

# FAQs

As a major Life Science supplier, Sigma-Aldrich has spent years helping customers with numerous application and technique inquiries. By using some of the information gained from these customer contacts, we present some of our **Frequently Asked Questions (FAQs)** about our feature article. These FAQs will hopefully serve as a guide to help identify and resolve some of your concerns.

## Whole Genome Amplification: Moving Beyond the Limits of Traditional PCR

### How does the GenomePlex WGA kit differ from other WGA methods?

GenomePlex WGA is based upon the random fragmentation of genomic DNA and conversion of the resulting small fragments to PCR-amplifiable OmniPlex library molecules flanked by universal priming sites. The OmniPlex molecules are then amplified by PCR.

### What sources of genomic DNA can be used with GenomePlex WGA?

Genomic DNA from buccal swabs, blood, cell culture, bacteria, plants, and animals.

### What downstream applications can be performed with WGA DNA?

GenomePlex WGA DNA is suitable for use with numerous genotyping platforms including BeadArray™, TaqMan®, SNP-IT™, STR microsatellite analysis.

### Can the amplified genomic DNA be stored for future use?

Yes. Following amplification and purification, genomic DNA may be immediately used for various downstream analysis or it may be stored at  $-20^{\circ}\text{C}$ .

### Is it possible to amplify more than the suggested input DNA concentration of 10 ng?

The GenomePlex WGA protocol has been optimized to work with 10 ng genomic DNA. In order to scale up the reaction, multiple reactions may be performed in parallel or the library amplification step may be repeated with WGA amplified DNA as input material.

### What is the mean size of WGA DNA fragments and what is the fragment range?

WGA DNA fragments have a size range from 0.5 kb - 3 kb, which functions efficiently for SNP genotyping, STR analysis, and exon resequencing. The mean size is about 1.0 kb.

### What is the expected yield of amplified DNA?

Following completion of the GenomePlex WGA protocol, the expected yield is 5 – 10  $\mu\text{g}$  of amplified DNA from 10 ng input genomic DNA.

For advice and information on our products, contact Sigma Technical Services at **1-800-325-5832** or by email at [techserv@sial.com](mailto:techserv@sial.com)

## One Technology—Multiple Applications

