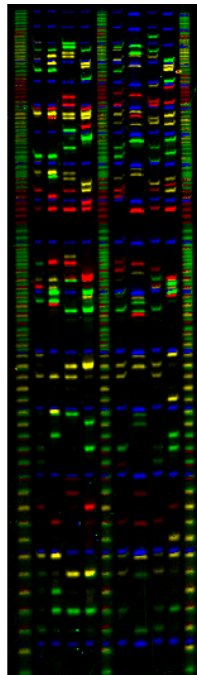


## FMBIO® III/Plus Imager Application

# Promega's PowerPlex® 16 BIO System

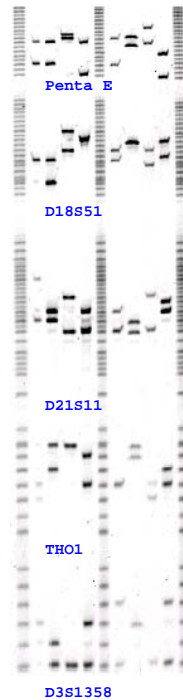
4-Color  
Overlap Image



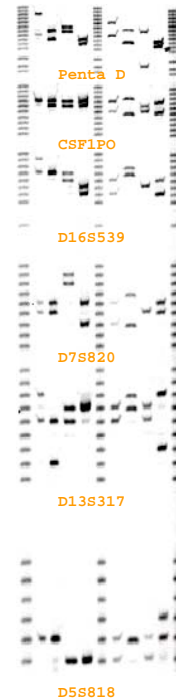
These gel images, run on an FMBIO III Plus Imaging System, show the 16 different loci (fifteen STR loci and Amelogenin) generated from Promega's PowerPlex 16 BIO System for human identification applications. The sixteen different loci are Penta E, D18S51, D21S11, TH01, D3S1358, FGA, TPOX, D8S1179, vWA, Amelogenin, Penta D, CSF1PO, D16S539, D7S820, D13S317, and D5S818.

PowerPlex 16 BIO amplified samples and Allelic Ladders were kindly provided by Promega. Loading solutions of 2 uL of samples or ladders were mixed with 1 uL Internal Lane Standards and 3 uL Bromophenol Blue loading solution. These were then denatured at 95 °C for 2 minutes. Approximately 3 uL was loaded onto a 6% GenePAGE PLUS gel and run 1 hr and 40 min. on a SA47 Gel apparatus before scanning on the FMBIO III Plus Imaging System.

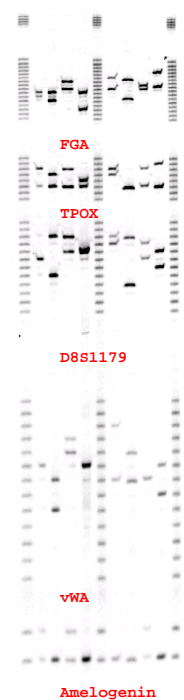
Fluorescein  
Labeled Loci



JOE  
Labeled Loci



RRX  
Labeled Loci



When using the PowerPlex 16 BIO System with the FMBIO III Plus Imaging systems, Table 1 depicts the individual settings for each locus and dye combination used with this system. Gels were also scanned in 4 repeats at a 100 um resolution to improve signal quality. The 4-color overlap image shows the power and convenience of MiraiBio Image Analysis software for data analysis.

These images definitively show that Promega's PowerPlex 16 System can be effectively used in combination with MiraiBio's FMBIO III Imaging systems.

Table 1: FMBIO III Plus Parameters

	Loci	Dye	Filter	Laser	PMT
Channel 1	FGA, TPOX, D8S1179, vWA, Amelogenin	RRX	598 nm	532 nm	100%
Channel 2	Penta D, CSF1PO, D16S539, D7S820, D13S317, D5S818	JOE	577 nm	532 nm	100%
Channel 3	Penta E, D18S51, D21S11, TH01, D3S1358	FL	520 nm	488 nm	100%
Channel 4*	ILS 600	Texas Red	650 nm	532 nm	100%

\* The ILS 600 standards' image is not shown.