Stuttgart

**Institute for Sanitary Engineering,  
Water Quality and Solid Waste  
Management**

Universität Stuttgart  
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To the participants of AQS Baden-Württemberg

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Date  
Stuttgart, 10.01.2012

## **Proficiency test 2/12 - PAH in ground and raw water -**

Dear Sirs,

in March 2012 the execution of the above mentioned proficiency test (PT) round „PAH in ground and raw water” is planned.

Details about the PT round are enclosed. Please read them carefully.

The PT will be executed in the framework of the national PT – 28. LÜRV – in Germany.

If you are interested in participation, please complete, sign and return the enclosed application form.

**Application deadline: 10. February 2012**

You can also register for this PT round online via our website  
<http://www.aqsbw.de/index.en.html>.

Please consider our general terms and conditions of business for the execution of the PT.

If we receive your application after the deadline we cannot guarantee that participation will be possible.

The production of PT samples in this dimension is accompanied with high effort. You help us if you register early.

For formal reasons we confirm your application by sending a registration confirmation by fax. If you do not receive this registration confirmation, you are not registered.

If you have any questions, please do not hesitate to contact us:

AQS Baden-Württemberg at ISWA

AQS Baden-Württemberg, Bandtäle 2, 70569 Stuttgart, Germany

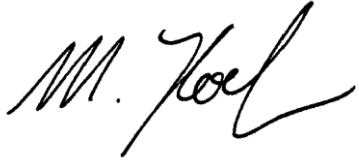
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E-Mail: [info@aqsbw.de](mailto:info@aqsbw.de)

Contact: Heidi Sanwald, Dr. Frank Baumeister, Dr. Michael Koch

Best regards



Dr.-Ing. Michael Koch  
Scientific director AQS



Dr.-Ing. Frank Baumeister  
PT manager

Annex:  
Details of the proficiency test exercise  
Terms and conditions  
Application form

## Details of the proficiency test round 2/12 PAH in ground and raw water – (January 2012)

### Parameters

- naphthalene
- acenaphthene
- fluorene
- phenanthrene
- anthracene
- fluoranthene
- pyrene
- benzo(a)anthracene
- chrysene
- benzo(b)fluoranthene
- benzo(k)fluoranthene
- benzo(a)pyrene
- dibenz(ah)anthracene
- benzo(ghi)perylene
- indeno(1,2,3-cd)pyrene

### Matrix

Ground water

### Dates and deadlines

- Registration deadline: 10. February 2012

**Please register for this PT with the enclosed registration form or via our website (<http://www.aqsbw.de/index.en.html>).**

- Dispatch of the samples: 12. March 2012
- **Deadline for submission of results: 05. April 2012, 24:00h in written form to the provider. Results submitted after the deadline will not be accepted.**

### Sample dispatch

Samples will be sent by courier service.

### Sample details

- 3 x 2 samples in 1000-ml-ground flask (brown) with ground-in stopper. Preservation by cooling.

### Permitted analytical methods

The following restrictions do not apply for laboratories outside Germany. Laboratories participating in this PT not under the rules of the 28. LÜRV are free to choose a suitable method:

Under the rules of the 28. LÜRV following HPLC- and GC-methods are allowed:

- DIN 38407-F18: 1999-05
- DIN EN ISO 17993: 2004-03
- DIN 38407-F 39 : 2011-09
- E DIN 38407-F 39 : 2008-08

### Limit of quantification

The analytical methods must be suitable to achieve a limit of quantification of 0,005 µg/l for all parameters.

### Execution of the analysis

The samples must be analysed in the own laboratory with own personnel and own equipment and treated like routine samples. Subcontracting of the analysis is not allowed.

**Important remark:** The samples must be extracted 24 hours after receipt at the latest.

### Reporting of the results

The samples must be analysed in duplicate over the complete method (sample preparation and measurement). Please submit the results as average values in µg/l with three significant digits.

### Evaluation

The statistical evaluation will be executed according to DIN 38402 – A45 and ISO/TS 20612 “Interlaboratory comparisons for proficiency testing of analytical chemistry laboratories” with the combined estimation method Hampel/Q-method, a method of robust statistics.

### Assessment of the single values

The values are assessed according to the tolerance limits determined in the assessment of 28. LÜRV. In 28. LÜRV the assigned value  $x_a$  is calculated by the Hampel estimator. The standard deviation for proficiency assessment  $\hat{\sigma}$  will be taken from the Q method for the calculation of  $z_U$ -scores according to DIN 38402 - A45 (chapter 10.4) or ISO/TS 20612 respectively from 28. LÜRV.  $\hat{\sigma}$  will be limited as follows:

- lower limit: 10%
- upper limit: 30%

A z-score is calculated for each measurement result derived from the assigned value  $x_a$  and the standard deviation for proficiency assessment:

$$z - score = \frac{result - x_a}{\hat{\sigma}}$$

The z-score will be modified to a  $z_U$ -score with a correction factor for proficiency assessment (as described in the above mentioned standards).

The tolerance limits are defined as  $|z_U| = 2$ .

### Overall assessment

For laboratories which do not participating in this PT under the rules of 28. LÜRV, there is no overall assessment of the proficiency test round, but the single parameters are assessed.

A parameter is assessed as successful, if more than half of the values are correctly determined (2 out of 3 values are within the tolerance limits).

Not successful are:

- 1) Values which are not determined (if the other samples of this parameters are analysed),
- 2) Values, which are indicated with “lower than limit of quantification”,
- 3) Values, which are subcontracted,
- 4) Values, which are submitted after the deadline of submission of results.

### Participation fee

The participation fee will be € 512,50,- plus transportation costs.



**University of Stuttgart**  
Germany

**Institute for Sanitary Engineering, Water Quality  
and Solid Waste Management  
Department of Hydrochemistry  
Prof. Dr. Jörg W. Metzger**

## **General Terms and Conditions of Business**

### **1. General Provisions:**

The university shall perform exclusively pursuant to the General Terms and Conditions as presented hereinafter, unless otherwise provided for in a separate written agreement. Customer terms and conditions that supplement or are different hereto shall herewith be rejected.

### **2. Assignment of Orders**

The issuance of a purchase order to the university as well as any form of contract execution must be in writing. Additions or amendments of any kind to a university bid or to an agreement currently in existence must be in writing. Promises and/or information given verbally or through electronic means (i.e. facsimile, telex, e-mail) shall be nonbinding and not enforceable.

### **3. Remuneration:**

The price specified in the offer or in the agreement is not a fixed price in as much as nothing else is agreed to in writing. If the price agreed on should not suffice in order to obtain an optimal result, then the university will inform the customer thereof and proffer suggestions about the continued course of action. Each contractually agreed upon payment must be paid into an account specified by the university either within 30 days of the customer's receipt of the university's invoice, or on the contractually agreed upon payment dates. Value added tax must be separately invoiced and paid, when applicable. The university may only commence performance after prepayments have been paid into its account.

### **4. Work Product / Inventions:**

The agreed upon provision in the offer or in the agreement shall be applicable. However, in cases where there is no provision therefore the following shall be applicable: the customer shall receive an irrevocable and non-exclusive right of use for the consequential results. The customer shall reimburse the university an amount, which is to be agreed upon, for expenses relating to the registration, retention and defense of proprietary intellectual property rights, which have arisen during the course of contractual performance under the agreement. If the customer uses the proprietary intellectual property rights then he/she/it shall be obligated to reimburse any employee inventor remuneration incurred.

### **5. Confidentiality / Publication:**

The university shall not disclose to third parties and shall keep confidential all technical and business information received from the customer by reason of this agreement. This obligation shall survive the duration of the agreement inasmuch and provided that such information is not otherwise generally known, or the customer has waived in writing the provision for non-disclosure and confidentiality. Taking into consideration the legal obligations of a university, the university may publish the results of its work achieved within the context of this agreement in the usual scientific form upon prior agreement with the customer. Upon agreement and coordination with the university, the customer shall also be entitled to publish. However, an intended publication may be delayed for the time necessary to complete any dissertations, thesis work, or the registration of proprietary intellectual property rights. The obligations set forth in this provision shall be applicable for 2 years following the completion of the project.

### **6. Warranty and Liability:**

The liability of the university, its legal representatives, agents, employees and/or assigns for a breach of this agreement or tortuous behavior shall be limited to cases of intent, gross negligence, or a breach of a material obligation, which forms the essence of the agreement. In cases of grossly negligent behavior, liability for damages shall be limited to provable losses in the amount of the contractual

consideration. Liability for consequential damages or losses shall be excluded. The university warrants the application of reasonable scientific care and diligence in addition to compliance with recognized principles of technology, but does not guarantee the actual achievement of any research and development goals.

The university shall entrust the appropriate employees with the execution of the work as provided for pursuant to this agreement, who then shall be obligated to comply with the provisions of this agreement, inasmuch as such is legally permissible. The university shall have the right to cure any defects, which may arise. In the event that the university is unable to cure, the customer may choose to either abate the consideration received under the agreement, or rescind the agreement in its entirety. Any and all other forms of remedy are hereby excluded. The duration of any and all warranties or guarantees shall be limited to six months after the delivery of the research and development results. This shall also apply for any and all warranty and guarantee claims, which are not subject to statutory warranty or guarantee provisions.

### **7. Third Party Intellectual Property Rights:**

The customer shall be immediately informed in the event it is discovered during the course of performance by an agent or employee of the university that there are third party proprietary intellectual property rights in existence, which are relevant to the work being performed within the scope of this agreement. Neither the university, nor its agents, employees or assigns are obligated to conduct an investigation into the existence, validity or enforceability of such rights.

### **8. Agreement Termination:**

This agreement can be prematurely terminated upon three-month's notice if:

- it is ascertainable that the expected result can not be achieved, or can not be achieved without substantially exceeding budgeted costs or the scheduled time frame;
- or
- extraordinary circumstances occur, which would make the

continuation of this agreement futile. In the case of premature termination of agreement, the contractual parties shall come to an accord on how best to wind-up any outstanding contractual matters. The customer shall pay pursuant to section 3 hereof any accrued expenses incurred by the university up until the date of termination.

### **9. Miscellaneous:**

No extraneous agreements, nor amendments or additions to this agreement shall be legally binding and enforceable unless in writing. The place of performance for purposes of this agreement shall be Stuttgart, Germany. This agreement shall be governed by and construed and interpreted in accordance with the laws of the Federal Republic of Germany. If any suit or action is filed by any party based upon this agreement, venue shall be in the federal German courts having jurisdiction for the City of Stuttgart, Germany, inasmuch as such is legally permissible.

### **10.**

The English text is only a nonbinding service. Only the German text, which also is handed out, legally is substantial and obligatory therefore.

The German text (Allgemeine Geschäftsbedingungen) is available on <http://www.aqsbw.de/pdf/agb.pdf>.

**Registration for the  
proficiency test round  
"PAH in ground and raw water"**

Our laboratory will participate in the proficiency test "PAH in ground and raw" – provided by AQS Baden-Württemberg. The participation fee of €512,50 plus transportation costs (for transport outside Germany) will be paid after receipt of the invoice. I took note of the terms and conditions.

For remarks of the organizer

For remarks of the organizer

**Obligation**

Our laboratory will perform the analyses in our own laboratory, with own personnel and own equipment.

Details of our laboratory:

	<b>Type or print legibly</b>
Name of the laboratory	
Street	
Postal code, City	
Delivery address (if different from the above address)	
Billing address (if different from the above address)	
Country	
Phone / FAX	
E-Mail	
VAT-ID (absolutely necessary for participants outside Germany)	
Contact Person	

date: \_\_\_\_\_ signature (legally binding): \_\_\_\_\_

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70569 Stuttgart  
Germany