

WHITE PAPER

FIREPol® DNA polymerase

A 30-year stability case study

FIREPol® DNA polymerase is Solis BioDyne's first and one of the most enduring products. First produced on the 30th of April 1996, this highly processive, thermostable Taq DNA polymerase has delivered robust and reproducible PCR results for three decades. In our latest re-test, the original batch retained 46% of its initial activity after 30 years of storage at -20 °C.



Product overview

- Highly processive, thermostable Taq DNA polymerase
- Robust and reproducible amplification in routine PCR
- Suitable for templates up to 5 kb
- Enhanced room-temperature stability; no activity loss for up to 1 month
- Suitable for TA cloning



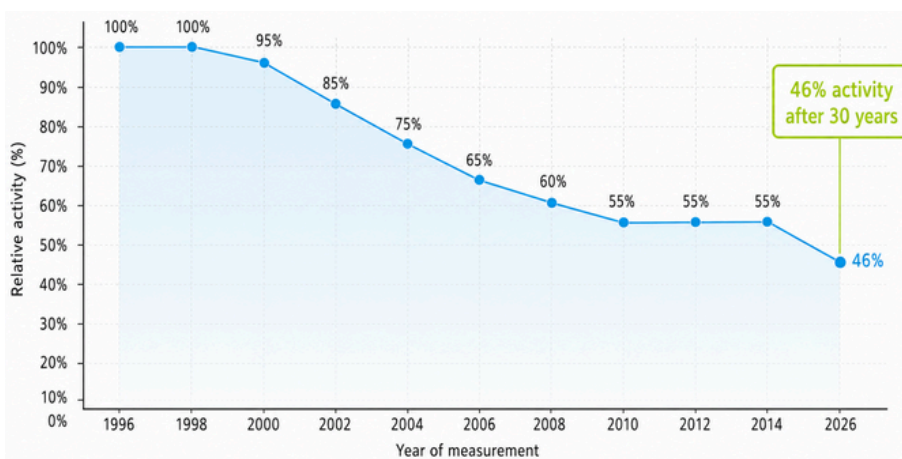
Why it matters

- Stability TAG technology enhances protein stability without compromising beneficial properties
- Long-term retained activity highlights exceptional shelf life for a biochemical reagent



FIREPol® DNA polymerase turned 30 years old in 2026. We offer it in a kit format, which includes buffers and additives.

Long-term stability of the original FIREPol® batch



Conclusion

The 2026 re-test confirms the extraordinary long-term stability of FIREPol® DNA polymerase. Even after three decades, the original batch remains functional, underscoring the value of Solis BioDyne's stability-focused design and the remarkable durability of this enzyme.



Key finding

The original FIREPol® batch retained **46%** activity after 30 years at -20 °C.

In practical terms, using approximately **2x** more enzyme restores the original working activity - an extraordinary result for a biochemical reagent.

