

# PowerPlex<sup>®</sup> 21 System Faster process. Flexible protocols. Unbeatable Results.

The Power to Solve...from Sample to Analysis



## The Power to Solve...from Sample to Analysis

### Analyze samples in less time, regardless of sample type.

The PowerPlex<sup>®</sup> 21 System allows for STR analysis of human forensic samples, common database samples and paternity samples. The system provides:

- Rapid thermal cycling, saving time with every run
- Unbeatable inhibitor tolerance, enabling analysis of challenging casework samples
- Optimized protocols for many sample types, including direct amplification from FTA<sup>®</sup> cards as well as pretreated non FTA<sup>®</sup> card punches or swabs



Figure 1. Configuration of the PowerPlex<sup>®</sup> 21 System. The PowerPlex<sup>®</sup> 21 System allows amplification of all 13 CODIS loci: D3S1358, D5S818, D7S820, D8S1179, D13S317, D16S539, D18S51, D21S11, CSF1PO, FGA, TH01, TPOX and vWA, plus Amelogenin, Penta D, Penta E, D1S1656, D2S1338, D6S1043, D12S391 and D19S433.

#### Rapid Thermal Cycling

The PowerPlex<sup>®</sup> 21 System uses rapid PCR technology to save time with every run. Amplification can be completed in about 90 minutes, enabling improved efficiency and productivity in your laboratory.



#### **Unbeatable Inhibitor Tolerance**

The PowerPlex<sup>®</sup> 21 System is considerably more tolerant of PCR inhibitors than other STR systems, including the PowerPlex<sup>®</sup> 16 HS System. This means more interpretable data and less need for re-amplification of difficult samples.





Figure 2. Human genomic DNA (500pg; n = 3) was amplified with the PowerPlex 16 HS and 21 Systems in the presence of common inhibitors such as hematin, humic acid and tannic acid. Percent of alleles called are indicated.

#### Flexibility for Most Sample Types

The PowerPlex<sup>®</sup> 21 System handles difficult casework samples and is compatible with direct amplification from FTA<sup>®</sup> card punches as well as pretreated swabs, Bode Buccal DNA Collector<sup>™</sup> punches or S&S 903 punches.



Figure 3. Amplification of samples with the PowerPlex<sup>®</sup> 21 System. Panel A. 500pg of human genomic DNA; Panel B. 1.2mm punch from blood on an FTA card (direct amplification); Panel C. 1.2mm punch from buccal samples on S&S 903 (pretreated with PunchSolution<sup>™</sup> prototype reagent); Panel D. Buccal swab (pretreated with SwabSolution<sup>™</sup> prototype reagent). Amplified products were separated on an Applied Biosystems 3130 or 3130x/ Genetic Analyzer (3kV, 5-second injection).

# PowerPlex<sup>®</sup> 21 System



#### **Ordering Information**

PRODUCT	SIZE	CAT.#
PowerPlex <sup>®</sup> 21 System	200 reactions	DC8902
PowerPlex <sup>®</sup> 5-Dye Matrix Standards, 3100/3130	25µl (each dye)	DG4700

#### For more information, visit:

### www.promega.com/powerplex21



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