

**PRODUCT INFORMATION**

**Thermo Scientific  
FastDigest Value Pack**

**#K1991 for 13 x 20 rxns**  
**Lot \_\_\_\_\_ Expiry Date 00.0000**

**Store at -20°C**

[www.thermoscientific.com/onebio](http://www.thermoscientific.com/onebio)

**Description**

Thermo Scientific™ FastDigest™ Value Pack is a collection of 13 popular FastDigest enzymes, 20 µL each, supplied with:


- 2 x 1 mL of 10X FastDigest Buffer;
- 2 x 1 mL of 10X FastDigest Green Buffer.

**Recommended Reaction Conditions**

1X FastDigest or 1X FastDigest Green Buffer at 37°C. The 10X FastDigest Green Buffer is a proprietary restriction digestion reaction buffer. All FastDigest restriction enzymes have 100% activity in this buffer. The FastDigest Green Buffer contains a density reagent along with blue and yellow tracking dyes that allow for direct loading of reaction mixtures on a gel. The FastDigest Green Buffer has the same performance in both DNA digestion and downstream applications as the colorless FastDigest Buffer.

**CERTIFICATE OF ANALYSIS**

FastDigest enzymes were tested in all standard quality control assays and pass its requirements.

**Quality authorized by:**  Jurgita Zilinskiene

**Properties of FastDigest enzymes**

Enzyme	Specificity 5'→3'	Digestion time with 1µL of FastDigest enzyme, min			Thermal inactivation	Incubation without star activity, hours	Methylation effects	Ordering information for separate enzyme	
		Plasmid DNA	PCR product	Genomic DNA				Catalog #	Package size, reactions
		1 µg/20 µL	~0.2 µg/30 µL	1 µg/10 µL					
FastDigest BamHI	G↓GATCC	5	5	5	80°C, 5 min	16	No effect	FD0054	800
FastDigest BglII	A↓GATCT	20	30	20	No	16	No effect	FD0083 FD0084	100 200
FastDigest EcoRI	G↓AATTC	5	20	5	80°C, 5 min	0.5	CpG: may overlap - cleavage impaired	FD0274	800
FastDigest EcoRV (Eco32I)	GAT↓ATC	5	5	5	No	16	No effect	FD0303 FD0304	200 400
FastDigest HindIII	A↓AGCTT	5	20	10	80°C, 10 min	16	No effect	FD0504	800
FastDigest KpnI	GGTAC↓C	5	5	5	80°C, 5 min	16	No effect	FD0524	300
FastDigest NdeI	CA↓TATG	5	60	30	65°C, 5 min	6	No effect	FD0583 FD0584	100 300
FastDigest NotI	GC↓GGCCGC	30	5	10	80°C, 5 min	16	CpG: completely overlaps - blocked	FD0593 FD0594	20 50
FastDigest PstI	CTGCA↓G	5	30	5	No	16	No effect	FD0614	800
FastDigest Sall	G↓TCGAC	5	60	5	65°C, 10 min	16	CpG: completely overlaps - blocked	FD0644	200
FastDigest SmaI	CCC↓GGG	5	5	5	65°C, 5 min	16	CpG: completely overlaps - blocked	FD0663 FD0664	100 200
FastDigest XbaI	T↓CTAGA	5	5	10	65°C, 20 min	16	Dam: may overlap - blocked	FD0684	300
FastDigest XhoI	C↓TCGAG	5	5	10	80°C, 5 min	16	CpG: may overlaps - cleavage impaired	FD0694	400

**Standard Reaction Set-up**

Component	Volume		
	Plasmid DNA	PCR product	Genomic DNA
<b>Water*, nuclease-free (#R0581)</b>	15 µL	17 µL	30 µL
<b>10X FastDigest or 10X FastDigest Green Buffer</b>	2 µL	2 µL	5 µL
<b>DNA*</b>	2 µL (up to 1 µg)	10 µL (~0.2 µg)	10 µL (5 µg)
<b>FastDigest enzyme</b>	1 µL	1 µL	5 µL
<b>Total volume:</b>	20 µL	30 µL	50 µL

\* The volume of DNA can be scaled up to 10 µL or down to 0.5 µL depending on the DNA concentration. The volume of water should be corrected to keep the indicated total reaction volume.

**Activity of DNA/RNA Modifying Enzymes in FastDigest and FastDigest Green Buffers, %**

FastAP Thermosensitive Alkaline Phosphatase	100
T4 DNA Ligase*	75-100
Klenow Fragment	100
T4 DNA Polymerase	100
T4 Polynucleotide Kinase	100

\* 0.5 mM ATP is required for T4 DNA Ligase activity.

**PRODUCT USE LIMITATION**

This product is developed, designed and sold exclusively for research purposes and in vitro use only. The product was not tested for use in diagnostics or for drug development, nor is it suitable for administration to humans or animals. Please refer to [www.thermoscientific.com/onebio](http://www.thermoscientific.com/onebio) for Material Safety Data Sheet of the product.