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The QuickExtract™ Solution

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Excellence in Molecular Biology

A quick and easy way to obtain PCR ready DNA

The QuickExtract™ Solution

The range of QuickExtract™ Solution kits can be used to rapidly and efficiently extract PCR-ready genomic DNA from almost any sample type using a simple, one-tube protocol that takes only 3-8 minutes. (depending on the sample). The range of available kits can be used to extract DNA from human, animal, microbial and plant sources. The DNA obtained can be use for transgenic mouse genotyping, genetic studies, human identity testing, viral/microbial screening, environmental research and plant studies.

QuickExtract™ DNA extraction kits
Extract DNA from samples such as hair follicles, quill-end cells of feathers, tissue-culture cells, buccal cells, zebrafish organs and scales, and mouse tail snips.

QuickExtract™ Plant DNA Extraction Solution
Obtain plant genomic DNA for PCR amplification. With no bead-beating, freezing, or grinding of plant leaf material. Obtain DNA from various plant sources including Arabidopsis, barley, maize, emmer, pepper, rice, spelt, spinach, soybeans, and wheat.

QuickExtract™ Seed DNA Extraction Solution
Use this kit to rapidly and efficiently extract PCR-ready genomic DNA from ground seed samples. Seeds rich in PCR inhibitors polyphenols, gossypol, and phytic acid can be used. These include sunflower and cotton seeds

Simply choose the Quickextract ™ kit for your sample type (Human, animal, plant, bacteria etc), add the sample to the solution, heat and within 8 minutes you have PCR ready DNA. Its that simple !

Benefits	
•*Simple*	One tube protocol
•*Higher yields*	No spin columns or centrifugation
•*Safe*	Non-toxic reagents
•*Automation*	Suitable for robotic workstations

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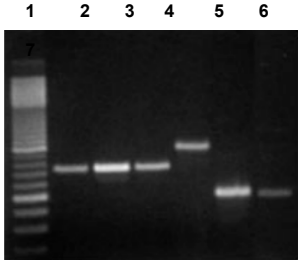
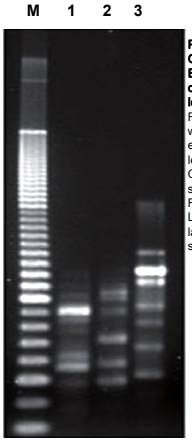
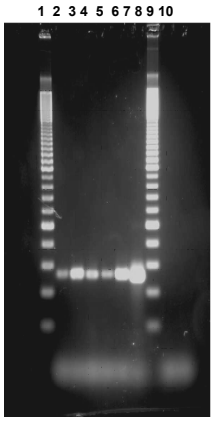


PCR amplifications of genomic DNA extracted from a variety of tissues or cells. Buccal cells were extracted using the BuccalAmp™ DNA Extraction Kit, and all other samples with QuickExtract™ DNA Extraction Solution. PCR was performed using primers to amplify the regions indicated: Lanes 1-3, human β-globin; lane 4, transgenic mouse GAPDH; lane 5, *E. coli* 16S ribosomal RNA gene; lane 6, transgenic SV40 T antigen.
Samples on gel: 1. Marker, 2.Human Buccal swabs,3. Hela cells, 4. HumanHair follicle, 5. Mouse tail, 6. Bacteria and 7. Transgenic mice.



PCR products using QuickExtract™ Plant DNA Extraction Solution with different varieties of plant leaves.
Forty cycles of RAPD were performed with DNA extracted from plant leaves using the QuickExtract Plant solution and the FailSafe™ PCR System. Lane M, 100-bp ladder; lane 1, pepper; lane 2, soybean; lane 3, spelt.



PCR amplification of DNA from monocot seeds. ~10 mg of a variety of ground or fragmented monocot crop seeds were prepared as in Fig. 1 and the extract was amplified (without dilution) in PCR with universal primers (CISP, conserved intronspanning primers). Lanes 1 and 8, 100-bp ladder; lane 2, wheat; lane 3, rye; lane 4, barley; lane 5, oat; lane 6, rice; lane 7, corn; lanes 9 and 10, negative controls containing buffer only and QuickExtract™ Seed Solution only, respectively.

Also available QuickExtract™ Bacterial & QuickExtract™ FFPE DNA extraction kits.

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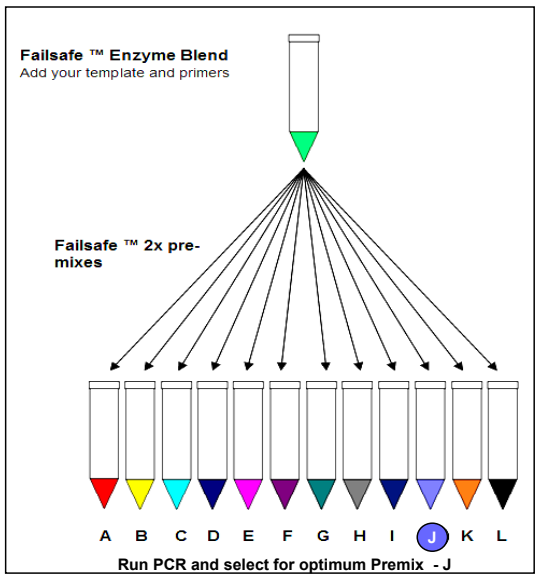
FailSafe™PCR System

Optimise PCR templates up to 20kb with confidence in a single round

1. Add template and primers to the Failsafe system



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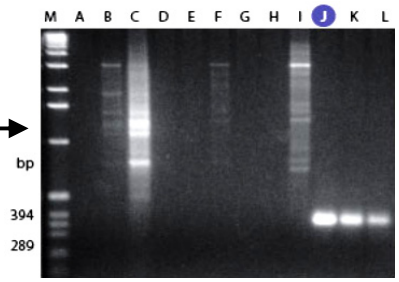
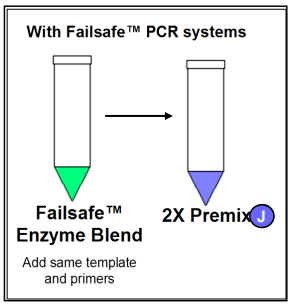
2. Select the best Premix



PCR amplification using the 12 Premix together with the failsafe enzyme blend. Premix J is identified as optimal for the PCR

3. Use appropriate Premix for subsequent PCR reactions



How does it work?

The patented FailSafe ™ PCR Premix Selection Kit contains 12 FailSafe PCR Premixes to cover a meticulously determined matrix of PCR conditions that give optimal PCR results for different sequences. Each Premix represents a unique PCR condition, with everything needed for successful PCR. Combine the template and primers with the FailSafe Enzyme Mix, add one volume of this cocktail to one volume of each of the 12 FailSafe PCR 2X Premixes, and cycle. We guarantee that at least one FailSafe PCR PreMix will provide conditions that are optimal for the template and primers tested.

Benefits

•***Simple***	3 step optimisation of any template
•***Fast***	Optimal PCR condition in less than 1 day
•***Convenient***	Primers and templates only required
•***High Fidelity***	Less errors than TAQ
•***Guaranteed***	Works every time

Don't fail with your PCR… make optimisation as easy as 123

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TAQXpedite™ PCR System (FAST End-Point)

16 minute PCR on a standard cycler !

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The TAQXpedite™ PCR system achieves fast PCR results with total reaction time as little as 16 minutes for a 500-bp amplicon. The TAQXpedite™ kit can be used with a either a specialized fast PCR thermocycler or a standard thermocycler. The TAQXpedite PCR System (FAST End-Point) contains a unique blend of thermostable DNA polymerases that can be used for fast PCR, a carefully optimized 2X Universal MasterMix and a difficult/Long MasterMix with all four dNTPs, and an optimized MgCl2 concentration.

The MasterMix also contains a patented PCR Enhancer with betaine,* which substantially improves the yield, efficiency, and specificity of amplification of many target sequences, especially those containing a high GC content or secondary structure. The TAQXpedite PCR System's Universal Master-Mix is designed for routine and/or high-throughput fast PCR applications, while the Difficult/Long MasterMix is designed for use with troublesome, non-routine, or long applications. All reaction components are included in the kit except for template and primers.

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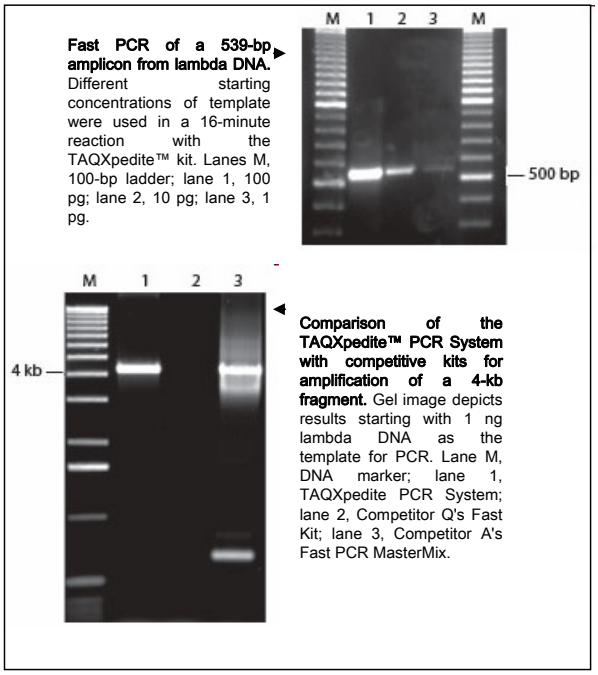
*Covered by issued and/or pending patents.



Fast PCR of a 539-bp amplicon from lambda DNA. Different starting concentrations of template were used in a 16-minute reaction with the TAQXpedite™ kit. Lanes M, 100-bp ladder; lane 1, 100 pg; lane 2, 10 pg; lane 3, 1 pg.

Comparison of the TAQXpedite™ PCR System with competitive kits for amplification of a 4-kb fragment. Gel image depicts results starting with 1 ng lambda DNA as the template for PCR. Lane M, DNA marker; lane 1, TAQXpedite PCR System; lane 2, Competitor Q's Fast Kit; lane 3, Competitor A's Fast PCR MasterMix.

Amplicon Size	TAQXpedite™ Fast Protocol	Standard PCR
539 bp	16 min	1 hr 16 min
1 kb	20 min	1 hr 30 min
4 kb	39 min	3 hr 1 min
7 kb	1 hr 39 min	4 hr 31 min
20 kb	2 hr 55 min	11 hr 1 min
30 kb	5 hr 33 min	16 hr 1 min
270 bp high-GC	44 min	1 hr 16 min
Nine-amplicon multiplex	52 min	1 hr 16 min

Benefits

- Increased sample throughput.
- High fidelity due to proofreading capabilities.
- Two convenient Master Mixes for universal and difficult/long amplifications.

Achieve faster, efficient and accurate PCR with TAQXpedite™

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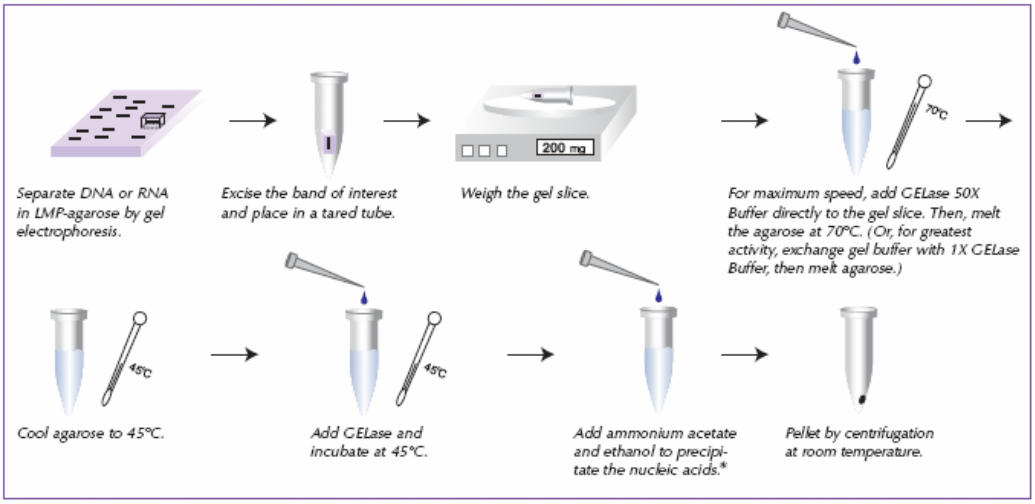
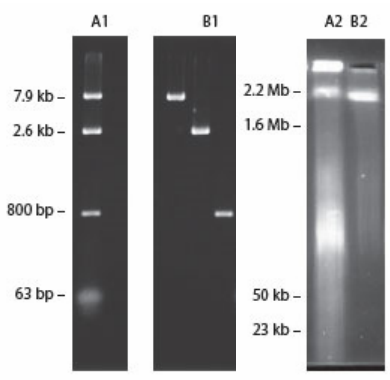
GELase™ Agarose Gel-Digesting Preparation

GELase™ Agarose Gel-Digesting Preparation contains a unique β-agarose digesting enzyme developed at EPICENTRE for simple, quantitative recovery of intact DNA and RNA from low-melting point (LMP) agarose gels following electrophoresis in TAE, TBE, MOPS, or phosphate buffers. The gel may be digested directly in the electrophoresis buffers or GELase Buffer may be added to, or exchanged with, those buffers for higher activity. GELase Preparation digests the carbohydrate backbone of molten agarose, releasing small, soluble oligosaccharides. The nucleic acid can be used in the digested gel solution or precipitated using ammonium acetate/ethanol. The gel digestion products are alcohol-soluble.



GELase protocols are simple and flexible, providing highest activity or maximum speed.



Recovery of any size DNA approaches 100% using GELase™ Gel-Digesting Preparation. In Experiment 1, DNAs from 63 bp to 7.9 kb were separated in a 1.5% LMP-agarose gel (A1), purified using GELase Preparation, and analyzed on a new, 1.5% agarose gel (B1) stained with ethidium bromide. In Experiment 2, high-molecular-weight soybean DNA was separated on a 1% LMP-agarose gel by pulsed-field electrophoresis (A2). The 2.2 Mb DNA band was purified using GELase Preparation, and analyzed on a new 1% LMP-agarose gel stained with ethidium bromide (B2). (Experiment 2 results courtesy of L. Chen and A. Atherly, Dept. of Zoology & Genetics, Iowa State Univ., Ames, IA.)

Benefits

- Recoveries of DNA or RNA consistently approach 100%
- Purify even megabase DNA or RNA that is intact and biologically active.
- Simple, flexible protocol with minimal hands-on time.
- More active than other gel-digesting enzymes.
- More economical than spin columns or other gel-digesting methods.

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