



Data Sheet (15.06.2005)

## mi- Splendid Taq 96 / Taq 96 (12x 8)

Thermostable DNA Polymerase PreMix, plate format – single tubes or 8' stripes for long range PCR

Source: *Thermus aquaticus*, gene expressed in *E. coli*

Cat.-No.	Size	final Volume
mi-E6006 (96 single tubes)	96 rxs	20 µl
mi-E6008 (12x 8' stripes)	96 rxs	20 µl

For *in vitro* use only! For research only!

### PreMix content (2x)

2 u Taq/rxn, dNTP 2.5 mM each, MgCl<sub>2</sub> 1.5 mM  
Reaction Buffer (KCl, Tris-Cl) - proprietary conc.  
Stabilizer - proprietary formulation

### Recommended PCR Assay (20 µl volume)

1. Spin mi-Splendid Taq PreMix (2x) briefly down (10 µl).
2. Add template DNA (10-100 ng), primers (5-20 pmoles each) and ddH<sub>2</sub>O on ice to a total volume of 20 µl.
3. Mix the reaction by pipetting or gentle vortexing and briefly spin down again.

Note: If you do not have a hot lid thermal cycler, add mineral oil prior to PCR.

4. Run PCR. After reaction, load samples directly onto the aragose gel without adding loading buffer.

### General reaction conditions

95°C 2 min.	(initial denaturation)
94°C 30 sec.	(25 to 30 cycles)***
TA°C* ~30 sec.	
72°C 1-2 min.**	
72°C 5 min.	(final extension)
4-8°C indefinite to store	

\* Annealing temperature: TA°C ~ T<sub>m</sub> -5°C

\*\* Amplification time: 1 min./1kb approximately

\*\*\* up to 40 possible, especially for detection of low copy genes

### Description

The mi-Splendid Taq 96 DNA Polymerase PreMix is a ready-to-use solution containing mi-Splendid Taq DNA Polymerase (see mi-E6004), dNTPs, MgCl<sub>2</sub>, reaction buffer, orange color dye and stabilizer at optimal concentrations for efficient amplification of DNA templates by PCR. After PCR, product can be directly loaded onto the agarose gel without additional loading buffer (already included).

### Performance and purity tests

- Functional Assay: mi- Splendid Taq 96 PreMix is tested for performance in PCR by amplifying a 8 kb and 1 kb fragment of lambda DNA and of human genomic DNA, respectively.
- Endonuclease Assay: No nicking activity is detectable on an ethidium bromide-stained agarose gel, when 1 µg of lambda DNA is incubated with mi-Splendid Taq 96 DNA Premix (1x) for 6 hours at 45°C, followed by 6 hours at 72°C.
- Exonuclease Assay: No exonuclease activity is detectable on an ethidium bromide-stained agarose gel, when 1 µg lambda/Hind III DNA is incubated with mi- Splendid Taq 96 PreMix (1x) for 6 hours at 45°C, followed by 6 hours at 72°C.

**Storage Temperature:** Store at -20°C. Avoid frequent thawing and freezing cycles.

### Unit definition

One unit is defined as the amount of the enzyme required to catalyze the incorporation of 10 nmol of dNTP into an acid-insoluble form in 30 minutes at 72°C.