

# STATE OF HAWAII REQUEST FOR SOLE SOURCE

STATE OF HAWAII  
DEPARTMENT OF HEALTH  
STATE LABORATORIES DIVISION

TO: Chief Procurement Officer

FROM: Department of Health/State Laboratories Division/Medical Microbiology Branch

Pursuant to §103-306D, HRS, and Subchapter 9, Chapter 3-122, HAR, the Department requests sole source approval to purchase the following:

**Description of goods, services, or construction:**

The ABI Prism 7900 HT Sequence Detection System is a real-time Polymerase Chain Reaction (PCR) system that detects and quantitates nucleic acid sequences. The components of the 7900 Sequence Detection System are as follows: a 96-well thermal cycling block module; system and primer express software; a desktop computer with monitor, including installation and operator training; a limited warranty for one year; and a maintenance contract for five years.

Name of Vendor: <b><u>Applied Biosystems</u></b>  Address: North American Sales and Service 850 Lincoln Center Road Foster City, CA 94404	Cost: <b><u>One Hundred Fifty Thousand Dollars \$150,000 (Lump-sum purchase)</u></b>
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Term of Contract:      From:                      To:	Prior Bid Exemption Reference No. 02-92J
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The goods, services, or construction has the following unique features, characteristics, or capabilities:

The instrument is fully automated and is designed to perform real-time PCR and post PCR analysis; it is a high throughput instrument capable of analyzing up to 384 samples simultaneously; the instrument is designed to accept a 96-well or a 384-well sample blocks; it has an argon ion laser excitation source and uses a Charged-Coupled-Device (CCD) camera for detection; the instrument is able to support two homogeneous reaction chemistries (Taqman® probes and SYBR Green I double stranded binding dye chemistry); the software provides a specialized application that collects and analyzes fluorescence data for detection and quantitation of nucleic acids; and, ABI 7900HT is supplied with automated oligonucleotide software.

How the unique features, characteristics, or capabilities are essential for the agency to accomplish its work:

- Since the instrument is fully automated, it does not require user intervention for the processing of up to 84 384-well reaction plates enhancing productivity and efficiency in the laboratory. The ability to use a 96-well or a 384-well sample format, interchangeably, allows for flexibility.
- Automated loading and unloading of reaction plates further enhances productivity in the laboratory.
- Its high throughput capability allows processing for at least 5,000 real-time quantitative PCR sample wells per day for a 24-hour period and at least 10,000 genotyping (Single Nucleotide Polymorphism) samples per hour.
- CCD technology provides better color separation, which is very useful when using different reaction chemistries.
- The ability of the instrument to provide real-time quantitative PCR accurately (99.7% confidence level) ensures reliability of results, which is very important.
- The instrument is designed so that the reactions take place in an enclosed system further reducing the chance of aerosolization and contamination which is a important and desirable feature.

PCR technology has proven to be highly accurate in the identification of bacteria and viruses. This is an extremely useful for viruses which require a living host system in which to replicate which is both costly and labor intensive. Polymerase Chain Reaction (PCR) technology is able to amplify specific DNA or RNA of pathogenic organisms from minute quantities of material as well as from organisms that may be non-viable for traditional cultural techniques. PCR technology allows for the rapid, accurate identification of an organism which makes it an essential diagnostic tool in public health where rapid identification of disease-producing organism is critical for implementation of timely and effective intervention.

The following other possible sources for the goods, services, or construction were investigated but do not meet our needs because:

None. This instrument is compatible with the current system used by the Bioterrorism Response Laboratory (BTRL) and is intended to be used for surge capacity in the event that testing exceeds their laboratory capabilities. In the event that our laboratory's capabilities are exceeded by our system, the BTRL unit is intended to be used for surge capacity.

The real-time and rapid detection methodologies validated by the Rapid Response and Advance Technology Laboratory of the CDC for the Laboratory Response Network (LRN) are available only for specific real-time instruments such as this ABI instrument. The BTRL is part of the LRN organized by the Centers for Disease Control and Prevention (CDC) to provide detection and identification for suspected bioterrorism (BT) agents. CDC provides LRN Laboratories with primers and probes used in the detection of various BT reagents. Validation of assays to detect BT agents using nucleic acid-based systems such as the ABI Prism 7900 HT is conducted by the CDC with the participation of LRN Laboratories nationwide. The validation process ensures reliability, reproducibility, and accuracy of test protocols, reagents, and instrumentation. Only the instruments that the CDC and the LRN Laboratories have tested to ensure uniformity and standardization of test results and to conduct reliable and reproducible detection assays are used.

REQUEST FOR SOLE SOURCE (Cont)

Direct questions to: GAIL Y. KUNIMOTO, Chief, Medical Microbiology Branch Phone: (808) 453-6700

I certify that the information provided above is to the best of my knowledge, true, correct and that the goods, services, or construction are available through only one source.



NOV - 1 2005

Department/Agency Head

Date

Title (If other than Department/Agency Head)

Chief Procurement Officer's Comments:

Please be aware of requirement for cost/price data for sole source procurements. See section 3-122-123, HAR.

Please ensure adherence to applicable administrative and statutory requirements

Expenditure may be processed through a purchase order: Yes  No . If no, a contract must be executed and funds certified.

Approved  Denied

  
Chief Procurement Officer

11/14/05  
Date