FAQs for Secure Documents

• Is there really a market for forged or counterfeit documents?

The forging of passports and identity documents poses a grave threat to national security. Forged documents enable identity theft and provide a means for terrorists to cross borders. Six of the nineteen suicide bombers involved in the 9/11 attacks were traveling on forged passports and government authorities believe that there is an Al Qaeda unit devoted to creating forged identity documents. In May 2009, British authorities arrested two men charged with forging thousands of European passports.

A PBS Frontline story from 2001 illustrates the worst case scenario of this problem. It details how terrorists are specifically trained to use counterfeit documents to move across borders. The story states that using counterfeit documents is part of the security training of Al Qaeda operatives. This story also states that the terrorists affiliate themselves with organized criminal syndicates that smuggle humans and provide counterfeit documents to accomplish this. Counterfeit documents enable the rest of the illegal activity to occur, which makes them a weapon that could be a lot more dangerous than an assault rifle, IED or RPG. violence.

• What is DNA and how can it be used to deter the production of forged documents?
Deoxyribonucleic acid (DNA) is the ultimate reality check. DNA is the genetic material that contains the instructions for the development and functioning of plant and animal organisms, and it is found in all living things. The structure or “code” of DNA is unique to the organism to which it belongs and can be used as a “tag” or “unique marker” to identify materials to which it is affixed. It is effectively “nature’s fingerprint.”

Applied DNA Sciences has developed a unique form of SigNature DNA protection by developing a proprietary, patented method to create a marker or “tag” derived from botanical DNA, a 100% natural resource. This marker can be mixed with the ink used to print the documents or the actual materials used to manufacture the documents themselves. The “tag’ enhances the effectiveness of inks and other materials because DNA cannot be copied due to its enormous variability and provides forensic proof of authenticity.

• What is unique about the solutions offered by Applied DNA Sciences?
Applied DNA Sciences is currently the only company in the world that makes use of botanical DNA in its authentication analysis. DNA is a trusted form of forensic evidence and widely accepted as evidence by courts and government agencies around the world. The potential for a false positive is on the magnitude of one in one trillion.

• Are there other solutions offered by Applied DNA Sciences in document production?Applied DNA Sciences offers two methods of DNA protection and forensic authentication. The solutions offered are used as efficient and cost effective anti-counterfeiting tools. There are two ways that tests can be used as a forensic means to authenticate documents:
a. **Intrinsic DNA**: BioMaterial GenoTyping™ is a highly effective DNA test developed by Applied DNA Sciences to authenticate original source material, such as the specific fibers used to produce documents. This technology is effective in situations where natural materials are used, for example cotton and linen in identity documents. The DNA in a suspect document can be compared with the DNA in the known source material of the authentic document as one means of verifying the authenticity of the paper used to produce them.

b. **Extrinsic DNA**: SigNature® DNA are unique, botanically derived markers or “tags” that cannot be copied and due to their enormous variability, provide forensic proof of identity for authentication. SigNature DNA may be used in the security inks and anti-counterfeit features (such as watermarks and magnetic strips) on the printed surface or embedded in the paper of documents. SigNature DNA is a green, cost effective and safe technology that can also be incorporated in formulations of finished-goods.

• **What’s distinguishes the solutions offered by Applied DNA Sciences from others on the market?**
The “tags” or markers produced or used by other anti-counterfeiting solutions companies may themselves be counterfeited or otherwise neutralized by savvy counterfeiters. DNA is unique and cannot be counterfeited. What’s more, the quantity of DNA required to produce a marker is so small, sometimes only a molecule that can be hidden literally in the coating of a pill or the thread used in the pin striping of a worsted woolen suit. And, as an added benefit SigNature DNA is a green, cost effective and safe technology that can help to guarantee authenticity.

• **Are there other security solutions offered by Applied DNA Sciences?**
APDN provides brand owners with bespoke DNA solutions that can be used to protect the integrity, quality and security of a wide range of products. DNA-marked security inks, including: intaglio, inkjet, thermal transfer, UV-curable, screen printed, flexographic and offset printed inks are now available.