

THE GERMAN ACCREDITATION COUNCIL IS NOW 10 YEARS OLD

The German Accreditation Council DAR was founded on 04 March 1991 on the initiative of fifteen members.



The 32nd DAR Meeting held on 6 March 2001 was devoted to the ten years of existence of the DAR and appreciated this event ceremonially.

It therefore took place in the building of the BDI (Association of German Industries). To celebrate this event, the DAR which now totals 27 members invited guests, accredited bodies, representatives and users of accreditation.

It was a good time to take a stock of the previous ten years, to analyse the present experience and to discuss future fields of work and requirements as well as indispensable further developments within the DAR.

The DAR offered its thanks to all those who actively contributed to its work, but who withdrew from work due to age reasons or resigned because of acceptance of other responsibilities. It expressed its thanks to the foundation members and their supporting and efficient work. They all built a platform with the DAR and made sure that the German accreditation system gets harmonised and coordinated despite of all

and different needs in the various technical disciplines and at the same time remains manageable for the accredited bodies and users of testing and certification services.

The sound and beneficial work was especially appreciated by all accreditation bodies operating under the umbrella of the DAR and contributing to the DAR system, and all assessors acting on behalf of the accreditation bodies, all honorary members of the Sectoral and Technical Committees having essentially contributed to the high competence and external impact of the German accreditation system.

The great achievements of the DAR reached at international scale and obtained by common efforts and a sound technical work were pointed out.

1. Dr. Röhling, department head at BMWi (German Federal Ministry of Economics and Technology), esteemed the international importance of the DAR in view of the high volume of exports of the German industry. The BMWi regards the DAR both as a forum for forming information and opinions within Germany and as a representative of the German accreditation system at international level.
2. Prof. Dr. Fresenius as a representative of EUROLAB-Germany discussed the benefit of accreditation for laboratories. EUROLAB-D appreciates the DAR as a positive board, which brings the interested parties together and jointly discusses questions and issues of common interest. EUROLAB-D will continue to actively contribute to the work of the DAR.
3. Prof. Dr. Gürtler as a representative of ICSCA (Industry Cooperation on Standards & Conformity Assessment – a voluntary association of leading industrial companies from all over the world) pointed out that the value of accreditation for the companies, in particular in view of the recognition of test results, is of great national and international interest. The industry needs a close cooperation between the mandatory and the voluntary area, no double efforts, but a direct and straight recognition of the results by all parties concerned, all governmental bodies and consumers. "Once tested – accepted everywhere" that is the slogan. In this context the positive results were empha-

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sised, in particular those gained in international recognitions and accreditations within ILAC and IAF, both are organisations to which the DAR contributes considerably.

From the point of view of the industry, the DAR is the decisive national communication platform in accreditation matters in view of a harmonised external representation. The DAR is therefore needed as a coordinator to strengthen the international position of Germany.

4. Mr. Pärsch spoke from the perspective of DQS (German Association for Management Systems Certification) – one of the oldest accredited QMS certification bodies. He appreciated the contribution accreditation reached to harmonise the

activities of the certification bodies. Furthermore, he made various proposals to improve DAR's work.

5. The Bund der Deutschen Industrie (BDI – Federation of German Industries) has drawn up a propositions paper on conformity assessment, which reflects the industry's expectations of all types of conformity assessment and accreditation. The industry regards as most important the quality of the accredited bodies as well as the simplicity and clearness of the accreditation requirements. The BDI agrees to further actively contribute to an improvement of the work of the DAR.

The accreditation bodies took a stock of the work of the DAR system and discussed proposals and possibilities for its improvement and further development.

BAM S.42 – M. Wloka

NEWS FROM THE DAR



DASMIN German Accreditation Body Petroleum and Related Products – Signatory to the MRA of EA and ILAC

DASMIN has successfully passed the EA evaluation procedure and joined the Mutual Recognition Arrangements (MRAs) of EA and ILAC. This implicates that all accreditations granted by DASMIN are recognised within Europe and worldwide by all other signatories to the MRAs. At the 32nd DAR Meeting, DASMIN as a further signatory to the EA and ILAC MRAs was handed over the recognition certificate.

8th Tutors' Exchange of Experience held by the DAR, BAM/Berlin, 7.-8.3.2001

According to a tradition of many years, the DAR held again a Tutors' Exchange of Experience among all parties actively involved in the DAR system and dealing with the preparation and performance of training courses of assessors. This year's Tutors' Exchange of Experience included the following topics:

- Experience in introducing and implementing EN ISO/IEC 17025 on the basis of the DAR recommendation DAR-EM32 and the ILAC document "Guidance to ILAC Members for Accreditation to ISO/IEC 17025";
- Discussion of essential issues in laboratories relating to the transition to ISO/IEC 17025;

- Joint Checklist endorsed by the DAR on self-assessment of laboratories on the basis of ISO/IEC 17025;
- Information on current activities of EA, ILAC, IAF, ISO CASCO as well as on the present state of European and international arrangements and agreements among accreditation systems;
- Increase of cooperation among all accreditation bodies in both areas (mandatory and voluntary area) for the benefit of the entire accreditation system.

Detailed documentation on the 8th Tutors' Exchange of Experience can be requested at the DAR Secretariat.

BAM S.42 - S. Stobbe

Joint event DAR-EUROLAB-D, Berlin (20.-21.03.2001)

Joint Seminar: ISO/IEC 17025 for users – Wishes of the laboratories and requirements of the accreditors

EN ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories" was published as a standard in April 2000. It replaces the existing EN 45001 dated May 1990, which so far formed the basis for the accreditation of laboratories.

A transition period is foreseen for accredited laboratories and for the accreditation bodies by the end of 2002. Until that date the requirements shall be fulfilled by all accredited laboratories and their compliance must have been verified by the accreditation bodies. (Detailed information see DAR-aktuell 1/00 and 3/99.)

For this purpose, EUROLAB-Germany and the DAR held a Joint Workshop/Seminar in March 2001. It themed help to the laboratories to master the transition period and offer a discussion forum to clarify all topics of interest.

The Seminar dealt with specific and practical issues: Which new requirements will an accredited laboratory face in future? How can the technical requirements, such as traceability to SI-Units and measurement uncertainty, be fulfilled?

Which role play proficiency tests and validation as a tool in quality management? Which expectations do

the accreditation bodies have to the laboratory in implementing ISO/IEC 17025?

Practical experience in implementing ISO/IEC 17025 was demonstrated, just as a study on the economic impact of accreditation.

A concluding discussion provided the opportunity to exchange views on possibilities for improving accreditation and the laboratories' work.

This Seminar presented the most essential experience of the accreditation bodies in implementing ISO/IEC 17025.

BAM S.42 – S. Stobbe

Excerpt from an article

EN ISO/IEC 17025 – Implementation and application in practice

Since April 2000 the German accreditation body DATech has been applying EN ISO/IEC 17025 both for all initial assessments of laboratories and for planned surveillances and reassessments of laboratories having already been accredited (if the laboratories concerned express this wish). Some problems occurred in fulfilling the requirements for the management system, as these requirements in terms of *organisation, quality system including internal audits, control of nonconforming work, corrective measures, management reviews and complaints* are described more detailed as in the respective paragraphs of EN 45001. Furthermore, the interfaces to the client, service provider, supplier, and subcontractor of the laboratory are described more clearly and unambiguously.

Larger problems occurred particularly in implementing the new requirements following preventive measures (para. 4.11) and in assessing the procurement of services and equipment. In view of the preventive measures it is often not understood that in the preliminary stage the laboratory should think about the procedure and possibly occurring error sources. An example of problems occurring in the procurement of services

and equipment may be the assessment of a calibration laboratory by the subcontracted laboratory. The applicant laboratory shall assess a satisfactory traceability, calibration including the measurement uncertainty and also the competence of the subcontracted calibration laboratory. Selection and assignment on the basis of the assessment of the calibration laboratory (para. 4.6.4) exclusively lie in the responsibility of the laboratory.

Further difficulties which were not expected in the occurred extent arose in view of the reliability of quality of results (para. 5.9) and the required procedures and certificates.

In many cases the main focus of the work related to the implementation of the new requirements in the laboratory concentrates on the unambiguously required determination of influence factors to the accurateness and reliability of the test (para. 5.1) as well as the reasonable estimation of the measurement uncertainty of the results determined in the laboratory (para. 5.4.6). For this reason the Seminar following the Workshop, in which examples of measurement uncertainty were debated and discussed provided help to many laboratories.

DATech, R. Egner

Joint Workshop: Examples of measurement uncertainty

As the topic measurement uncertainty is of high significance in the new standard and will play a larger role in accreditations, the second day was devoted to this topic.

- Guidance and Guidelines on calculation of measurement uncertainties (Eurachem Guide and Guide to the Expression of Uncertainty in Measurement (GUM));
- Estimation of measurement uncertainties from data and information available;
- Software help for determination of measurement uncertainty;

- Example calculation fore determination of measurement uncertainty.

The Workshop (six Working Groups on different fields of testing were provided) aimed at enabling the participants an active cooperation and to reasonably determine and state measurement uncertainties.

Detailed and complete Workshop Proceedings can be requested at EUROLAB-D (Tel: 030-8104 3769 / Fax: 030-8104 3717, eMail: Gudrun.Neumann@bam.de/Roswitha.Nuesser@bam.de).

BAM S.42 – M. Wloka

	Value	Uncertainty	Uncertainty as RSD
C_{max}	0.09	0.00017	1.7×10^{-3}
V_{a}	25.0	0.021	8.4×10^{-4}
V_{rec}	25.45	0.033	1.3×10^{-3}



ESTIMATION OF MEASUREMENT UNCERTAINTY IN A TESTING LABORATORY

One of the most discussed issues in implementing the requirements of the new standard EN ISO/IEC 17025 (hereinafter called ISO 17025) is the statement of the measurement uncertainties. According to this international standard, laboratories shall have and apply procedures for estimating the measurement uncertainty. In the broader sense, this was already a requirement for quantitative results given in the predecessor, standard EN 45001 (para. 5.4.3).

Whereas according to ISO 17025 the laboratory shall have an idea of the uncertainty for each measurement, measurement uncertainties for quantitative test results shall only be stated in test reports, if they

- are important for the validity or use of the test results,
- are required by the customer,
- challenge the compliance with maximum permissible errors or specifications.

Internationally harmonised principles play an important role for the determination and statement of measurement uncertainties. As basic standards for the estimation of the measurement uncertainty, ISO 17025 explicitly specifies the ISO 5725 "Accuracy (trueness and precision) of measurement methods and results" as well as the "Guide to the expression of uncertainty in measurement" (GUM), the philosophy of which allows various methods of solution.

The standard ISO 17025 requires a reasonable estimation of measurement uncertainty, for which in practice the current state of knowledge has to be considered. In the various technical disciplines of measurement and testing this state-of-the-art has reached a different stage of development with respect to the mathematical modelling and the contributions of the single influence quantities to the measurement uncertainty. Accordingly the requirement of the standard will have to be implemented at a different rate and may have to be realised gradually in the various technical disciplines at reasonable effort.

In any case it is not reasonable that those laboratories having demonstrated their competence by an accreditation according to EN 45001 for years are now being overburdened beyond their economic capability.

In particular when using standardised test methods, the individual laboratory is not expected to do any scientific research in terms of the determination of the uncertainty of results. When estimating the measurement uncertainty, laboratories shall rather consider the information available in the laboratory. For that purpose they may consult bibliographies or results from internal quality assurance, from experiments and interlaboratory comparison tests, whereby first it might be sufficient to state the repeatability or the reproducibility (comp. ISO 5725). Alternatively, estimations based on a list of essential influence factors may be made. If the estimation of the measurement uncertainty covers only specific parts of testing or can be made only incompletely, a clear description of the approach and the basis for the estimation are particularly important as well for the users of the test results as for reasons of a fair competition among the laboratories.

It is the task of the national and international standardisation organisations to include statements on measurement uncertainty in all newly issued or revised test standards. As far as such statements are available they can be adopted by the laboratory, if the laboratory is able to demonstrate that it masters the standardised test method.

The accreditation bodies, their associations (e.g. EA and ILAC) and the laboratories' associations such as EUROMET, EURACHEM and EUROLAB are requested to seek for practicable and economically reasonable solutions, to support and promote the elaboration of guidelines and examples, in particular in areas of problems and to make the concept of measurement uncertainty known to the users – i.e. the clients – of measurement and test results.

EUROLAB-D - A. Schmidt