

# NFC / HF RFID in In-Vitro Diagnostic (IVD) Device



JADAK Case Study

## CHALLENGE:

A world leader in in-vitro diagnostics (IVD) developed a laboratory device that will be used for DNA sequencing, Polymerase Chain Reactions (PCR) and other enzymatic manipulations. They reached out to JADAK to provide a solution that would verify the authenticity of the consumable reagent being used within the device.

## SOLUTION:

JADAK was able to provide the customer with a Near Field Communication (NFC) High Frequency (HF) reader that is embedded into the IVD device. JADAK also provided the manufacturer with custom firmware tag commands for tags applied onto the consumables. The combination NFC HF RFID reader and tags has several benefits.

### **Benefit: Authentication & Verification of Reagents**

The use of RFID verifies that the consumable reagent being used is not counterfeit. It is also able to verify the liquid level removed from the reagent bottle every time the test is run, and thereby the remaining amount of reagent available for the next test. This information is written onto the tag every time the test is run.

### **Benefit: Tracking Patient Samples with Information Stamp**

RFID provides a date and time stamp written onto the tag when the test is run. Patient data or information is also stamped onto the tag. As the tag moves through the IVD system, RFID is able to track and confirm the sample location within the device. Finally, the test results are written back onto the tag.

JADAK's Gemini was identified as the best solution for this situation, given its low cost, ultra-low power and NFC reader/writer capabilities. The Gemini supports the secure MIFARE family of tags, making it a versatile yet robust option for consumable authentication.

For information on identifying the right solution for your IVD application, contact JADAK at 315.701.0678 or via email at [info@jadaktech.com](mailto:info@jadaktech.com).



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