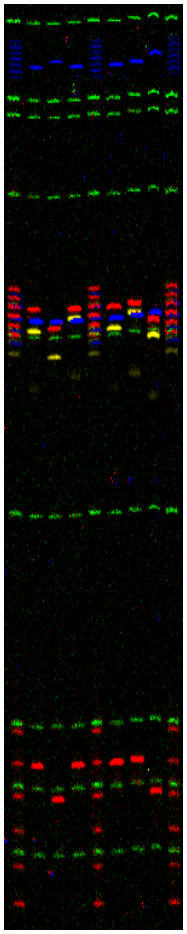
MiraiBio
A Hitachi Software Company

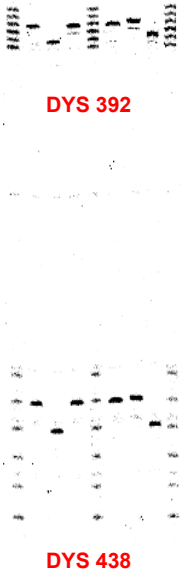
FMBIO® III/Plus Imager Application

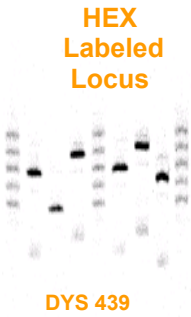
ReliaGene Technologies' Y-Plex™ 5 Kit

These gel images, run on an FMBIO III Plus Imaging System, show the five Y-chromosomal genetic markers provided in ReliaGene Technologies' Y-Plex 5 Kit for human identification applications. The five different genetic markers or loci are DYS389II, DYS389I, DYS392, DYS438, and DYS439.

Validation samples and allelic ladder standards were prepared with 0.5 ul ROX standard, 1.5 ul Bromophenol Blue Loading Solution (Promega), and 1 ul amplified samples or allelic ladders. Solutions were then mixed and denatured at 95 °C for 2 minutes. Approximately 1.5 ul was loaded onto a 6% GenePAGE PLUS gel and run 1 hr and 50 min. on a SA47 Gel apparatus before scanning on the FMBIO III Plus Imaging System.







When using the Y-Plex 5 Kit with the FMBIO III Plus Imaging systems, Table 1 depicts the individual settings for each locus and dye combination used in the kits. Gels were also scanned in triplicate at a 100 um resolution to improve signal quality.

Table 1: FMBIO III Plus Parameters

	Loci	Dye	Filter	Laser	PMT
Channel 1	DYS 392, DYS 438	TAMRA	580 nm	532 nm	90%
Channel 2*	ROX 500*	ROX	625 nm	532 nm	90%
Channel 3	DYS 389II, DYS 389I	FAM	520 nm	488 nm	100%
Channel 4	DYS 439	HEX	555 nm	532 nm	100%

These images definitively show that ReliaGene Technologies' Y-Plex 5 Kit can be effectively used in combination with MiraiBio's FMBIO III Imaging systems. The 4-color overlap image allows for the convenient visualization of all four colors in a single image.

The allelic ladders (ROX 500) and validation samples were kindly provided by ReliaGene Technologies.

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