



Rapid DNA Intelligence in Major Crime Investigations

 **RapidHIT™ 200**



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The need for Rapid Intelligence in Major Crime Investigations

Major and organised crime investigations rely heavily on real-time intelligence to inform rapid decision making. Now, rapid DNA intelligence is available to law enforcement right at the start of an investigation with the RapidHIT 200 System.

The contribution of DNA to major investigations

Over the last two decades, DNA has become an increasingly important tool for law enforcement. The technology for analyzing DNA samples has steadily evolved and improved and the contribution of DNA to major investigations has soared. However the impact of DNA testing has so far been limited by the time taken to produce the results. In fast-moving investigations, suspects may have disappeared, and evidence been lost or destroyed by the time DNA results are available to inform the next steps in an investigation.

The RapidHIT™ 200 System

Designed and developed by IntegenX, the RapidHIT 200 Human DNA Identification System is a fully integrated and fully automated DNA analyzer, capable of producing full DNA profiles **'swab in, result out' in 90 minutes.**

The system is designed for use by non-scientists, is compatible with most types of swabs and commonly encountered forensic samples, and produces results that are fully compatible with DNA database searching and other aspects of forensic casework.

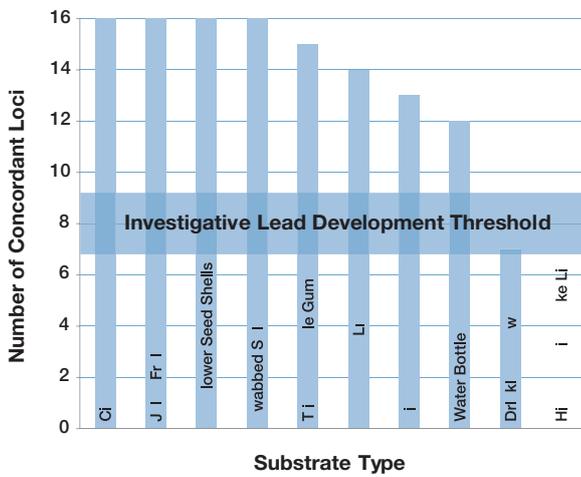
Decision making, based on DNA results, in less than two hours

Early trials with leading crime agencies have demonstrated the effectiveness of the RapidHIT System at producing informative DNA results from real forensic samples in 90 minutes. These results can be used to search databases of offenders, suspects and crime scenes, or compared directly with a DNA profile relevant to a specific investigation. The results of this search can be obtained by the investigating officers within two hours of collecting the samples, enabling close to real-time decision making during fast-moving investigations.



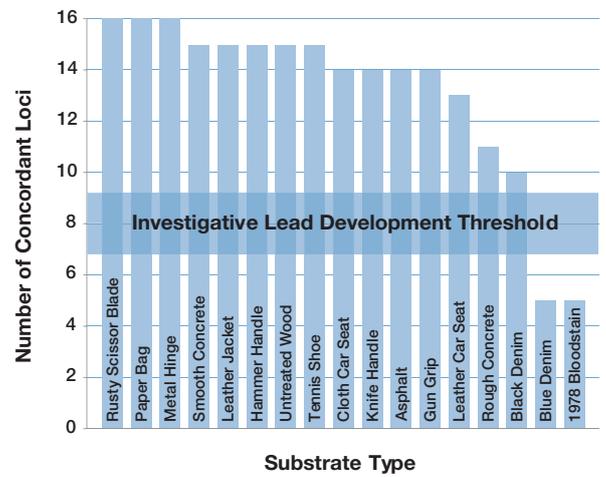
Saliva-based samples

RapidHIT saliva analysis protocol results by substrate type



Blood samples

RapidHIT blood analysis protocol results by substrate type



Features

- Sample processing in less than 90 minutes, outside of the standard laboratory environment
- Disposable cartridges contain all reagents and waste

Specifications

- Sample Input: swabs - buccal, blood, and other human samples
- Sample Capacity: 1 to 8 swabs, depending on control requirements
- Runtime <90 minutes

- Profile formats compatible with most internationally used DNA databases
- Straightforward, easy, unattended operation

- Dimensions 71cm (W) x 46cm (H) x 68.5cm (D)
- Weight: 82kg
- Power: 100 - 240 VAC, 50/60 Hz, 1,000 VA

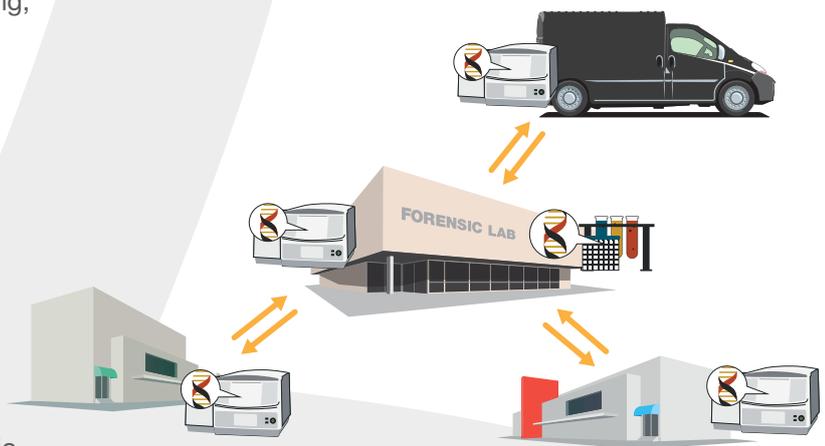
Quality and integrity ensured through design

Quality and integrity of DNA results obtained using the **RapidHIT 200 System** in the field are ensured in **two ways**.

First, the fundamental design of the instrument minimizes any chance of contamination or sample mix-up through a myriad of features including computer chips for consumable and reagent tracking, and a simple four-step operating procedure that requires no scientific skill or training. Ease of use is comparable to the fingerprint technology used routinely by police forces throughout the world.

Second, IntegenX has worked closely with early users of the system to establish partnerships between the operational crime agency and an experienced DNA laboratory. Whilst the crime agency has full control of the instrument, and is capable of producing their own DNA profiles in 90 minutes at the crime/surveillance scene, the forensic laboratory plays a key role in ensuring that results are checked against quality parameters and are reliable for use by the police. The laboratory also plays a key role in assisting in validation, training and quality control.

Using this 'hub and spoke' model, a single, central forensic laboratory can support multiple RapidHIT instruments deployed by police in the field:



A new era in rapid intelligence

The speed and ease of use of the RapidHIT System, achieved whilst maintaining performance and quality, are now for the first time empowering police to use DNA as a routine part of their early intelligence

gathering in major crime investigations. The system represents a new era in the contribution of forensic science to modern policing.



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