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Rapid DNA customer profile

The Kaua'i Police Department uses rapid DNA technology to save time and cost in disaster victim identification

Summary

- The Kaua'i Police Department (KPD) sought to expedite the identification of victims of a tragic helicopter crash
- Thermo Fisher Scientific provided supplies and support to assist KPD in analyzing the remains on their recently validated and implemented Applied Biosystems™ RapidHIT™ ID System
- KPD utilized the RapidHIT ID System to quickly identify all of the victims, helping the department save on the cost of outsourcing the analysis, and getting answers to the families in days instead of weeks or even months

Overview

In 2019, KPD implemented the RapidHIT ID System in order to reduce the need to outsource crime scene samples from the island and get quicker intelligence in local cases. The RapidHIT ID System is a fully automated, sample-to-answer genetic analyzer that can produce high-quality DNA results with just one minute of hands-on time. By providing quick answers for reference and investigative lead samples, the RapidHIT ID System has quickly become an indispensable tool to help law enforcement agencies around the world identify crime suspects faster, and to allow forensic labs to process samples more efficiently. Soon after implementing the system, KPD faced an urgent disaster victim identification (DVI) challenge and enlisted Thermo Fisher and the RapidHIT ID System. Utilizing the RapidHIT ID System, KPD was able to identify all of the remains quickly and bring closure to the affected families.

The case study

Just after Christmas in 2019, a helicopter crashed into a remote cliff range on the northwest side of Kaua'i in the Hawaiian Islands. None of the seven people on board survived the tragic accident. Due to the steep terrain, the severity of the impact, and a post-crash fire, the recovery process required an intensive joint effort from the Kaua`i Police Department and Fire and Rescue personnel.

KPD currently does not have a full-scale forensic DNA analysis lab. Therefore, previously, KPD would have needed to outsource the remains identification process to a private lab in the continental United States. The process of outsourcing would have likely taken a month or even more before positive identifications could have brought closure for the families.

KPD had recently implemented their RapidHIT ID System to assist in crime scene investigations. The department set in motion a plan to test most of the unidentified remains and reached out to Thermo Fisher Scientific as to whether the system could aid in the identification of some of the most fire-degraded samples. Thermo Fisher supplied Applied Biosystems™ RapidINTEL™ Cartridges for the RapidHIT ID System, which are designed to get results from challenging samples, and provided continuous applications support for the specific sample types.

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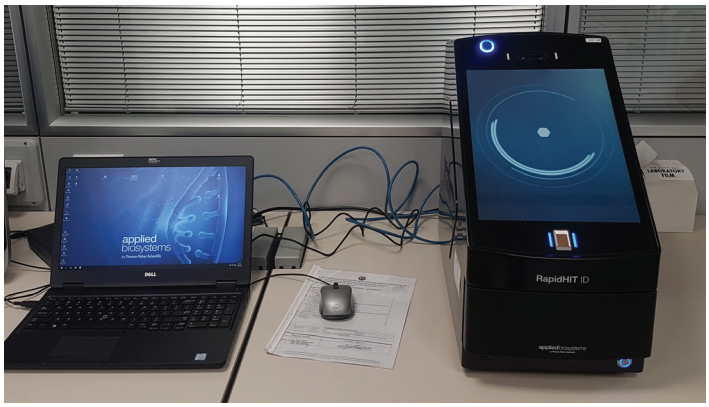
KPD was very satisfied with the instrument's speed and performance in identifying the samples from the accident site, including tissue, brain, and bone samples of varying sizes and levels of fire degradation. The system facilitated the rapid identification of all seven victims of the crash, as well as all partial remains to be attributed. KPD chief Todd G. Raybuck said, "The findings we made would have typically taken weeks, but we were able to complete them in-house within a short period of time so that we could bring some sense of closure to the families and friends of the victims."



Conclusion

The supervisor for the KPD Crime Scene and Laboratory Unit reported that without the help of Thermo Fisher and the RapidHIT ID System, the process would have not only taken much longer but also involved significantly higher costs. KPD estimates that for this one case alone, they saved between $20,000–30,000 and up to two months of time. In addition, KPD estimated that the RapidHIT ID System will save their agency an average of $91,000 per year.

The Kaua'i case stands as a significant example of how Applied Biosystems™ rapid DNA technology combined with expertise from Thermo Fisher applications support can help ease the burden of DVI, reducing both the time and costs associated with traditional sample analysis, and offering faster closure for the victims' loved ones.

Find out more about the RapidHIT ID System at
thermofisher.com/rapiddna

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