

## New England Biolabs Product Specification

*Product Name:* PreCR<sup>®</sup> Repair Mix  
*Catalog #:* M0309S/L  
*Concentration:* 1 reaction/ $\mu$ L  
*Shelf Life:* 24 months  
*Storage Temp:* -20°C  
*Storage Conditions:* Proprietary  
*Specification Version:* PS-M0309S/L v1.0  
*Effective Date:* 11 Jun 2018

### Assay Name/Specification (minimum release criteria)

**Functional Testing (Oligonucleotide Cleavage - 8-oxo-guanine)** - A 10  $\mu$ l reaction in ThermoPol<sup>®</sup> Reaction Buffer containing 2.5 pmol of annealed oligo containing 8-oxo-guanine as the non-standard base and 1  $\mu$ l of the PreCR<sup>®</sup> Repair Mix incubated for 1 hour at 37°C resulted in >70% cleavage as determined by polyacrylamide gel electrophoresis

**Functional Testing (Oligonucleotide Cleavage - Thymine Glycol)** - A 10  $\mu$ l reaction in ThermoPol<sup>®</sup> Reaction Buffer containing 2.5 pmol of annealed oligo containing thymine glycol as the non-standard base and 1  $\mu$ l of the PreCR<sup>®</sup> Repair Mix incubated for 20 minutes at 37°C resulted in >70% cleavage as determined by polyacrylamide gel electrophoresis

**Functional Testing (Oligonucleotide Cleavage - Uracil)** - A 10  $\mu$ l reaction in ThermoPol<sup>®</sup> Reaction Buffer containing 2.5 pmol of annealed oligo containing uracil as the non-standard base and 1  $\mu$ l of the PreCR<sup>®</sup> Repair Mix incubated for 10 minutes at 37°C resulted in >70% cleavage as determined by polyacrylamide gel electrophoresis

**PCR Amplification (1 kb, PreCR<sup>®</sup>)** - A 48  $\mu$ l reaction in ThermoPol<sup>®</sup> Reaction Buffer containing 1.5 ng of UV damaged Lambda DNA, 100  $\mu$ M dNTPs, 500  $\mu$ M NAD<sup>+</sup> and 1  $\mu$ l of the PreCR<sup>®</sup> Repair Mix was incubated for 15 minutes at 37°C. Addition of 100  $\mu$ M dNTPs, 0.4  $\mu$ M L1 primer mix and 2.5 units of *Taq* DNA Polymerase followed by 25 cycles of PCR resulted in the expected 1 kb specific product.



Date 11 Jun 2018

Derek Robinson  
Director of Quality Control

