



## DNA Identification Services

From the nation's most respected resource for DNA identification products and services.

Act with confidence.



# Quality. Innovation. Experience.

## At Bode, we earn your trust every day.

### Quality

**We continually evaluate our procedures to improve the accuracy and consistency of results.**

- Bode employs nearly 100 highly trained, dedicated scientists and technicians who have the knowledge and expertise necessary to deliver reliable results to our customers.
- Bode is committed to generating scientifically accurate results by striving to exceed the Quality Assurance Standards for Forensic DNA Testing Laboratories and Convicted Offender DNA Testing Laboratories issued by the FBI Director.
- Bode's DNA analysts utilize advanced software and laboratory robotics to ensure the highest quality testing results, minimizing the potential for human error.

### Innovation

**We advance the cause of justice through the development and use of technologically advanced products and services.**

- Bode developed mini-STR's to analyze DNA samples from the World Trade Center, as well as our proprietary and highly sensitive Y-Marker Screening System for sexual assault cases.
- Bode has developed robust molecular methods for DNA analysis of botanical forensic evidence and touch evidence, including processed fingerprints.
- Bode's patented Buccal DNA and Crime Scene Collectors provide a simple, highly effective method of collecting samples for DNA analysis.

### Experience

**We offer more than 100 years of collective management experience in forensics.**

- Bode's expertise in obtaining DNA profiles from bones and other compromised samples has been demonstrated by our success rates with samples obtained from the World Trade Center and other mass disasters.
- Bode has analyzed more than 35,000 sexual assault, homicide, and burglary forensic cases utilizing STR analysis, mitochondrial DNA analysis, Y-STR analysis, and forensic biology screening.
- Bode has analyzed nearly 1,000,000 convicted offender samples helping to eliminate testing backlogs in 15 U.S. states and federal agencies.



## DNA Identification Services

### Pre-screening Services

#### Offering both DNA and serological screening methods

Our unique Y-Marker Screening System can be used to identify male component DNA in a mixed forensic or environmentally challenged sample prior to STR analysis. This Y-marker system is more sensitive than conventional STR systems, ensuring that low levels of male component DNA are identified.

Bode uses a wide range of serological tests to detect the presence of blood, semen, and saliva. Once potential body fluid stains have been isolated by alternate light source or visual examination, presumptive tests are used to screen the stained areas. These tests include the Phenolphthalein test for blood, Acid Phosphatase test for semen and Phadebas® test for saliva.

The ABACard® HemaTrace® test is utilized to confirm the presence of the hemoglobin found in human blood, while the Seratec® PSA SemiQuant® test confirms the presence of prostate-specific antigen (PSA or p30), a marker for semen. In addition, we are able to recover hair and determine the suitability for nuclear DNA testing. Bode analysts are trained to perform microscopic examinations for the presence of spermatozoa.

### Forensic Casework

#### Analyzing forensic samples for over a decade

Our high-throughput, customized forensic casework services include providing DNA analysis of cases that contain reference and evidence samples from a variety of sources, such as blood, semen, saliva, bone, hair, fingerprints, and other touch evidence. We typically analyze large volumes of evidence and reference samples from sexual assault cases, burglaries, or homicides. Many projects involve samples from unsolved, backlogged cases with an unknown suspect.

Analysis includes screening; profile development utilizing either Applied Biosystems® or Hitachi platforms for STR, Y-STR, mini-STR and mitochondrial DNA sequence analysis; statistical analysis; and a written report. STR analysis includes the development of the 13 core CODIS loci and Amelogenin using AmpFℓSTR® Profiler Plus® ID PCR Amplification Kit and AmpFℓSTR® COfiler® PCR Amplification Kit. The AmpFℓSTR® Identifier® PCR Amplification Kit, PowerPlex® 16, and PowerPlex® 16 BIO systems are also available, providing additional markers and even greater discrimination potential. Mitochondrial DNA-Sequencing is typically applied to more challenging biological samples where STR analysis has failed to provide results. These samples can include old bones and teeth, and hairs without roots.



## **Mass Disaster and Humanitarian Services**

### **Leader in humanitarian DNA identification**

Using newly developed DNA extraction and typing techniques, Bode has taken a lead role in the forensic identification process in incidents resulting in mass fatalities.

Bode's forensic DNA experts have assisted in identifying victims from the tsunami in Thailand, Hurricane Katrina in the U.S., the war in Bosnia, commercial aircraft disasters, the remains of American soldiers dating back to the Vietnam War, and the September 11, 2001 attack on the World Trade Center.

During this process, Bode has provided important information to investigators and medical examination teams, while helping bring closure to the families impacted by these tragic events.

## **DNA Databanking**

### **One of the leading contributors of CODIS profiles**

DNA databases provide law enforcement agencies with a valuable tool in solving criminal cases and identifying potential suspects.

Bode has provided nearly 1,000,000 DNA profiles which have generated more than 2,000 cold hits in the CODIS database.

Analysis is offered using Applied Biosystems platforms, and a profile is developed at the 13 core CODIS loci utilizing AmpFℓSTR® Identifier® PCR Amplification Kit, AmpFℓSTR® Profiler Plus® ID PCR Amplification Kit and AmpFℓSTR® COfiler® PCR Amplification Kit.

Bode Technology's internally-developed software, BodeChecks™, is designed to work with FSS-i3™ Expert System software and data from Genotyper™ and GeneMapper™ ID software to analyze DNA samples. Bode uses the BodeChecks system as an additional quality control step in the analysis of databanking samples.



## Support Services

### **Expert Witness Testimony**

#### **Providing testimony in the U.S. and around the world**

Bode has provided expert witness testimony and other valuable litigation support in more than 750 cases at the federal, state, and local level, as well as in military cases. Bode scientists are recognized experts in their fields, possessing advanced degrees and more than 100 years of collective management experience in forensics. Our teams work closely with clients to ensure that the DNA results and our testimony are clearly understood by courts and juries.

### **Research & Development**

#### **A proven performance record of government Research and Development contracts**

Bode consistently develops new techniques of DNA analysis for a variety of forensic evidence relating to human identification, forensic botany, and forensic microbiology. We have a strong record of success in forensic research, product development, and process improvement to improve quality, advance technology, increase throughput and maintain reliability. Our experiences with the World Trade Center victim identification project and analyses of DNA from fingerprints have provided us a wealth of experience in modified sample handling and interpretation guidelines required with samples containing trace amounts of DNA.

We have performed research relating to the extraction and analysis of DNA from bacteria samples and plant samples associated with a wide variety of environmental substrates, including a variety of soil types, environmental water samples, dust samples, and textile samples. Additionally, we have evaluated and developed methods to amplify bacterial DNA from surfaces after they have been exposed to chemical decontaminants, and developed molecular methods to identify plant materials from trace evidence and particulate materials.

Bode facilities and personnel have the appropriate clearances to perform government classified research.



## **Technical Services**

### **Using our experience to answer your technical questions**

Bode's proven expertise in human identification using DNA enables us to provide answers and solutions to your technical problems. Our staff is experienced at developing solutions for demanding situations, such as processing 1,000 bones per week for the World Trade Center disaster. An extensive in-house team of scientists provides a readily available resource for innovative answers to novel questions in all aspects of the forensics field.

## **Client Services**

### **Providing customized support for simplified outsourcing**

Bode is dedicated to supporting clients throughout the outsourcing process — from initial case submission, to ongoing status updates, to final report delivery and court testimony. The variety of work performed in our laboratories gives us the flexibility to meet specific customer needs. Our Client Services team takes time to understand customer requirements and tailors our processes and reports to satisfy those requirements. Well-defined points of contact enable our clients to gain immediate access to case information or the status of a project.

## **Data Services**

### **Offering flexibility in providing or communicating data**

Bode can provide data and reports in a variety of ways to satisfy the unique requirements of each customer. Data can be delivered both in hardcopy and electronic form. Electronic transfer methods include, but are not limited to, CD-ROM, secure upload to a customer web site, email, and file transfer protocol. Other secure transfer mechanisms can also be arranged.



## Bode Technology Group

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Bode Technology is one of the largest and most trusted resources for DNA identification. With a unique combination of quality, innovation and experience, we have developed effective products and services for state-of-the-art DNA analysis. Around the world, we provide forensic DNA services, mass disaster victim identification, advanced crime scene tools and DNA collection products for reference samples and child identification.



Bode Technology is a part of GlobalOptions Group, a provider of high-end risk assessment and mitigation services to FORTUNE 1000 corporations, governmental organizations and high-profile individuals throughout the world. The firm's services include risk mitigation and security, investigations and litigation support, and crisis management and preparedness services.

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