

# Phire™

Hot Start DNA Polymerase

Hot start –  
quick finish

# Phire™

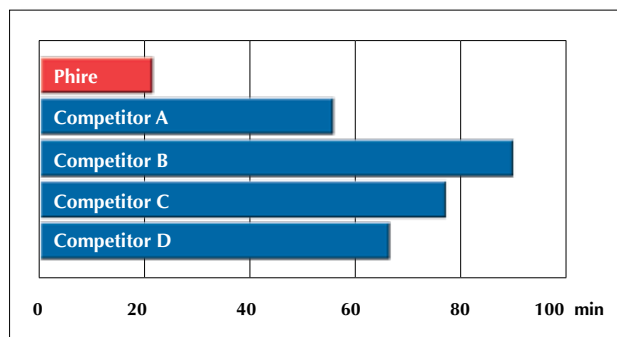
## Hot Start DNA Polymerase

### Speed and specificity for PCR

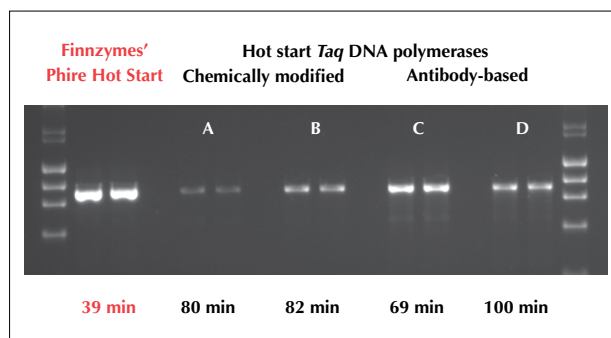
Finnzymes' Phire™ Hot Start DNA Polymerase is a novel PCR enzyme that outperforms every *Taq*-based hot start polymerase on the market. This is a result of the polymerase's DNA-binding domain which shortens extension times, improves yields, and increases fidelity 2-fold compared to *Taq* polymerase. In addition, our unique hot start technology allows complete reactivation of Phire DNA Polymerase in "zero-time" at standard cycling temperatures. This combination of features makes this polymerase an ideal solution for routine and high throughput PCR applications. Phire DNA Polymerase delivers superior performance in all thermal cyclers, both conventional and fast instruments such as the Piko™ Thermal Cycler from Finnzymes.

### Advantages

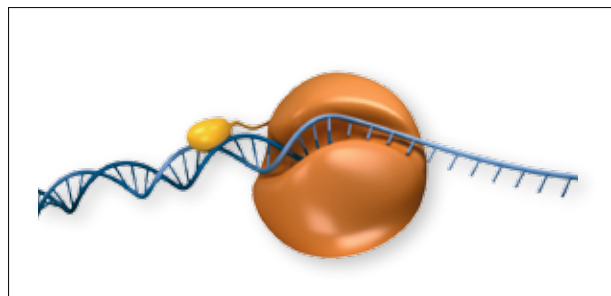
- **Quick hot start:** No reactivation step
- **Fast enzyme:** Amplify 3 times faster than with hot start *Taq*
- **High yields:** Abundant products due to high efficiency
- **Longer PCR products:** Amplify significantly longer DNA fragments than with any hot start *Taq*



**Complete PCR protocols in less than half the time.** A 500 bp fragment was amplified with hot start DNA polymerases from five major suppliers according to each supplier's recommendations. Due to our unique hot start technology and a special dsDNA-binding domain, the PCR protocol was completed in less than half the time with Phire DNA Polymerase as compared to *Taq* polymerases utilizing chemically modified or antibody-based hot start technologies (competitors A-D). The instrument used in the experiment was the Piko™ Thermal Cycler from Finnzymes.



**Abundant yields in shorter time.** A 1.0 kb fragment from the human glutathione peroxidase gene was amplified with five different hot start DNA polymerases according to suppliers' recommendations. Phire DNA Polymerase amplified high amounts of specific PCR product in just 39 minutes. In contrast, the PCR protocols for hot start *Taq* DNA polymerases from four major suppliers (A-D) were substantially slower and resulted in lower product yields.



**Intelligent design for improved performance.** Phire Hot Start DNA Polymerase is constructed by fusing a novel DNA polymerase (orange) and a small dsDNA-binding protein (yellow). This technology dramatically increases the processivity of the polymerase thus improving its overall performance.

[www.finnzymes.com](http://www.finnzymes.com)

### Ordering information

Phire™ Hot Start DNA Polymerase	
F-120S	200 reactions (50 µl each) or 500 reactions (20 µl each)
F-120L	1000 reactions (50 µl each) or 2500 reactions (20 µl each)