MyTaq™ Extract-PCR Kit

PCR Direct From Tissues

- **Fast:** single-tube protocol that eliminates wash steps, giving high-yield, PCR-ready DNA in just 15 minutes
- **Simple:** few protocol steps greatly reduce the risk of sample loss and contamination and minimizes manual effort
- **Sensitive:** incorporates MyTaq HS DNA Polymerase that exhibits increased affinity for DNA, thereby improving yield of even the most challenging targets
- **Specific:** MyTaq HS DNA Polymerase is an antibody-mediated hot-start enzyme that remains completely inactive during PCR set-up to prevent non-specific amplification
- **Flexible:** ideal for amplifying any target up to 5 kb from DNA extracted from mammalian tissue samples
- **Convenient:** mastermix facilitates PCR set-up and includes a red dye for improved pipetting ease / accuracy and to enable direct gel loading

MyTaq™ Extract-PCR Kit provides quick and easy extraction and amplification of DNA from a variety of tissue types. This kit maximizes sensitivity while simultaneously minimizing contamination risks, to deliver greater experiment success rates.

Many DNA extraction methods can be laborious and time-consuming or involve the use of hazardous chemicals. MyTaq Extract-PCR Kit offers a rapid, easy and safer alternative for the extraction and amplification of DNA from a variety of tissue types. MyTaq Extract-PCR Kit is particularly suited to solid tissues such as mouse tail or mouse ear (Fig. 1). The DNA extractions are performed in a single-tube, without the need for multiple washing steps, greatly reducing the risk of sample loss and contamination.

The extracted DNA is amplified in a proprietary buffer system using MyTaq HS Red Mix, the latest generation of very high-performance polymerase unique to Bioline. To further reduce non-specific amplification, MyTaq HS uses antibody hot-start technology. The advanced formulation of MyTaq HS Red Mix allows fast cycling conditions to be used, greatly reducing the reaction time without compromising PCR specificity or yield.

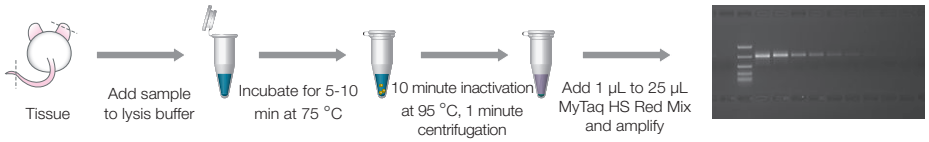

Fig. 1 Overview of the workflow, tissues can be ready for PCR in only 15 min

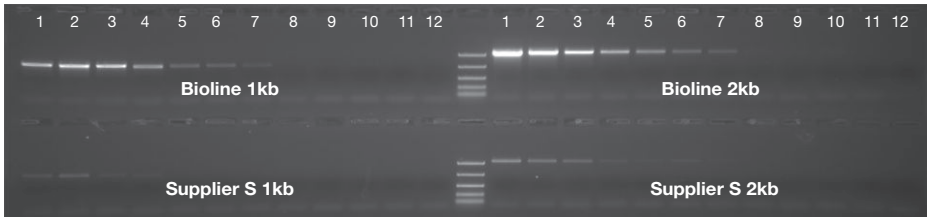

Fig. 2 Fast Protocol
Genomic DNA was extracted from mouse tails using a 5 minute digestion at 75 °C, followed by a 10 minute neutralization at 95 °C (as specified in the manufacturers' instructions). After extraction, a two-fold serial dilution (Lanes 1—12, (EasyLadder I (M)) was used for the amplification of a 1 kb fragment (A) and a 2 kb fragment (B) from the mouse CTXN1 gene under fast PCR conditions. The results illustrate that the MyTaq Extract-PCR kit results in high yields with both small and larger fragments even under fast PCR conditions unlike alternative extraction and amplification kits tested.

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APPLICATIONS

- High-throughput genotyping
- Detection of transgenes
- Knockout analysis

SIMPLE, FAST AMPLIFICATION

MyTaq Extract-PCR Kit uses a novel protease and buffer system that provides fast, simple and efficient lysis in a single tube. It also contains MyTaq HS Red Mix, to maximize sensitivity, while minimizing contamination risks and significantly reduce reaction times, as well as delivering improved success rates in protocols such as mouse DNA characterization. To demonstrate the quality of the DNA produced by MyTaq Extract-PCR Kit using a fast protocol, DNA was extracted and amplified from mouse tail using MyTaq Extract-PCR Kit and an equivalent kit from Supplier S. A 1 kb and a 2 kb fragment of the same gene were amplified using the manufacturers' recommended reaction conditions, with the result demonstrating that MyTaq Extract-PCR Kit consistently generated superior yields under fast conditions (Fig. 2).

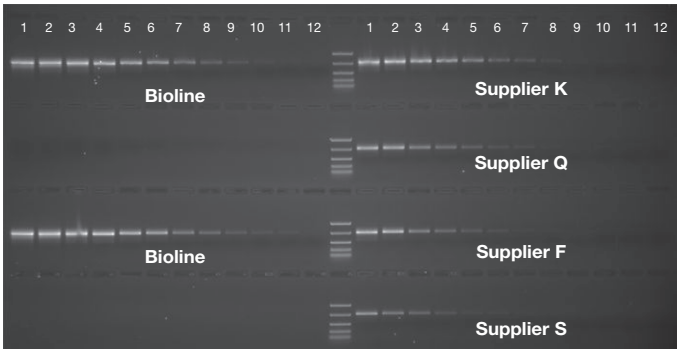

Fig. 3 Consistently High Yield
MyTaq Extract-PCR Kit and kits from other suppliers were used to extract and amplify genomic DNA from 3 mg of mouse tail according to the manufacturers' instructions. After extraction, a two-fold serial dilution of the sample was amplified using primers for a 1 kb fragment from mouse γ-actin (Lanes 1—12, (EasyLadder I (M)). The results illustrate that the MyTaq Extract-PCR results in reproducibly high yields from these crudely extracted samples and was more sensitive than competing extraction and amplification kits tested.

IMPROVED DNA EXTRACTION

Biopsy samples for molecular genotyping techniques using PCR can be problematic owing to the presence of bone, cartilage and blood contaminants. MyTaq Extract-PCR Kit's superior extraction capabilities were demonstrated by subjecting a 3 mg snip of mouse tail to a rapid extraction and amplification protocol (Fig. 3). When processing these mouse tissue samples under the manufacturers' recommended reaction conditions, MyTaq Extract-PCR Kit consistently demonstrated greater sensitivity and higher yield than equivalent kits from other suppliers.

> *"We tested the MyTaq Extract-PCR Kit for genotyping mice. The extraction was fast, easy to handle and the PCR reactions worked very well. We also used the kit for performing multiplex PCR and we obtained better results than with our conventional method."*
>
> Michael Mitterer, MPI for Immunology and Epigenetics, Freiburg

Ordering Information

MyTaq™ Extract-PCR Kit	Size	Cat. #
MyTaq Extract-PCR Kit	100 Reactions	BIO-21126
	500 Reactions	BIO-21127

Please contact us for institutional pricing, special price quotations and availability of bulk pack sizes.

For related products such as agarose and molecular weight markers visit www.bioline.com

Unravelling DNA To Enable Your Discovery

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