

# NVLAP ACCREDITATION AT HART

In November 2000 Hart Scientific's temperature laboratory became officially accredited by the National Voluntary Laboratory Accreditation Program (NVLAP lab code 200348-0), which operates under the umbrella of NIST, the national laboratory of the United States.

NVLAP has signed mutual recognition agreements with Canada, the Asia Pacific Laboratory Accreditation Cooperation (APLAC), and the International Laboratory Accreditation Cooperation (ILAC). Signatories to the ILAC agreement include most of the world's developed nations. In short, Hart's lab is now recognized as an accredited laboratory in most countries in the world.

Laboratory accreditation. It's technically challenging, requires a lot of time, and costs money. So why would anyone do it? We'll tell you.

## What Is Accreditation?

Accreditation is the unbiased assessment by a third party of a laboratory's quality program and technical capabilities. The third party assesses the laboratory against a recognized standard. Internationally, the ISO Guide 25, "General Requirements for the Competence of Calibration and Testing Laboratories," has been the accepted standard for many years. However, in December 1999, the new standard, ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories," was adopted. Laboratories accredited to ISO Guide 25 have two years to comply with the new standard. Laboratories accredited to either ISO Guide 25 or ISO/IEC 17025 are also generally compliant to the basic requirements of ISO 9000.

Accreditation indicates that a laboratory has demonstrated that it functions within the parameters of the standard. While accreditation is not a guarantee of a laboratory's performance, it does provide a means for determining the laboratory's competence to perform particular types of tests or calibrations. The technical evaluation during an accreditation includes a review (by experts in the

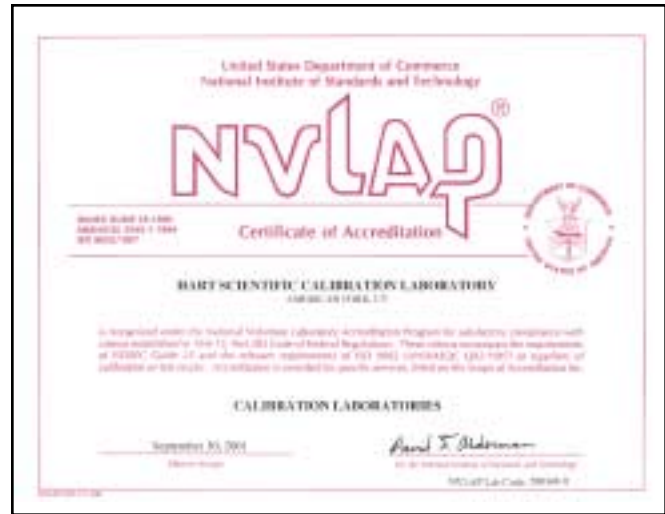
relevant discipline) of calibration procedures, calibration standards, traceability, uncertainty analysis, actual results, and statistical process control. Hart's technical evaluation included certification of eight different ITS-90 fixed points.

Laboratory accreditation has been a requirement in many countries for years. Nationally recognized accreditation bodies have provided customers with confidence in calibration certificates and reports by employing generally established standards set by the European (CEN) or international (ISO) standardization bodies. Accreditation in the United States is voluntary. Nevertheless, as more companies become ISO 9000 certified, accreditation is becoming a more common practice in the United States.

## What Is the Scope of Hart's Accreditation?

The scope of Hart's accreditation is intended to satisfy the traceability and other requirements for ongoing company operations, research requirements, and customer support for both primary and secondary thermometry. In the United States, NVLAP and A2LA have already accredited hundreds of calibration laboratories. Hart's laboratory, however, is accredited for some of the lowest uncertainties of all commercial laboratories in the world. Hart's accreditation also includes DC resistance, and Hart is not limited to providing calibrations only for equipment manufactured by Hart. The following areas are included within Hart's scope of accreditation:

- Thermometric fixed-point cell certification
- SPRT calibration both by fixed point and comparison



- Noble-metal thermocouple calibration by fixed point
- PRT calibration
- Thermistor calibration
- Reference resistor calibration
- Thermometer readout calibration

## What's in It for You?

First, since accreditation involves a third party assessment of a laboratory's QA program and technical capabilities, it provides an impartial viewpoint of the competency of the laboratory. It also provides an unbiased assessment of the laboratory's standards, procedures, personnel qualifications, and traceability to an appropriate national laboratory. In the United States, this means traceability of all standards to NIST. By showing traceability to NIST, we show traceability directly to ITS-90. In short, accreditation offers a lab's customers a high level of confidence in its quality and technical abilities.

Second, because ISO 9000 includes calibration requirements, many companies include accreditation for calibration suppliers as a mandatory part of their QA system. Often, accredited suppliers need only remit a copy of their accreditation scope in order to become an approved vendor. This eliminates the need for time-consuming, expensive audits and other supplier evaluation methods. Further, a customer's own audits run

smoother when accredited suppliers are used.

Third, accreditation has benefits for international customers. All recognized accreditation bodies have adopted the ISO Guide 25 as the basis for accreditation of calibration and testing laboratories, and will be transitioning to ISO/IEC 17025. Because these accreditations tend to be based on the same standards, countries may enter into Mutual Recognition Agreements (MRAs) whereby an accreditation body in one country recog-

nizes the accreditations done by a fellow MRA signatory in another country. This has the effect of easing some of the barriers that have historically hindered the flow of calibrated instruments across borders.

### What's in It for Us?

Customer demand for laboratory accreditation has been rising for years. With many companies requiring their calibration services suppliers to be accredited by 2001, this demand is starting

to reach a critical level. By becoming accredited, Hart is better positioned to serve a wide variety of customers. Additionally, the time and costs associated with providing repetitive audits to numerous customers will decline with accreditation.

Perhaps the single greatest benefit of accreditation to Hart is the accreditation process itself. Hart employs some of the world's leading temperature metrologists. One such expert, Tom Wiandt, has done an outstanding job running our calibration lab since 1996. However, the opportunity to receive an evaluation and criticism from industry peers is still valuable. Both the QA systems and the technical operating procedures were thoroughly examined. Issues were discussed and recommendations made and implemented. While the lab was already excellent, it is now the best it's ever been, and we have independent confirmation that we do what we say we do.

In the end, accreditation benefits both the accredited lab and its customers. Our processes and systems have been validated, our stated uncertainties scrutinized, and traceability established. At the

## Where can you get more information?

### International Laboratory Cooperation (ILAC)

c/o NATA - 7 Leeds Street - Rhodes NSW 2138, Australia  
+61 2 9736 8222, fax: +61 2 9743 5311 (Secretariat)  
E-mail: [ilac@nata.asn.au](mailto:ilac@nata.asn.au)  
Web site: [www.ilac.org](http://www.ilac.org)

### European Co-operation for Accreditation (EA)

c/o COFRAC - 37, rue de Lyon - FR-75012 Paris, France  
+33 1 4468 8225, fax: +33 1 4468 8221  
E-mail: [martine.simon@cofrac.fr](mailto:martine.simon@cofrac.fr)  
Web site: [www.european-accreditation.org](http://www.european-accreditation.org)

### Asia Pacific Laboratory Accreditation Cooperation (APLAC)

71-73 Flemington Road - North Melbourne VIC 3051, Australia  
+61 3 9329 1633, fax: +61 3 9326 5148  
E-mail: [aplac@nata.asn.au](mailto:aplac@nata.asn.au)  
Web site: [www.ianz.govt.nz/aplac](http://www.ianz.govt.nz/aplac)

### National Cooperation for Laboratory Accreditation (NACLA)

NACLA Secretariat - Office of Standards Services - NIST  
PO Box 4045 - Gaithersburg, MD 20885-4045, USA  
(301) 975-6472, fax: (301) 963-2871  
E-mail: [naclasecretariat@nist.gov](mailto:naclasecretariat@nist.gov)  
Web site: [ts.nist.gov/ts/htdocs/210/nacla/index.htm](http://ts.nist.gov/ts/htdocs/210/nacla/index.htm)

### National Voluntary Laboratory Accreditation Program (NVLAP)

Building 820, Room 282 - Gaithersburg, MD 20899, USA  
(301) 975-4016, fax: (301) 926-2884  
E-mail: [nvlap@nist.gov](mailto:nvlap@nist.gov)  
Web site: [www.ts.nist.gov/nvlap](http://www.ts.nist.gov/nvlap)

### American Association for Laboratory Accreditation (A2LA)

5301 Buckeystown Pike, Suite 350 - Frederick, MD 21704, USA  
(301) 644-3248, fax: (301) 662-2974  
Web site: [www.a2la.org](http://www.a2la.org)



For the Scope of Accreditation  
Under NVLAP Lab Code 200348-0

same time, customers' confidence in our lab's quality system and technical capabilities has been independently substantiated. The complete scope, ranges, and uncertainties of Hart's accreditation are available for review on our web site at [www.hartscientific.com](http://www.hartscientific.com).

Take a look. We make the world's finest temperature calibration equipment, and we know how to use it. We used it, in fact, to get our accreditation. Trust your critical calibration work to an accredited laboratory.