

# BsrI



R0527S 011120514051

## R0527S



1-800-632-7799  
info@neb.com  
www.neb.com

**1,000 units**   **Lot: 0111205**   **Exp: 5/14**

**5,000 U/ml**   **Store at -20°C**



**Recognition Site:**

5'...ACTGGN▼...3'  
3'...TGAC▲CN...5'

**Source:** *Bacillus stearothermophilus* (C. Polisson)

Supplied in: 400 mM NaCl, 10 mM Tris-HCl (pH 7.4), 0.1 mM EDTA, 1 mM dithiothreitol, 200 µg/ml BSA and 50% glycerol.

**2X More Units**

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**Reagents Supplied with Enzyme:**  
10X NEBuffer 3.

**Reaction Conditions:** 1X NEBuffer 3.  
**Incubate at 65°C.**

**1X NEBuffer 3:**  
100 mM NaCl  
50 mM Tris-HCl  
10 mM MgCl<sub>2</sub>  
1 mM dithiothreitol  
pH 7.9 @ 25°C

**Unit Definition:** One unit is defined as the amount of enzyme required to digest 1 µg of φX174 RF I DNA in 1 hour at 65°C in a total reaction volume of 50 µl.

**Diluent Compatibility:** Diluent Buffer B  
300 mM NaCl, 10 mM Tris-HCl, 0.1 mM EDTA, 1 mM dithiothreitol, 500 µg/ml BSA and 50% glycerol (pH 7.4 @ 25°C).

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### Quality Control Assays

**Ligation:** After 10-fold overdigestion with BsrI, > 95% of the DNA fragments can be ligated with T4 DNA Ligase (at a 5' termini concentration of 1–2 µM) at 16°C. Of these ligated fragments, > 95% can be recut.

**16-Hour Incubation:** A 50 µl reaction containing 1 µg of φX174 RF I DNA and 50 units of enzyme incubated for 16 hours resulted in the same pattern of DNA bands as a reaction incubated for 1 hour with 1 unit of enzyme.

**Exonuclease Activity:** Incubation of 100 units of enzyme with 1 µg sonicated <sup>3</sup>H DNA (10<sup>6</sup> cpm/µg) for 4 hours at 65°C in 50 µl reaction buffer released < 0.2% radioactivity.

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### Enzyme Properties

**Activity in NEBuffers:**  
NEBuffer 1   0%  
NEBuffer 2   50%  
NEBuffer 3   **100%**  
NEBuffer 4   10%


When using a buffer other than the optimal (supplied) NEBuffer, it may be necessary to add more enzyme to achieve complete digestion.

**Survival in a Reaction:** A minimum of 0.25 unit is required to digest 1 µg of substrate DNA in 16 hours.

**Heat Inactivation:** 80°C for 20 minutes.

**Note:** Incubation at 37°C results in 20% activity.

Not sensitive to *dam*, *dcm* or mammalian CpG methylation.

 = Time-Saver™ Qualified (See www.neb.com for details).

CERTIFICATE OF ANALYSIS

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