

Life Science Research 2024



NZYtech
genes & enzymes



Your Partner for Life Sciences

NZYtech designs, manufactures and supplies key reagents, kits and master mixes to life science research labs, visionary biotechnology companies and forward-thinking clinical diagnostic laboratories. Powered by in-house Research and Development, NZYtech engineers products to aid researchers and professionals in molecular diagnostics laboratories around the world - Serving more than 70 Countries, across 5 Continents.

From qPCR Master Mixes and cDNA Synthesis Kits to One-Step RT-qPCR Master Mixes, Key Components for qPCR assays, Bst DNA Polymerases and RNA/DNA Isolation Kits.

NZYtech is a global supplier-of-choice providing IVD kits for SARS-CoV-2 and Respiratory Viruses detection as well as more than 220 Real-Time PCR detection kits for Veterinary, Food/Water and Human Pathogen industries searching for molecular research and diagnostic Real-Time kits.

NZYtech has a global database and supply of Glycobiology products. With more than 80 enzyme categories available, listing more than 1000 CAZymes to choose from. As well as analytical test kits for agro-food and fermentation industries.

Committed to the ever growing field of scientific research, our scientists are deeply engaged in the development of novel products every year. Dedicated to advancing science and being your trusted partner in Life Sciences.





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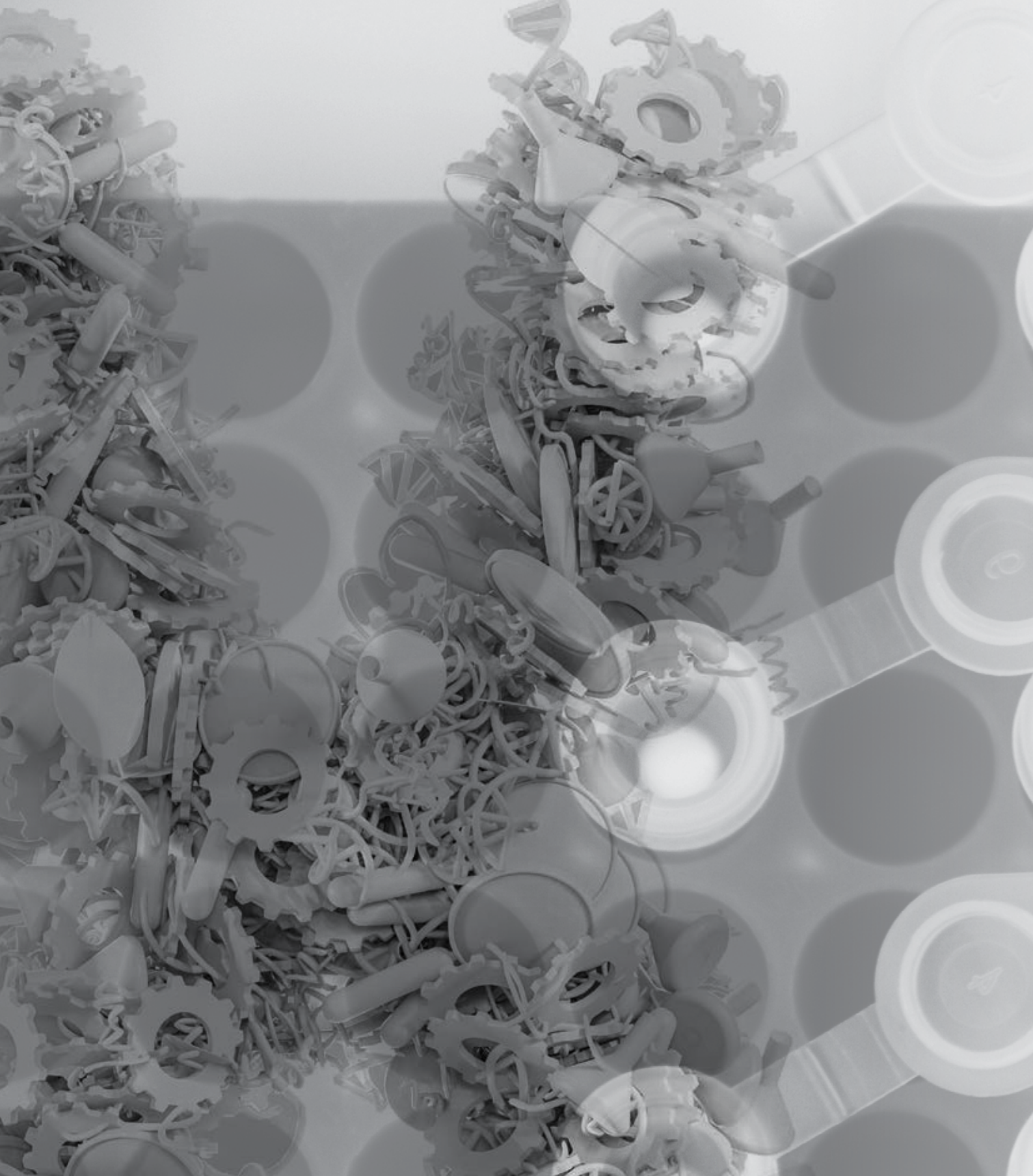
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DNA & RNA purification

PLASMID DNA PURIFICATION

GENOMIC DNA PURIFICATION

RNA PURIFICATION

NUCLEIC ACIDS CLEAN-UP

DNA & RNA PURIFICATION REAGENTS

DNA & RNA PURIFICATION

PLASMID DNA PURIFICATION

NZYtech provides kits for the rapid preparation of highly pure plasmid DNA from recombinant *Escherichia coli* strains at different scales (Miniprep, Midiprep, Maxiprep and Gigaprep). The resulting purified plasmid DNA is suitable for use in the most demanding molecular biology applications. Buffers for plasmid purification kits, columns and RNase A are also sold separately for your convenience. Our portfolio also includes kits designed for manual or automated large-scale purification of DNA plasmids from *E. coli* in 96-well format (NZYMiniprep 96-well plate), or for the fast purification of multiples DNA molecules simultaneously (NZYDNA Clean-up 96-well plate).

Plasmid DNA kits	Plasmid type	Typical yield	Scale/ Format
NZYMiniprep	high and low-copy number, BACs or cosmids	up to 45 µg	Mini/spin-column
NZYMiniprep 96-well plate	high and low-copy number	up to 15 µg	Mini/96-well plate
NZYSpeedy Miniprep	high and low-copy number, BACs or cosmids	up to 35 µg	Mini/spin-column
NZYMidiprep	high and low-copy number, BACs or cosmids	up to 150 µg	Midi/gravity flow column
NZYMaxiprep	high and low-copy number, BACs or cosmids	up to 1000 µg	Maxi/gravity flow column
NZYMaxiprep Endotoxin Free	high and low-copy number, BACs or cosmids	up to 500 µg	Maxi/gravity flow column
NZYGigaprep	high and low-copy number, BACs or cosmids	up to 10000 µg	Giga/gravity flow column

Miniprep

NZYMiniprep		
MB01001	50 columns	69 €
MB01009	2 x 50 columns	129 €
MB01002	200 columns	199 €
MB01008	5 x 200 columns	899 €

NZYMiniprep 96-well plate		
MB20201	2 plates	560 €
MB20202	4 x 2 plates	2019 €

NZYSpeedy Miniprep		
MB21001	50 columns	79 €
MB21004	2 x 50 columns	139 €
MB21002	200 columns	209 €
MB21003	5 x 200 columns	909 €

NZY Spin Columns & Collection Tubes		
MB18901	50 units	59 €
MB18902	4 x 50 units	189 €

Buffer A1		
MB20301	60 mL	29 €

Buffer A2		
MB20401	60 mL	47 €

Buffer A3		
MB20501	80 mL	49 €

Buffer AY		
MB20601	120 mL	59 €

Buffer A4		
MB20701	25 mL	47 €

Procedure	Time	Quality grade	Application
Manual – centrifugation	< 25 min	Molecular Biology	Cloning, sequencing, PCR, enzymatic reactions, transfection
Manual or Automated – under vacuum or centrifugation	~ 45 min	Molecular Biology	Cloning, sequencing, PCR, enzymatic reactions, transfection
Manual – centrifugation	≤ 12 min	Molecular Biology	Cloning, sequencing, PCR, enzymatic reactions, transfection
Manual – centrifugation	~ 70 min	Transfection	Transfection, cloning, sequencing, PCR, enzymatic reactions
Manual – centrifugation	~ 70 min	Transfection	Transfection, cloning, sequencing, PCR, enzymatic reactions
Manual – centrifugation	~ 80 min	Endotoxin free	Transfection, cloning, sequencing, PCR, enzymatic reactions
Manual – centrifugation	~120 min	Transfection	Transfection, cloning, sequencing, PCR, enzymatic reactions

Midiprep, Maxiprep e Gigaprep

NZYMidiprep

MB05003	5 columns	59 €
MB05004	20 columns	159 €
MB05005	3 x 20 columns	405 €

NZYMaxiprep

MB05101	5 columns	149 €
MB05102	2 x 5 columns	279 €
MB05103	5 x 5 columns	609 €

NZYMaxiprep Endotoxin Free

MB39901	5 columns	169 €
MB39902	2 x 5 columns	289 €

NZY Plasmid Midi Columns

MB19001	5 units	29 €
MB19002	4 x 5 units	99 €

NZY Plasmid Maxi Columns

MB20101	5 units	89 €
MB20102	4 x 5 units	329 €

NEW NZY Buffers M for Midi, Maxi and Gigaprep kits

MB47701	250 mL each	199 €
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NEW NZYGigaprep

MB47601	2 columns	249 €
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GENOMIC DNA PURIFICATION

NZY gDNA Isolation kits are spin column silica-based systems designed for the simple and rapid small-scale purification of genomic DNA from various sources. Resulting purified DNA has the highest quality and integrity and is suitable for use in most sensitive downstream applications.

Genomic DNA kits	Sample Material	Typical yield	Scale/Format	Time	Application
NZY Tissue gDNA Isolation Kit	Animal tissue, cultured cells, bacterial cells, rodent tails, buccal swabs, paraffin embedded tissue and fecal material, whole blood*, serum, plasma, body fluids	up to 35 µg	Mini/Spin-column	20 min ²	PCR, qPCR, genotyping, sequencing, enzymatic manipulations
NZY Plant/Fungi gDNA Isolation Kit	Plant and fungal tissues	up to 30 µg	Mini/Spin-column	30 min	PCR, qPCR, genotyping, sequencing, enzymatic manipulations
NZY Soil gDNA Isolation kit	Soil, sludge, sediment and stool samples	2-10 µg	Mini/Spin-column	15 min ²	PCR, qPCR, genotyping, sequencing, enzymatic manipulations
NZY Microbial gDNA Isolation Kit	Cell pellets of gram-positive and gram-negative bacteria	5-25 µg ¹	Mini/Spin-column	15 min	PCR, qPCR, genotyping, sequencing, enzymatic manipulations
NZY DNA/RNA/Protein Isolation Kit	Animal cells, Animal Tissue, Cultured Cells, Plant tissue	RNA < 70 µg DNA < 6 µg Protein < 1200 µg	Mini/Spin-column	30 min	cDNA synthesis, PCR, Protein Electrophoresis, qPCR, RT-PCR, RT-qPCR, Sequencing, Western Blotting
NZY Food gDNA Isolation Kit	Food and Feed Samples	Up to 10 µg	Mini/Spin-column	25 min	sequencing, real-time PCR, multiplex-PCR, genotyping
NZY cfDNA Isolation Kit	Plasma, Serum	5-30 µL	Mini/Spin-column	15 min/6	PCR, qPCR, Sequencing
Speedy NZY Direct Genotyping Kit	Animal Tissue, Blood	NA	High-Throughput	~5 min	Genotyping, Mouse Genotyping

* Fresh, frozen or treated; ¹ From 30 mg wet weight cell pellet; ² Excluding lysis step.

NZY Tissue gDNA Isolation kit

MB13502	50 columns	199 €
MB13503	200 columns	599 €

NZY Plant/Fungi gDNA Isolation kit

MB17701	50 columns	259 €
MB17702	4 x 50 columns	819 €

NZY Soil gDNA Isolation kit

MB21802	50 columns	329 €
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NZY Microbial gDNA Isolation kit

MB21702	50 columns	249 €
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NEW NZY Food gDNA Isolation Kit

MB21602	50 columns	299 €
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NEW Speedy NZY Direct Genotyping Kit

MB47501	100 reactions	99 €
MB47502	500 reactions	399 €

NEW NZY cfDNA Isolation kit

MB46001	50 columns	299 €
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Speedy NZY Direct Genotyping Kit

Engineered to process an array of tissue materials, including blood and non-invasive hair samples, this kit promises a seamless, animal-friendly genotyping experience.

The Speedy NZY Direct Genotyping Kit integrates a streamlined one-tube sample preparation with a swift PCR process, enabling rapid lysis of biological samples, including mouse genotyping tissues samples (tail clipping and ear punch), in under 5 minutes.



RNA PURIFICATION

NZYtech's RNA Isolation kits are spin column silica-based systems designed for the easy and fast purification of RNA at the highest integrity from a variety of sources, such as animal tissues, cultured cells and bacteria (NZY Total RNA Isolation kit), serum, plasma, saliva, nasal samples, blood and environmental samples. In addition to these developments, we are excited to introduce three new products: the Plant/Fungi RNA Isolation Kit for reliable RNA extraction from plant tissues and fungal materials, the NZYSTool RNA Isolation Kit, ensuring efficient RNA extraction from fresh and frozen stool samples to explore the microbiome's potential, and the NZYmiRNA Isolation & RNA Clean-up Kit, streamlining miRNA research with simplified RNA extraction and purification.

NZY Total RNA Isolation Kit		
MB13402	50 columns	235 €

NZY Viral RNA Isolation Kit		
MB40701	50 columns	149 €

NZYol		
MB18501	100 mL	109 €

NZY Mag Viral RNA/DNA Isolation Kit, RUO		
MD04961	200 preps	200 €
MD04962	2000 preps	1599 €

NEW NZY DNA/RNA/Protein Isolation Kit		
MB45901	50 columns	399 €

NEW NZY miRNA Isolation & RNA Clean-up Kit		
MB45801	50 columns	349 €

NEW Buffer NPFN		
MB46101	5 mL	29 €

NEW Buffer NVL		
MB40801	5 mL	89 €

NEW NZY Stool RNA Isolation Kit		
MB45701	50 columns	399 €

NEW NZY Plant/Fungi RNA Isolation Kit		
MB45601	50 columns	329 €

NUCLEIC ACIDS CLEAN-UP

NZYGelpure kit is designed for the purification of DNA (50 bp to 20 kb) from TAE/TBE agarose gels and for direct purification of enzymatic reactions. NZYGelpure purification kit utilizes a silica-gel based membrane which selectively adsorbs up to 20 µg of DNA fragments.

DNA Clean-Up

NZYGelpure		
MB01101	50 columns	69 €
MB01104	2 x 50 columns	129 €
MB01102	200 columns	199 €
MB01103	5 x 200 columns	899 €

NZYDNA Clean-up 96-well plate		
MB20001	2 plates	218 €
MB20002	4 x 2 plates	800 €

NZYGelpure: includes a pH indicator, allowing to analyze the optimal pH for DNA binding



DNA & RNA PURIFICATION REAGENTS

NZY DNase I		
MB19901	200 U/vial	79 €

NEW Speedy ExoSAP Kit		
MB47401	50 reactions	39 €
MB47402	500 reactions	249 €

Proteinase K		
MB01901	100 mg	89 €
MB01902	500 mg	339 €

NZY RNase A		
MB18701	100 mg	109 €

NEW RNA Stabilization Solution		
MB46901	100 mL	125 €
MB46902	500 mL	499 €

NEW Protease ID39, <i>Labilibacter marinus</i>		
MB47101	1 mg	199 €
MB47102	3 x 1mg	449 €





end-point pcr

DNA POLYMERASES & OTHER PCR ENZYMES

MASTER MIXES

MULTIPLEX MIXES

COMPONENTS/SUPPLEMENTS

END-POINT PCR

DNA POLYMERASES & OTHER PCR ENZYMES

NZYtech's DNA polymerases offer great performance expressed by high yields and extreme sensitivity. Each enzyme presents different features to cover a wide range of applications. Thus, we organized enzymes by applications allowing you to direct your selection to the enzymes that most suit your experiment. The Supreme version of each enzyme displays a hot-start-like activity for improved specificity and sensitivity.

	DNA polymerase	Features	Product length	Extension (sec/kb)	Proof reading	Sensitivity*	Product overhang	Cat. No.
Power & Routine	NZYTaq II	High yields with minimal optimization	≤ 6 kb	15-30	No	5 pg	3'-A	MB354
	Supreme NZYTaq II	Hot-start-like version of NZYTaq II	≤ 6 kb	15-30	No	1 pg	3'-A	MB355
	Speedy NZYTaq	Powerful PCR in 30-60 min	≤ 6 kb	5-10 [#]	No	50 pg	3'-A	MB403
	Speedy Supreme NZYTaq	Hot-start-like PCR in 15-60 min	≤ 6 kb	5-10 [#]	No	1 pg	3'-A	MB390
Fidelity	NZYProof	High fidelity proofreading enzyme	≤ 10 kb	60	Yes	5 ng	Blunt	MB146
	Supreme NZYProof	Hot-start-like version of NZYProof	≤ 10 kb	15-30	Yes	1 ng	Blunt	MB283
	Speedy NZYProof	High fidelity PCR in 30-60 min	≤ 2 kb	5	Yes	10 ng	Blunt	MB404
	Speedy Supreme NZYProof	Fast & powerful fidelity PCR	≤ 2 kb	2	Yes	1 ng	Blunt	MB436
Long	NZYLong	Increased processivity for extended PCR	≤ 20 kb	60	No	5 ng	Mixed	MB003
	Supreme NZYLong	Hot-start-like version of NZYLong	≤ 25 kb	60	No	1 ng	Mixed	MB331

*Measures the minimal quantity of human gDNA required to amplify a 1 kb template

[#] For DNA fragments lower than 2kb, use 5 sec/kb

Powerful PCR

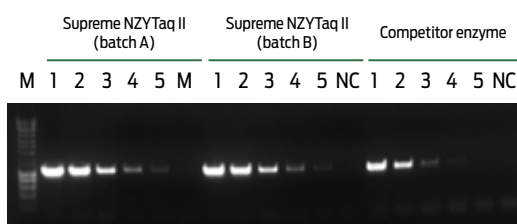
NZYTaq II DNA polymerase		
MB35401	500 U (100 µL)	35 €
MB35402	1000 U (2 x 100 µL)	65 €
MB35403	2500 U (5 x 100 µL)	149 €

NZYTaq II with 5x Gel Load Reaction Buffer		
MB36401	500 U (100 µL)	46 €
MB36402	1000 U (2 x 100 µL)	86 €
MB36403	2500 U (5 x 100 µL)	201 €

Supreme NZYTaq II DNA polymerase		
MB35501	500 U (100 µL)	82 €
MB35502	1000 U (2 x 100 µL)	153 €
MB35503	2500 U (5 x 100 µL)	359 €

Supreme NZYTaq II with 5x Gel Load Buffer		
MB36501	500 U (100 µL)	91 €
MB36502	1000 U (2 x 100 µL)	170 €
MB36503	2500 U (5 x 100 µL)	406 €

Supreme NZYTaq II DNA polymerase: High sensitivity, reproducibility and performance



Amplification of a 1-kb fragment from human genomic DNA using a 1:5 dilution series ranging from 20 ng to 32 pg. 1) 20 ng; 2) 4 ng; 3) 0.8ng; 4) 0.16 ng; 5) 0.032 ng; NC) No template control. M) NZYDNA Ladder III

NZYTaq II DNA polymerase Shipping Thermal Stability Analysis. Read the full report:



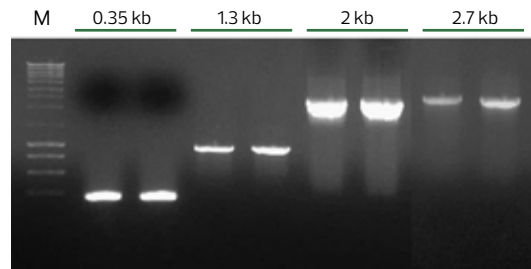
Speedy NZYTaq DNA polymerase

MB40301	125 U (25 µL)	24 €
MB40302	500 U (100 µL)	69 €

Speedy Supreme NZYTaq DNA polymerase

MB39001	500 U (100 µL)	160 €
MB39002	1000 U (2 x 100 µL)	301 €
MB39003	2500 U (5 x 100 µL)	710 €

Speedy NZYTaq DNA polymerase: Successful amplification of different-sized targets with limited extension time (5 sec/kb)



High Fidelity PCR

NZYProof DNA polymerase

MB14601	125 U (50 µL)	70 €
MB14602	500 U (200 µL)	239 €
MB14603	1000 U (2 x 200 µL)	439 €

Supreme NZYProof DNA polymerase

MB28301	125 U (50 µL)	81 €
MB28302	500 U (200 µL)	283 €
MB28303	1000 U (2 x 200 µL)	521 €

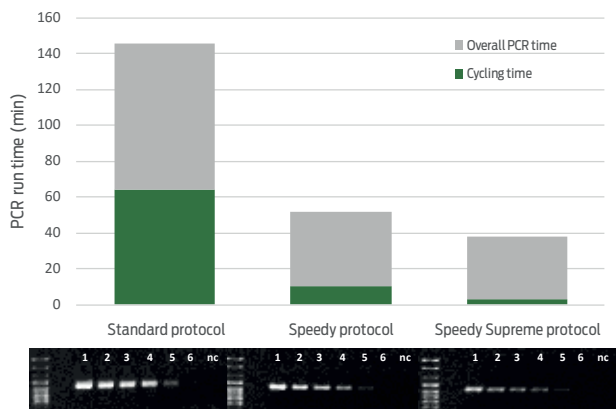
Speedy NZYProof DNA polymerase

MB40401	125 U (50 µL)	84 €
MB40402	500 U (200 µL)	300 €

Speedy Supreme NZYProof DNA polymerase

MB43601	125 U (50 µL)	69 €
MB43602	500 U (200 µL)	249 €

Speedy Supreme NZYProof DNA polymerase: The best choice for ultra-rapid fidelity PCRs



Amplification of a 1-kb fragment from human genomic DNA using dilution series ranging from 80 ng to 0.625 ng. The PCR was conducted with **Speedy Supreme NZYProof DNA polymerase** (2.5 U) in a 50 µL final volume in different cycling protocols (standard, speedy and speedy supreme).

The cycling times for each protocol are shown in green, while the overall PCR times on a Thermal Cycler System with a ramp rate of 4°C/sec are shown in grey. PCR products analysis through agarose gel electrophoresis (1% v/v TAE) is presented below to the chart, using NZYDNA Ladder VIII (Cat. No. MB175); numbers represent the amount of DNA template used.

1) 80 ng; 2) 40 ng; 3) 20ng; 4) 10 ng; 5) 2.5 ng; 6) 0.625 ng; NC) No template control

Long PCR

NZYLong DNA polymerase

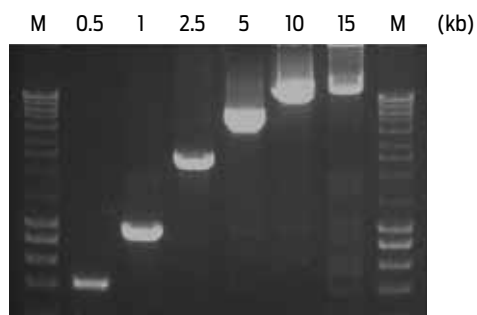
MB00301	125 U (25 µL)	47 €
MB00302	500 U (100 µL)	152 €
MB00303	1000 U (2 x 100 µL)	286 €

Supreme NZYLong DNA polymerase

MB33101	125 U (25 µL)	58 €
MB33102	500 U (100 µL)	183 €
MB33103	1000 U (2 x 100 µL)	339 €

NZYLong DNA polymerase:

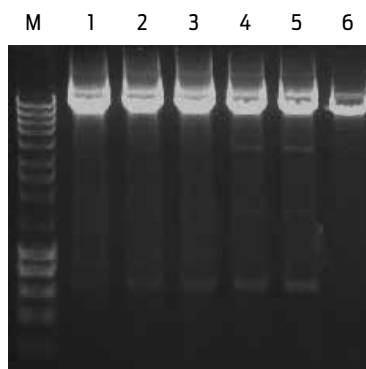
Successful amplification of DNA fragments from 0.5 to 15 kb



20-10 ng of *E. coli* gDNA were used in the different sized amplifications (the size of each amplicon is indicated in the figure).

Supreme NZYLong DNA polymerase:

High sensitivity with large-sized fragments using different amounts of *E. coli* gDNA



1) 40 ng; 2) 20 ng; 3) 10 ng; 4) 5 ng; 5) 2.5 ng; 6) 1.25 ng; M) NZYDNA Ladder III

Other PCR Enzymes

NZY Uracil-DNA Glycosylase

MB44601	500 U (100 µL)	65 €
MB44602	1500 U (3 x 100 µL)	149 €

NZY Thermolabile Uracil-DNA Glycosylase

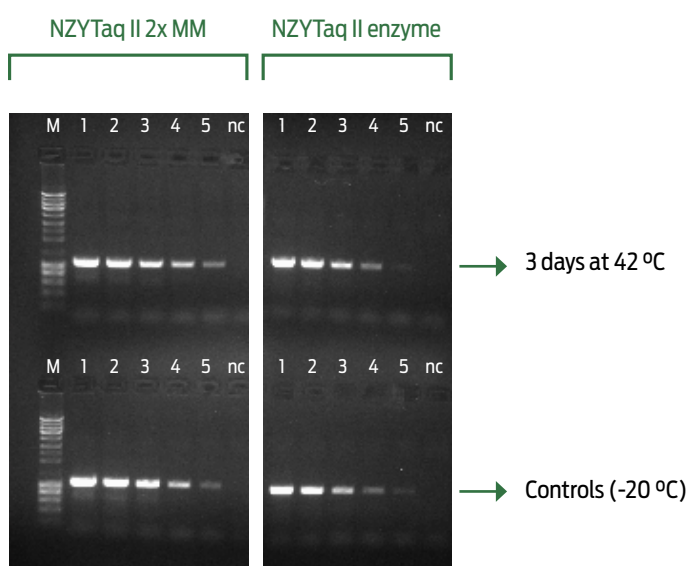
MB44501	500 U (100 µL)	65 €
MB44502	1500 U (3 x 100 µL)	149 €

MASTER MIXES

NZYtech presents a variety of master mixes containing all PCR components (except primers and template) at optimal concentrations for efficient DNA amplification. Green Master Mixes allow amplification reactions to be directly loaded onto agarose gels. The mixes are formulated in 2x concentrated solutions.

DNA polymerase	Master Mix	Loading dye	Cat. No.
NZYtaq II DNA polymerase	NZYtaq II 2x Green Master Mix	Yes	MB358
	NZYtaq II 2x Colourless Master Mix	No	MB357
Supreme NZYtaq II DNA polymerase	Supreme NZYtaq II 2x Green Master Mix	Yes	MB360
	Supreme NZYtaq II 2x Colourless Master Mix	No	MB359
Speedy NZYtaq DNA polymerase	Speedy NZYtaq 2x Green Master Mix	Yes	MB362
	Speedy NZYtaq 2x Colourless Master Mix	No	MB361
Speedy Supreme NZYtaq DNA polymerase	Speedy Supreme NZYtaq 2x Green Master Mix	Yes	MB391
	Speedy Supreme NZYtaq 2x Colourless Master Mix	No	MB392
NZYProof DNA polymerase	NZYProof 2x Green Master Mix	Yes	MB287
	NZYProof 2x Colourless Master Mix	No	MB288
Supreme NZYProof DNA polymerase	Supreme NZYProof 2x Green Master Mix	Yes	MB285
	Supreme NZYProof 2x Colourless Master Mix	No	MB286
NZYLong DNA polymerase	NZYLong 2x Green Master Mix	Yes	MB139
	NZYLong 2x Colourless Master Mix	No	MB332
Supreme NZYLong DNA polymerase	Supreme NZYLong 2x Green Master Mix	Yes	MB333
	Supreme NZYLong 2x Colourless Master Mix	No	MB334

NZYtaq II DNA polymerase: Robust stability at high temperatures



Activity of NZYtaq II DNA polymerase (individual enzyme and master mix formats) after 3 days at high temperature storage. NZYtaq II DNA polymerase and NZYtaq II 2x Green Master Mix were stored during 3 days at 42 °C. Controls of the same batches were kept at -20 °C. Then, the activity was assayed in a PCR experiment to amplify a 1-kb fragment using as template a dilution series of human genomic DNA (from 20 ng to 32 pg); numbers represent the amount of DNA template used (1: 20 ng; 2: 4 ng; 3: 0.8ng; 4: 0.16 ng; 5: 0.032 ng; nc: negative control without DNA). M: NZYDNA Ladder III (Cat. No. MBO44)

NZYTaq II-based master mixes

NZYTaq II 2x Green Master Mix

MB35801	2 x 1.25 mL (100 rxns of 50 µL)	46 €
MB35802	4 x 1.25 mL (200 rxns of 50 µL)	86 €
MB35803	20 x 1.25 mL (1000 rxns of 50 µL)	373 €

NZYTaq II 2x Colourless Master Mix

MB35701	2 x 1.25 mL (100 rxns of 50 µL)	46 €
MB35702	4 x 1.25 mL (200 rxns of 50 µL)	86 €
MB35703	20 x 1.25 mL (1000 rxns of 50 µL)	373 €

Supreme NZYTaq II-based master mixes

Supreme NZYTaq II 2x Green Master Mix

MB36001	2 x 1.25 mL (100 rxns of 50 µL)	84 €
MB36002	4 x 1.25 mL (200 rxns of 50 µL)	158 €
MB36003	20 x 1.25 mL (1000 rxns of 50 µL)	688 €

Supreme NZYTaq II 2x Colourless Master Mix

MB35901	2 x 1.25 mL (100 rxns of 50 µL)	84 €
MB35902	4 x 1.25 mL (200 rxns of 50 µL)	158 €
MB35903	20 x 1.25 mL (1000 rxns of 50 µL)	688 €

Speedy Supreme NZYTaq-based master mixes

Speedy Supreme NZYTaq 2x Green Master Mix

MB39101	2 x 1.25 mL (100 rxns of 50 µL)	114 €
MB39102	4 x 1.25 mL (200 rxns of 50 µL)	214 €
MB39103	20 x 1.25 mL (1000 rxns of 50 µL)	945 €

Speedy Supreme NZYTaq 2x Colourless Master Mix

MB39201	2 x 1.25 mL (100 rxns of 50 µL)	114 €
MB39202	4 x 1.25 mL (200 rxns of 50 µL)	214 €
MB39203	20 x 1.25 mL (1000 rxns of 50 µL)	945 €

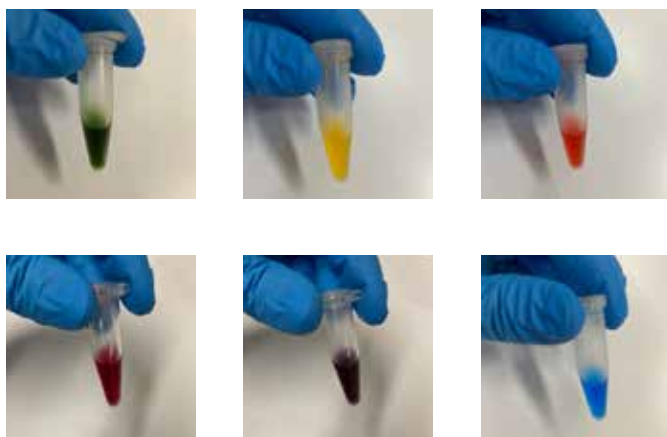
Speedy NZYTaq-based Master Mixes

Speedy NZYTaq 2x Green Master Mix

MB36201	2 x 1.25 mL (100 rxns of 50 µL)	65 €
MB36202	4 x 1.25 mL (200 rxns of 50 µL)	123 €
MB36203	20 x 1.25 mL (1000 rxns of 50 µL)	535 €

Speedy NZYTaq 2x Colourless Master Mix

MB36101	2 x 1.25 mL (100 rxns of 50 µL)	65 €
MB36102	4 x 1.25 mL (200 rxns of 50 µL)	123 €
MB36103	20 x 1.25 mL (1000 rxns of 50 µL)	535 €



Custom Colors Tailored to Your Brand

Don't settle for green when you can have any color you want. Create your own master mixes with custom colors that match your brand.

Choose your color from our exclusive palette (made to order):
Green | Yellow | Red | Pink | Purple | Blue

NZYProof-based master mixes

NZYProof 2x Green Master Mix

MB28701	2 x 1.25 mL (100 rxns of 50 µL)	113 €
MB28702	4 x 1.25 mL (200 rxns of 50 µL)	214 €
MB28703	20 x 1.25 mL (1000 rxns of 50 µL)	935 €

NZYProof 2x Colourless Master Mix

MB28801	2 x 1.25 mL (100 rxns of 50 µL)	113 €
MB28802	4 x 1.25 mL (200 rxns of 50 µL)	214 €
MB28803	20 x 1.25 mL (1000 rxns of 50 µL)	935 €

Supreme NZYProof-based master mixes

Supreme NZYProof 2x Green Master Mix

MB28501	2 x 1.25 mL (100 rxns of 50 µL)	170 €
MB28502	4 x 1.25 mL (200 rxns of 50 µL)	323 €
MB28503	20 x 1.25 mL (1000 rxns of 50 µL)	1413 €

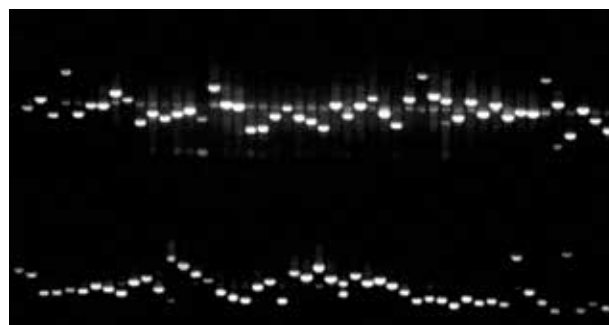
Supreme NZYProof 2x Colourless Master Mix

MB28601	2 x 1.25 mL (100 rxns of 50 µL)	170 €
MB28602	4 x 1.25 mL (200 rxns of 50 µL)	323 €
MB28603	20 x 1.25 mL (1000 rxns of 50 µL)	1413 €

Green Master Mixes offer convenience in colony PCR and high-throughput applications



NZYLong 2x Green Master Mix:
Convenience of direct gel loading of different-sized PCR products
in a high-throughput PCR experiment (96 amplifications)



NZYLong-based master mixes

NZYLong 2x Green Master Mix

MB13902	2 x 1.25 mL (100 rxns of 50 µL)	103 €
MB13903	4 x 1.25 mL (200 rxns of 50 µL)	194 €
MB13904	20 x 1.25 mL (1000 rxns of 50 µL)	851 €

NZYLong 2x Colourless Master Mix

MB33201	2 x 1.25 mL (100 rxns of 50 µL)	103 €
MB33202	4 x 1.25 mL (200 rxns of 50 µL)	194 €
MB33203	20 x 1.25 mL (1000 rxns of 50 µL)	851 €

Supreme NZYLong-based master mixes

Supreme NZYLong 2x Green Master Mix

MB33301	2 x 1.25 mL (100 rxns of 50 µL)	150 €
MB33302	4 x 1.25 mL (200 rxns of 50 µL)	283 €
MB33303	20 x 1.25 mL (1000 rxns of 50 µL)	1241 €

Supreme NZYLong 2x Colourless Master Mix

MB33401	2 x 1.25 mL (100 rxns of 50 µL)	150 €
MB33402	4 x 1.25 mL (200 rxns of 50 µL)	283 €
MB33403	20 x 1.25 mL (1000 rxns of 50 µL)	1241 €

MULTIPLEX MIXES

NZYtech developed PCR master mixes based on our non-proofreading and proofreading enzymes for the simultaneous amplification of multiple DNA fragments (up to 15 targets) in a single tube. The mixes are provided in 2x concentrated solutions, in green (direct-gel load) and colourless versions.

Multiplex PCR NZYtaq 2x Green Master Mix

MB33501	2 x 1.25 mL (100 rxns of 50 µL)	147 €
MB33502	4 x 1.25 mL (200 rxns of 50 µL)	296 €
MB33503	20 x 1.25 mL (1000 rxns of 50 µL)	1298 €

Multiplex PCR NZYtaq 2x Colourless Master Mix

MB33601	2 x 1.25 mL (100 rxns of 50 µL)	147 €
MB33602	4 x 1.25 mL (200 rxns of 50 µL)	296 €
MB33603	20 x 1.25 mL (1000 rxns of 50 µL)	1298 €

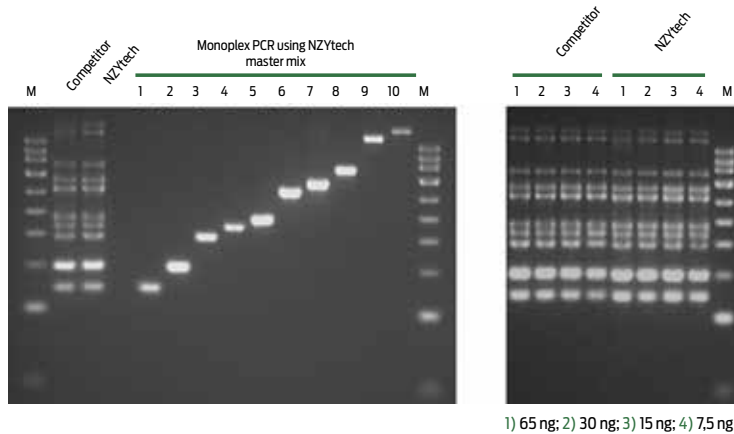
Multiplex PCR NZYProof 2x Green Master Mix

MB33701	2 x 1.25 mL (100 rxns of 50 µL)	183 €
MB33702	4 x 1.25 mL (200 rxns of 50 µL)	347 €

Multiplex PCR NZYProof 2x Colourless Master Mix

MB33801	2 x 1.25 mL (100 rxns of 50 µL)	183 €
MB33802	4 x 1.25 mL (200 rxns of 50 µL)	347 €

Multiplex PCR NZYtaq 2x Green Master Mix:
High performance in a multiplex PCR reaction amplifying 10 different fragments from human genomic DNA



COMPONENTS/SUPPLEMENTS

dNTPs

dNTPs NZYSet

MB08701	100 mM (4 x 0.25 mL)	57 €
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dNTPs NZYMix

MB08601	25 mM each, 1 mL	59 €
MB08602	25 mM each, 5 mL	269 €
MB08603	10 mM each, 0.2 mL	14 €
MB08604	10 mM each, 1 mL	39 €
MB08605	10 mM each, 5 mL	149 €

PCR Supplements

NZYtech supplements are available to optimize PCR conditions with NZYtaq II DNA polymerase.

NZYtaq 5x Optimizer Solution

MB06001	1 mL	69 €
MB06002	3 x 1 mL	172 €

NZYtaq 2x GC-Enhancer Solution

MB14301	1 mL	69 €
MB14302	5 x 1 mL	274 €



real-time pcr

qPCR MASTER MIXES

ONE-STEP RT-qPCR KITS

ONE-STEP RT-qPCR MASTER MIXES

qPCR COMPONENTS

REAL-TIME PCR

qPCR MASTER MIXES

NZYtech has developed and optimized two of the most widely used real-time fluorescent PCR chemistries: the probe-detection technology (Probe Mixes) and the intercalating green dye chemistry (Green Mixes). NZYSupreme mixes are ultra-sensitive mixes developed with a dual hot-start mode. NZYSpeedy mixes present a higher performance for the faster real-time PCR protocols. Passive reference dye based on ROX™ dye is used to normalize the fluorescent reporter signal in real-time PCR. NZYtech provides highly optimized mixes that are compatible with different thermocyclers available on the market. NZYtech recently increased its portfolio of real-time qPCR products by introducing lyophilized master mixes, which are very stable formulations that allow an eco-friendly and cost-effective room temperature shipment.

Choose the mix with the reference dye that is most appropriate for your instrument with the help of the qPCR Selection Guide below.

	ROX plus	ROX	(no ROX*)
Agilent			
AriaMX		⊗	
MX3000P™, MX3005P™, MX4000P™		⊗	
Applied Biosystems™			
7000/7300/7700	⊗		
7500/7500 FAST		⊗	
7900/7900HT/7900HT FAST	⊗		
QuantStudio™ 5, 6, 7, 12k Flex/ViiA7™		⊗	
StepOne™/StepOne™plus	⊗		
Bio-Rad®			
CFX Opus/CFX96™/CFX384™			⊗
Opticon™/Opticon™ 2			⊗
Fluidigm®			
BioMark™		⊗	
Illumina®			
Eco™			⊗
Qiagen			
Rotor-Gene™ 3000			⊗
Rotor-Gene™ 6000			⊗
Rotor-Gene™ Q			⊗
Roche			
Lightcycler® 96			⊗
Lightcycler® 480			⊗
Lightcycler® Nano			⊗

* For qPCR instruments that require ROX reference dye, it is possible to add ROX in a separate step, according to instructions provided in the respective Master Mix product brochure.

Green Master Mixes

NZYSupreme qPCR Green Master Mix (2x), ROX plus

MB44001	2 x 1 mL (200 rxns of 20 µL)	99 €
MB44002	5 x 1 mL (500 rxns of 20 µL)	219 €
MB44003	20 x 1 mL (2000 rxns of 20 µL)	659 €

NZYSupreme qPCR Green Master Mix (2x), ROX

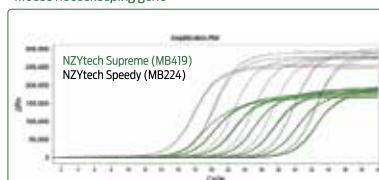
MB44101	2 x 1 mL (200 rxns of 20 µL)	99 €
MB44102	5 x 1 mL (500 rxns of 20 µL)	219 €
MB44103	20 x 1 mL (2000 rxns of 20 µL)	659 €

NZYSupreme qPCR Green Master Mix (2x)

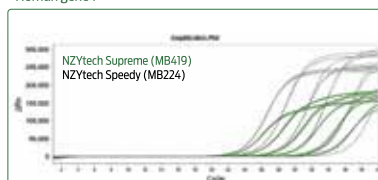
MB41901	2 x 1 mL (200 rxns of 20 µL)	99 €
MB41902	5 x 1 mL (500 rxns of 20 µL)	219 €
MB41903	20 x 1 mL (2000 rxns of 20 µL)	659 €

NZYSupreme qPCR Green Master Mix Benchmark Analysis

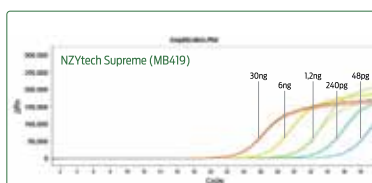
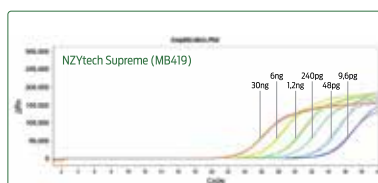
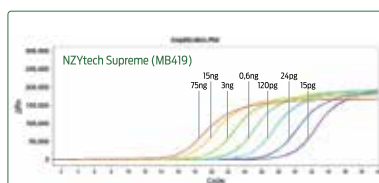
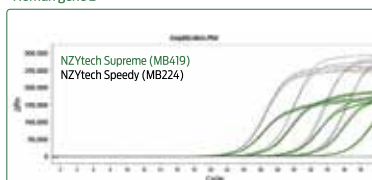
Mouse housekeeping gene



Human gene 1



Human gene 2



	Mouse housekeeping gene		Human gene 1		Human gene 2	
	Efficiency	Detetion Range*	Efficiency	Detetion Range*	Efficiency	Detetion Range*
NZYSupreme qPCR Green Master Mix	101.1%	6	106.5%	7	75.3%	5
NZYSpeedy qPCR Green Master Mix	92.4%	6	89.5%	7	66.4%	4
Competitor AB	94.0%	6	111.5%	7	73.0%	5
Competitor B	104.6%	6	100.9%	7	75.6%	5
Competitor N	96.8%	6	99.7%	7	71.0%	5
Competitor P	99.3%	6	70.2%	7	40.9%	4
Competitor Q	101.6%	6	85.5%	7	62.9%	5
Competitor QB	99.7%	6	107.6%	7	67.3%	5

(* Detection range is expressed as number of detected 5-fold dilutions)

Hot-start like activity
Reproducibility
Highly sensitive



Performance and Benchmark Analysis
NZYSpeedy qPCR Green Master Mix vs
NZYSupreme qPCR Green Master Mix vs
Competitors.
Read the full report:



NZYSpeedy qPCR Green Master Mix (2x), ROX plus

MB22201	2 x 1 mL (200 rxns of 20 µL)	125 €
MB22202	5 x 1 mL (500 rxns of 20 µL)	259 €
MB22203	20 x 1 mL (2000 rxns of 20 µL)	899 €

NZYSpeedy qPCR Green Master Mix (2x)

MB22401	2 x 1 mL (200 rxns of 20 µL)	125 €
MB22402	5 x 1 mL (500 rxns of 20 µL)	259 €
MB22403	20 x 1 mL (2000 rxns of 20 µL)	899 €

NZYSpeedy qPCR Green Master Mix (2x), ROX

MB22301	2 x 1 mL (200 rxns of 20 µL)	125 €
MB22302	5 x 1 mL (500 rxns of 20 µL)	259 €
MB22303	20 x 1 mL (2000 rxns of 20 µL)	899 €

Probe Master Mixes

NZYSupreme qPCR Probe Master Mix (2x), ROX plus

MB43901	2 x 1 mL (200 rxns of 20 µL)	99 €
MB43902	5 x 1 mL (500 rxns of 20 µL)	219 €
MB43903	20 x 1 mL (2000 rxns of 20 µL)	659 €

NZYSupreme qPCR Probe Master Mix (2x), ROX

MB43801	2 x 1 mL (200 rxns of 20 µL)	99 €
MB43802	5 x 1 mL (500 rxns of 20 µL)	219 €
MB43803	20 x 1 mL (2000 rxns of 20 µL)	659 €

NZYSupreme qPCR Probe Master Mix (2x)

MB41601	2 x 1 mL (200 rxns of 20 µL)	99 €
MB41602	5 x 1 mL (500 rxns of 20 µL)	219 €
MB41603	20 x 1 mL (2000 rxns of 20 µL)	659 €

Lyo NZYSupreme qPCR Probe Master Mix (2x)

MB41702	For 3 x 0.5 mL (150 rxns of 20 µL)	99 €
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NZYSupreme Multiplex qPCR Probe Master Mix (2x)

MB45201	2 x 1 mL (200 rxns of 20 µL)	109 €
MB45202	5 x 1 mL (500 rxns of 20 µL)	239 €
MB45203	20 x 1 mL (2000 rxns of 20 µL)	699 €

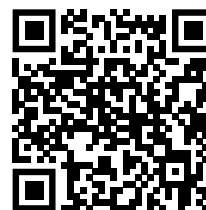
Lyo NZYSupreme Multiplex qPCR Probe Master Mix (2x)

MB45301	For 3 x 0.5 mL (150 rxns of 20 µL)	109 €
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High efficiency
High specificity
Efficient multiplexing



NZYSupreme qPCR Probe
Master Mix.
Read the benchmark:



NZYSpeedy qPCR Probe Master Mix (2x), ROX plus

MB22801	2 x 1 mL (200 rxns of 20 µL)	125 €
MB22802	5 x 1 mL (500 rxns of 20 µL)	259 €
MB22803	20 x 1 mL (2000 rxns of 20 µL)	899 €

NZYSpeedy qPCR Probe Master Mix (2x), ROX

MB22901	2 x 1 mL (200 rxns of 20 µL)	125 €
MB22902	5 x 1 mL (500 rxns of 20 µL)	259 €
MB22903	20 x 1 mL (2000 rxns of 20 µL)	899 €

NZYSpeedy qPCR Probe Master Mix (2x)

MB23001	2 x 1 mL (200 rxns of 20 µL)	125 €
MB23002	5 x 1 mL (500 rxns of 20 µL)	259 €
MB23003	20 x 1 mL (2000 rxns of 20 µL)	899 €

ONE-STEP RT-qPCR KITS

NZYtech provides One-step real-time PCR kits designed to directly amplify RNA samples on your real-time PCR instrument. These kits were developed to enable cDNA synthesis from input RNA followed by PCR amplification of the cDNA in the same reaction well, with no extra hands-on requirement or further reagent addition. This not only reduces the number of sample manipulations but also saves time. One-step kits are available for Probe and Green detection. Choose the One-step real-time PCR kit that most suits your experiment and that is most appropriate for your instrument through the analysis of the qPCR Selection Guide presented in page 22.

One-Step NZYSpeedy RT-qPCR Green Kits

Fast

One-step RT-qPCR Green Kit (2x), ROX plus

MB34401	1 mL (100 rxns of 20 µL)	112 €
MB34402	5 x 1 mL (500 rxns of 20 µL)	504 €

One-step RT-qPCR Green Kit (2x), ROX

MB34501	1 mL (100 rxns of 20 µL)	112 €
MB34502	5 x 1 mL (500 rxns of 20 µL)	504 €

One-step RT-qPCR Green Kit (2x)

MB34601	1 mL (100 rxns of 20 µL)	112 €
MB34602	5 x 1 mL (500 rxns of 20 µL)	504 €

One-Step NZYSpeedy RT-qPCR Probe Kits

Fast

One-step RT-qPCR Probe Kit (2x), ROX plus

MB35001	1 mL (100 rxns of 20 µL)	112 €
MB35002	5 x 1 mL (500 rxns of 20 µL)	504 €

One-step RT-qPCR Probe Kit (2x), ROX

MB35101	1 mL (100 rxns of 20 µL)	112 €
MB35102	5 x 1 mL (500 rxns of 20 µL)	504 €

One-step RT-qPCR Probe Kit (2x)

MB35201	1 mL (100 rxns of 20 µL)	112 €
MB35202	5 x 1 mL (500 rxns of 20 µL)	504 €

ONE-STEP RT-qPCR MASTER MIXES

NZYtech provides One-step real-time qPCR master mixes containing all required components (except primers/probe and template) to perform reverse transcription and qPCR amplification in a single-step. This offers great convenience and minimizes the risk of errors and contaminations. These master mixes were engineered with a dual hot-start enzyme control mechanism to provide the highest detection sensitivity. In addition, the latest developments in PCR enhancers were introduced. Lyophilized versions are also available as very stable room temperature options.

One-Step RT-qPCR Probe Master Mixes

NZYSupreme One-step RT-qPCR Probe Master Mix (2x)		
MB41401	2 x 1 mL (200 rxns of 20 µL)	241 €
MB41402	5 x 1 mL (500 rxns of 20 µL)	549 €
MB41403	20 x 1 mL (2000 rxns of 20 µL)	1979 €

NZYSupreme Multiplex RT-qPCR Probe MM (2x)		
MB44201	2 x 1 mL (200 rxns of 20 µL)	263 €
MB44202	5 x 1 mL (500 rxns of 20 µL)	582 €
MB44203	20 x 1 mL (2000 rxns of 20 µL)	2089 €

NEW NZYSupreme One-step RT-qPCR Probe Master Mix (2x), ROX		
MB47801	2 x 1 mL (200 rxns of 20 µL)	241 €
MB47802	5 x 1 mL (500 rxns of 20 µL)	549 €
MB47803	20 x 1 mL (2000 rxns of 20 µL)	1 979 €

NEW NZYSupreme One-step RT-qPCR Probe Master Mix (2x), ROX plus		
MB47901	2 x 1 mL (200 rxns of 20 µL)	241 €
MB47902	5 x 1 mL (500 rxns of 20 µL)	549 €
MB47903	20 x 1 mL (2000 rxns of 20 µL)	1 979 €

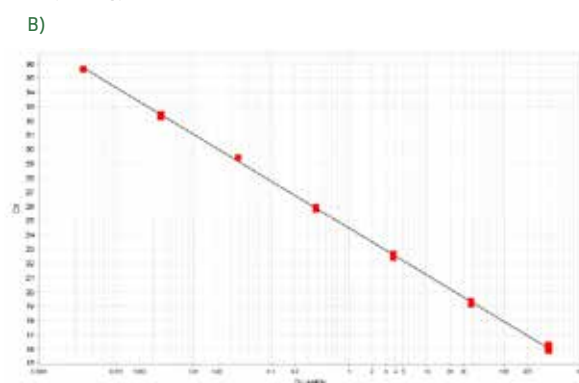
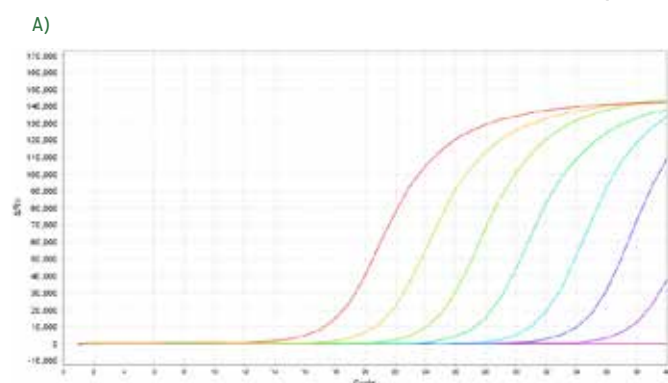


NZYSupreme Multiplex One-Step RT-qPCR Probe Master Mix is a high performing master mix, combining sensitivity and efficiency for fast and accurate results.

Benchmarked against a total of 4 market-leading master mixes considered to be the gold-standard in qPCR Master Mixes, the MB442 proved to be a leading -edge product with first-class results.

Read the full report:

NZYSupreme One-step RT-qPCR Probe Master Mix: High-performance across a wide dynamic range of very low RNA inputs (<0.5 pg)



A 10-fold serial dilution of total RNA from mouse liver (375 ng to 0.375 pg) was used as template for a one-step real-time RT-qPCR experiment to detect the rpl27 housekeeping gene.

Panel A: evidence of the high performance and linearity when using NZYSupreme One-step RT-qPCR Probe Master Mix. Panel B: standard curve (slope: -3.28; efficiency: 101.7%).

Ultra-sensitive: Detect low-copy number targets (8 copies)

Dual Hot-Start mode for Supreme versions

Include RNase Inhibitor

Efficient multiplexing

Lyo formats stable at Room Temperature



Lyo One-step RT-qPCR Master Mixes

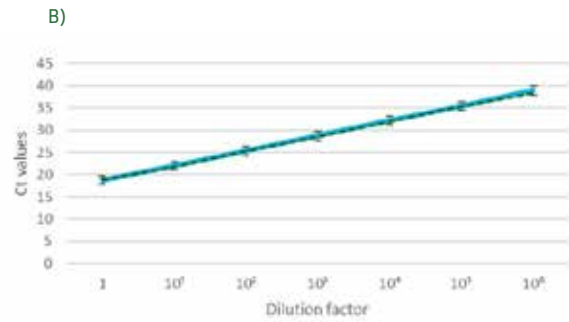
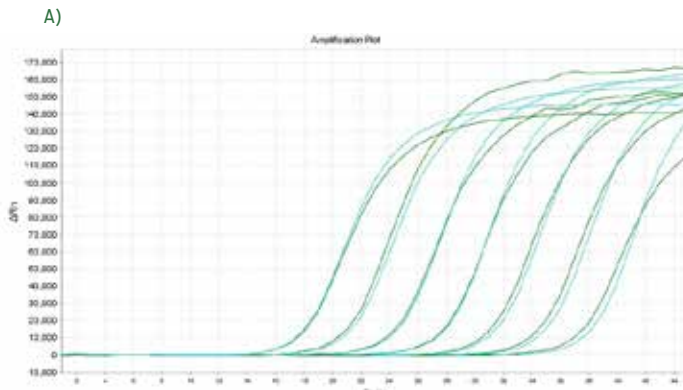
Lyo NZYSupreme RT-qPCR Probe Master Mix (2x)

MB41501 For 3 x 0.5 ml (150 rxns of 20 µL) 241 €

Lyo NZYSupreme Multiplex RT-qPCR Probe Master Mix (2x)

MB44301 For 3 x 0.5 ml (150 rxns of 20 µL) 263 €

NZYSupreme One-step RT-qPCR Probe Master Mix vs Lyo NZYSupreme One-step RT-qPCR Probe Master Mix:
Remarkable efficiency and sensitivity ensured in all formats available



High sensitivity and linearity of the two formulations of NZYSupreme One-step RT-qPCR Probe Master Mix – liquid (with glycerol) and lyophilized (tested after rehydrated with the respective reconstitution buffer), across a wide range of input RNA (from 375 ng to 0.375 µg) to amplify the rpl27 mouse gene.

Panel A: Amplification curves evidencing the high reproducibility between the liquid (blue curves) and lyophilized (green curves) formats.

Panel B: Comparison of Ct variation across template dilutions.

qPCR COMPONENTS

DEPC-treated Water

MB43701 5 x 1 mL 22 €



RNA & cDNA

RNA SYNTHESIS

cDNA SYNTHESIS

RNases

RNA PROTECTION

RNA & cDNA

RNA SYNTHESIS

NZYtech offers convenient kits for the *in vitro* transcription of DNA into RNA using a T7 RNA polymerase that is highly specific for T7 phage promoters. The enzyme is also provided separately for your routine protocols.

NZY T7 RNA Synthesis kit		
MB35301	50 reactions	199 €

NZY T7 High Yield RNA Synthesis kit		
MB36301	50 reactions	299 €

T7 RNA polymerase		
MB08001	10000 U (20 U/μL)	49 €
MB08003	10000 U (200 U/μL)	49 €

cDNA SYNTHESIS

Reverse transcriptases

NZY M-MuLV and NZY Reverse Transcriptases lack 3'-5' exonuclease activity and have no intrinsic RNase H activity. NZY Reverse Transcriptase is a thermostable (50-55 °C) and sensitive enzyme with fast synthesis capacity (30 min reaction). Supreme NZYReverse Transcriptase was recently developed to increase inhibitor resistance, range and thermostability.

NZY M-MuLV Reverse Transcriptase		
MB08301	20000 U	80 €
MB08302	100000 U	341 €

NZY Reverse Transcriptase		
MB12401	20000 U	103 €
MB12402	100000 U	457 €

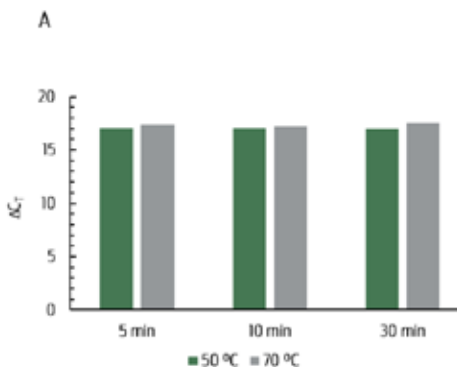
Lyo NZY Reverse Transcriptase		
MB40901	100000 U	504 €

NEW Supreme NZY Reverse Transcriptase		
MB44801	20000 U	299 €
MB44802	100000 U	1299 €

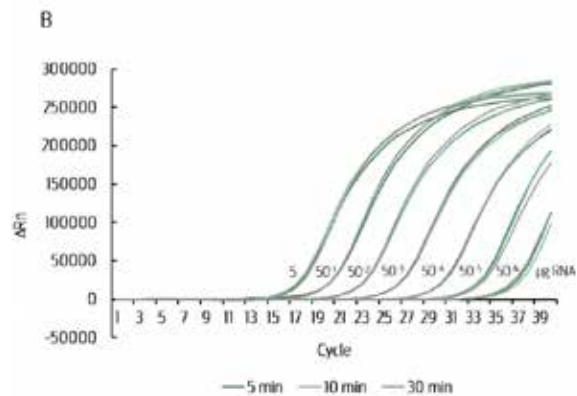
NEW Lyo Supreme NZYReverse Transcriptase		
MB48201	20000 U	349 €
MB48202	100000 U	1599 €

Fast cDNA synthesis

A) (Activity of RT 29):



B) (cDNA synthesis):



Performance of Supreme RT variant.

(A) cDNA synthesis at 50°C and 70°C for three reaction periods: 10, 20 and 30 minutes. (B) A dilution series of mouse total RNA (from 5 μg to 5 pg) was used as template for cDNA synthesis at 70°C. Synthesized cDNA was detected with PPIA mouse gene TaqMan primers/probe.

Sensitivity at high temperatures

Activity of Supreme RT 29 at high temperatures. (A) cDNA synthesis was tested at two temperatures, 50°C, and 70°C, in the amplification of mouse total RNA (from 5 μg to 5 pg) for 5 minutes with oligo (dT)18 primers. (B) Synthesized cDNA was detected with PPIA, Rplp0, RPL27 and B2M mouse genes TaqMan primers/probe. The graphic presents the CT value of 5 μg of RNA input.

cDNA kits

NZYtech offers convenient, reliable and cost-effective kits to generate high quality cDNA for different downstream applications, such as standard PCR, cDNA library construction, or two-step RT-PCR assays. cDNA kits contain all the components required to synthesize first-strand cDNA (except the template RNA), at optimal conditions. A mixture of NZY Ribonuclease Inhibitor and one of the NZYtech's reverse transcriptases is included in all kits. NZY First-Strand cDNA Synthesis kits provide more specific synthesis of cDNA, while NZY M-MuLV First-Strand Synthesis kits are a cost-effective alternative, also providing high yields of full-length cDNA at low reaction temperatures.

Features	NZY First-Strand cDNA Synthesis Kits	NZY M-MuLV First-Strand cDNA Synthesis Kits
Reverse Transcriptase	NZY Reverse Transcriptase	NZY M-MuLV Reverse Transcriptase
Product length	up to 7 kb	up to 7 kb
Optimal reaction temperature	50 °C	37 °C
Reaction time	30 min	50 min
Sensitivity	10 pg – 5 µg total RNA	10 pg – 5 µg total RNA
Amplification of GC-rich templates	yes	-
Amplification of secondary structure-rich templates	yes	-
Available as kits with separate oligos	yes	yes

⚠ NZY First-Strand cDNA Synthesis kit		
MB12501	50 reactions	196 €
MB12502	250 reactions	857 €

⚠ NZY First-Strand Synthesis kit, separate oligos		
MB17001	50 reactions	199 €
MB17002	250 reactions	879 €

⚠ NZY M-MuLV First-Strand cDNA Synthesis kit		
MB17201	50 reactions	151 €
MB17202	250 reactions	659 €

⚠ NZY M-MuLV First-Strand cDNA Synthesis Kit, separate oligos		
MB17301	50 reactions	159 €
MB17302	250 reactions	679 €

⚠ NZY First-Strand cDNA Synthesis Flexible Pack		
MB40001	200 reactions	224 €

RNA primers

⚠ Oligo (dT) ₁₈ primer mix		
MB12801	27 µg (100 µL)	69 €

⚠ Random hexamer mix		
MB12901	25 µg (500 µL)	57 €

Oligo(dT)₁₈ primer: hybridizes to the poly(A) tail found at the 3' - end of most eukaryotic mRNAs; frequently used when cDNA is used for cloning, cDNA library construction and qPCR

Random hexamers: priming ssDNA or RNA for extension by DNA polymerase or Reverse transcriptases; during cDNA synthesis, random hexamer will perform random priming throughout the entire length of the RNA to generate a cDNA pool containing various lengths of cDNA



RNases

NZY RNase H (<i>E. coli</i>)		
MB08501	250 U	57 €
MB08502	1250 U	228 €

NZY RNase A		
MB18701	100 mg	109 €

RNA PROTECTION

NZYtech Ribonuclease Inhibitors are active againsts RNases (E. C. 3.1) of the pancreatic type (RNase A, B and C) and are useful in applications where eukaryotic RNase contamination is a potential problem. For reactions that do not tolerate higher levels of DTT, please use the oxidation-resistant NZY Ribonuclease Inhibitor (no DTT). NZYtech offers a powerful trio of cleaners targeting DNA, RNA, Mycoplasma, and nucleases, ensuring thorough decontamination for optimal laboratory operations.

NZY Ribonuclease Inhibitor		
MB08401	2500 U	57 €
MB08402	5 x 2500 U	228 €

Lyo NZY Ribonuclease Inhibitor		
MB41102	20000 U	399 €
MB41103	5 x 20000 U	1499 €

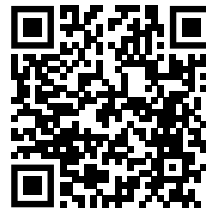
NZY Ribonuclease Inhibitor (no DTT)		
MB41001	2500 U	57 €
MB41002	5 x 2500 U	228 €

Lyo NZY Ribonuclease Inhibitor (no DTT)		
MB41202	20000 U	399 €
MB41203	5 x 20000 U	1499 €

NEW DNA & RNA Cleaner		
MB46201	250 mL	24 €
MB46202	500 mL (Refill)	46 €

NEW RNase & DNase Cleaner		
MB46301	250 mL	24 €
MB46302	500 mL (Refill)	46 €

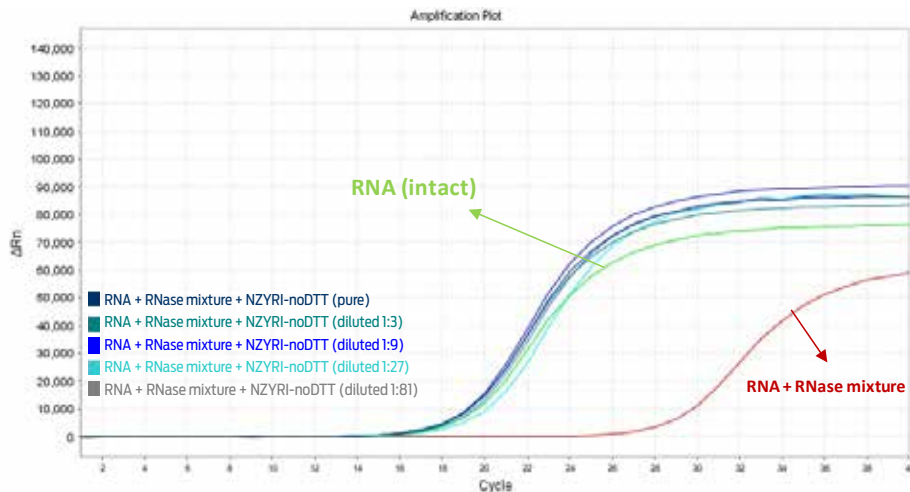
NEW Nucleases & Nucleic Acid Cleaner		
MB48301	250 mL	32 €
MB48302	500 mL (Refill)	59 €



As a life science researcher, you deal with contamination issues daily, affecting your experiments' reliability. Common disinfectants like ethanol, bleach, and hydrogen peroxide have limits in your work. Finding a better solution is crucial.

Scan the QR code and read the full whitepaper to find out exactly how you can optimize your lab work with precise contamination control.

NZY Ribonuclease Inhibitor (no DTT): Efficient protection of RNA against RNases in non-added DTT reactions



The ability of NZY Ribonuclease Inhibitor (no DTT) to inhibit ribonuclease (RNase) activity was tested by pre-mixing 125 ng of mouse RNA with different amounts of the inhibitor enzyme (1:3 dilution series) and a cocktail of RNases from serum origin. No DTT was added in the reactions, which were incubated at 37 °C for 1 hour. A negative control (without NZY Ribonuclease Inhibitor (no DTT)) and a positive control (only RNA not exposed to the RNases mixture) were introduced. The integrity of RNA was judged through a real-time one-step RT-qPCR experiment. Complete preservation of RNA integrity is observed in the presence of NZY Ribonuclease Inhibitor (no DTT) (in all dilutions tested), as measured by the successful amplification of the desired target in the real-time RT-PCR assay (the signal overlaps to that emitted by the positive control – intact RNA).



restriction enzymes

CONVENTIONAL
SPEEDY

RESTRICTION ENZYMES

NZYtech offers a vast portfolio of restriction enzymes used in recombinant DNA technology. We present two different types of enzymes: Conventional and Fast Digestion (Speedy). Each conventional restriction enzyme is provided with a specific reaction buffer in which the enzyme is 100% active. For double digestions, we recommend to use the 10x NZYBuffer U (sold separately). Speedy restriction enzymes are a new generation of DNA modifying enzymes that were developed for rapid DNA digestion (digestion periods range from 5-15 min) and are 100% active in the 10x NZYSpeedy Buffers Colourless or Orange.

CONVENTIONAL



AscI GG↓CGCGCC	MB23101	500 U	57 €
	MB23102	2500 U	240 €
BglII A↓GATCT	MB06501	1000 U	35 €
	MB06502	5000 U	126 €
DdeI C↓TNAG	MB23601	500 U	69 €
	MB23602	2500 U	274 €
DpnI G(mA)↓TC	MB07801	100 U	24 €
	MB07802	1000 U	81 €
DpnII ↓GATC	MB23301	1000 U	46 €
	MB23302	5000 U	171 €
EcoRI G↓AATTC	MB06701	5000 U	24 €
	MB06702	25000 U	81 €
HindIII A↓AGCTT	MB07001	5000 U	35 €
	MB07002	25000 U	126 €
HinfI G↓ANTC	MB23901	500 U	24 €
	MB23902	2500 U	81 €

HpaI GTT↓AAC	MB07101	500 U	46 €
	MB07102	2500 U	171 €
MboI ↓GATC	MB24101	1000 U	46 €
	MB24102	5000 U	171 €
MluI A↓CGCGT	MB24301	1000 U	46 €
	MB24302	5000 U	171 €
NcoI C↓CATGG	MB06601	500 U	35 €
	MB06602	2500 U	126 €
PstI CTGCA↓G	MB07301	4000 U	35 €
	MB07302	20000 U	126 €
SalI G↓TCGAC	MB07701	2000 U	46 €
	MB07702	10000 U	171 €
TaqI T↓CGA	MB23501	1000 U	24 €
	MB23502	5000 U	81 €
XhoI C↓TCGAG	MB07401	2000 U	46 €
	MB07402	10000 U	171 €

SPEEDY



Speedy AscI GG↓CGCGCC	MB23201	50 reactions	81 €
	MB23202	250 reactions	343 €
Speedy BglII A↓GATCT	MB09301	100 reactions	46 €
	MB09302	500 reactions	171 €
Speedy DpnII ↓GATC	MB23401	100 reactions	81 €
	MB23402	500 reactions	343 €
Speedy EcoRI G↓AATTC	MB09501	500 reactions	24 €
	MB09502	2500 reactions	81 €
Speedy HindIII A↓AGCTT	MB09701	500 reactions	46 €
	MB09702	2500 reactions	171 €
Speedy HinfI G↓ANTC	MB24001	50 reactions	24 €
	MB24002	250 reactions	81 €
Speedy HpaI GTT↓AAC	MB09801	50 reactions	46 €
	MB09802	250 reactions	171 €

Speedy MboI ↓GATC	MB24201	100 reactions	46 €
	MB24202	500 reactions	171 €
Speedy MluI A↓CGCGT	MB24401	100 reactions	69 €
	MB24402	500 reactions	274 €
Speedy NcoI C↓CATGG	MB10001	50 reactions	46 €
	MB10002	250 reactions	171 €
Speedy PstI CTGCA↓G	MB10301	400 reactions	35 €
	MB10302	2000 reactions	126 €
Speedy Sall G↓TCGAC	MB10401	200 reactions	69 €
	MB10402	1000 reactions	274 €
Speedy XhoI C↓TCGAG	MB10701	200 reactions	46 €
	MB10702	1000 reactions	171 €

Buffers

10x NZYBuffer U

MB11001	500 µL	24 €
MB11002	1000 µL	35 €





DNA & RNA modifying enzymes

LIGASES

POLYMERASES

NUCLEASES

LAMP

OTHER MODIFYING ENZYMES

DNA & RNA MODIFYING ENZYMES

NZYtech offers a variety of enzymes optimized for the development of different molecular biology protocols, including nucleases, polymerases, ligases, DNA binding enzymes and others.

LIGASES

T4 DNA Ligase

MB00703	500 U	49 €
MB00704	2500 U	195 €

T4 dsRNA Ligase

MB42801	150 U	76 €
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Glycerol-free T4 DNA Ligase 50 U/μL

MB47201	5000 U	199 €
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Speedy Ligase

MB13001	50 ligations	81 €
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Lyo T4 DNA Ligase 50 U/μL

MB47301	5000 U	239 €
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T7 DNA Ligase

MB42501	100000 U	65 €
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DNA Ligase (*E. coli*)

MB42401	200 U	65 €
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T4 ssRNA Ligase

MB42701	1000 U	65 €
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Taq DNA Ligase

MB42601	2000 U	76 €
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POLYMERASES

DNA Polymerase I (*E. coli*)

MB42001	500 U	66 €
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Klenow Fragment of DNA Polymerase I

MB00901	300 U	81 €
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Klenow Fragment, (exo -)

MB42101	200 U	65 €
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T4 DNA Polymerase

MB42201	150 U	65 €
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phi29 DNA Polymerase

MB42301	250 U	54 €
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LOOP MEDIATED ISOTHERMAL AMPLIFICATION (LAMP)

NZY LAMP Fluorescent dye 50x

MB45401	250 μL	49 €
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NZY LAMP Positive Control Kit

MB48001	50 reactions	99 €
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NZY RT-LAMP Positive Control Kit

MB48101	50 reactions	99 €
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NZY Bst DNA Polymerase

MB44401	200 μL	65 €
MB44402	3 x 200 μL	164 €




As a life science researcher, you deal with contamination issues daily, affecting your experiments' reliability. Common disinfectants like ethanol, bleach, and hydrogen peroxide have limits in your work. Finding a better solution is crucial.


Read the full whitepaper to find out exactly you can optimize your lab work with precise contamination control.

NUCLEASES


 Endonuclease V (<i>E. coli</i>)		
MB21301	250 U	103 €


 UltraPrecise T7 Endonuclease I		
MB34001	50 reactions	146 €
MB34002	200 reactions	527 €


NZY DNase I		
MB19901	200 U/vial	79 €

 Exonuclease III (<i>E. coli</i>)		
MB43001	5000 U	65 €


 Exonuclease VII (<i>E. coli</i>)		
MB43201	200 U	65 €

 T7 Endonuclease I		
MB21201	250 U	92 €


 Nt.BbvCI, Nicking Endonuclease		
MB09401	1000 U	68 €
MB09402	5000 U	292 €

 Exonuclease I (<i>E. coli</i>)		
MB42901	3000 U	65 €

 Endonuclease IV (Tth)		
MB43101	500 U	76 €


 T5 Exonuclease		
MB43301	1000 U	65 €

OTHER MODIFYING ENZYMES

 MutS (<i>E. coli</i>)		
MB21101	50 µg	103 €
MB21102	250 µg	444 €


 dam Methyltransferase		
MB43401	500 U	76 €

 T4 Polynucleotide Kinase (T4 PNK)		
MB00801	500 U	81 €

 NZY Uracil-DNA Glycosylase		
MB44601	500 U (100 µL)	65 €
MB44602	1500 U (3 x100 µL)	149 €

 Topoisomerase I (<i>E. coli</i>)		
MB43501	100 U	65 €

 Alkaline Phosphatase (<i>E. coli</i>)		
MB01801	200 U	103 €

 NZY Thermolabile Uracil-DNA Glycosylase		
MB44501	500 U (100 µL)	65 €
MB44502	1500 U (3 x100 µL)	149 €





DNA cloning and mutagenesis kits

EASY CLONING & EXPRESSION

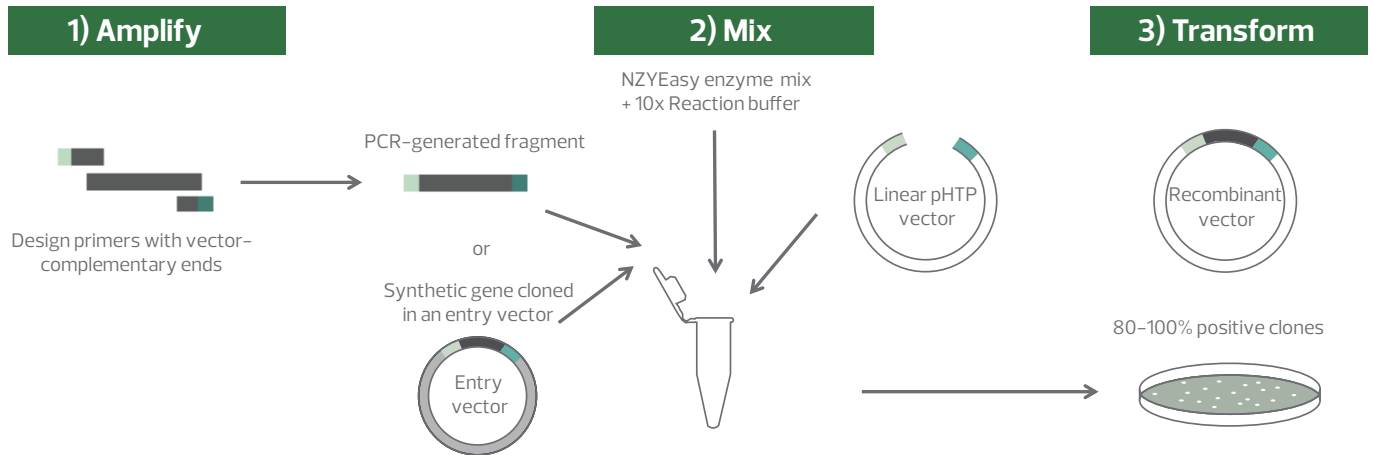
STANDARD CLONING

DNA MUTAGENESIS

DNA CLONING KITS

EASY CLONING & EXPRESSION

The NZYEasy Cloning & Expression System was designed to allow directional cloning of PCR-generated fragments or synthetic genes previously cloned in pUC-vectors into a linearized pHTP vector in a single reaction mediated by NZYEasy enzyme mix. The system allows achieving high cloning efficiencies and does not require the use of DNA ligases. In addition, no further treatment (e.g. restriction digestion, phosphorylation or blunt-end polishing) of the inserts is required.



NZYtech provides ready-to-use pHTP vectors in separate kits. The portfolio of pHTP prokaryotic expression vectors, which includes a different range of fusion tags, offers the possibility to quickly assay levels of expression and solubility of the desired protein in multiple expression vectors simultaneously. Choose the pHTP vectors that most suits your experiments on the table below:

Vector	Features	Comments	Kit Cat. No.
pHTP0	<i>lac</i> promoter and <i>lacZ_a</i> reporter	High-copy number cloning vector for the NZYEasy Cloning & Expression System; allows blue/white screening during cloning (if adding IPTG and X-GAL)	MB281
pHTP1	N- and/or C-terminal 6xHis	Standard vector for high-level protein expression in <i>E. coli</i>	Kit I, MB282
pHTP2	N- and/or C-terminal 6xHis; N-terminal LLDsbC	Leader Less DsbC promotes cytoplasmic isomerization of disulfide bonds	Kit II, MB319
pHTP3	N- and/or C-terminal 6xHis; N-terminal mutDsbC	Inactive DsbC promotes cytoplasmic solubilization without isomerization of disulfide bonds	Kit III, MB320
pHTP4	N- and/or C-terminal 6xHis; N-terminal DsbC	DsbC promotes periplasmic isomerization of disulfide bonds	Kit IV, MB321
pHTP7	N- and/or C-terminal 6xHis; N-terminal DsbA	DsbA promotes periplasmic formation of disulfide bonds	Kit VII, MB322
pHTP8	N- and/or C-terminal 6xHis; N-terminal Trx	Trx enhances solubility of tagged proteins	Kit VIII, MB323
pHTP9	N- and/or C-terminal 6xHis; N-terminal GFP	GFP is a reporter molecule that allows monitoring protein localization	Kit IX, MB324
pHTP10	N- and/or C-terminal 6xHis; N-terminal NusA	NusA enhances solubility of tagged proteins	Kit X, MB325
pHTP11	N- and/or C-terminal 6xHis; N-terminal GST	GST enables glutathione-based affinity purification of tagged proteins while enhancing protein solubility	Kit XI, MB326
pHTP13	N- and/or C-terminal 6xHis; N-terminal GB1	GB1 enhances solubility of tagged proteins	Kit XIII, MB327
pHTP14	N- and/or C-terminal 6xHis; N-terminal KSI	KSI enhances solubility of tagged proteins	Kit XIV, MB328
pHTP16	N- and/or C-terminal 6xHis; N-terminal CpA	CpA enhances solubility of tagged proteins	Kit XVI, M3290
pHTP17	N- and/or C-terminal 6xHis; N-terminal CpB	CpB enhances solubility of tagged proteins	Kit XVII, MB330

PCR-generated fragments can be cloned into the pHTP0 cloning vector (included in the NZYEasy Cloning kit) or, alternatively, into one of the various kanamycin-resistant pHTP expression vectors (included in the different NZYEasy Cloning & Expression kits) without the need to go through the tedious and laborious intermediate stages.

DNA Cloning

The NZYEasy Cloning kit was designed for time-saving and cost-effective DNA cloning. It includes the pHTP0 vector (pUC-derivative) that allows blue/white screening for positive bacterial colonies (if adding IPTG and X-GAL).

NZYEasy Cloning kit

MB28101	8 reactions	29 €
MB28103	96 reactions	199 €

DNA Cloning & Expression

NZYEasy Cloning & Expression kits include different expression vectors that use the T7/lac promoter for regulated high-level protein expression in *E. coli* strains containing the λ DE3 lysogen, such as BL21(DE3).

NZYEasy Cloning & Expression kit I

MB28201	8 reactions	29 €
MB28203	96 reactions	199 €

NZYEasy Cloning & Expression kit II

MB31901	8 reactions	29 €
MB31903	96 reactions	199 €

NZYEasy Cloning & Expression kit III

MB32001	8 reactions	29 €
MB32003	96 reactions	199 €

NZYEasy Cloning & Expression kit IV

MB32101	8 reactions	29 €
MB32103	96 reactions	199 €

NZYEasy Cloning & Expression kit VII

MB32201	8 reactions	29 €
MB32203	96 reactions	199 €

NZYEasy Cloning & Expression kit VIII

MB32301	8 reactions	29 €
MB32303	96 reactions	199 €

NZYEasy Cloning & Expression kit IX

MB32401	8 reactions	29 €
MB32403	96 reactions	199 €

NZYEasy Cloning & Expression kit X

MB32501	8 reactions	29 €
MB32503	96 reactions	199 €

NZYEasy Cloning & Expression kit XI

MB32601	8 reactions	29 €
MB32603	96 reactions	199 €

NZYEasy Cloning & Expression kit XIII

MB32701	8 reactions	29 €
MB32703	96 reactions	199 €

NZYEasy Cloning & Expression kit XIV

MB32801	8 reactions	29 €
MB32803	96 reactions	199 €

NZYEasy Cloning & Expression kit XVI

MB32901	8 reactions	29 €
MB32903	96 reactions	199 €

NZYEasy Cloning & Expression kit XVII

MB33001	8 reactions	29 €
MB33003	96 reactions	199 €

STANDARD CLONING

NZYtech's DNA cloning kits are optimized to provide high-efficiency cloning based on easy protocols with no requirement for time-consuming restriction digests. To clone PCR-amplified fragments take into account the type of DNA polymerase that was used to generate the DNA fragment and choose the appropriate cloning kit: NZY-A PCR cloning kits are designed for cloning of DNA fragments amplified using non-proofreading polymerases, while NZY-blunt PCR cloning kit is designed to clone blunt-end PCR products amplified by proofreading enzymes. For a faster DNA cloning, the speedy version of NZY-A PCR cloning kit (NZY-A Speedy PCR cloning kit) should be chosen.

Blunt-end

NZY-blunt PCR cloning kit was designed to allow the direct cloning of PCR products with blunt-ends which result from amplifications using proofreading DNA polymerases such as NZYProof DNA polymerase (MB146).

NZY-blunt PCR cloning kit		
MB12101	24 ligations + competent cells	219 €
MB12102	24 ligations	139 €

A-overhang

NZY-A PCR cloning kits were designed to clone PCR products produced by non-proofreading DNA polymerases such as NZYTaq II DNA polymerase (MB354). They take advantage of the terminal transferase activity of these polymerases which adds a single 3'-A overhang to each end of the PCR product. For a faster DNA cloning, NZYtech provides the NZY-A Speedy PCR cloning kit which allows direct cloning of PCR products with 3'-A overhangs in only 5 minutes at room temperature. Blunt-ended PCR fragments generated by amplification with proofreading polymerases can also be cloned using NZY-A PCR cloning kits after conducting an A-tailing procedure.

NZY-A PCR cloning kit			NZY-A Speedy PCR cloning kit		
MB05301	24 ligations + competent cells	209 €	MB13701	24 ligations + competent cells	229 €
MB05302	24 ligations	125 €	MB13702	24 ligations	169 €

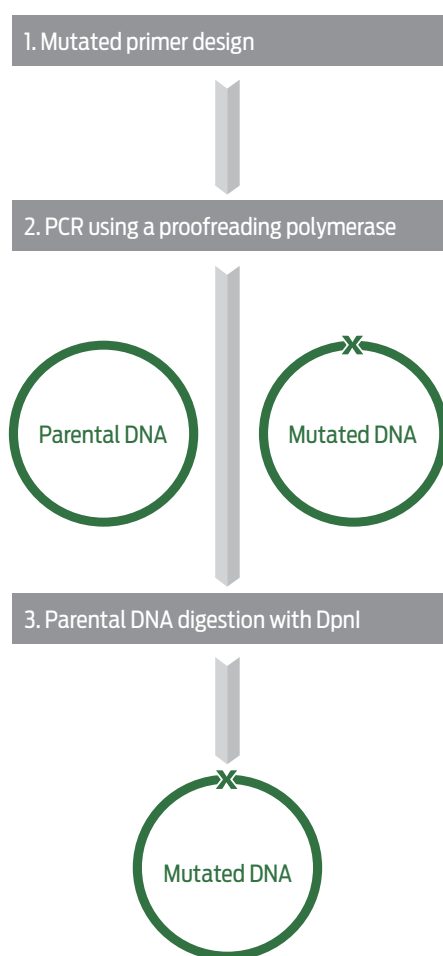
High efficiency cloning: >95% positive clones
Blue/white colony screening
5 minutes cloning with NZY-A Speedy PCR cloning kit



DNA MUTAGENESIS

Site-Directed Mutagenesis can help you in a range of applications allowing to edit the desired DNA sequence by incorporation of single or multiple point mutations in any type of plasmid DNA. NZYtech's Mutagenesis kits provide simple and highly efficient methods to generate point mutations and delete or insert single (or multiple) nucleotides in plasmid DNA using PCR. NZYSupreme Mutagenesis kit was recently developed to reduce labor time and increase the efficiency of DNA editing.

Mutagenesis kits contain a proofreading DNA polymerase for PCR amplification of dsDNA plasmid to be mutated. NZYSupreme Mutagenesis kit includes Supreme NZYProof DNA polymerase, an engineered highly accurate, fast and sensitive variant of NZYProof DNA polymerase (the DNA polymerase present in NZYMutagenesis kit), formulated in a 2x concentrated master mix solution. Both Supreme NZYProof and NZYProof DNA polymerases ensure high fidelity for the exponential PCR amplification, thus reducing the unwanted secondary mutations and enabling amplification of large plasmids up to 15 kb. In addition, mutagenesis system requires the provision of two synthetic oligonucleotide primers containing the desired mutation. Mutated primers can be designed following standard guidelines (overlapping primers) or using an improved methodology (non-overlapping primers) recommended on NZYSupreme Mutagenesis kit. The mutagenesis protocol includes only three main steps:



1. Mutated primer design

Primers should have between 25 and 45 bases in length, with a melting temperature (T_m) of ≥ 78 °C; a GC content of 40% and should terminate in one or more C or G bases;

2. PCR amplification

Extension of the oligonucleotide primers with a proofreading DNA polymerase generates a mutated plasmid containing staggered nicks;

3. Digestion with DpnI

Digestion of PCR product with DpnI endonuclease for elimination of the parental methylated and hemimethylated DNA template and selection of the mutation-containing synthetic DNA (not methylated).

NZYtech provides convenient versions of the kit, which include highly efficient competent cells for mutated plasmid recovering.

	NZYMutagenesis kit	NZYSupreme Mutagenesis kit
Primer design:	Standard (overlapping primers)	Improved (non-overlapping primers)
DNA polymerase:	NZYProof DNA polymerase	Supreme NZYProof 2x Colourless Master Mix
PCR time:	2h 30	<1h 30 min
Digestion time:	1 hour (at 37 °C)	5-15 min (at 37 °C)

NZYMutagenesis kit

MB01201	10 mutations	114 €
MB01202	10 mutations + competent cells	160 €

NZYSupreme Mutagenesis kit

MB44701	10 mutations	142 €
MB44702	10 mutations + competent cells	186 €





competent cells & media

COMPETENT CELLS

CELL PREPARATION & GROWTH

COMPETENT CELLS & MEDIA

COMPETENT CELLS

Efficient DNA transformation of *Escherichia coli* competent cells is essential for successful cloning and protein expression applications. NZYtech offers competent *E. coli* host strains for high-efficiency transformation.

NZY5α		
MB00401	20 transformations	89 €
MB00402	40 transformations	149 €

NZYStar		
MB00501	20 transformations	99 €
MB00502	40 transformations	171 €

NZY5α

10⁹ cfu/μg of pUC19

Blue/White colony screening

Routine cloning

Genotype: *fhuA2fj(argF-lacZ)U169 phoA glnV44Ψ80 fj(lacZ)M15 gyrA96recA1 relA1 endA1 thi-lhsdR17*



NZYStar

10⁹ cfu/μg of pUC19

Blue/White colony screening

High quality plasmid preparation

Construction of cDNA libraries/gene banks

Genotype: *endA1 hsdR17(rk-, mk+) supE44 thi -1 recA1 gyrA96 relA1 lac[F'proA+B+ lac-lqZfjM15:Tn10(TcR)]*



CELL PREPARATION & GROWTH

Competent cells preparation

NZYCompetent Cells Preparation Buffer is designed for the preparation of super competent *Escherichia coli* cells. The method is compatible with the classical heat shock transformation procedure and the transformation efficiencies are typically on the order of 10^8 - 10^9 transformants/ μg plasmid DNA with the most common *E. coli* strains.

NZYCompetent Cells Preparation Buffer

MB12001	100 mL	115 €
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Culture media

NZYtech offers a selection of high quality culture media for a wide variety of applications. Our specific formulations were extensively tested for use in cloning, plasmid DNA preparation and protein expression.

Agar Granulated

MB02902	500 g	139 €
MB02903	1000 g	219 €

LB Broth (granulated)

MB02802	500 g	104 €
MB02803	1000 g	129 €

Tryptone

MB16701	1000 g	209 €
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LB Agar

MB11802	1000 g	149 €
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LB Broth (powder)

MB14501	500 g	64 €
MB14502	1000 g	85 €
MB14503	5000 g	349 €

SOC Broth

MB28001	500 g	111 €
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Sodium Chloride (NaCl)

MB15901	1000 g	25 €
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Yeast Extract, Micro Granulated

MB16401	1000 g	111 €
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Auto-Induction media

NZY Auto-Induction LB medium (powder) is an innovative culture medium developed for growing *Escherichia coli* to high cell densities, while obtaining high-levels of recombinant protein expression when using IPTG-inducible bacterial expression systems.

NZY Auto-Induction LB medium (powder)*

MBI7901	100 g	49 €
MBI7903	1000 g	322 €

* Product not available for use or sale in the United States

No need for IPTG induction
 No need to monitor cell growth
 Ideal for High-Throughput (HTP) methods
 High protein yields

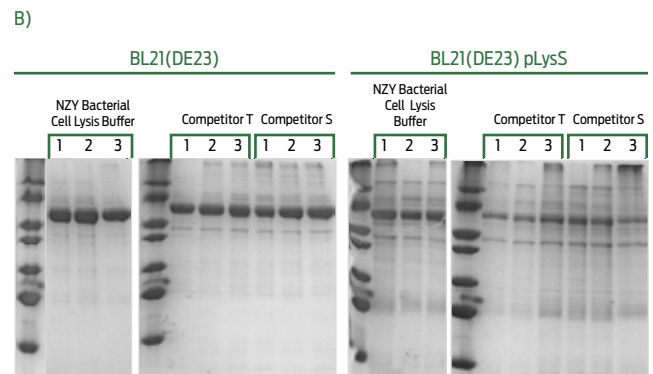
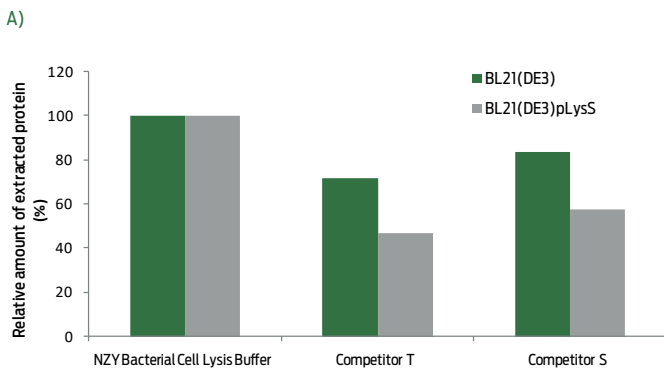
Cell disruption

NZY Bacterial Cell Lysis Buffer is an innovative product for the gentle disruption of *Escherichia coli* cell wall that generates a homogeneous cell-free extract. It provides a rapid and cost effective alternative to mechanical methods such as French Press or sonication for releasing recombinant and native proteins. This extraction reagent is a Tris buffered formulation (pH 7.5) with Lysozyme and DNase I provided separately.

NZY Bacterial Cell Lysis Buffer

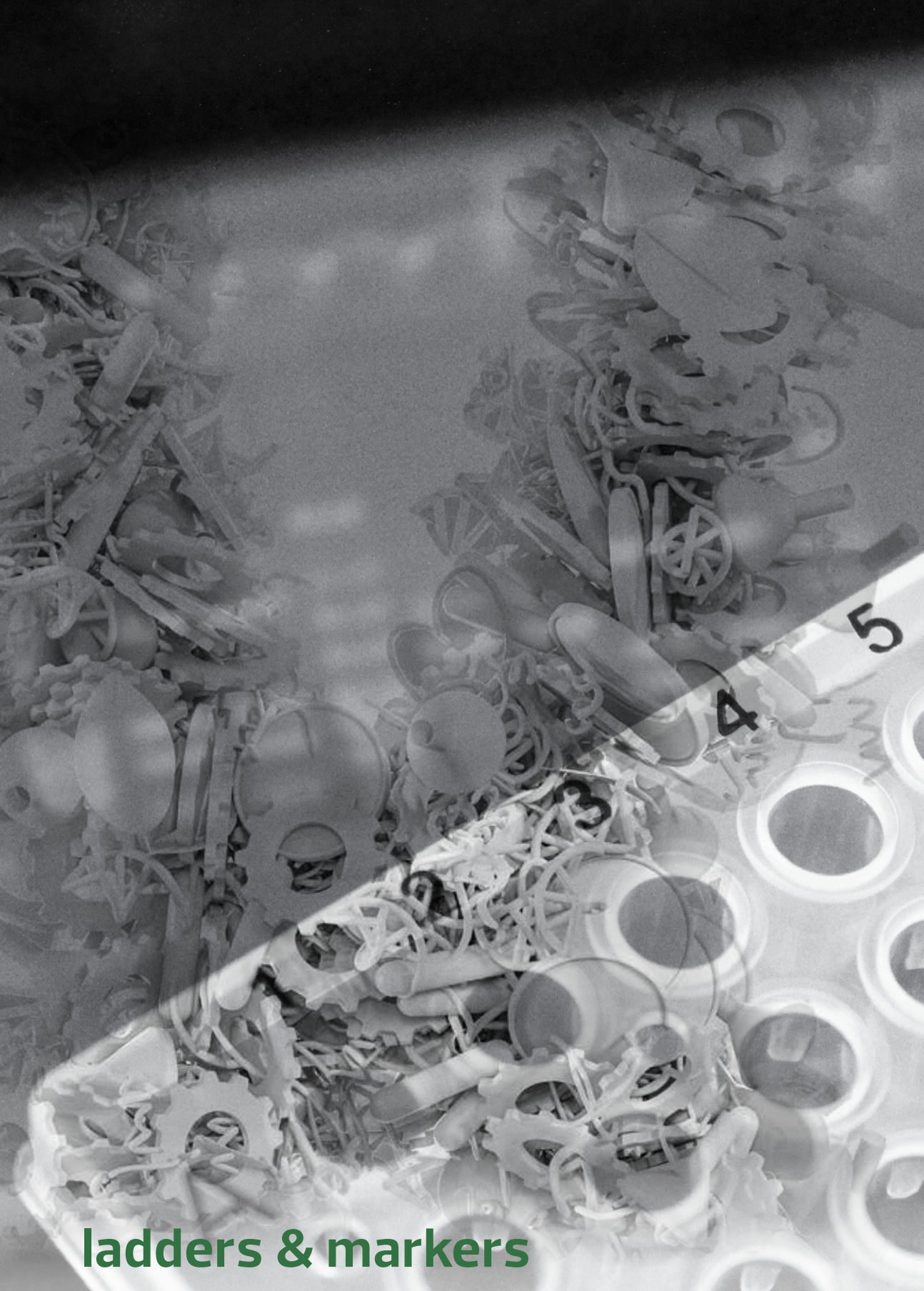
MBI7801	250 mL	80 €
MBI7802	2 x 250 mL	148 €

Ready-to-use formulation
 Ideal for High-Throughput (HTP) methods
 DNase I and Lysozyme provided separately



Comparing the efficiency of *Escherichia coli* cell lysis for protein extraction using NZY Bacterial Cell Lysis Buffer and two similar competitor products. Cells from two strains of *E. coli* BL21(DE3) and BL21(DE3 pLysS) were harvested from 5 mL of cultured media and lysed (in triplicates) using three different protein extraction chemicals: NZY Bacterial Cell Lysis Buffer, Competitor T and Competitor S.

A) Levels of extracted protein obtained were evaluated. B) The recombinant proteins (in triplicates) were purified through IMAC and separated through SDS-PAGE.



ladders & markers

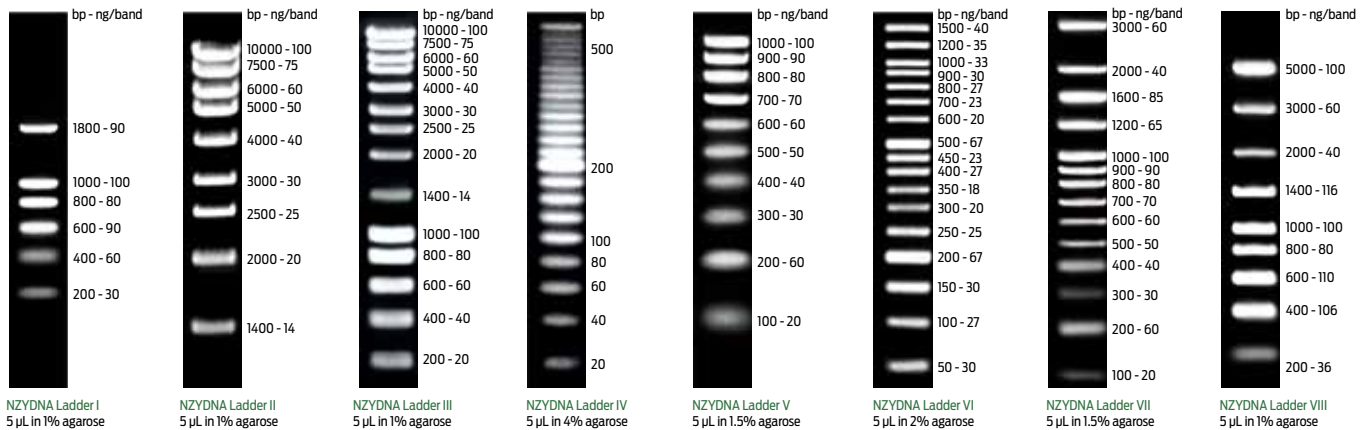
DNA LADDERS

PROTEIN MARKERS

LADDERS & MARKERS

DNA LADDERS

NZYtech offers a ready-to-use set of DNA ladders suitable for standard gel electrophoresis applications. Ladders can be used to quantify the acid nucleic concentration based on band intensity and/or to accurately determine the molecular weight of the nucleic acids molecules.



NZYDNA Ladder I, 200-1800 bp		
MB04103	500 µL (100 lanes)	49 €
MB04101	2 x 500 µL (200 lanes)	69 €
MB04102	5 x 500 µL (500 lanes)	139 €

NZYDNA Ladder V, 100-1000 bp		
MB06103	500 µL (100 lanes)	49 €
MB06101	2 x 500 µL (200 lanes)	69 €
MB06102	5 x 500 µL (500 lanes)	139 €

NZYDNA Ladder II, 1400-10000 bp		
MB04303	500 µL (100 lanes)	49 €
MB04301	2 x 500 µL (200 lanes)	69 €
MB04302	5 x 500 µL (500 lanes)	139 €

NZYDNA Ladder VI, 50-1500 bp		
MB08903	500 µL (100 lanes)	49 €
MB08901	2 x 500 µL (200 lanes)	89 €
MB08902	5 x 500 µL (500 lanes)	159 €

NZYDNA Ladder III, 200-10000 bp		
MB04403	500 µL (100 lanes)	49 €
MB04401	2 x 500 µL (200 lanes)	69 €
MB04402	5 x 500 µL (500 lanes)	139 €

NZYDNA Ladder VII, 100-3000 bp		
MB14703	500 µL (100 lanes)	49 €
MB14701	2 x 500 µL (200 lanes)	79 €
MB14702	5 x 500 µL (500 lanes)	149 €

NZYDNA Ladder IV, 20-500 bp		
MB05801	250 µL (50 lanes)	159 €
MB05802	3 x 250 µL (150 lanes)	329 €

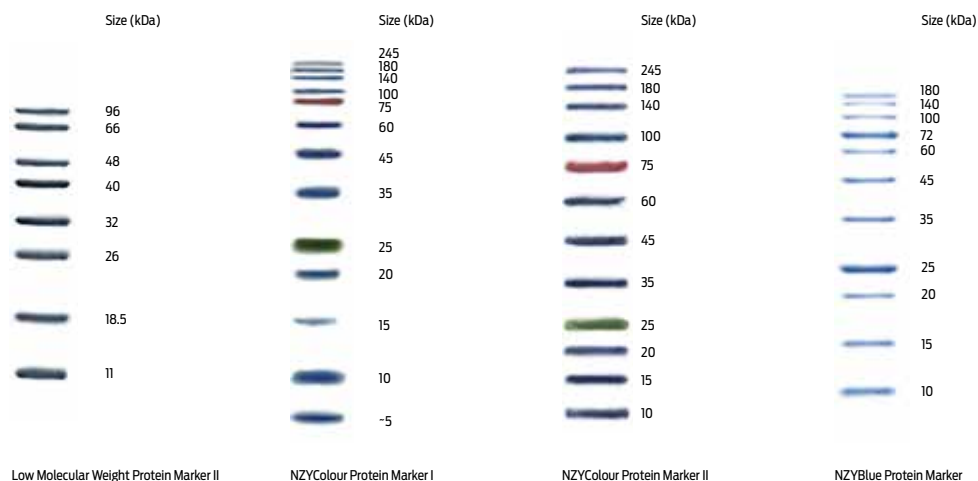
NZYDNA Ladder VIII, 200-5000 bp		
MB17503	500 µL (500 lanes)	49 €
MB17501	2 x 500 µL (200 lanes)	69 €
MB17502	5 x 500 µL (500 lanes)	139 €

PROTEIN MARKERS

NZYtech provides different ready to-use protein markers containing unstained or stained proteins. All protein markers are mixtures of highly purified proteins of known molecular weight developed for assessing proteins relative molecular weights.

Low Molecular Weight (LMW) Protein Marker II, 11-96 kDa			NZYColour Protein Marker I, 5-245 kDa		
MB21401	3 x 500 µL (300 lanes)	129 €	MB21501	500 µL (125 lanes)	189 €
MB21402	6 x 500 µL (600 lanes)	219 €	MB21502	4 x 500 µL (500 lanes)	649 €

NZYBlue Protein Marker, 10-180 kDa			NZYColour Protein Marker II, 10-245 kDa		
MB17601	500 µL (125 lanes)	139 €	MB09002	500 µL (125 lanes)	179 €
MB17602	4 x 500 µL (500 lanes)	499 €	MB09003	4 x 500 µL (500 lanes)	599 €







loading & staining

LOADING

STAINING

LOADING & STAINING

LOADING

For DNA

6x NZYDNA loading dye

MB13101	5 x 1 mL	35 €
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For Proteins

5x SDS-PAGE sample loading buffer

MB11701	5 x 1 mL	35 €
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STAINING

For DNA

NZYtech offers a DNA stain that can be used as a safer alternative to the traditional ethidium bromide (EtBr) and presenting equal sensitivity. GreenSafe Premium can be either incorporated in the agarose gels or used post-running.

GreenSafe Premium

MB13201	1 mL	94 €
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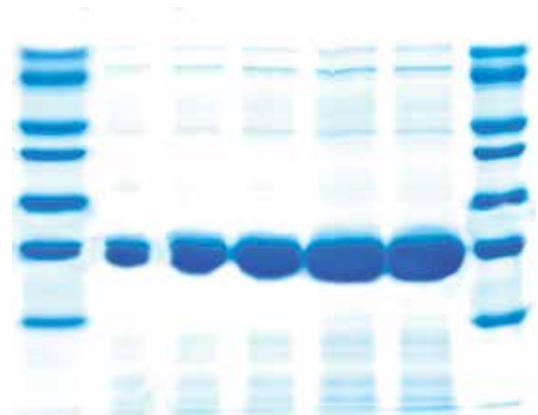
For Proteins

As an alternative to the traditional Coomassie Blue staining for detecting proteins in SDS-PAGE, NZYtech offers BlueSafe, a very sensitive and safe single-step protein stain.

BlueSafe

MB15201	1000 mL	129 €
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BlueSafe: High contrast and sensitivity





agaroses & buffers

AGAROSSES

READY-TO-USE BUFFERS

AGAROSSES & BUFFERS

AGAROSSES

NZYtech offers two different agaroses that cover the most used applications in the laboratory.

	Analytical separation ≥ 0.5 kb	Preparative electrophoresis	DNA typing	Blotting
Electrophoresis grade	✗		✗	✗
Ultrapure grade	✗	✗	✗	✗

Agarose (electrophoresis grade)

MB02702	100 g	89 €
MB02703	500 g	269 €
MB02704	1000 g	489 €

Agarose (ultrapure grade)

MB05201	100 g	99 €
MB05202	500 g	388 €

READY-TO-USE BUFFERS

PBS (10x) pH 7.4 (liquid)

MB25201	1000 mL	85 €
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TAE Buffer (50x) pH 8.3 (liquid)

MB20901	1000 mL	78 €
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PBS (10x) pH 7.4 (powder)

MB18201	1 pouch (1 x 10 L)	32 €
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TBE Buffer (10x) (liquid)

MB27701	1000 mL	52 €
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antibiotics & biochemicals

ANTIBIOTICS

BIOCHEMICALS

ANTIBIOTICS & BIOCHEMICALS

ANTIBIOTICS

Ampicillin (sodium salt)

MB02101	5 g	29 €
MB02102	25 g	77 €
MB02103	50 g	104 €

Chloramphenicol

MB02402	25 g	96 €
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Kanamycin Monosulphate

MB02001	5 g	73 €
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Carbenicillin (disodium)

MB16501	5 g	56 €
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Gentamicin (sulphate)

MB16601	5 g	37 €
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BIOCHEMICALS

D(+) - Glucose Anhydrous

MB16801	1000 g	37 €
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Glycerol

MB16101	1000 mL	89 €
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IPTG

MB02602	5 g	41 €
MB02603	25 g	116 €

DEPC-treated Water

MB43701	5 x 1 mL	22 €
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NaCl

MB15901	1000 g	25 €
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X-Gal

MB02501	1 g	49 €
MB02502	5 g	189 €

Water for Molecular Biology

MB11101	1000 mL	51 €
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NEW Mycoplasma Cleaner

MB46401	250 mL	29 €
MB46402	500 mL (Refill)	56 €



As a life science researcher, you deal with contamination issues daily, affecting your experiments' reliability. Common disinfectants like ethanol, bleach, and hydrogen peroxide have limits in your work. Finding a better solution is crucial.

Read the full whitepaper to find out exactly you can optimize your lab work with precise contamination control.



protein electrophoresis & blotting

PROTEIN ELECTROPHORESIS & TRANSFER

PROTEIN QUANTIFICATION

WESTERN BLOTTING

PROTEIN ELECTROPHORESIS & BLOTTING

PROTEIN ELECTROPHORESIS & TRANSFER

NEW NZY Bis-Tris Precast Gel (4-12%, 12 wells)

MB46501	10 gels	99 €
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NEW NZY Tris-Glycine Precast Gel (4-15%, 12 wells)

MB46601	10 gels	99 €
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Acrylamide/bis-Acrylamide (29:1 Solution)

MB04501	500 mL	114 €
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Acrylamide/bis-Acrylamide (37.5:1 Solution)

MB15601	500 mL	114 €
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Tris-Glycine Buffer 10X

MB19401	1000 mL	47 €
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Tris-Glycine-SDS Buffer 10X

MB19501	1000 mL	47 €
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DTT -Dithiothreitol

MB03101	5g	36 €
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SDS Solution 20%

MB11601	500 mL	94 €
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NEW NZY 1X MOPS-SDS Buffer Powder

MB46701	1 pouch (for 1 L)	9 €
MB46702	5 pouches (for 5 L)	39 €

NEW NZY 1X Tris-Glycine-SDS Buffer Powder

MB46801	1 pouch (for 1 L)	9 €
MB46802	5 pouches (for 5 L)	39 €

Tris base

MB01601	1000 g	113 €
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TEMED

MB03501	25 mL	47 €
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Ammonium Persulphate (APS)

MB03403	100 g	89 €
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Glycine

MB01401	1000 g	51 €
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SDS Powder

MB18101	500 g	153 €
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PROTEIN QUANTIFICATION

NZY Bradford reagent

MB19801	500 mL	158 €
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Precast Gels
Learn More:



WESTERN BLOTTING

NEW BSA Low Endotoxin

MB47001	10 g	22 €
MB47002	100 g	160 €
MB47003	1000 g	1234 €

NZY Standard ECL

MB40101	250 mL	149 €
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Milk, Dry Powder

MB26001	100 g	35 €
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NZY Advanced ECL

MB40201	250 mL	205 €
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PDZ domains & venom peptides

PDZ DOMAINS

PDZ domains are structural modules of 80 to 90 amino acids found in signaling proteins of bacteria, yeast, plants, viruses and animals (Vicentelli et al. 2015, Nature Methods 12, 787-93). PDZ is an acronym combining the first letters of three proteins, which were first discovered to contain these domains: Post synaptic density protein (PSD95), Drosophila disc-large tumor suppressor (Dlg1), and Zonula occludens-1 protein (zo-1). PDZ domains play an essential role in a number of cellular processes by facilitating protein scaffolding and assembly of protein complexes. Protein complex formation between PDZ target molecules can lead to a number of signaling and regulatory cascades that may either promote or inhibit the activation of certain proteins. NZYtech offers a library of representative recombinant PDZ domains of the human proteome which includes 120 different constructs. For more information, please visit NZYtech website at www.NZYtech.com.

VENOM PEPTIDES

Animal venoms are highly complex molecular cocktails containing a wide range of biologically active peptides that target, with high selectivity and efficacy, a variety of membrane receptors. These peptides and their biological activities possess important pharmacological, therapeutic and biotechnological values. Venom peptides are highly stable molecules displaying formidable affinity and selectivity while presenting low immunogenicity, making them attractive candidates for the development of novel therapeutics.

Venom peptides generally contain between 20 to 120 residues and include up to eight disulfide bonds that are critical for both biological activity and stability.

In recent years, considerable emphasis is being put on the discovery of novel molecules with therapeutic interest and venom peptides appear as a source of potential drugs. Unfortunately, the use of venom peptides as therapeutic or biotechnological molecules is still hampered by the difficulty to produce native and active proteins in sufficient amounts. In order to increase the availability of these molecules for academic or pharmaceutical partners, NZYtech is proud to offer a library of representative animal recombinant Venom Peptides. Our recombinant Venom Peptides are subjected to a variety of highly stringent quality control protocols to reach high purity levels. For more information, please visit NZYtech website at www.NZYtech.com.



labware

PCR TUBES, PLATES & STRIPS

ADHESIVE SEALS

LABWARE

At NZYtech we believe your PCR samples are too precious for low quality consumables. Please test NZYtech throughly optimized and proved labware and take your PCR amplifications to the next level. Regarding PCR Plates and Strips compatibility please refer to www.NZYtech.com

PCR TUBES, PLATES & STRIPS

0.2 mL Individual PCR tubes with flat caps

LW01301	1000 tubes	86 €
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Strip 8 x 0.2 mL PCR tubes w/ optically caps

LW03801	120 strips	133 €
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Strips of 8 flat optical caps

LW03201	300 strips	122 €
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Strip of 8 x 0.2 mL tubes flat strip caps

LW01201	125 strips + caps	145 €
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96 Well non-skirted PCR plate

LW00901	50 plates	194 €
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96 Well non-skirted PCR plate, white

LW02601	50 plates	244 €
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96 Well semi skirted PCR plate

LW00801	50 plates	194 €
---------	-----------	-------

96 Well semi skirted PCR plate, white

LW03601	50 plates	232 €
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96 Well skirted PCR plate

LW00701	50 plates	194 €
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96 Well skirted PCR plate, white

LW02501	50 plates	232 €
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Low P. 96 well semi sk. PCR plate, Roche, white

LW04101	50 plates	206 €
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ADHESIVE SEALS

General adhesive plate seals

LW01701	100 sheets	61 €
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qPCR adhesive clear plate seals

LW02101	100 sheets	302 €
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Adhesive PCR plate seals

LW01801	100 sheets	145 €
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LABWARE COMPATIBILITY

Skirt type	Skirted		Half-Skirted			Non-Skirted		Strips	
Number of wells	96		96			96		8	
Profile	Low		Standard		Low	Standard		200µL	100µL
Colour type	Clear	White	Clear	White		Clear	White	Clear	
Catalogue Number	LW00701	LW02501	LW00801	LW03601	LW04101	LW00901	LW02601	LW03801	LW03901

ABI® / Life Technologies/ Thermo Fisher Scientific										
Thermal Cyclers	GeneAmp® 2400								✗	
	GeneAmp® 2700, 2720, 9600			✗	✗		✗	✗		
	GeneAmp® 9700			✗	✗		✗	✗	✗	
	GeneAmp® 9800 FAST Block									✗
	MultiBlock System, MBS	✗	✗							✗
	PCR Sprint						✗	✗	✗	✗
	ProFlex 96 well			✗	✗		✗	✗		
	Simpliamp						✗	✗	✗	
	Veriti 0.1 ml (96 well block) FAST									✗
	Veriti 0.2 ml (96 well block)			✗	✗		✗	✗	✗	
qPCR Cyclers	7000, 7300, 7500, 7700, 7900			✗	✗				✗	
	QuantStudio™ 3, 5, 6, 7, 12K, Dx			✗	✗					
	StepOne, StepOne Plus™									
	ViiA7™			✗	✗		✗	✗	✗	
Sequencers	310, 3100, 3130, 3130 XL Genetic Analyser			✗	✗		✗	✗		
	3500, 3500 XL Genetic Analyser			✗	✗		✗	✗	✗	
	3700, 3730, 3730XL DNA Analyser			✗	✗		✗	✗		
Agilent (Stratagene)										
Thermal Cyclers	Surecycler 8800 96 well						✗	✗		
	Gradient Cycler	✗	✗				✗	✗		
qPCR Cyclers	AriaMx	✗	✗				✗	✗		
	Mx3000P™						✗	✗		
	Mx3005P™	✗	✗				✗	✗		
	Mx4000™			✗	✗		✗	✗		
Biometra										
Thermal Cyclers	Flexcycler2 96			✗	✗		✗	✗	✗	
	T1 Thermocycler, Tgradient			✗	✗		✗	✗	✗	✗
	T3 Thermocycler								✗	
	Tone, Tadvanced (96), TProfessional Gradient/XL			✗	✗		✗	✗	✗	
	TRIO, Tpersonal						✗	✗	✗	
	Trobot 96			✗	✗					
	SpeedCycler2			✗	✗		✗	✗	✗	
qPCR Cyclers	qTOWER3/G, touch	✗	✗	✗	✗		✗	✗	✗	
	Optical Thermalcycler			✗	✗		✗	✗	✗	

Skirt type	Skirted		Half-Skirted			Non-Skirted		Strips	
Number of wells	96		96			96		8	
Profile	Low		Standard		Low	Standard		200µL	100µL
Colour type	Clear	White	Clear	White		Clear	White	Clear	
Catalogue Number	LW00701	LW02501	LW00801	LW03601	LW04101	LW00901	LW02601	LW03801	LW03901

Bioer Technologies

Thermal Cyclers	GeneTouch			⊗	⊗		⊗	⊗	⊗	
	GeneQ						⊗	⊗	⊗	

BIO-RAD

Thermal Cyclers	C1000 Touch	⊗	⊗							⊗
	Genecycler						⊗	⊗	⊗	
	iCycler™, MyCycler™			⊗	⊗		⊗	⊗	⊗	
	S1000	⊗	⊗							⊗
	T100			⊗	⊗		⊗	⊗	⊗	⊗
	Mini Gradient						⊗	⊗	⊗	⊗
	PTC100™ (96 well block only)	⊗	⊗	⊗	⊗		⊗	⊗	⊗	⊗
	DNA Engine™, DNA Dyad™	⊗	⊗	⊗	⊗		⊗	⊗	⊗	⊗

qPCR Cyclers	CFX Opus, CFX96 Touch/Touch Deep Well, CFX connect	⊗	⊗							
	iCycler™ IQ, IQ™ 4, IQ™ 5, MyiQ™			⊗	⊗		⊗	⊗	⊗	
	Chromo4™	⊗	⊗				⊗	⊗		
	MiniOpticon									
	Opticon™, Opticon2™, DNA Engine	⊗	⊗							

Corbett Research

Thermal Cyclers	(Qiagen) Palm Cycler	⊗	⊗							⊗
qPCR Cyclers	Rotor-Gene series									

EPPENDORF

Thermal Cyclers	MasterCycler® Pro, Pro S	⊗	⊗	⊗	⊗		⊗	⊗	⊗	
	MasterCycler® nexus, gradient, eco, gradient eco	⊗	⊗	⊗	⊗		⊗	⊗	⊗	
	MasterCycler® nexus X2, GX2, GX2e, X2e						⊗	⊗	⊗	
	MasterCycler® nexus SX1, GSX1	⊗	⊗	⊗	⊗		⊗	⊗	⊗	
qPCR Cyclers	Mastercycler™ ep realplex	⊗	⊗	⊗	⊗		⊗	⊗	⊗	

PEQLAB (VWR)

Thermal Cyclers	peqSTAR 96	⊗	⊗				⊗	⊗	⊗	⊗
	peqSTAR 2X						⊗	⊗	⊗	

ROCHE

	LC96/LC480					⊗				
	Nano									⊗





GENE SYNTHESIS

SITE-DIRECTED MUTAGENESIS

PEPTIDE SYNTHESIS

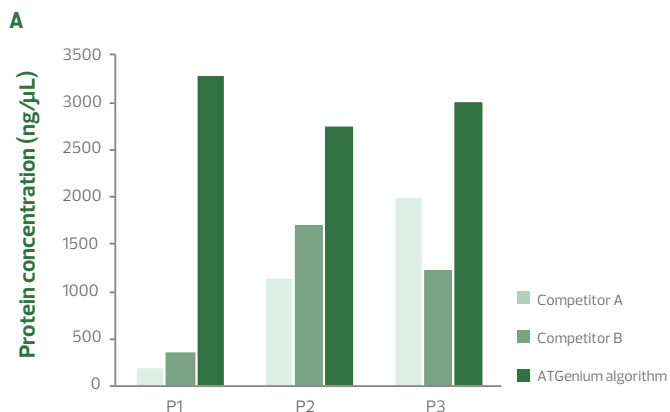
MOLECULAR SERVICES

GENE SYNTHESIS

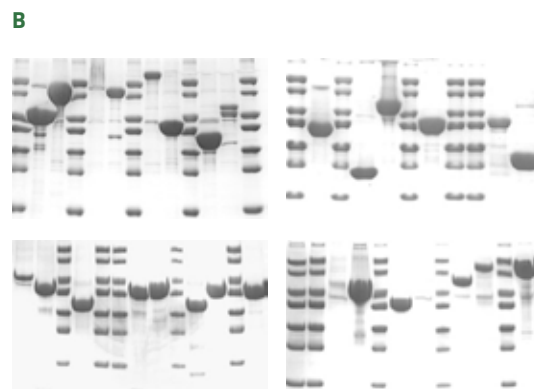
Gene synthesis has become an important tool in many fields of recombinant DNA technology. Whether you have limited cloning experience or simply want to save time, NZYtech's Gene Synthesis service helps you to quickly move your ideas from the planning stage to the laboratory. A highly motivated team is eager to provide you with a very efficient service affording considerable savings of time and money. Either if you select the custom or High-Throughput (HTP) Gene Synthesis service you will be offered a premium service that will deliver high quality and downstream efficacy.



NZYtech's scientists have also developed a highly robust gene design optimization software - **ATGenium** codon optimization algorithm - to maximize protein expression. Our proprietary algorithm comprehensively optimizes critical factors in transcription, translation and co-translational protein folding to deliver highest levels of expression in any host system. This service is offered at no extra cost for all gene synthesis services if required.



A. Levels of protein expression of three different eukaryotic proteins in *Escherichia coli* BL21 (DE3). The genes encoding these proteins were optimized by three algorithms for codons optimization, by two different competitors (light green) and using the ATGenium codon optimization algorithm developed by NZYtech (dark green).



B. High-throughput recombinant protein expression of CAZymes (Carbohydrate Active Zymes). Genes encoding these proteins were optimized using ATGenium, cloned into pHTPI expression vector and overexpressed in *E. coli* BL21 (DE3). High protein expression yields were obtained.

CUSTOM GENE SYNTHESIS

NZYtech's Custom Gene Synthesis service provides *in vitro* chemical synthesis, cloning and 100% sequence verification of any desired DNA sequence.

Cloning into a selection of bacterial, mammalian and viral expression vectors, namely into pHTP E. coli expression vectors (for an additional price)

Gene Synthesis

Gene Synthesis (DNA fragments 300-500 bp)	GS00312	129 €/gene
Gene Synthesis (DNA fragments 501-1000 bp)	GS00308	0,23 €/bp
Gene Synthesis (DNA fragments 1001-2000 bp)	GS00309	0,24 €/bp
Gene Synthesis (DNA fragments 2001-5000 bp)	GS00310	0,28 €/bp

Flexible, custom gene design
Free codon optimization – ATGenium
Sequences 100% verified



Gene sub-cloning

Gene sub-cloning (other vectors) (combined with gene synthesis)	MS00208	99 €/gene
Gene sub-cloning into pHTP vectors (combined with gene synthesis)	MS00209	59 €/gene

HIGH-THROUGHPUT GENE SYNTHESIS

NZYtech's R&D team has developed a High-Throughput (HTP) Gene Synthesis platform to efficiently generate hundreds to thousands of synthetic genes. We offer a high quality HTP Gene Synthesis service for DNA fragments below 5kb. HTP Gene Synthesis will allow to tackle difficult research projects such as: determination of structure-function relationships in different proteins, creation of novel antibody libraries, screening of gene variant libraries or optimization of protein function and expression. Our codon optimization technology - ATGenium algorithm - allows obtaining the highest possible levels of gene expression in different expressions hosts while retaining high levels of protein solubility.

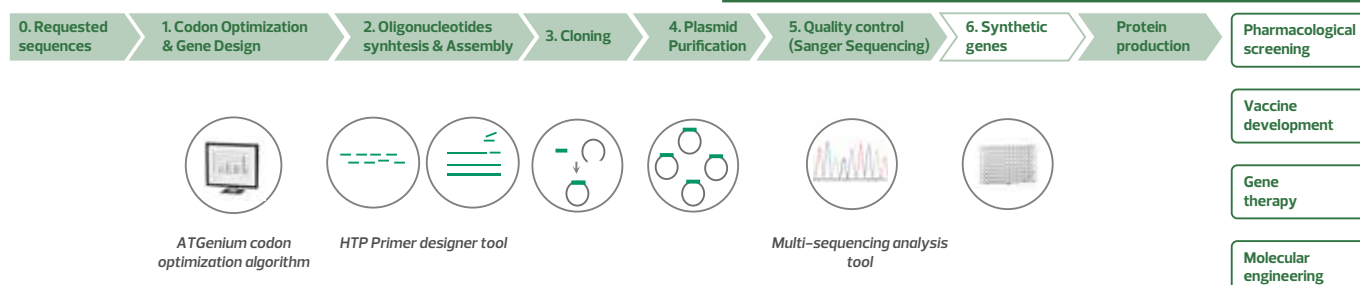
HTP Gene Synthesis (> 48 genes)

HTP Gene Synthesis (> 48 genes) (DNA fragments 300-500 bp)	HS00509	109 €/gene
HTP Gene Synthesis (> 48 genes) (DNA fragments 501-1000 bp)	HS00506	0,18 €/base
HTP Gene Synthesis (> 48 genes) (DNA fragments 1001-2000 bp)	HS00510	0,19 €/base
HTP Gene Synthesis (> 48 genes) (DNA fragments 2001-5000 bp)	HS00511	0,25 €/base

HTP Gene Sub-cloning (> 48 genes)

High-Throughput Gene Cloning (pHTP vectors) (> 48 genes)	HS00203	50 €/gene
High-Throughput Gene Cloning (other vector) (> 48 genes)	HS00204	90 €/gene

– Flexible gene design process
– Free codon optimization
– 100% sequence accuracy guaranteed
– Cloning into a selection of bacterial, mammalian and viral expression vectors, namely into pHTP E. coli expression vectors (for an additional price)



GENE FRAGMENTS

Gene Fragments

Gene Fragments (DNA fragments 300-400 bp)	GF00108	149 €
Gene Fragments (DNA fragments 401-500 bp)	GF00109	159 €
Gene Fragments (DNA fragments 501-750 bp)	GF00110	169 €
Gene Fragments (DNA fragments 751-1000 bp)	GF00111	199 €
Gene Fragments (DNA fragments 1001-1250 bp)	GF00112	229 €
Gene Fragments (DNA fragments 1251-1500 bp)	GF00113	269 €
Gene Fragments (DNA fragments 1501-1800 bp)	GF00114	329 €

HTP GENE FRAGMENTS

We have recently upgraded NZYtech's Gene Fragments Synthesis platform to accommodate the synthesis of a substantial quantity of gene fragments at more competitive prices. This service allows researchers to obtain a large quantity of custom-made gene fragments without the need for expensive equipment or dedicated facilities. By choosing our HTP (High-Throughput) Gene Fragments service, researchers can benefit from the scalability of this service, accessing cutting-edge technologies and freeing up time to focus on their core research goals.

HTP Gene Fragments

HTP Gene Fragments (DNA fragments 300-400 bp)	HF00101	90 €
HTP Gene Fragments (DNA fragments 401-500 bp)	HF00102	95 €
HTP Gene Fragments (DNA fragments 501-750 bp)	HF00103	100 €
HTP Gene Fragments (DNA fragments 751-1000 bp)	HF00104	130 €
HTP Gene Fragments (DNA fragments 1001-1250 bp)	HF00105	160 €
HTP Gene Fragments (DNA fragments 1251-1500 bp)	HF00106	190 €
HTP Gene Fragments (DNA fragments 1501-1800 bp)	HF00107	230 €

SITE-DIRECTED MUTAGENESIS

Site-directed mutagenesis is crucial in molecular biology for precisely introducing specific genetic changes into DNA sequences, allowing researchers to study the functional implications of these alterations. This technique is instrumental in understanding the role of individual amino acids or regulatory elements in protein function and/or gene expression. Resorting to NZYtech's Site-Directed Mutagenesis service allows researchers to concentrate on their core scientific objectives, streamlining the experimental process and promoting efficiency of their studies.

HTP Gene Fragments

Site-directed mutagenesis - Standard - 1 mutant	MS00306	299 €/gene
Site-directed mutagenesis - Standard - 3 mutants	MS00307	269 €/gene
Site-directed mutagenesis - Standard - 5 mutants	MS00308	229 €/gene
Site-directed mutagenesis - Complex and/or Multiple	MS00309	Quote

Lyophilized peptide delivered with the required sequence, purity and quantity

Several modifications available: phosphorylation, methylation, acetylation, amidation, fluorescence/dye labeling
Additional discounts for large-scale peptide synthesis orders

PEPTIDE SYNTHESIS

NZYtech offers a high-quality peptide synthesis service designed to ensure our customer's complete satisfaction. Every peptide is subjected to a variety of performance control steps to guarantee the highest quality. Peptides may be provided crude, desalted, or with 75% to 98% purity. In addition, NZYtech peptides can be subjected to a variety of chemical modifications upon request.



GLYCOBIOLOGY

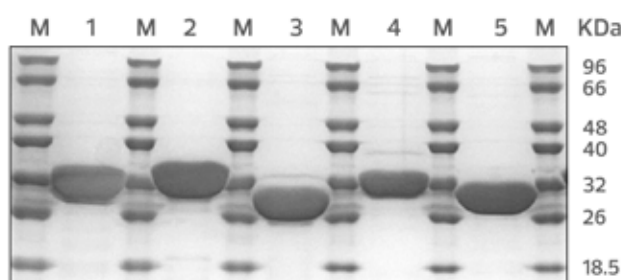
NZYTECH CAZYMES: HIGHLY PURE, STABLE AND OPTIMIZED RESEARCH TOOLS FOR SCIENCE AND INDUSTRY

1. A LARGE AND DIVERSE PORTFOLIO

NZYtech R&D department, individually or in collaboration with the CAZy community, is building a large and diverse portfolio to foster science and industrial progress. All proteins have a recombinant origin and are produced and purified from *Pichia pastoris* or *Escherichia coli*. In this catalogue you will find more than 1000 CAZymes, covering >200 CAZy families (www.cazy.com) and >150 EC number activities (www.enzyme.expasy.org).

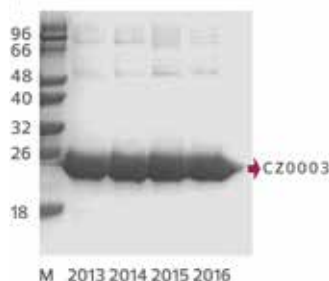
2. ULTRA-PURE FOR A VARIETY OF APPLICATIONS

NZYtech CAZymes are purified using a comprehensive list of chromatography protocols to achieve the highest level of protein purity. As an example, the figure below provides an SDS-PAGE analysis of CAZymes CZ0604, CZ0580, CZ0621, CZ0633 and CZ0641. Purification level of all CAZymes listed in this catalogue may be found at NZYtech website (www.nzytech.com).



3. REDUCED BATCH-TO-BATCH VARIATION AND LONG STORAGE STABILITY

NZYtech devotes significant efforts to minimize batch to batch variation and improve protein stability. In the Figure below 4 batches of Xylanase 11A from *Clostridium thermocellum* (CZ0003), produced in 2013, 2014, 2015 and 2016, were tested in March 2018 for molecular integrity and protein purity. The data reveals that there is minimal variation in molecular integrity up to 5 years after production (Panel B). Thus, it is important to follow the storage guidelines provided.



4. NZYTECH CAZYMES ARE THOROUGHLY CHARACTERIZED AND THEIR BIOCHEMICAL PROPERTIES DESCRIBED IN LITERATURE

Although NZYtech provides CAZymes as highly pure recombinant proteins and not functionally assessed, the majority of NZYtech CAZymes have been thoroughly characterized and their enzymatic properties is described in the literature. The reference of the paper describing such properties is provided in the product manual which allows you to select the one most suited for your experiments.

Glycoside Hydrolases

ACETYL GALACTOSAMINIDASES	(5 entries)	PHOSPHO- β -GLUCOSIDASES	(16 entries)
ACETYLGLUCOSAMINIDASES	(19 entries)	GLUCURONIDASES	(14 entries)
AGARASES	(17 entries)	GLUCURONOXYLANASES	(4 entries)
AMYLASES	(15 entries)	HEXOSAMINIDASES	(13 entries)
AMYLOMALTASES	(7 entries)	HYALURONIDASES	(2 entries)
ARABINANASES	(8 entries)	INULASES	(2 entries)
ARABINOFURANOSIDASES	(35 entries)	LAMINARINASES	(16 entries)
ARABINOPYRANOSIDASES	(1 entries)	LEVANASES	(4 entries)
ARABINOXYLANASES	(2 entries)	LEVANSUCRASES	(3 entries)
CARRAGEENASES	(2 entries)	LICHENASES	(11 entries)
CELLOBIOHYDROLASES	(10 entries)	LYSOZYMES	(4 entries)
CELLODEXTRINASES	(2 entries)	α -MANNANASES	(3 entries)
CELLULASES	(79 entries)	β -MANNANASES	(25 entries)
CHITINASES	(7 entries)	α -MANNOSIDASES	(22 entries)
CHITOSANASES	(3 entries)	β -MANNOSIDASES	(6 entries)
DEXTRANASES	(4 entries)	MANNOSYLGLUCOSE	(2 entries)
FRUCTANASES	(3 entries)	PHOSPHORYLASES	
FRUCTOFURANOSIDASES	(4 entries)	OLIGOSACCHARIDE REDUCING	(2 entries)
FRUCTANASES	(3 entries)	-END XYLANASES	
FRUCTOFURANOSIDASES	(4 entries)	PEPTIDOGLYCAN LYTIC	(4 entries)
FUCOSIDASES	(16 entries)	EXOTRANSGLYCOSYLASES	
GALACTANASES	(6 entries)	POLYGALACTURONASES	(7 entries)
α -GALACTOSIDASES	(15 entries)	PORPHYRANASES	(4 entries)
β -GALACTOSIDASES	(21 entries)	PULLULANASES	(3 entries)
PHOSPHO- β -GALACTOSIDASES	(4 entries)	RHAMNOGALACTURONASES	(16 entries)
β -D-GALACTOSYL-1,4-L-RHAM- NOSE PHOSPHORYLASES	(2 entries)	SIALIDASES	(6 entries)
GALACTOSYL-N-ACETYLHEXOSA- MINE PHOSPHORYLASES	(2 entries)	TREHALASES	(13 entries)
GALACTURONIDASES	(6 entries)	Δ -4,5-UNSATURATED	(7 entries)
GLUCANSUCRASES	(5 entries)	β -GLUCURONYL HYDROLASES	
GLUCOSAMINIDASES	(3 entries)	XYLANASES	(43 entries)
α -GLUCOSIDASES	(13 entries)	XYLOGLUCANASES	(7 entries)
β -GLUCOSIDASES	(25 entries)	XYLOSIDASES	(17 entries)
		OTHER ACTIVITIES	(26 entries)

Carbohydrate esterases

ACETYL XYLAN ESTERASES	(18 entries)
ACETYLGLUCOSAMINE	(8 entries)
DEACETYLASES	
DIACETYLCHITOBIOSE	(1 entries)
DEACETYLASES	
FERULOYL ESTERASES	(96 entries)
GLUCURONYL ESTERASES	(7 entries)
PECTIN ACETYL ESTERASES	(4 entries)
PECTIN METHYLESTERASES	(4 entries)

Polysaccharide lyases

ALGINATE LYASES	(14 entries)
CHONDROITIN LYASES	(4 entries)
HEPARIN LYASES	(6 entries)
HYALURONATE LYASES	(1 entries)
OLIGOGALACTURONATE LYASES	(2 entries)
PECTATE LYASES	(28 entries)
PECTIN LYASES	(2 entries)
POLY- α -GULURONATE LYASES	(2 entries)
RHAMNOGALACTURONAN LYASES	(8 entries)
ULVAN LYASES	(8 entries)
XANTHAN LYASES	(1 entries)
RHAMNOGLUCURONATE LYASES	(1 entries)

Auxiliar activities

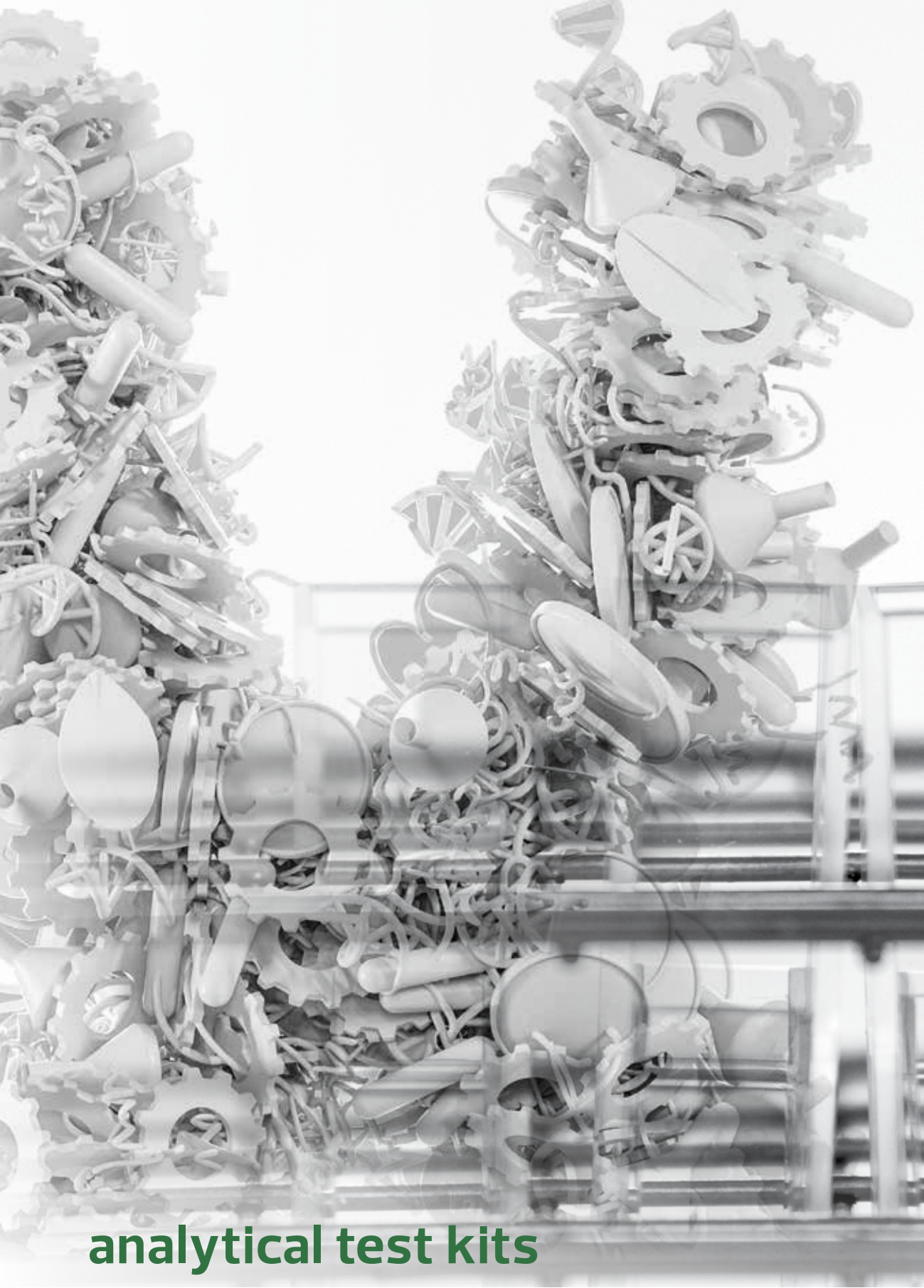
LACCASES	(3 entries)
LYTIC POLYSACCHARIDE MONOOXYGENASES	(5 entries)

Carbohydrate-binding modules

CBMs	(103 entries)
GFP-CBM	(57 entries)
ZZ-CBM	(2 entries)

Mini-cellulosomes & other enzymes

MINI-CELLULOSOMES	(3 entries)
CELLOBIOSE DEHYDROGENASE	(1 entries)
XYLOSE ISOMERASE	(1 entries)



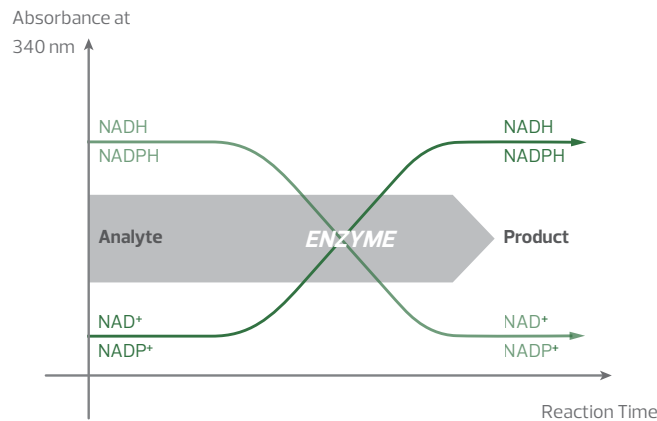
analytical test kits

ANALYTICAL PRODUCTS

PRINCIPLES & FEATURES

UV TESTS

NZYtech test kits are based on enzymatic reactions and performed using spectrophotometric methods. The principle of the enzymatic tests is based on the NAD(P)⁺/NAD(P)H system and uses highly pure enzymes engineered to display a premium performance. The enzymes used in these analytical kits produce or consume NAD(P)H, which strongly absorbs the UV radiation at 340 nm (extinction coefficient of 6300 M⁻¹cm⁻¹).



COLORIMETRIC TESTS

The principle of the enzymatic tests based on a chromogenic reaction is the formation of a coloured compound, which absorbs at the visible region of the spectrum. The coloured compound results from the interaction between the product of a first enzymatic reaction and a chromogenic compound. In this case, the concentration of the analyte must be determined by using a standard curve.

- Endpoint analysis
- Easy to use, simple protocols
- Rapid analysis
- Accuracy and precision
- Safe to the operator
- Standards included



REQUIRED MATERIAL

- Spectrophotometer
- Micropipettes set with disposable plastic tips to accurately dispense volumes from 20 µL to 1000 µL
- Cuvettes
- Basic filtering or other simple sample treatment device

APPLICATIONS

Nome	Kit size	Range	Detection Limit	Food Industry	Feed Industry	Wine Industry	Fermentation Industry	Dairy Industry	Biofuel	Catalogue No	Price
Acetaldehyde, UV Method	50 tests	0.25-200 mg/L	0.176 mg/L							AK00051	209 €
Acetic Acid, UV Method	53 tests	0.15-200 mg/L	0.14 mg/L							AK00081	209 €
Ammonia, UV Method	96 tests	10-70 mg/L	0.07 mg/L							AK00091	209 €
L-Arginine/Urea/Ammonia, UV Method	50 tests each	50-400 mg/L L-arginine 20-140 mg/L urea 10-70 mg/L ammonia	0.37 mg/L L-arginine 0.13 mg/L urea 0.07 mg/L ammonia							AK00171	239 €
Ethanol, UV Method	60 tests	0.12-120 mg/L	0.093 mg/L							AK00061	209 €
D-Fructose/D-Glucose, UV Method	110 tests of each*	2-800 mg/L	0.66 mg/L							AK00041	209 €
D-Glucose HK, UV Method	110 tests	2-800 mg/L	0.66 mg/L							AK00031	209 €
D-Glucose (God+POD), Colorimetric Method	660 tests	100-1000 mg/L	100 mg/L							AK00161	209 €
L-Glutamine/Ammonia, UV Method	50 tests of each	10-400 mg/L L-glutamine 10-70 mg/L ammonia	0.54 mg/L L-glutamine 0.07 mg/L ammonia							AK00111	209 €
L-Lactic Acid, UV Method	50 tests of each	0.30-300 mg/L	0.30 mg/L							AK00131	209 €
D-/L-Lactic Acid, UV Method	50 tests of each	0.30-300 mg/L	0.30 mg/L							AK00141	309 €
D-Malic Acid, UV Method	100 tests	0.25-400 mg/L	0.26 mg/L							AK00021	209 €
L-Malic Acid, UV Method	58 tests	0.25-300 mg/L	0.25 mg/L							AK00011	209 €
L-Malic Acid, Colorimetric Method	5x10 tests	8-800 mg/L	8 mg/L							AK00191	209 €
Sucrose/D-Fructose/D-Glucose, UV Method	100 tests of each	20-800 mg/L	1.40 mg/L							AK00201	209 €
Sulfite, UV Method	30 tests	0.25-300 mg/L	0.25 mg/L							AK00071	209 €
Urea/Ammonia, UV Method	50 tests each	1.5-140 mg/L urea 10-70 mg/L ammonia	0.13 mg/L urea 0.07 mg/L ammonia							AK00101	209 €



nzytech

L-ARGININE



analytical enzymes

ANALYTICAL PRODUCTS

ANALYTICAL ENZYMES

Enzyme	EC	Catalogue No	Pack size	Price
Acetyl-CoA synthetase	6.2.1.1	AE00081	250 U	169 €
D-Alanine aminotransferase	2.6.1.21	AE00141	2500 U	169 €
Alcohol dehydrogenase	1.1.1.1	AE00131	1000 U	169 €
Aldehyde reductase YqhD	1.1.1.21	AE00021	2.0 mg	169 €
Arginase	3.5.3.1	AE00211	1950 U	169 €
Aspartate aminotransferase	2.6.1.1	AE00061	5000 U	169 €
Citrate synthase	2.3.3.1	AE00041	2500 U	169 €
Diaphorase	1.8.1.4	AE00231	1000 U	169 €
Glucokinase	2.7.1.2	AE00171	1400 U	169 €
Glucose-6-phosphate dehydrogenase , NADP ⁺ dependent	1.1.1.49	AE00111	5000 U	169 €
Glucose-6-phosphate dehydrogenase , NAD ⁺ dependent	1.1.1.49	AE00161	5000 U	169 €
Glucose-6-phosphate isomerase	5.3.1.9	AE00101	5000 U	169 €
Glutamate dehydrogenase	1.4.1.4	AE00051	3300 U	169 €
Glutaminase	3.5.1.2	AE00071	2500 U	169 €
Glutathione reductase	1.8.1.7	AE00221	500 U	169 €
Invertase	3.2.1.26	AE00241	100 kU	169 €
Lactaldehyde dehydrogenase	1.2.1.22	AE00031	4.0 mg	139 €
D-Lactate dehydrogenase	1.1.1.28	AE00121	22 kU	169 €
D-Malate dehydrogenase	1.1.1.83	AE00151	200 U	169 €
L-Malate dehydrogenase	1.1.1.37	AE00091	50 kU	169 €
NADH peroxidase	1.11.1.1	AE00201	500 U	169 €
Sulfite oxidase molybdenum centre domain	1.8.3.1	AE00011	2.25 U	169 €
Uronate dehydrogenase	1.1.1.203	AE00191	24 kU	199 €

TERMS & CONDITIONS



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