# ThermaStop™
# Instructions for Use.

## GENERAL INFORMATION:

ThermaStop™ is a proprietary additive for use in reactions involving any thermo stable DNA polymerase and is designed to dramatically improve reaction specificity and yield for cleaner, robust reactions. ThermaStop interacts with DNA polymerase at temperatures below 50°C to provide reversible inhibition of enzyme activity. ThermaStop also inhibits DNA polymerase activity following PCR, thereby providing a "cold-stop" that can improve results from subsequent product analysis.
One unit of ThermaStop is defined as the amount required for maximum hot-start in amplification reactions containing one unit of Taq DNA polymerase in a volume of 25 µl.

## CONTAINS:

A single tube of dried ThermaStop reagent. Does not contain magnesium, dNTPs, or buffer components.

## PREPARATION:

***-To prepare a 5 Units/µl ThermaStop stock:***

- Centrifuge Therma-Stop™ tube briefly to insure the dried reagent is at the bottom of the tube.
- Add sterile, molecular-grade 10 mM Tris-Cl, pH 8.3; 100 µl for tubes containing 500 units, or 500 µl for vials containing 2500 units
- Vortex tube for at least 1-2 minutes.
- Allow tube to sit at room temperature for six hours (or overnight) with occasional mixing to insure reagent is completely dissolved.
- Vortex an additional minute, then centrifuge briefly.
- Aliquot into smaller volumes, if desired.

## RECOMMENDED STORAGE CONDITIONS:

- ***ThermaStop*** can be stored at 4°C or -20°C in dark (or light protected) tubes.
- If frozen, divide stock into small volume aliquots to avoid freezing and thawing more than 5 times.

THERMAGENIX

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USE:

- Add a number of units of ***ThermaStop*** equal to the number of units of Taq DNA polymerase in the amplification reaction.
  - Example: For a 25 µl reaction containing 1 unit of Taq DNA polymerase (0.2 µl of 5 Units/µl Taq DNA polymerase) add 1 unit of Therma-Stop™ (0.2 µl of 5 Units/µl ***ThermaStop***).
- ***ThermaStop*** was evaluated for sample volumes of 10 to 25 µl. Sample volumes outside that range may require optimization of the ***ThermaStop*** to Taq ratio.
- PCR annealing temperature should be 60ºC or above to insure full enzyme activity.