

the tumor necrosis factor (TNF) gene.¹ This GC-rich 740-bp PCR product was amplified with the FailSafe PCR System using FailSafe PCR PreMix F for all of the samples tested, including pediatric DNA as well as remote-site collected DNA (Figure 4).

M 1 2 3 4 5 6 7 8 9 10

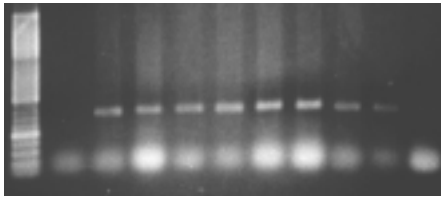


Figure 4. FailSafe™ DNA amplification of TNF-beta from BuccalAmp™ extracted, genomic DNA.

Lane 1, negative control; Lane M, 100 bp ladder. Lanes 2-10, TNF PCR products from individuals 1-9.

Discussion

High yields of PCR-ready DNA were obtained from buccal cells collected with the Catch-All Sample Collection Swabs and extracted with the BuccalAmp DNA Extraction Kit reagents. Buccal DNA yields from samples collected at remote sites produced comparable yields to samples extracted immediately, demonstrating the effectiveness of the Catch-All Swabs for remote-site collection when transported in their hard plastic cylinders. The soft, porous Catch-All Swabs were also shown to be effective for collecting buccal cells from children.

The simple DNA extraction protocol requires minimal hands-on processing time, allowing simultaneous processing of a large number of samples. The resulting DNA is sufficient for more than 100 amplification reactions.

References

1. Moffatt, M. *et al.* (1999) *Thorax*, **54**:757-761.

BuccalAmp™ DNA Extraction Kit

BQ0901S	1 Kit
BQ0908S	8 Kits
BQ0916S	16 Kits

Contents:

15 tubes (1 extraction/tube) of BuccalAmp™ QuickExtract™ Solution 1.0.
15 individually-packaged sterile Catch-All™ Swabs.

QuickExtract™ DNA Extraction Solution 1.0

QE09050 50 ml
Bulk solution, sufficient to perform 100 extractions.

Catch-All™ Sample Collection Swabs

QEC091H 100 swabs
100 individually-packaged swabs in sterile hard-pack plastic cylinders.

High Fidelity PCR Amplification of DNA up to 40 Kb Using the MasterAmp™ Extra-Long PCR Kit

The FailSafe™ PCR System (page 15-16) is ideal for consistent and accurate amplification of any template up to about 20 Kb, whatever its sequence and without need for "hot start" techniques. However, for sequences up to 40 Kb, the MasterAmp™ Extra-Long PCR Kit enables consistent and accurate amplification. This kit efficiently amplifies regions up to at least 40 Kb from lambda DNA, 30 Kb from *E. coli* DNA and 28 Kb from human DNA. "Hot start" techniques are typically not required when using the MasterAmp Extra-Long Kit.

The MasterPure™ Extra-Long DNA Polymerase contained in the kit combines MasterAmp™ Taq DNA Polymerase with a proprietary 3' – 5' proofreading enzyme to achieve PCR fidelity at least three times better than Taq DNA Polymerase alone. The kit includes MasterAmp Extra-Long DNA Polymerase and nine

different Extra-Long PCR 2X PreMixes for convenient and fast PCR set-up. The nine Extra-Long PCR PreMixes each contain buffer, dNTPS and differing amounts of both Mg²⁺ and MasterAmp™ PCR Enhancer (with betaine*). Once the optimal PreMix is identified for a particular template/primer combination, consistent amplification of the template will be achieved using the same PreMix.

* Patents issued and pending.

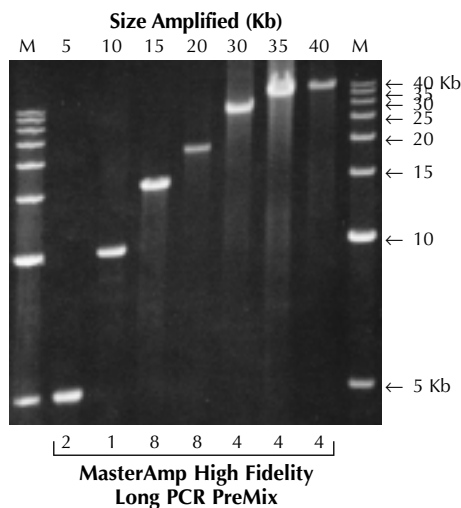


Figure 1. Amplification of 5, 10, 15, 20, 30, 35, and 40 Kb sequences from lambda DNA.

One nanogram of lambda DNA was used to amplify 5, 10, 15, 20, 30, 35, and 40 Kb sequences. Lane M, 5 Kb DNA ladder. Results were analyzed on a 0.5% agarose gel run at 30 V for 20 hours.

MasterAmp™ Extra-Long PCR Kit

MHF9220 50 Reactions

Contents:

MasterAmp™ Extra-Long PCR PreMixes 1-9
MasterAmp™ Extra-Long DNA Polymerase Mix
Control Lambda DNA/Primers

Individual Extra-Long PCR 2X PreMixes

MasterAmp™ Extra-Long PCR 2X PreMix 1	
MHF925A	5 ml
MasterAmp™ Extra-Long PCR 2X PreMix 2	
MHF925B	5 ml
MasterAmp™ Extra-Long PCR 2X PreMix 3	
MHF925C	5 ml
MasterAmp™ Extra-Long PCR 2X PreMix 4	
MHF925D	5 ml
MasterAmp™ Extra-Long PCR 2X PreMix 5	
MHF925E	5 ml
MasterAmp™ Extra-Long PCR 2X PreMix 6	
MHF925F	5 ml
MasterAmp™ Extra-Long PCR 2X PreMix 7	
MHF925G	5 ml
MasterAmp™ Extra-Long PCR 2X PreMix 8	
MHF925H	5 ml
MasterAmp™ Extra-Long PCR 2X PreMix 9	
MHF925I	5 ml

MasterAmp™ Extra-Long DNA Polymerase Mix

QU92125	125 U
QU92500	500 U
QU9201K	1,000 U