

# VI. Molecular Biology

**Product Overview**

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Salts

## Product Overview

### Modified Nucleotides

Prod.No.	Product	Pack-size	Price in €
M3451.0200	2'-Deoxy-2'-aminouridine	200 mg	52.02
M3451.1000	2'-Deoxy-2'-aminouridine	1 g	208.09
M3452.0200	5'-DMTr-Deoxy-2'-TFA-amidouridine	200 mg	78.04
M3452.1000	5'-DMTr-Deoxy-2'-TFA-amidouridine	1 g	312.14
M3423.0100	AZT triphosphate (min. 96%), 100 mM	100 µL	227.61
M3423.0500	AZT triphosphate (min. 96%), 100 mM	500 µL	845.39
M3428.0100	Biotin-11-dUTP	100 µL	149.57
M3428.1000	Biotin-11-dUTP	1 mL	on request
M3440.0050	Biotin-4-dUTP	50 µL	110.55
M3440.1000	Biotin-4-dUTP	1 mL	on request
M3425.0100	BUDR triphosphate (min. 96%)	100 µL	129.41
M3425.0500	BUDR triphosphate (min. 96%)	500 µL	513.74
M3424.0050	d4T triphosphate (min. 96%)	50 mg	1157.53
M3426.0040	Flu-12-dUTP (1 mg/mL)	40 µL	227.61
M3427.0040	Tamra-dUTP (1 mg/mL)	40 µL	227.61

### Modifying Enzymes

Prod.No.	Product	Pack-size	Price in €
M3025.0001	Bacterial Alkaline Phosphatase (BAP)	1 mg (ca. 30 U)	90.42
M3025.0005	Bacterial Alkaline Phosphatase (BAP)	5 mg (ca. 150 U)	284.89
M3025.0025	Bacterial Alkaline Phosphatase (BAP)	25 mg (ca. 750 U)	1139.57
M3033.0100	Calf Intestine Phosphatase (CIP)	100 mg (100 U/mg)	39.02
M3033.0500	Calf Intestine Phosphatase (CIP)	500 mg (100 U/mg)	154.83
M3033.0001	Calf Intestine Phosphatase (CIP)	1 g (100 U/mg)	260.12
M3035.0500	Calf Intestine Phosphatase (CIP)	500 mg (20 U/mg)	34.07
M3035.0001	Calf Intestine Phosphatase (CIP)	1 g (20 U/mg)	55.74
M3035.0005	Calf Intestine Phosphatase (CIP)	5 g (20 U/mg)	241.54
M3028.0010	DNase I (EC 3.1.21.1)	10 mg	20.64
M3028.0050	DNase I (EC 3.1.21.1)	50 mg	36.17
M3028.0500	DNase I (EC 3.1.21.1)	500 mg	247.12
M3036.0100	Proteinase K powder (>30U/mg)	100 mg	55.00
M3036.0500	Proteinase K powder (>30U/mg)	500 mg	210.00
M3036.1000	Proteinase K powder (>30U/mg)	1 g	395.00
M3037.0001	Proteinase K solution (20mg/mL)	1 mL	12.00
M3037.0005	Proteinase K solution (20mg/mL)	5 x 1 mL	55.00
S5218.0050	Ribonuclease A (DNase free)	50 mg	33.88
S5218.0250	Ribonuclease A (DNase free)	250 mg	120.15
S5218.0500	Ribonuclease A (DNase free)	500 mg	224.69
S5231.0100	Ribonuclease A (RNase A)	100 mg	31.56
S5231.0500	Ribonuclease A (RNase A)	500 mg	82.13
S5231.1000	Ribonuclease A (RNase A)	1 g	148.03
M3026.0500	T4 Polynucleotide Kinase	500 units	52.02
M3026.2500	T4 Polynucleotide Kinase	2500 units	191.99

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M3026.5000	T4 Polynucleotide Kinase	5000 units	340.63
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### T4 Polynucleotide Kinase

Prod.No.	Product	Pack-size	Price in €
M3026.0500	T4 Polynucleotide Kinase	500 units	52.02
M3026.2500	T4 Polynucleotide Kinase	2500 units	191.99
M3026.5000	T4 Polynucleotide Kinase	5000 units	340.63

T4 Polynucleotide Kinase catalyses the transfer of the terminal phosphate group of ATP to 5'-OH ends of DNA. T4 polynucleotide kinase is suited for labelling of 5'-OH ends of DNA with gamma-<sup>32</sup>P-ATP.

#### Concentration

5-20 units/μL

#### Storage and shipping

Store at -20°C, shipped refrigerated.

#### Unit definition

One Richardson unit is defined as the amount of enzyme required to catalyse the addition of 1 nmole of phosphate from [gamma-<sup>32</sup>P]ATP to the 5'-OH end of an oligonucleotide after 30 minutes at 37°C.

#### Comments

Tested for absence of endo-, exonucleases, and RNase activities. For complete nonradioactive phosphorylation of 5'-OH ends, more than 2-fold molar excess of ATP should be used with a minimum concentration of 100 μM. T4 polynucleotide kinase activity is very sensitive to the presence of salts. 150 mM NaCl will produce 50% inhibition. (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub> will inhibit almost completely.

#### Reaction buffer

50 mM Tris-HCl pH 7.6, 10 mM MgCl<sub>2</sub>, 1 mM 2-mercaptoethanol. 10X reaction buffer (500 mM Tris-HCl pH 7.6, 100 mM MgCl<sub>2</sub>) and 10 mM 2-mercaptoethanol solution are supplied separately.

### Proteinase K

Prod.No.	Product	Pack-size	Price in €
M3036.0100	Proteinase K powder (>30U/mg)	100 mg	55.00
M3036.0500	Proteinase K powder (>30U/mg)	500 mg	210.00
M3036.1000	Proteinase K powder (>30U/mg)	1 g	395.00
M3037.0001	Proteinase K solution (20mg/mL)	1 mL	12.00
M3037.0005	Proteinase K solution (20mg/mL)	5 x 1 mL	55.00

Proteinase K, extracted from the fungus *Tritirachium album*, is a non-specific serine protease exhibiting a very broad cleavage range (cleaves the carboxylic ends of aromatic, hydrophobic and aliphatic amino acids) making it useful for general digestion of proteins in biological samples (Ebeling W. et al. (1974) Eur. J. Biochem., 47, 91). Proteinase K is mainly used in nucleic acid extraction protocols but may also be used in protein fingerprinting experiments, or for removal of nucleases.

#### Specifications

Lyophilised powder or 18 mg/ml solution; recommended reaction buffer: 50 mM Tris-HCl pH 7.5, 5 mM CaCl<sub>2</sub>

#### Comments

Free of exonuclease, endonuclease and RNase activities.

#### Activity / Unit definition

> 30 mAnson U/mg; one unit is equivalent to one mAnson unit (Anson M.L. (1939) J. Gen. Physiol., 22, 79) when using urea-denatured haemoglobin as substrate. One mAnson unit releases folin-positive amino acids and peptides corresponding to 1 μmole of tyrosine per minute at 35°C.

#### Storage buffer (for liquid form)

20 mM Tris-HCl pH 7.4, 1 mM CaCl<sub>2</sub>, 50% (v/v) glycerol.

#### Storage and shipping

Store at -20°C, shipped refrigerated.

## Agaroses

The Genaxxon bioscience agaroses have been specially tested and optimised for all molecular biology applications. They are tested on a broad panel (contaminating nuclease activities, pH in solution, background fluorescence, molecular weight marker separation, particle, sizing, etc. ...) and guarantee top results for every application.

GenAgarose with low electroendosmosis (EEO) is recommended for most DNA/RNA applications. If the separated nucleic acid fragments have to be used in further enzymatic reactions (ligation, restriction, etc. ...) our special, highly purified GenAgarose Plus may be used. For nucleic acid preparative work, an agarose with low gelling temperature should be used. The GenAgarose ME is used for electrophoresis of serum proteins and immunoelectrophoresis. For the separation of high molecular weight DNA such as pulsed field gel electrophoresis (PFGE), the GenAgarose Mega with a high gel strength is recommended. For separating small DNA fragments ranging from 10bp to 1500bp, Genaxxon bioscience provides a unique range of molecular screening agaroses, GenAgarose Tiny, GenAgarose Tiny HT and GenAgarose Tiny LMH.

Prod.No.	Product	Pack-size	Price in €
M3356.0010	GenAgarose ISO	10 g	87.92
M3356.0025	GenAgarose ISO	25 g	195.69
M3356.0100	GenAgarose ISO	100 g	614.25
M3356.0250	GenAgarose ISO	250 g	1359.75
M3044.0050	GenAgarose LE	50 g	53.50
M3044.0100	GenAgarose LE	100 g	85.60
M3044.0250	GenAgarose LE	250 g	133.75
M3044.0500	GenAgarose LE	500 g	200.63
M3044.1000	GenAgarose LE	1 kg	369.15
M3049.0010	GenAgarose LM	10 g	70.01
M3049.0025	GenAgarose LM	25 g	170.89
M3049.0100	GenAgarose LM	100 g	550.10
M3050.0050	GenAgarose ME	50 g	71.21
M3050.0100	GenAgarose ME	100 g	107.93
M3050.0250	GenAgarose ME	250 g	232.85
M3050.0500	GenAgarose ME	500 g	382.02
M3050.1000	GenAgarose ME	1 kg	709.46
M3051.0025	GenAgarose Mega	25 g	55.13
M3051.0050	GenAgarose Mega	50 g	90.96
M3051.0100	GenAgarose Mega	100 g	164.22
M3051.0250	GenAgarose Mega	250 g	320.83
M3051.0500	GenAgarose Mega	500 g	550.15
M3051.1000	GenAgarose Mega	1 kg	964.69
M3046.0025	GenAgarose Tiny	25 g	115.76
M3046.0050	GenAgarose Tiny	50 g	220.22
M3046.0100	GenAgarose Tiny	100 g	385.38
M3046.0250	GenAgarose Tiny	250 g	834.32
M3046.0500	GenAgarose Tiny	500 g	1267.43
M3047.0025	GenAgarose Tiny HT	25 g	91.68
M3047.0050	GenAgarose Tiny HT	50 g	155.35
M3047.0100	GenAgarose Tiny HT	100 g	298.78
M3047.0250	GenAgarose Tiny HT	250 g	660.40
M3047.0500	GenAgarose Tiny HT	500 g	1000.52
M3048.0010	GenAgarose Tiny LMH	10 g	60.64
M3048.0025	GenAgarose Tiny LMH	25 g	137.81
M3048.0050	GenAgarose Tiny LMH	50 g	248.61
M3048.0100	GenAgarose Tiny LMH	100 g	464.15
M3048.0250	GenAgarose Tiny LMH	250 g	1015.40
M3048.0500	GenAgarose Tiny LMH	500 g	1808.21

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### GenAgarose LE (low electroendosmosis)

Prod.No.	Product	Pack-size	Price in €
M3044.0050	GenAgarose LE	50 g	56.18
M3044.0100	GenAgarose LE	100 g	89.88
M3044.0250	GenAgarose LE	250 g	140.44
M3044.0500	GenAgarose LE	500 g	210.66
M3044.1000	GenAgarose LE	1 kg	387.61

GenAgarose is suitable for all analytical and preparative electrophoresis of nucleic acids in routine gel electrophoresis. Depending on the concentration of GenAgarose used, the size range of nucleic acid separation will vary between 0.2 and 15 kbp. The low EEO makes this useful for a broad range of applications: PCR product analysis, restriction enzyme digest analysis, separation of RNA before blotting, etc.

#### Specifications

Electroendosmosis < 0.13, sulfur as sulfates < 0.01%; gel strength > 1230 g/cm<sup>2</sup>; gelling temperature: 35°C (+/- 1.5°C); melting temperature > 88°C; pH (1% in water): 5.7; DNase and RNase: none detected.

#### Storage and shipment

Shipped at room temperature. Store at room temperature in a dry place.

### GenAgarose Tiny (agarose designed for separation of small fragments)

Prod.No.	Product	Pack-size	Price in €
M3046.0025	GenAgarose Tiny	25 g	115.76
M3046.0050	GenAgarose Tiny	50 g	220.22
M3046.0100	GenAgarose Tiny	100 g	385.38
M3046.0250	GenAgarose Tiny	250 g	834.32
M3046.0500	GenAgarose Tiny	500 g	1267.43

GenAgarose Tiny has been designed for electrophoretic analysis of small nucleic acids. Fine resolution of small DNA fragments or PCR products in the 50bp - 1000bp range can be obtained (see table). It can also be used for genotyping, allele sizing and short tandem repeat analysis. GenAgarose Tiny works as a molecular screen and has twice the resolution of the finest sieving agaroses. It can discriminate between fragments which differ by only 2-4bp in length and thus, is able to compete with acrylamide gels, being much easier to handle as the latter. GenAgarose Tiny 2% to 4% gels give similar results to polyacrylamide 6% to 8% gels. For efficient resolution, the concentration of GenAgarose Tiny should be adjusted according to the range of band sizes analysed, and the gel running buffer used (TAE or TBE).

#### Specifications

Electroendosmosis (EEO): < 0.12; sulfur as sulfates < 0.10%; gel strength (1.5%): > 500 g/cm<sup>2</sup>; gel strength (3.0%): > 1500 g/cm<sup>2</sup>; gelling temperature (1.5%): < 30°C; melting temperature (1.5%): < 70°C; pH (1% in water): 5.7; loss on drying: max. 7%; Ash: max. 0.35%; sulfate: max. 0.1%; DNase and RNase: not detected.

#### Storage and shipment

Shipped at room temperature. Store at room temperature in a dry place.

### GenAgarose Tiny HT (molecular screening agarose for fragments < 1500 bp)

Prod.No.	Product	Pack-size	Price in €
M3047.0025	GenAgarose Tiny HT	25 g	91.68
M3047.0050	GenAgarose Tiny HT	50 g	155.35
M3047.0100	GenAgarose Tiny HT	100 g	298.78
M3047.0250	GenAgarose Tiny HT	250 g	660.40
M3047.0500	GenAgarose Tiny HT	500 g	1000.52

GenAgarose Tiny HT is a molecular screening agarose with "normal melting temperature" designed to have a slightly larger gel network than GenAgarose Tiny; it is recommended for a fine sieving of DNA fragments smaller than 1500 bp including PCR products (see table). Approximate ranges of separation (in 1 X TAE buffer): 2% 500-1500 bp 4% 150-600 bp.

#### Specifications

Electroendosmosis (EEO): < 0.12; sulfur as sulfates < 0.10%; gel strength (1.5%): > 2000 g/cm<sup>2</sup>; gel strength (3.0%): > 4250 g/cm<sup>2</sup>; gelling temperature (1.5%): < 36.5°C; melting temperature (1.5%): < 88°C; pH (1% in water): 5.7; loss on drying: max. 7%; Ash: max. 0.35%; sulfate: max. 0.1%; DNase and RNase: not detected.

#### Storage and shipment

Shipped at room temperature. Store at room temperature in a dry place.

### GenAgarose LM (low melting agarose)

Prod.No.	Product	Pack-size	Price in €
M3049.0010	GenAgarose LM	10 g	70.01
M3049.0025	GenAgarose LM	25 g	170.89
M3049.0100	GenAgarose LM	100 g	550.10

GenAgarose LM is a high purity low melting agarose excellent for separation of RNA and DNA fragments as well as isolation of genomic DNA. Optimum separation of DNA in the 100 bp to 10kbp range will be obtained using GenAgarose LM at concentrations between 0.75% and 1,75%. The low melting temperature facilitates quantitative recovery of nucleic acids from the gel. The low gelling temperature also facilitates the inclusion of thermo-labile substances such as living cells, and allows enzymatic manipulation of DNA in melted agarose.

#### Specifications

Electroendosmosis < 0.13; sulfur as sulfates < 0.015%; gel strength:  $\geq 450$  g/cm<sup>2</sup>; gelling temperature: 26°C (+/- 1.5°C); melting temperature: 65°C (+/- 1.0°C); pH (1% in water): 7.6; DNase and RNase not detected.

#### Storage and shipment

Shipped at room temperature. Store at room temperature in a dry place.

### GenAgarose ME (medium electroendosmosis agarose)

Prod.No.	Product	Pack-size	Price in €
M3050.0050	GenAgarose ME	50 g	71.21
M3050.0100	GenAgarose ME	100 g	107.93
M3050.0250	GenAgarose ME	250 g	232.85
M3050.0500	GenAgarose ME	500 g	382.02
M3050.1000	GenAgarose ME	1 kg	709.46

The GenAgarose ME has a moderate electroendosmosis and is recommended for electrophoresis of serum proteins and immunoelectrophoresis. It may also be used in nucleic acid electrophoresis.

#### Specifications

Electroendosmosis 0.17-0.18; sulfur as sulfates < 0.01% ; gel strength: 2500 g/cm<sup>2</sup> ; gelling temperature: 36.7°C; melting temperature 88.1°C; pH (1% in water): 5.9; DNase and RNase: none detected.

#### Storage and shipment

Shipped at room temperature. Store at room temperature in a dry place.

### GenAgarose Mega (high gel strength agarose)

Prod.No.	Product	Pack-size	Price in €
M3051.0025	GenAgarose Mega	25 g	55.13
M3051.0050	GenAgarose Mega	50 g	90.96
M3051.0100	GenAgarose Mega	100 g	164.22
M3051.0250	GenAgarose Mega	250 g	320.83
M3051.0500	GenAgarose Mega	500 g	550.15
M3051.1000	GenAgarose Mega	1 kg	964.69

GenAgarose Mega is intended for analysis and separation of high molecular weight DNA in Southern blotting experiments or Pulsed Field Gel Electrophoresis (PFGE). Due to the high gel strength, low concentrations of agarose may be used and high molecular weight molecules migrate rapidly without significant restriction. GenAgarose Mega is ideal for PFGE applications. The high gel strength reduces separation times for large DNA molecules while maintaining high resolution. GenAgarose Mega can also be used for the preparative separation of nucleic acids.

#### Specifications

Electroendosmosis < 0.113 ; sulfur as sulfates < 0.015%; gel strength: 1800 g/cm<sup>2</sup>; gelling temperature: 36°C ( $\pm 1.5^\circ\text{C}$ ) ; melting temperature  $> 87^\circ\text{C}$  ( $\pm 1.0^\circ\text{C}$ ); pH (1% in water) : 6.0; DNase and RNase: not detected.

#### Storage and shipment

Shipped at room temperature. Store at room temperature in a dry place.

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### GenAgarose Tiny LMH

(molecular screening agarose for very small fragments)

Prod.No.	Product	Pack-size	Price in €
M3048.0010	GenAgarose Tiny LMH	10 g	60.64
M3048.0025	GenAgarose Tiny LMH	25 g	137.81
M3048.0050	GenAgarose Tiny LMH	50 g	248.61
M3048.0100	GenAgarose Tiny LMH	100 g	464.15
M3048.0250	GenAgarose Tiny LMH	250 g	1015.40
M3048.0500	GenAgarose Tiny LMH	500 g	1808.21

At 3% concentration, GenAgarose Tiny LMH presents a resolution of DNA fragments similar to gels of polyacrylamide at an 8% concentration (see table). Its main properties are: 1. Excellent resolution of DNA fragments with less than 500 bp. 2. Clear separation of DNA fragments smaller than 50bp with differences of only 3bp. 3. Separation of nucleic acid fragments of less than 10bp. 4. Recommended for capillary electrophoresis, not recommended for blotting assays. 5. Clear, transparent gels produced even at concentrations of 5% or higher. 6. Easy handling at all concentrations.

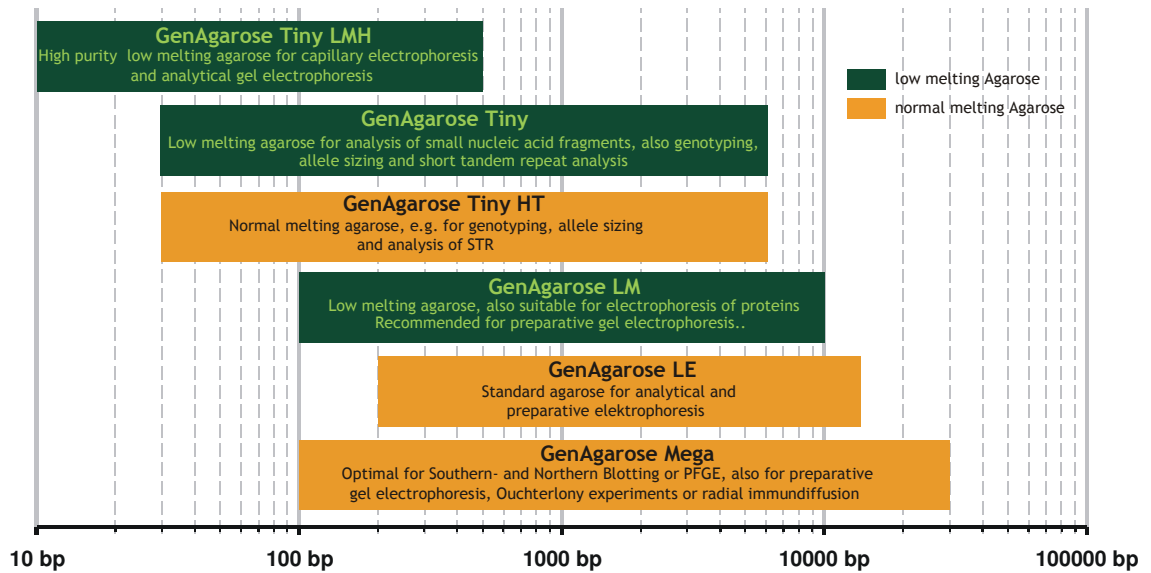
Approximate ranges of separation (in 1 X TAE buffer): 3% 80-500bp, 4% 30-300bp, 5% 10-200bp.

#### Specifications

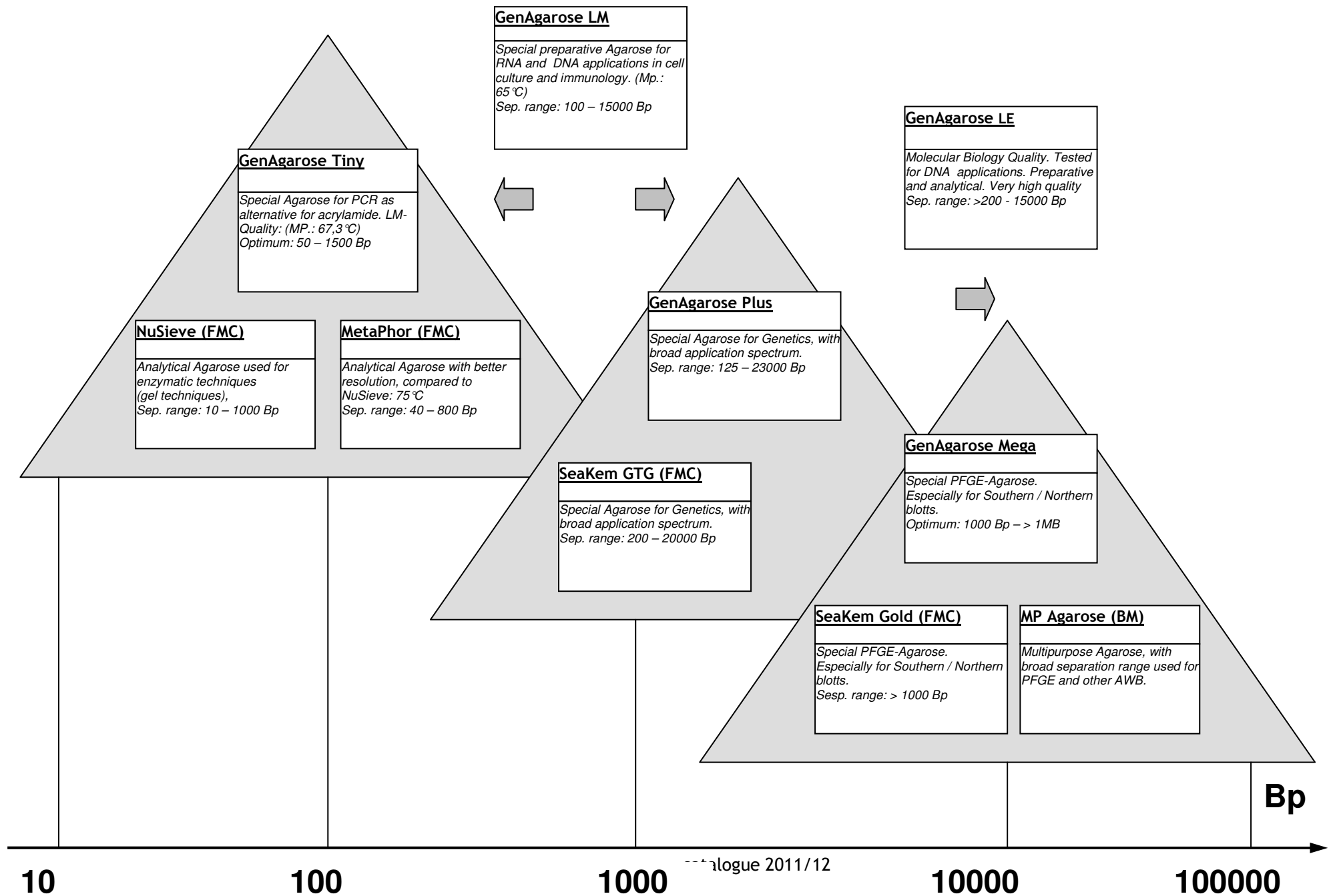
Electroendosmosis (EEO): < 0.12; sulfate: < 0.12%; ash: > 0.3%; humidity: max. 7%; gel strength (1%): > 500 g/cm<sup>2</sup>; gel strength (1.5%): > 1000 g/cm<sup>2</sup>; gelling temperature (3%): 27°C +/- 3°C; melting temperature (3%): < 75°C (+/- 1.0°C); pH (1% in water): 7.6; DNase and RNase: not detected.

#### Storage and shipment

Shipped at room temperature. Store at room temperature in a dry place.



# Genaxxon bioscience - Speciality Agaroses



## Electrophoresis Reagents

Prod.No.	Product	Pack-size	Price in €
M3270.0100	Ammonium persulfate BioChemica	100 g	17.16
M3270.0500	Ammonium persulfate BioChemica	500 g	39.38
M3270.1000	Ammonium persulfate BioChemica	1 kg	44.63
M3269.0025	Ammonium persulfate Molbio grade	25 g	14.10
M3269.0100	Ammonium persulfate Molbio grade	100 g	18.78
M3269.0250	Ammonium persulfate Molbio grade	250 g	37.49
M3280.0500	Glycine, free of pyrogens, min. 99.8%	500 g	24.53
M3280.1000	Glycine, free of pyrogens, min. 99.8%	1 kg	34.07
M3280.5000	Glycine, free of pyrogens, min. 99.8%	5 kg	142.45
M3310.0500	HighPure Urea	500 g	12.02
M3310.1000	HighPure Urea	1 kg	22.53
M3310.5000	HighPure Urea	5 kg	102.15
M6070.0025	Silver nitrate, analytical grade, min. 99.8%	25 g	37.54
M6070.0050	Silver nitrate, analytical grade, min. 99.8%	50 g	60.74
M6070.0100	Silver nitrate, analytical grade, min. 99.8%	100 g	103.16
M6070.0250	Silver nitrate, analytical grade, min. 99.8%	250 g	227.06
M3293.0025	Silver nitrate, Molecular biology grade	25 g	54.08
M3293.0050	Silver nitrate, Molecular biology grade	50 g	88.63
M3293.0100	Silver nitrate, Molecular biology grade	100 g	156.23
M3293.0250	Silver nitrate, Molecular biology grade	250 g	345.50
M3295.0025	TEMED	25 mL	19.69
M3295.0100	TEMED	100 mL	27.31
M3295.0250	TEMED	250 mL	43.10
M3337.0100	Urea for 2D-gel electrophoresis (min. 99.5%)	100 g	9.76
M3337.0500	Urea for 2D-gel electrophoresis (min. 99.5%)	500 g	23.28
M3337.1000	Urea for 2D-gel electrophoresis (min. 99.5%)	1 kg	39.36
M3311.0500	Urea powder for molecular biology (min. 99%)	500 g	20.28
M3311.1000	Urea powder for molecular biology (min. 99%)	1 kg	29.89
M3311.5000	Urea powder for molecular biology (min. 99%)	5 kg	124.68

**Ammonium Persulfate, Molbio grade**  
(Ammonium Peroxodisulfate, APS, MW = 228.20 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3269.0025	Ammonium persulfate Molbio grade	25 g	14.10
M3269.0100	Ammonium persulfate Molbio grade	100 g	18.78
M3269.0250	Ammonium persulfate Molbio grade	250 g	37.49

**Specifications**

Min. 98%; pH (5% in water): 1-2; solubility (water, 20 °C): 582 g/l; MP=120 °C (dec.); DNases/RNases/Proteases: negative; chloride: max. 0.001%; Pb: max. 0.005%; Mn: max. 0.00005%, free acid: max. 0.1%; residue on ignition: max. 0.05%.

**Storage and shipment**

Shipped and stored at room temperature.

**Use**

Ammonium persulfate (APS) or riboflavine initiates the polymerisation of acrylamide gels (Ogden R.C. and Adams D.A. (1987) *Methods Enzymol.*, 152, 61-87). Stock solutions of APS (10% in water) are stable for 1-2 weeks.

**Safety**

R: 8-22-36/37/38-42/43; S: 22-24-26-37

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### Silver Nitrate

(Analytical grade, AgNO<sub>3</sub>, MW = 169.87 g/mol)

Prod.No.	Product	Pack-size	Price in €
M6070.0025	Silver nitrate, analytical grade, min. 99.8%	25 g	37.54
M6070.0050	Silver nitrate, analytical grade, min. 99.8%	50 g	60.74
M6070.0100	Silver nitrate, analytical grade, min. 99.8%	100 g	103.16
M6070.0250	Silver nitrate, analytical grade, min. 99.8%	250 g	227.06

#### Specifications

Min. 99.8%; solubility (water, 20°C): 2150 g/l; MP=212°C; BP=444°C; chloride: max. 0.0005%; sulfate: max. 0.002%; Pb: max. 0.001%; Cd: max. 0.0001%; Fe: max. 0.0002%; Mn: max. 0.0005%; Ni: max. 0.0005%; Zn: max. 0.0001%.

#### Safety

R: 34; S: 26-45

#### Use

Mainly used for detection of proteins and for DNA and RNA in polyacrylamide gels (Porro M. et al. (1982) Anal. Biochem., 127, 316; Gardiner K. et al. (1986) Somatic Cell Genetics, 12, 185.

#### Storage and shipment

Shipped and stored at RT

### HighPure Urea

(CH<sub>4</sub>N<sub>2</sub>O, MW = 60.06 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3310.0500	HighPure Urea	500 g	12.02
M3310.1000	HighPure Urea	1 kg	22.53
M3310.5000	HighPure Urea	5 kg	102.15

#### Specifications

Min. 99.5%; solubility (water, 20°C): 1080 g/l; MP = 132-135°C; pH (8M, water): 7.5-9.0; chloride: max. 0.0005%; cyanate: max. 0.002%, sulphate: max. 0.001%; Fe: max. 0.0005%; heavy metals: max. 0.001%.

#### Shipment and Storage

Shipped and stored at RT

#### Comments

See M3311

#### Usage

See M3311

### Urea, molbio grade

(CH<sub>4</sub>N<sub>2</sub>O, MW = 60.06 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3311.0500	Urea powder for molecular biology (min. 99%)	500 g	20.28
M3311.1000	Urea powder for molecular biology (min. 99%)	1 kg	29.89
M3311.5000	Urea powder for molecular biology (min. 99%)	5 kg	124.68

#### Specifications

min. 99.5%; solubility in water (20°C) = 1080 g/l; MP = 132 - 135°C; pH (8M, H<sub>2</sub>O) = 7.5 - 9.0; DNAses and RNAses: not detectable; Ca: max. 0.001%; Cu: max. 0.0005%; Fe: max. 0.0005%; Pb: max. 0.001%; Mg: max. 0.001%; Cl: max. 0.005%; SO<sub>4</sub>: max. 0.001%.

#### Usage

Proteins, RNA and DNA molecules are denatured in polyacrylamide gels by adding 7M urea (Maniatis T. and Efstratiadis A. (1980) Methods Enzymol., 65, 299); molecules, larger than the 150-200 nucleotides, do not completely denature at room temperature in 7M urea.

#### Shipment and Storage

Shipped and stored at RT.

#### Comments

At alkaline pH, urea decomposes and forms cyanate ions. These ions may react with the amino group and form stable carbamylated derivatives that may result in a change of the migration pattern during electrophoresis. Solutions containing urea should not be stored for long periods or be heated; gels containing urea should be prerun to remove cyanate ions before loading samples.

### Urea for 2D-gel electrophoresis

(CH<sub>4</sub>N<sub>2</sub>O, MW = 60.06 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3337.0100	Urea for 2D-gel electrophoresis (min. 99.5%)	100 g	9.76
M3337.0500	Urea for 2D-gel electrophoresis (min. 99.5%)	500 g	23.28
M3337.1000	Urea for 2D-gel electrophoresis (min. 99.5%)	1 kg	39.36

#### Specifications

min. 99.5%; solubility in water (20°C) = 1080 g/l; MP = 132 - 135°C; pH (8M, H<sub>2</sub>O) = 7.5 - 9.0; A (1cm/ 8M in water): at 230nm max. 0.05, at 260nm max. 0.03, at 280nm max. 0.02; Fe: max. 0.001%; Pb: max. 0.001%; Cl: max. 0.005%; SO<sub>4</sub>: max. 0.005%.

#### Shipment and Storage

Shipped and stored at RT.

#### Comments

See M3311

#### Usage

Especially suited for high resolution 2D-gel electrophoresis.

**TEMED**(Analytical grade, N,N,N',N'-Tetramethylethylenediamine, TMDA, C<sub>6</sub>H<sub>16</sub>N<sub>2</sub>, MW = 116.21 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3295.0025	TEMED	25 mL	19.69
M3295.0100	TEMED	100 mL	27.31
M3295.0250	TEMED	250 mL	43.10

**Specifications**

Min. 99.0% (GC), refractive index (n<sub>20</sub><sup>°</sup>/D): 1.417; density: 0.77; BP = 121°C; water: max. 0.3%.

**Safety**

R: 11-22-36/37/37; S: 7-16-26

**Storage and shipment**

Shipped at RT, store at 2-8°C

**Use**

TEMED catalyses the formation of free radicals in the presence of ammonium persulfate and is used as an enhancer for polymerisation/cross-linking of acrylamide/bisacrylamide gels (Needles H.L. (1970) *Anal. Biochem.*, **35**, 533; Odgen R.C. and Adams D.A. (1987) *Methods Enzymol.*, **152**, 61).

**DNA Ladders**

Genaxxon bioscience Molecular Weight Markers are obtained from phage and plasmid DNA, purified and digested to completion with highly purified restriction endonucleases. The resulting DNA fragments are further purified. The Genaxxon bioscience molecular weight markers can be directly labelled at the 5'- end with radioisotopes using T4 Polynucleotide Kinase for visualisation by autoradiography.

Prod.No.	Product	Pack-size	Price in €
M3340.0050	GenLadder 100 bp + 1.5 kbp	50 µg	36.75
M3340.5050	GenLadder 100 bp + 1.5 kbp	5 x 50 µg	147.00
M3340.0250	GenLadder 100 bp + 1.5 kbp	250 µg	132.00
M3094.0050	GenLadder 100 bp + 1.5 kbp (ready-to-use)	50 µg	36.75
M3094.5050	GenLadder 100 bp + 1.5 kbp (ready-to-use)	5 x 50 µg	147.00
M3094.0250	GenLadder 100 bp + 1.5 kbp (ready-to-use)	250 µg	132.00
M3084.0050	GenLadder 1kb	50 µg	36.75
M3084.5050	GenLadder 1kb	5 x 50 µg	147.00
M3084.0250	GenLadder 1kb	250 µg	132.00
M3328.0050	GenLadder 300 bp - 10 kb (ready-to-use)	50 µg	36.75
M3328.5050	GenLadder 300 bp - 10 kb (ready-to-use)	5 x 50 µg	147.00
M3328.0250	GenLadder 300 bp - 10 kb (ready-to-use)	250 µg	132.00
M3072.0050	GenLadder 50bp (ready-to-use)	50 µg	45.15
M3072.0250	GenLadder 50bp (ready-to-use)	5 x 50 µg	210.00
M3071.0150	HighRange GenLadder	150 µg	335.38
M3079.0050	Lambda DNA / Sty I marker	50 µg	17.70
M3079.0250	Lambda DNA / Sty I marker	250 µg	53.09
M3076.0050	Lambda-DNA - BstE II DNA marker	50 µg	17.70
M3076.0250	Lambda-DNA - BstE II DNA marker	250 µg	53.09
M3075.0050	Lambda-DNA - Hind III DNA Marker	50 µg	17.70
M3075.0250	Lambda-DNA - Hind III DNA Marker	250 µg	53.09
M3073.0050	Lambda-DNA (undigested)	50 µg	16.33
M3073.0250	Lambda-DNA (undigested)	250 µg	43.21
M3073.1000	Lambda-DNA (undigested)	1 mg	135.98
M3080.0050	pBR322 - Hae III DNA marker	50 µg	65.10
M3080.0250	pBR322 - Hae III DNA marker	250 µg	243.60
M3077.0050	Phage T7 DNA	50 µg	82.58
M3077.0250	Phage T7 DNA	250 µg	330.31
M3081.0050	pUC19 (undigested vector)	50 µg	41.29
M3081.0250	pUC19 (undigested vector)	250 µg	165.15

### DNA Ladders

Prod.No.	Product	Pack-size	Price in €
M3078.0050	pUC19 / MspI DNA marker	50 µg	41.29
M3078.0250	pUC19 / MspI DNA marker	250 µg	165.15
M3070.0200	WideRange GenLadder	200 µg	216.77

### Lambda - DNA (undigested)

(Phage lambda DNA for preparation of molecular weight markers)

Prod.No.	Product	Pack-size	Price in €
M3073.0050	Lambda-DNA (undigested)	50 µg	16.33
M3073.0250	Lambda-DNA (undigested)	250 µg	43.21
M3073.1000	Lambda-DNA (undigested)	1 mg	135.98

#### Storage and shipment

Shipped at room temperature. Store at - 20°C.

#### Storage Buffer

10 mM Tris-HCl pH 8.0, 1 mM EDTA, 10 mM NaCl

#### Comments

Phage Lambda cI857 *Sam7* DNA is isolated from an infected *E. coli* strain W3350. Restriction enzyme-digested lambda DNA (48,502bp) generates molecular weight size markers routinely used in gel analysis of nucleic acids. The complete nucleotide sequence has been determined.

Lit.: Sanger, F. *et al.* (1982) *J. Mol. Biol.* 162, 729.

### Lambda - DNA *Hind*III digest

(DNA Molecular Weight Marker)

Prod.No.	Product	Pack-size	Price in €
M3075.0050	Lambda-DNA - Hind III DNA Marker	50 µg	17.70
M3075.0250	Lambda-DNA - Hind III DNA Marker	250 µg	53.09

#### Comments

Lambda DNA (cI857 *Sam 7*)/*Hind* III Markers are prepared by digesting Lambda DNA with *Hind* III, followed by heat-inactivation of the enzyme. The DNA fragments have been ethanol-precipitated and resuspended in the storage buffer.

#### Storage and shipment

Store at - 20°C. Shipped at room temperature.

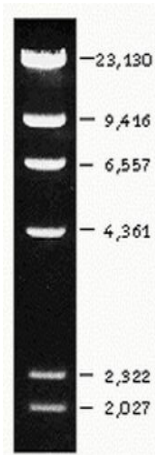
#### Storage buffer

10 mM Tris-HCl pH 8.0, 1 mM EDTA.

#### Concentration

DNA is reconstituted to a concentration of 0.2 - 0.5µg/µL.

#### Number of Bands: 6



### Lambda - DNA *Bst*E II digest (DNA Molecular Weight Marker)

Prod.No.	Product	Pack-size	Price in €
M3076.0050	Lambda-DNA - <i>Bst</i> E II DNA marker	50 µg	17.70
M3076.0250	Lambda-DNA - <i>Bst</i> E II DNA marker	250 µg	53.09

**Number of Bands: 14**

Fragment Sizes: 117, 224, 702, 1264, 1371, 1929, 2323, 3675, 4324, 4822, 5686, 6369, 7242, 8454 bp

**Concentration**

DNA is reconstituted to a concentration of 1µg/µL.

**Storage buffer**

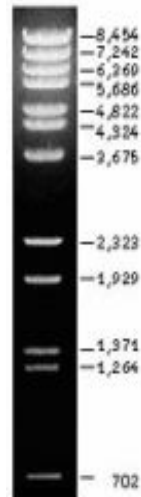
10 mM Tris-HCl pH 8.0, 1 mM EDTA

**Comments**

The cohesive ends of the 12 bp *cos* site of bacteriophage lambda from fragments 8453bp and 5687bp may anneal and form an additional band at 14140bp. These fragments can be separated by heating the DNA marker for 5 minutes at 65°C followed by rapid chilling on ice, before loading onto a gel.

**Storage and shipment**

Store at -20°C. Shipped at room temperature.



### Lambda - DNA *Sty* I digest (DNA Molecular Weight Marker)

Prod.No.	Product	Pack-size	Price in €
M3079.0050	Lambda DNA / <i>Sty</i> I marker	50 µg	17.70
M3079.0250	Lambda DNA / <i>Sty</i> I marker	250 µg	53.09

**Comments**

Lambda DNA (cI857 *Sam* 7)/*Sty* I Markers are prepared by digesting Lambda DNA with *Sty* I, followed by inactivation of the enzyme. The DNA fragments are then ethanol-precipitated and resuspended in the storage buffer.

The cohesive ends of fragments 1 and 4 may cause formation of extra band 23583 bp. The fragments may be separated by heating to 65°C for 3 minutes before loading the sample on the gel.

**Concentration**

DNA is reconstituted to a concentration of 0.2 - 0.5 µg/µL.

**Number of Bands: 11**

Fragment Sizes: 74, 421, 925, 1489, 1882, 2690, 3472, 4254, 6223, 7743, 19329.

**Storage and shipment**

Store at -20°C. Shipped at room temperature.

**Storage buffer**

10 mM Tris-HCl pH 8.0, 1 mM EDTA.

### Phage T7 DNA

(Phage T7 DNA for preparation of molecular weight markers)

Prod.No.	Product	Pack-size	Price in €
M3077.0050	Phage T7 DNA	50 µg	82.58
M3077.0250	Phage T7 DNA	250 µg	330.31

**Storage and shipment**

Shipped at room temperature. Store at -20°C.

**Storage Buffer**

10 mM Tris-HCl pH 8.0, 1 mM EDTA, 10 mM NaCl

**Comments**

Bacteriophage T7 DNA is isolated from an infected *E. coli* strain. DNA is linear, 39937 bp long. Some restriction enzymes have no recognition sequences on lambda DNA, therefore these enzymes are to be analysed on other DNA substrates like T7 DNA.

**Comments**

T7 DNA is the most popular "alternative" to lambda DNA substrate for the restriction endonucleases. The complete nucleotide sequence has been determined. The whole sequence can be downloaded from the Genaxxon webpage.

Lit.: Dunn, J.J. and Studier, F.W. (1983) Complete nucleotide sequence of bacteriophage T7 DNA and the locations of T7 genetic elements, *J. Mol. Biol.* 166 (4), 477-535.

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### DNA pBR322 / *Hae* III digest (DNA Molecular Weight Marker)

Prod.No.	Product	Pack-size	Price in €
M3080.0050	pBR322 - <i>Hae</i> III DNA marker	50 µg	65.10
M3080.0250	pBR322 - <i>Hae</i> III DNA marker	250 µg	243.60

#### Number of Bands: 14

Fragment Sizes:

89, 104, 123, 124, 184, 192, 213, 234, 267, 434, 458, 502, 540, 587 pb.

#### Gel Analysis

To demonstrate the mobility of the DNA fragments, 500ng of DNA were loaded onto a 1.5% agarose gel.

#### Comments

Before loading onto the gel, the diluted DNA marker should be heated for 5 minutes to 65°C and fast chilled on ice before loading onto the gel.

#### Storage and shipment

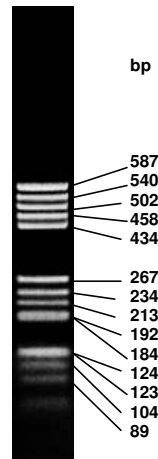
Store at -20°C. Shipped at room temperature.

#### Storage buffer

10 mM Tris-HCl pH 8.0, 1 mM EDTA

#### Concentration

DNA is reconstituted to a concentration of 1µg/µL.



### pUC 19 DNA (undigested) (for preparation of DNA molecular weight markers)

Prod.No.	Product	Pack-size	Price in €
M3081.0050	pUC19 (undigested vector)	50 µg	41.29
M3081.0250	pUC19 (undigested vector)	250 µg	165.15

#### Storage and shipment

Shipped at room temperature. Store at -20°C.

#### Storage Buffer

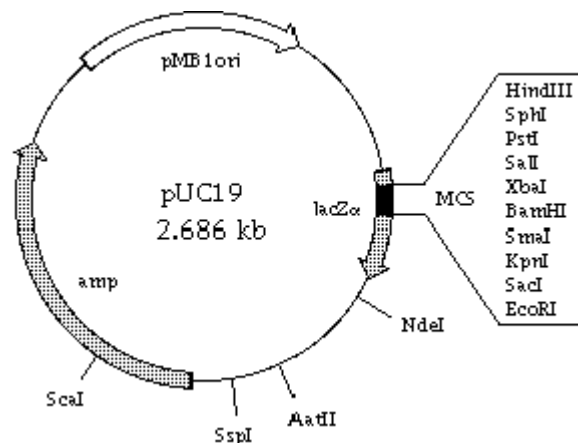
10 mM Tris-HCl pH 8.0, 1 mM EDTA, 10 mM NaCl

#### Comments

pUC19 is a commonly used *E.coli* plasmid cloning vector. The molecule is double-stranded circle 2686 base pairs in length. pUC19 carries a multiple cloning site polylinker that contains unique sites for 13 different restriction endonucleases (6-cutters).

Lit.: Yanisch-Perron, C., Vieira, J. and Messing, J. (1985)  
Gene 33, 103-119

ACCESSION L09137 X02514, MEDLINE 85180545, PUBMED 2985470



**pUC19 Msp I digest**  
(DNA Molecular Weight Marker)

Prod.No.	Product	Pack-size	Price in €
M3078.0050	pUC19 / MspI DNA marker	50 µg	41.29
M3078.0250	pUC19 / MspI DNA marker	250 µg	165.15

**Number of Bands: 11**

Fragment Sizes: 26, 2x34, 67, 110, 111, 147, 190, 242, 331, 404, 489, 501.

**Comments**

Msp I digest of pUC 19 vector.

**Storage and shipment**

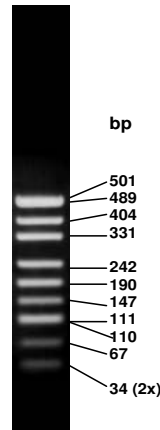
Store at -20°C. Shipped at room temperature.

**Storage buffer**

10 mM Tris-HCl pH 8.0, 1 mM EDTA.

**Concentration**

DNA is reconstituted to a concentration of 0.2 - 0.5µg/µL.



**GenLadder 100bp + 1.5kb ladder**  
(DNA Size Marker 100 - 1000bp + 1500bp)

Prod.No.	Product	Pack-size	Price in €
M3340.0050	GenLadder 100 bp + 1.5 kbp	50 µg	36.75
M3340.5050	GenLadder 100 bp + 1.5 kbp	5 x 50 µg	147.00
M3340.0250	GenLadder 100 bp + 1.5 kbp	250 µg	132.00

The Genaxxon bioscience 100bp ladder is the ideal DNA size marker for fragment sizes from 100bp to 1000bp. All bands light up to the same intensity, except the 500bp band which is brighter for better orientation. Each band has been calibrated with respect to base pair size and DNA quantity. Thus, an accurate determination of product size and DNA concentration is possible. No ambiguous bands are visible.

**Number of Bands: 11**

Fragment Sizes and amount of DNA per Band: 100pb, 200bp, 300bp, 400bp, 500bp (2X) , 600bp, 700bp, 800bp, 900bp, 1000bp, 1500bp.

**Storage buffer**

10 mM Tris-HCl pH 8.0, 1 mM EDTA

**Quantity**

Sufficient for more than 100 lanes; the DNA is dissolved at a concentration of 1µg/µL. We recommend to dilute the DNA 1:50 in TE.

**Loading buffer (5X)**

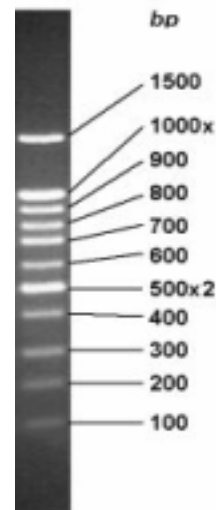
A separate tube of 150 mM EDTA, 25 mM Tris-HCl (pH 7.0), 25% glycerol, 0.05% bromophenol blue is provided. A 5µL load per lane is recommended.

**Storage and shipment**

Store at -20°C. Shipped at room temperature.

**Gel Analysis**

To demonstrate the mobility of the DNA fragments, 400ng of GenLadder were loaded onto a 1.5% agarose gel.



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### GenLadder 1 kb (DNA Size Marker 250 - 10000 bp)

Prod.No.	Product	Pack-size	Price in €
M3084.0050	GenLadder 1kb	50 µg	36.75
M3084.5050	GenLadder 1kb	5 x 50 µg	147.00
M3084.0250	GenLadder 1kb	250 µg	132.00

The Genaxxon bioscience 1kb ladder is the ideal DNA size marker for fragment sizes from 250 - 10000bp. All bands light up to the same intensity except the 3000bp band which is twice as bright for better orientation. Each band has been calibrated with respect to base pair size and DNA quantity. Thus, an accurate determination of product size and DNA concentration is possible. No ambiguous bands are visible. The GenLadder 1kb can be directly labelled at the 5'- end with radioisotopes using T4 Polynucleotide Kinase for visualisation by autoradiography.

#### Number of Bands: 14

Fragment Sizes: 250, 500, 750, 1000, 1500, 2000, 2500, 3000, 3500, 4000, 5000, 6000, 8000, 10000 bp.

#### Storage buffer

10 mM Tris-HCl pH 8.0, 1 mM EDTA

#### Quantity

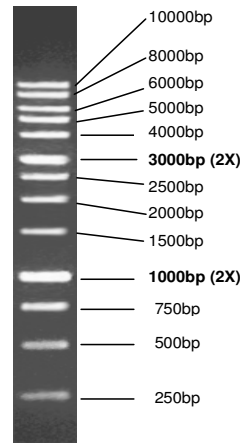
Sufficient for more than 150 lanes; the DNA is dissolved at a concentration of 0.3µg/µL.

#### Storage and shipment

Store at -20°C. Shipped at room temperature.

#### Gel Analysis

To demonstrate the mobility of the DNA fragments, 1µg of GenLadder 1kb were loaded onto a 2% agarose gel.



Run in 2.0% agarose gel

### GenLadder 50bp (ready-to-use) (DNA Size Marker 50 - 1500 bp)

Prod.No.	Product	Pack-size	Price in €
M3072.0050	GenLadder 50bp (ready-to-use)	50 µg	45.15
M3072.0250	GenLadder 50bp (ready-to-use)	5 x 50 µg	210.00

The Genaxxon bioscience 50bp DNA Ladder is an ideal DNA size marker for fragment sizes from 50 - 1500bp. The 500bp and 200bp bands light up more intensive for better orientation. Each band has been calibrated with respect to base pair size. Thus, an accurate determination of product size is possible. No ambiguous bands are visible. Band sizes: 50pb, 100bp, 150bp, 200bp (2x), 250bp, 300bp, 350bp, 400bp, 450bp, 500bp (2x), 600bp, 700bp, 800bp, 900bp, 1000bp, 1500bp. The DNA.ladder is already dissolved in loading buffer with tracking dye (Orange G and Xylene Cyanol FF).

#### Number of Bands: 16

Fragment sizes: 50bp, 100bp, 150bp, 200bp (2x), 250bp, 300bp, 350bp, 400bp, 450bp, 500bp (2x), 600bp, 700bp, 800bp, 900bp, 1000bp, 1500bp.

#### Storage buffer

10 mM Tris-HCl pH 8.0, 1 mM EDTA

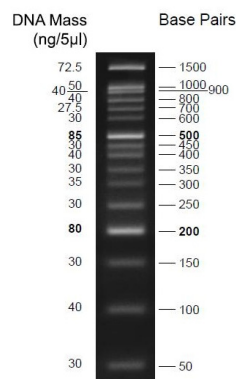
#### Quantity

Marker is already dissolved in buffer with dye (Orange G and Xylene Cyanol FF).

The total concentration of the DNA-Marker is about 0.1µg / 1µL.

#### Storage and shipment

shipped on blue-ice, store at -20°C



3% TAE agarose gel

## Dyes &amp; Stains

Prod.No.	Product	Pack-size	Price in €
M3179.0010	0.07 % Ethidium bromide	2 x 5 mL	34.14
M3179.0025	0.07 % Ethidium bromide	5 x 5 mL	68.28
M3178.0010	1 % Ethidium bromide solution	10 mL	21.85
M3178.0025	1 % Ethidium bromide solution	25 mL	33.57
M3175.0010	Acridine orange (C.I. 46005)	10 g	32.05
M3175.0025	Acridine orange (C.I. 46005)	25 g	38.24
M3175.0100	Acridine orange (C.I. 46005)	100 g	93.92
M3314.0025	Amido Black 10B	25 g	28.82
M3314.0100	Amido Black 10B	100 g	55.18
M3092.0005	Bromophenol blue sodium salt	5 g	20.21
M3092.0010	Bromophenol blue sodium salt	10 g	29.66
M3092.0025	Bromophenol blue sodium salt	25 g	44.46
M3093.0010	Coomassie-brilliant blue R-250 (C.I. 42660)	10 g	31.54
M3093.0025	Coomassie-brilliant blue R-250 (C.I. 42660)	25 g	37.55
M3093.0100	Coomassie-brilliant blue R-250 (C.I. 42660)	100 g	85.62
M3371.0001	Cresol Red	1 g	20.95
M3371.0005	Cresol Red	5 g	24.94
M3371.0025	Cresol Red	25 g	56.12
M3176.0010	DAPI, molecular biology grade, min. 98%.	10 mg	53.26
M3176.0025	DAPI, molecular biology grade, min. 98%.	25 mg	86.03
M3176.0100	DAPI, molecular biology grade, min. 98%.	100 mg	198.02
M3177.0001	Ethidium bromide, Molecular Biology grade , powder	1 g	24.58
M3177.0005	Ethidium bromide, Molecular Biology grade , powder	5 g	90.13
M3399.0005	Fast Green FCF (C.I. 42053)	5 g	24.03
M3399.0010	Fast Green FCF (C.I. 42053)	10 g	34.55
M3399.0025	Fast Green FCF (C.I. 42053)	25 g	56.12
M3398.0025	Fuchsin acid pure (C.I. 42685)	25 g	33.04
M3398.0050	Fuchsin acid pure (C.I. 42685)	50 g	52.24
M3398.0100	Fuchsin acid pure (C.I. 42685)	100 g	87.94
M3397.0025	Fuchsin basic pure (C.I. 42510)	25 g	22.53
M3397.0050	Fuchsin basic pure (C.I. 42510)	50 g	62.32
M3397.0100	Fuchsin basic pure (C.I. 42510)	100 g	123.74
M3199.0500	GelRed® in water (10000-time concentrate)	500 µL	129.94
M3199.2000	GelRed® in water (10000-time concentrate)	2 mL	469.61
M3199.5000	GelRed® in water (10000-time concentrate)	5 mL	966.00
M3199.1010	GelRed® in water (10000-time concentrate)	10 mL	1779.75
M3199.4000	GelRed® in water	4 L	238.88
M3181.0010	HighPure Propidium iodide	10 mg	13.66
M3181.0025	HighPure Propidium iodide	25 mg	27.31
M3181.0050	HighPure Propidium iodide	50 mg	47.80
M3181.0100	HighPure Propidium iodide	100 mg	81.94
M3181.0250	HighPure Propidium iodide	250 mg	218.50
M3363.0005	Methyl Green (C.I. 42590)	5 g	28.02
M3363.0010	Methyl Green (C.I. 42590)	10 g	47.78
M3363.0025	Methyl Green (C.I. 42590)	25 g	88.95

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### Dyes & Stains

Prod.No.	Product	Pack-size	Price in €
M3359.0010	Methylen Blue (C.I. 52015)	10 g	18.03
M3359.0025	Methylen Blue (C.I. 52015)	25 g	25.99
M3359.0100	Methylen Blue (C.I. 52015)	100 g	44.47
M3352.0010	Methylen Blue DNA-staining solution	10 mL	82.16
M3351.0100	Methylen Blue Solution (0.1%)	100 mL	17.59
M3351.0500	Methylen Blue Solution (0.1%)	500 mL	29.66
M3030.0001	MS-Silver Staining Kit	1 Kit	169.87
M3370.0010	Neutral Red (C.I. 50040)	10 g	30.38
M3370.0025	Neutral Red (C.I. 50040)	25 g	50.14
M3370.0100	Neutral Red (C.I. 50040)	100 g	168.10
M3180.0010	Orange G (C.I. 16230)	10 g	22.58
M3180.0025	Orange G (C.I. 16230)	25 g	25.73
M3349.0010	Ponceau S (C.I. 27195)	10 g	24.68
M3349.0025	Ponceau S (C.I. 27195)	25 g	43.58
M3349.0100	Ponceau S (C.I. 27195)	100 g	100.58
M3350.0100	Ponceau S Solution	100 mL	18.03
M3350.0500	Ponceau S Solution	500 mL	36.05
M3031.0001	SensoFluor Staining Kit	1 L	169.87
M3031.0004	SensoFluor Staining Kit	4 L	559.17
M3312.0010	Xylene cyanol FF	10 g	47.78
M3312.0025	Xylene cyanol FF	25 g	72.98

### Bromophenol Blue Sodium Salt

(3',3'',5',5''-Tetrabromophenolsulfonphthalein Na-salt, C<sub>19</sub>H<sub>9</sub>Br<sub>4</sub>NaO<sub>5</sub>S, MW = 691.94 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3092.0005	Bromophenol blue sodium salt	5 g	20.21
M3092.0010	Bromophenol blue sodium salt	10 g	29.66
M3092.0025	Bromophenol blue sodium salt	25 g	44.46

#### Specifications

Min. 90%, visual transition interval: pH 3.0 (greenyellow): pH 4.6 (blueviolet); max absorbance pH 3.0: 434-439 nm; max. absorbance pH 4.6: 590-593 nm; spec. extinction (E 1%/1cm, pH 3.0): 320-370 nm; pH 4.6: 880-980 nm; loss on drying: max. 5%.

#### Use

Tracking dye for gel electrophoresis (Odgen R.C. and Adams D.A. (1987) *Methods Enzymol.*, **152**, 61-87; Sambrook J. et al. (1989) *Molecular cloning: A Laboratory Manual* 2<sup>nd</sup> Edition, page 6.12, Cold Spring Harbor, New York.

#### Storage and shipment

Shipped and stored at room temperature.

### Coomassie Brilliant Blue R-250 (C.I. 42660)

(C<sub>45</sub>H<sub>44</sub>N<sub>3</sub>NaO<sub>7</sub>S<sub>2</sub>, MW = 825.98 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3093.0010	Coomassie-brilliant blue R-250 (C.I. 42660)	10 g	31.54
M3093.0025	Coomassie-brilliant blue R-250 (C.I. 42660)	25 g	37.55
M3093.0100	Coomassie-brilliant blue R-250 (C.I. 42660)	100 g	85.62

#### Specifications

Min. 90%, spec. Ext. (E 1%/1cm, 260 nm): 115-125 (pH 7.0).

#### Storage and shipment

Shipped and stored at room temperature.

#### Use

Staining dye for proteins after gel electrophoresis (Chrambach A. et al. (196) *Anal. Biochem.*, **20**, 150-154; Neuhoff V. et al. (1988) *Electrophoresis*, **9**, 255).

## GelRed®

GelRed(TM) is an ultra sensitive, extremely stable and environmentally safe fluorescent nucleic acid dye designed to replace the highly toxic ethidium bromide (EB) for staining dsDNA, ssDNA or RNA in agarose gels or polyacrylamide gels. GelRed is far more sensitive than EB without requiring a destaining step. GelRed and EB have virtually the same spectra, so you can directly replace EB with GelRed without changing your existing imaging system. GelRed(TM) can be used to stain dsDNA, ssDNA or RNA in agarose gel via either precast or post gel staining. GelRed can also be used to stain dsDNA, ssDNA or RNA in polyacrylamide gel via post gel staining. GelRed is also compatible with downstream DNA manipulations such as digestion with a restriction enzyme, Southern blotting techniques and clonings. A series of safety tests have confirmed that GelRed(TM) is noncytotoxic, nonmutagenic and nonhazardous at concentrations well above the working concentrations used in gel staining. As a result, GelRed can be safely disposed in regular trash, providing convenience and reducing cost in waste disposal. GelRed(TM) is supplied as a 10,000X solution in water. For your convenience, we also offer ready-to-use GelRed(TM) 3X in water (M3199.4000) that can be directly used for post gel staining. For customers who look for large pack size, we offer a cost-saving bulk pack size of 10mL (M3199.1010).

Prod.No.	Product	Pack-size	Price in €
M3199.0500	GelRed® in water (10000-time concentrate)	500 µL	129.94
M3199.2000	GelRed® in water (10000-time concentrate)	2 mL	469.61
M3199.5000	GelRed® in water (10000-time concentrate)	5 mL	966.00
M3199.1010	GelRed® in water (10000-time concentrate)	10 mL	1779.75
M3199.4000	GelRed® in water	4 L	238.88

**Use**

Non-toxic Nucleic Acid stain for agarose or PAGE gels.

**Storage and shipment**

Shipped and stored at room temperature.

## Xylenecyanol FF (C.I. 42135)

(Cyanol FF, C<sub>25</sub>H<sub>27</sub>N<sub>2</sub>NaO<sub>6</sub>S<sub>2</sub>, MW = 538.61 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3312.0010	Xylene cyanol FF	10 g	47.78
M3312.0025	Xylene cyanol FF	25 g	72.98

**Specifications**

Max. absorbance (water): 613-616 nm; spec. Ext. (E 1%/1cm, lambda max; water): 1000-1400; loss on drying (110°C): max. 6.0%

**Safety**

R: 36; S: 24

**Use**

Xylenecyanol is used as a tracking dye for DNA sequencing in agarose or polyacrylamide gels (Maxam A.M. and Gilbert W. (1977) Proc. Natl. Acad. Sci. USA, 74, 560; Odgen R.C. and Adams D.A. (1987) Methods Enzymol., 152, 61).

**Storage and shipment**

Shipped and stored at RT.

## Ethidium Bromide

(2,7-Diamino-10-ethyl-9-phenylphenanthridium bromide, C<sub>12</sub>H<sub>20</sub>BrN<sub>3</sub>, MW = 394.33 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3177.0001	Ethidium bromide, Molecular Biology grade , powder	1 g	24.58
M3177.0005	Ethidium bromide, Molecular Biology grade , powder	5 g	90.13

Ethidium bromide is an intercalating agent for nucleic acids; it is widely used for staining of nucleic acids after electrophoresis on agarose or acrylamide gels and for fluorescent labelling on a caesium chloride gradient (Lunn G. and Sansone E.B. (1987) Anal. Biochem., 162, 453; Sambrook J., Fritsch E.F. and Maniatis T. (1989) Molecular cloning, A Laboratory Manual 2<sup>nd</sup> Edition, Cold Spring Harbor, New York). As ethidium bromide is a powerful mutagen it is safer to use the Genaxxon ready-to-use 1% and 0.07% solution.

**Specifications**

Min. 98.5%, pH (1%, water) 4.5; solubility (water, 25°C): 40g/L; MP = 260-264°C; max. absorbance: 524-527 nm (50%, MeOH); loss on drying: max. 0.5%; NH<sub>4</sub>Br: max. 0.1%.

**Storage and shipment**

Shipped and stored at room temperature.

**Safety**

R: 22-26-36/37/38-40; S: 26-28.1-36/37-45;

Ethidium bromide is a powerful mutagen and is moderately toxic. Gloves and mask should be worn when handling it.

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### Ethidium Bromide, 1% aqueous solution

(2,7-Diamino-10-ethyl-9-phenylphenanthridium bromide,  $C_{12}H_{20}BrN_3$ , MW = 394.33 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3178.0010	1 % Ethidium bromide solution	10 mL	21.85
M3178.0025	1 % Ethidium bromide solution	25 mL	33.57

#### Specifications

10mg/mL; pH (water): 4.5.

#### Storage and shipment

Shipped at room temperature. Store at 2-8°C.

#### Safety

R: 22-26-36/37/38-40; S: 26-28.1-36/37-45;

Ethidium bromide is a powerful mutagen and is moderately toxic. Gloves and mask should be worn when handling it.

### Ethidium Bromide, 0.07% aqueous solution

(2,7-Diamino-10-ethyl-9-phenylphenanthridium bromide,  $C_{12}H_{20}BrN_3$ , MW = 394.33 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3179.0010	0.07 % Ethidium bromide	2 x 5 mL	34.14
M3179.0025	0.07 % Ethidium bromide	5 x 5 mL	68.28

#### Use

Genaxxon offers this ethidium bromide solution in convenient ready-to-use dropper bottles. 1 drop is sufficient to stain a 50mL gel.

#### Specifications

0.7mg/mL; pH (water): 4.5

#### Storage and shipment

Shipped at room temperature.  
Store at 2-8°C.

#### Safety

R: 22-26-36/37/38-40; S: 26-28.1-36/37-45;

Ethidium bromide is a powerful mutagen and is moderately toxic. Gloves and mask should be worn when handling it.

### Acridine orange (C.I. 46005)

(MW = 438.1 g/mol; CAS: [10127-02-3])

Prod.No.	Product	Pack-size	Price in €
M3175.0010	Acridine orange (C.I. 46005)	10 g	22.53
M3175.0025	Acridine orange (C.I. 46005)	25 g	32.05
M3175.0100	Acridine orange (C.I. 46005)	100 g	93.92

#### Specifications

MW = 438.1; CAS: [10127-02-3]; solubility in water (20°C): 28g/L;  $C_{17}H_{19}N_3 \times ZnCl_2$ ; pH (1% in water): ca. 4.0 (20°C); lambda max: 490-495 nm; loss on drying: max. 5%.

#### Storage and shipment

Shipped and stored at room temperature.

#### Use

Fluorochromic dye for selective staining of tumors. Stain for RNA in PAGE, used as 2% solution in 15% acetic acid with 1% lanthanum acetate. Used in flow cytometry due to its capacity to differentially stain single and double-stranded nucleic acids. Potent cancerogenic substance. (Tyrrer H.W. et al. (1979) J. Histochem. Cytochem. 27, 552-6).

#### Safety

R: 20/22-40; S: 28a

### DAPI

(4',6-Diamidino-2-phenylindol dihydrochloride, molecular biology grade,  $C_{16}H_{15}N_2 \times 2HCl$ , MW = 350.25 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3176.0010	DAPI, molecular biology grade, min. 98%.	10 mg	53.26
M3176.0025	DAPI, molecular biology grade, min. 98%.	25 mg	86.03
M3176.0100	DAPI, molecular biology grade, min. 98%.	100 mg	198.02

#### Specifications

Min. 98; fluorescence excitation: 342 nm, emission: 450 nm; chloride: min. 18.2%.

#### Storage and shipment

Store at 2-8°C

#### Use

A fluorescent dye which binds reversibly to DNA chains used for the demonstration of DNA in cells; under normal circumstances used at 250 mg/l (Russel W.C. et al. (1975) Nature, 253, 461).

**Orange G (C.I. 16230)**(Benzolazo-1-(2-naphthol-6,8-disulfonic acid) disodium salt,  $C_{16}H_{10}N_2Na_2O_7S_2$ , MW = 452.36 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3180.0010	Orange G (C.I. 16230)	10 g	22.58
M3180.0025	Orange G (C.I. 16230)	25 g	25.73

**Specifications**

Solubility (water, 20°C): 50g/L; pH (1%, water): ca. 8.5; max. absorbance (water): 476-481 nm; spec. Ext. (E 1%/1cm, lambda max): 380-500 nm.

**Use**

Tracking dye for gel electrophoresis; significantly faster than bromophenol blue.

**Storage and shipment**

Shipped and stored at RT.

**HighPure Propidium Iodide**(3,8-Diamino-5-(3-Diethylaminopropyl)-6-phenyl-phenanthridinium Iodide-Methiodide,  $C_{27}H_{34}I_2N_4$ ; MW = 668.40 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3181.0010	HighPure Propidium iodide	10 mg	13.66
M3181.0025	HighPure Propidium iodide	25 mg	27.31
M3181.0050	HighPure Propidium iodide	50 mg	47.80
M3181.0100	HighPure Propidium iodide	100 mg	81.94
M3181.0250	HighPure Propidium iodide	250 mg	218.50

**Specifications**

min. 95.0% (HPLC)

**Safety**

R: 40; S: 36/37-45.

**Storage and shipment**

Shipped at RT, stored at 2-8°C, keep away from light.

**Use**

Reagent for the fluorescent staining of nucleic acids (Waring M. (1975) Antibiotics, Vol. III, 141; Pollack A. and Ciancio G. (1990) Methods Cell. Biol., 33, 19; Krishan A (1990) Methods Cell Biol., 33, 121)

**Agar & Broth**

Prod.No.	Product	Pack-size	Price in €
M6002.0100	Agar Bacteriology grade, highly purified	100 g	46.46
M6002.0250	Agar Bacteriology grade, highly purified	250 g	88.50
M6002.0500	Agar Bacteriology grade, highly purified	500 g	137.81
M6002.1000	Agar Bacteriology grade, highly purified	1 kg	252.14
M6001.0100	Agar for Bacteriology	100 g	27.79
M6001.0250	Agar for Bacteriology	250 g	62.35
M6001.0500	Agar for Bacteriology	500 g	99.41
M6001.1000	Agar for Bacteriology	1 kg	182.41
M6003.0100	Agar Molecular biology grade	100 g	34.34
M6003.0250	Agar Molecular biology grade	250 g	63.09
M6003.0500	Agar Molecular biology grade	500 g	120.17
M6004.0250	Agar Plant tissue culture grade	250 g	58.84
M6004.0500	Agar Plant tissue culture grade	500 g	88.44
M6004.1000	Agar Plant tissue culture grade	1 kg	165.32
M6005.0500	Agar-Agar Food grade	500 g	60.38
M6005.1000	Agar-Agar Food grade	1 kg	98.18
M6005.2500	Agar-Agar Food grade	2.5 kg	195.77
M6008.0100	LB-Agar - Powder	100 g	23.99
M6008.0500	LB-Agar - Powder	500 g	70.61
M6008.1000	LB-Agar - Powder	1 kg	133.67
M6009.0500	LB-Medium - Powder	500 g	75.76
M6009.0100	LB-Medium - Powder	100 g	23.57

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### Agar & Broth

Prod.No.	Product	Pack-size	Price in €
M6006.0500	YT-Broth (2X)	500 g	58.84
M6006.2500	YT-Broth (2X)	2.5 kg	275.61

#### Agar for Bacteriology

Prod.No.	Product	Pack-size	Price in €
M6001.0100	Agar for Bacteriology	100 g	27.79
M6001.0250	Agar for Bacteriology	250 g	62.35
M6001.0500	Agar for Bacteriology	500 g	99.41
M6001.1000	Agar for Bacteriology	1 kg	182.41

#### Specifications

Ash max. 4.0%, water (K.F.) max. 5.0%, gelation (20°C) 750 - 900g/cm<sup>2</sup>, Gelling point 30-36°C, pH (1.5%, H<sub>2</sub>O) 6.0 - 8.0, Ca max. 0.001%, Mg max. 0.5%, Gelatin max. 0.00001%, Starch max. 0.00001%.

#### Storage and shipment

Shipped at RT, store in a dry place.

#### Use

1 litre of LB-agar plate can be prepared by adding 10g tryptone, 5g yeast extract, 5g NaCl and 15g of agar. Finally 1mL of NaOH 1N must be added to the solution. The media is then autoclaved for 25 min. and antibiotics or other substances may be added. From 1 litre LB-agar about 32 to 40 plates can be produced.

#### Agar for Bacteriology (highly purified)

Prod.No.	Product	Pack-size	Price in €
M6002.0100	Agar Bacteriology grade, highly purified	100 g	46.46
M6002.0250	Agar Bacteriology grade, highly purified	250 g	88.50
M6002.0500	Agar Bacteriology grade, highly purified	500 g	137.81
M6002.1000	Agar Bacteriology grade, highly purified	1 kg	252.14

#### Specification

Gel strength (1.5%): 700-1200 g/cm<sup>2</sup>; EEO: < 0.45; gelling point (1.5%): 32-37.5°C; pH (1.5, water): 5.8-7.0; MP = 80-95°C.

#### Use

See above, M6001.

#### Storage and shipment

Shipped at RT, store in a dry place.

#### Agar for Plant Tissue Culture

Prod.No.	Product	Pack-size	Price in €
M6004.0250	Agar Plant tissue culture grade	250 g	58.84
M6004.0500	Agar Plant tissue culture grade	500 g	88.44
M6004.1000	Agar Plant tissue culture grade	1 kg	165.32

#### Specifications

Gelation (1.5 %) >= 1000g/cm<sup>2</sup>, gelling point (1.5 %) 35°C +/- 5°C, melting point 85 +/- 5°C, pH prior to retorting 7.0 +/- 0.5, pH after retorting 6.5 +/- 0.5, Contamination with spores negative, no insoluble particles detectable.

#### Storage and shipment

Shipped at RT, store in a dry place.

#### Use

The Genaxxon tissue culture agar is processed from selected seaweeds (*Rhodophicea*), has a very high gel strength and can be used at low concentrations (0.5-0.6%). It is recommended for micropropagation of ornamental, horticultural and woody species, in vitro selection, genetic manipulations and other techniques in cultivation of plants.

### Peptone & Yeast extract

Prod.No.	Product	Pack-size	Price in €
M3300.0250	Lacalbuminhydrolysate	250 g	46.57
M3300.0500	Lacalbuminhydrolysate	500 g	79.62
M3300.1000	Lacalbuminhydrolysate	1 kg	139.70
M3296.0250	Peptone from casein (acid hydrolysate)	250 g	69.10
M3296.0500	Peptone from casein (acid hydrolysate)	500 g	108.91

## Peptone & Yeast extract

Prod.No.	Product	Pack-size	Price in €
M3297.0250	Peptone from casein (enzymatic digest)	250 g	57.83
M3297.0500	Peptone from casein (enzymatic digest)	500 g	94.64
M3298.0250	Peptone from casein (pancreatic digest)	250 g	45.07
M3298.0500	Peptone from casein (pancreatic digest)	500 g	75.11
M3299.0250	Peptone from gelatine	250 g	56.09
M3299.0500	Peptone from gelatine	500 g	87.00
M3301.0250	Peptone from meat (pepsic digest)	250 g	84.87
M3301.0500	Peptone from meat (pepsic digest)	500 g	124.68
M3302.0250	Peptone from Soybean (enzymatic digest)	250 g	44.31
M3302.0500	Peptone from Soybean (enzymatic digest)	500 g	64.10
M3302.1000	Peptone from Soybean (enzymatic digest)	1 kg	115.81
M3304.0250	Peptone from Wheat (enzymatic digest)	250 g	58.65
M3304.0500	Peptone from Wheat (enzymatic digest)	500 g	96.95
M3303.0250	Yeast extract Molbio Grade	250 g	34.55
M3303.0500	Yeast extract Molbio Grade	500 g	66.10
M3303.1000	Yeast extract Molbio Grade	1 kg	118.67

## Ready-to-Use Buffers

### Tablets

Prod.No.	Product	Pack-size	Price in €
D2007.0100	Borate buffered saline tablets (pH8.2)	100 tablets	191.73
D2008.0008	Carbonate-Bicarbonate buffer tablets (pH9.6)	8 tablets	45.36
D2008.0024	Carbonate-Bicarbonate buffer tablets (pH9.6)	24 tablets	78.54
D2008.0100	Carbonate-Bicarbonate buffer tablets (pH9.6)	100 tablets	102.38
D2009.0008	Carbonate-Bicarbonate buffer tablets (pH9.6)	8 tablets	60.06
D2009.0050	Carbonate-Bicarbonate buffer tablets (pH9.6)	50 tablets	120.12
D2034.0100	PBS tablets (pH7.2 - 1L)	100 tablets	253.05
D2003.0112	PBS tablets (pH7.4) with Tween 20 (100mL)	100 tablets	57.75
D2004.0010	PBS tablets (pH7.4) with Tween 20 (1L)	10 tablets	85.47
D2004.0100	PBS tablets (pH7.4) with Tween 20 (1L)	100 tablets	262.72
D2003.0100	PBS tablets (pH7.4) with Tween 20 (500mL)	100 tablets	179.03
D2033.0010	PBS tablets w/o K (pH7.4 - 1L - 0.01M)	10 tablets	65.94
D2033.0100	PBS tablets w/o K (pH7.4 - 1L - 0.01M)	100 tablets	253.05
D2033.2010	PBS tablets w/o K (pH7.4 - 1L - 0.02M)	10 tablets	73.08
D2033.2100	PBS tablets w/o K (pH7.4 - 1L - 0.02M)	100 tablets	286.44
D2000.0100	Phosphate buffered saline tablets (pH7.4 - 100mL)	100 tablets	58.38
D2002.0010	Phosphate buffered saline tablets (pH7.4 - 1L)	10 tablets	65.84
D2002.0100	Phosphate buffered saline tablets (pH7.4 - 1L)	100 tablets	253.62
D2001.0012	Phosphate buffered saline tablets (pH7.4 - 500mL)	12 tablets	58.38
D2001.0100	Phosphate buffered saline tablets (pH7.4 - 500mL)	100 tablets	162.57
D2005.0100	Sodium chloride tablets (100mL)	100 tablets	72.77
D2006.0010	Sodium chloride tablets (1L)	10 tablets	49.67
D2006.0100	Sodium chloride tablets (1L)	100 tablets	109.73
D2036.0050	Sodium dodecylsulfate (0.5g)	50 tablets	65.84
D2036.1000	Sodium dodecylsulfate (0.5g)	1000 tablets	308.18

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### Tablets

Prod.No.	Product	Pack-size	Price in €
D2037.0010	TBS pH7.6	10 tablets	51.98
D2037.0100	TBS pH7.6	100 tablets	188.48
D2038.0010	TBS with Tween®, pH7.6	10 tablets	56.18
D2038.0100	TBS with Tween®, pH7.6	100 tablets	203.07

### Powder

Prod.No.	Product	Pack-size	Price in €
D2016.1005	10X Phosphate buffered saline powder (pH7.4)	5 bags	97.02
D2027.1010	10X Tris buffered saline (pH8.0)	10 bags	429.20
D2030.1010	10X Tris-Borate-EDTA buffer (pH8.3)	10 bags	205.12
D2031.1010	10X Tris-EDTA buffer (pH7.4)	10 bags	169.58
D2029.1005	50X Tris-Acetate-EDTA buffer (pH8.3 - 1L)	5 bags	491.62
D2029.0505	50X Tris-Acetate-EDTA buffer (pH8.3 - 500mL)	5 bags	280.93
D2030.1005	5X Tris-Borate-EDTA buffer (pH8.3)	10 bags	142.54
D2039.0010	Buffered sodium citrate (3.2% - 0.109M)	10 bags	93.35
D2039.1005	Buffered sodium citrate (3.2% - 0.109M)	5 bags	121.28
D2040.0005	Buffered sodium citrate (3.8% - 0.109M)	5 bags	94.24
D2012.0005	D(+)-Glucose 20%	5 bags	139.13
D2013.0505	EDTA buffer (p8.0; 500mL)	5 bags	190.42
D2013.1005	EDTA buffer (pH8.0; 1L)	5 bags	253.58
D2015.1005	Mg <sub>2</sub> SO <sub>4</sub> (1M)	5 bags	144.48
D2014.1005	MgCl <sub>2</sub> (1M)	5 bags	139.13
D2017.1100	Phosphate buffered saline powder (pH7.4 - 100L)	1 bag	140.46
D2017.1010	Phosphate buffered saline powder (pH7.4 - 10L)	1 bag	43.89
D2017.1025	Phosphate buffered saline powder (pH7.4 - 25L)	1 bag	68.15
D2017.1050	Phosphate buffered saline powder (pH7.4 - 50L)	1 bag	94.71
D2018.1003	Potassium acetate powder (3M)	5 bags	211.58
D2018.1005	Potassium acetate powder (5M)	5 bags	279.04
D2019.1001	Potassium chloride (1M)	10 bags	142.54
D2019.1003	Potassium chloride (3M)	5 bags	127.58
D2020.0005	Saline sodium citrate buffer (20X - pH7.0)	5 bags	132.83
D2020.2005	Saline sodium citrate buffer (2X - pH7.0)	5 bags	87.68
D2021.1052	Sodium acetate buffer (pH5.2)	5 bags	209.37
D2021.1070	Sodium acetate buffer (pH7.0)	5 bags	209.37
D2022.1003	Sodium chloride powder (3M)	5 bags	85.47
D2022.1005	Sodium chloride powder (5M)	5 bags	96.02
D2023.1010	Sodium dodecylsulfate (10%)	5 bags	396.68
D2023.1020	Sodium dodecylsulfate (20%)	5 bags	671.11
D2024.1005	Sodium hydroxide (5M)	5 bags	117.81
D2042.1065	Sodium phosphate buffer (pH6.5 - 0.1M)	10 bags	108.68
D2025.1065	Sodium phosphate buffer (pH6.5 - 1M)	10 bags	187.29
D2041.1070	Sodium phosphate buffer (pH7.0 - 0.02M)	10 bags	92.77
D2041.5070	Sodium phosphate buffer (pH7.0 - 0.02M)	10 bags	193.73
D2042.1070	Sodium phosphate buffer (pH7.0 - 0.1M)	10 bags	108.68
D2025.1072	Sodium phosphate buffer (pH7.2 - 1M)	10 bags	187.29
d2042.1074	Sodium phosphate buffer (pH7.4 - 0.1M)	10 bags	108.68

**Powder**

Prod.No.	Product	Pack-size	Price in €
D2026.1074	Tris buffer (pH7.4)	10 bags	269.12
D2026.1080	Tris buffer (pH8.0)	10 bags	269.12
D2026.1083	Tris buffer (pH8.3)	10 bags	269.12
D2028.1001	Tris buffered saline (pH8.0)	10 bags	92.93
D2030.1001	Tris-Borate-EDTA buffer (pH8.3)	10 bags	86.63
D2032.1010	Tris-Glycine buffer (pH8.3 - 1L)	10 bags	85.52
D2032.5010	Tris-Glycine buffer (pH8.3 - 5L)	10 bags	134.93
D2035.5005	Urea 5M	5 bags	113.93
D2035.8005	Urea 8M	5 bags	131.78

**Solution**

Prod.No.	Product	Pack-size	Price in €
M3085.1000	TAE buffer (10X) ready-to-use solution	1 L	35.51
M3085.1010	TAE buffer (10X) ready-to-use solution	10 L	143.39
M3085.5000	TAE buffer (10X) ready-to-use solution	5 L	81.94
M3087.0500	TAE buffer (50X) ready-to-use solution	500 mL	23.22
M3087.1000	TAE buffer (50X) ready-to-use solution	1 L	42.33
M3086.1000	TAE buffer powder to prepare 10X solution	1 L	25.95
M3088.1000	TBE buffer (10X) ready-to-use solution (MB-Grade)	1 L	24.68
M3088.5000	TBE buffer (10X) ready-to-use solution (MB-Grade)	5 L	63.67
M3142.5000	TBE buffer (10X) ready-to-use solution in Cubitainer	5 L	65.35
M3142.1010	TBE buffer (10X) ready-to-use solution in Cubitainer	10 L	112.83
M3206.1000	TBE buffer (10X) ready-to-use solution in PE-bottle	1 L	23.63
M3206.5000	TBE buffer (10X) ready-to-use solution in PE-bottle	5 L	57.49
M3206.1010	TBE buffer (10X) ready-to-use solution in PE-bottle	10 L	105.02
M3407.1000	TBE buffer (5X) ready-to-use solution (MB-Grade)	1 L	19.18
M3407.5000	TBE buffer (5X) ready-to-use solution (MB-Grade)	5 L	50.40
M3406.5000	TBE buffer (5X) ready-to-use solution in Cubitainer	5 L	43.11
M3406.1010	TBE buffer (5X) ready-to-use solution in Cubitainer	10 L	76.41
M3405.1000	TBE buffer (5X) ready-to-use solution in PE-bottle	1 L	16.26
M3405.5000	TBE buffer (5X) ready-to-use solution in PE-bottle	5 L	40.64
M3405.1010	TBE buffer (5X) ready-to-use solution in PE-bottle	10 L	68.28
M3090.0500	TE buffer (100X) Molecular Biology grade	500 mL	30.07
M3090.1000	TE buffer (100X) Molecular Biology grade	1 L	30.04
M3090.5000	TE buffer (100X) Molecular Biology grade	5 L	143.39
M3091.1010	TE buffer (1X) Molecular Biology grade	10 x 1 L	102.42
M3091.5000	TE buffer (1X) Molecular Biology grade	10 x 500 mL	61.45
M3161.0250	Tris-Glycin Buffer (10X)	250 mL	17.56
M3161.0500	Tris-Glycin Buffer (10X)	500 mL	26.66
M3161.1000	Tris-Glycin Buffer (10X)	1 L	44.55
M6163.0500	Tris-Glycin Buffer (1X)	500 mL	14.96
M3163.1000	Tris-Glycin Buffer (1X)	1 L	22.44
M3163.5000	Tris-Glycin Buffer (1X)	5 L	47.15
M3162.0500	Tris-Glycin Buffer (5X)	500 mL	21.46
M3162.1000	Tris-Glycin Buffer (5X)	1 L	37.39
M3162.5000	Tris-Glycin Buffer (5X)	5 L	89.09

## VI. Molecular Biology

### TAE Buffer (10X)

(Tris-Acetate-EDTA buffer (10X), molecular biology grade)

Prod.No.	Product	Pack-size	Price in €
M3085.1000	TAE buffer (10X) ready-to-use solution	1 L	35.51
M3085.1010	TAE buffer (10X) ready-to-use solution	10 L	143.39
M3085.5000	TAE buffer (10X) ready-to-use solution	5 L	81.94

#### Specifications

Tris: 48.46g/L (0.4mol/L); EDTA-Na: 3.72g/L (0.01mol/L);  
Acetic acid: 12.01g/L (0.2mol/L); pH (water): 8.5 +/- 0.2.

#### Storage and shipment

Shipped and stored at room temperature.

#### Use

TAE 1X buffer is used for nucleic acid electrophoresis on agarose gels under low voltage conditions (Loening U.E. (1967) *Biochem. J.*, **102**, 251; Ogden R.C. and Adams D.A. (1987) *Methods Enzymol.*, **152**, 61; Sambrook J., Fritsch E.F. and Maniatis T. (1989) *Molecular Cloning, A Laboratory Manual*, 2<sup>nd</sup> Edition, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, New York.

### TAE Buffer (50X)

(Tris-Acetate-EDTA buffer (50X), molecular biology grade)

Prod.No.	Product	Pack-size	Price in €
M3087.0500	TAE buffer (50X) ready-to-use solution	500 mL	23.22
M3087.1000	TAE buffer (50X) ready-to-use solution	1 L	42.33

#### Specifications

Tris: 242.28g/L (2mol/L); EDTA-Na: 18.61g/L (0.05mol/L);  
Acetic acid: 60.05g/L (1mol/L); pH (water): 8.5 +/- 0.2.

#### Use

See M3085

#### Storage and shipment

Shipped and stored at room temperature.

### TBE Buffer (10X)

(Tris-Borate-EDTA buffer (10X), molecular biology grade)

Prod.No.	Product	Pack-size	Price in €
M3088.1000	TBE buffer (10X) ready-to-use solution (MB-Grade)	1 L	24.68
M3088.5000	TBE buffer (10X) ready-to-use solution (MB-Grade)	5 L	63.67

#### Specifications

Tris: 107.81g/L (0.89mol/L); EDTA-Na: 7.44g/L (0.02mol/L);  
Boric acid: 55.03g/L (0.89mol/L); pH (water): 8.3 +/- 0.2.

#### Storage and shipment

Shipped and stored at room temperature.

#### Use

TBE 1X buffer is the most widely used buffer for electrophoresis on agarose or acrylamide gels; it is particularly well suited for high-voltage long migration conditions (Peacock A.C. and Dingman C.W. (1968) *Biochemistry*, **7**, 668; Ogden R.C. & Adams D.A. (1987) *Methods Enzymol.*, **152**, 61).

## Chemicals

### Buffer Substances

Prod.No.	Product	Pack-size	Price in €
M6016.0500	Ammonium acetate Molecular biology grade	500 g	28.00
M6016.1000	Ammonium acetate Molecular biology grade	1 kg	45.07
M6017.5000	Ammonium acetate p.A BioChemica	5 kg	140.66
M6017.0500	Ammonium acetate p.A. BioChemica	500 g	23.22
M6017.1000	Ammonium acetate p.A. BioChemica	1 kg	36.87
M6378.0025	BES (buffer quality)	25 g	19.64
M6378.0100	BES (buffer quality)	100 g	61.78
M6378.0250	BES (buffer quality)	250 g	135.91
M6378.0500	BES (buffer quality)	500 g	227.60
M6362.0100	Bicine buffer grade	100 g	38.30
M6362.0250	Bicine buffer grade	250 g	85.19
M6362.0500	Bicine buffer grade	500 g	153.47
M6362.1000	Bicine buffer grade	1 kg	266.62
M6347.0100	Bis-Tris, analytical grade	100 g	73.74
M6347.0250	Bis-Tris, analytical grade	250 g	169.34

## Buffer Substances

Prod.No.	Prod.No.	Prod.No.	Prod.No.
M6347.0500	Bis-Tris, analytical grade	500 g	297.71
M6021.1000	Boric acid BioChemica	1 kg	30.79
M6021.1001	Boric acid BioChemica	10 kg	188.52
M6021.5000	Boric acid BioChemica	5 kg	108.91
M6019.1000	Boric acid buffer grade	1 kg	27.04
M6019.5000	Boric acid buffer grade	5 kg	93.89
M3273.0500	Boric acid Molecular biology grade, min. 99.8%	500 g	27.04
M3273.1000	Boric acid Molecular biology grade, min. 99.8%	1 kg	35.46
M3273.5000	Boric acid Molecular biology grade, min. 99.8%	5 kg	99.06
M6200.0100	CAPS buffer grade	100 g	50.72
M6200.0250	CAPS buffer grade	250 g	124.27
M6200.0500	CAPS buffer grade	500 g	197.89
M6258.0005	CHAPS buffer grade	5 g	51.98
M6258.0010	CHAPS buffer grade	10 g	87.62
M6258.0025	CHAPS buffer grade	25 g	177.98
M6201.0005	CHAPS for 2D-gel electrophoresis	5 g	76.73
M6201.0010	CHAPS for 2D-gel electrophoresis	10 g	135.26
M6201.0025	CHAPS for 2D-gel electrophoresis	25 g	296.53
M6201.0050	CHAPS for 2D-gel electrophoresis	50 g	520.24
M6201.0100	CHAPS for 2D-gel electrophoresis	100 g	955.93
M6202.0001	CHAPSO > 99.0% (HPLC)	1 g	68.28
M6202.0005	CHAPSO > 99.0% (HPLC)	5 g	278.59
M6202.0010	CHAPSO > 99.0% (HPLC)	10 g	477.97
M6202.0025	CHAPSO > 99.0% (HPLC)	25 g	1102.06
M6203.0010	CHES, min. 99.0%	10 g	34.14
M6203.0050	CHES, min. 99.0%	50 g	88.77
M6203.0250	CHES, min. 99.0%	250 g	327.75
M6022.1000	Citric acid monohydrate buffer grade	1 kg	23.28
M6022.1001	Citric acid monohydrate buffer grade	10 kg	118.67
M6022.5000	Citric acid monohydrate buffer grade	5 kg	69.10
M3274.1000	Citric acid monohydrate p.A., min. 99%	1 kg	33.80
M3274.5000	Citric acid monohydrate p.A., min. 99%	5 kg	129.94
M3275.0500	Citric acid trisodium salt dihydrate, p.A. min. 99.0%	500 g	29.29
M3275.1000	Citric acid trisodium salt dihydrate, p.A. min. 99.0%	1 kg	40.56
M3275.5000	Citric acid trisodium salt dihydrate, p.A. min. 99.0%	5 kg	148.72
M6030.1000	DL-Malic acid, BioChemica	100 g	20.89
M6030.5000	DL-Malic acid, BioChemica	500 g	44.38
M6370.0100	HEPES, buffer grade	100 g	35.12
M6370.0250	HEPES, buffer grade	250 g	72.40
M6370.0500	HEPES, buffer grade	500 g	124.95
M6370.1000	HEPES, buffer grade	1 kg	204.75
M6370.5000	HEPES, buffer grade	5 kg	771.75
M6205.0100	HEPES, molecular biology grade	100 g	45.66
M6205.0250	HEPES, molecular biology grade	250 g	95.79
M6205.0500	HEPES, molecular biology grade	500 g	163.20
M6205.1000	HEPES, molecular biology grade	1 kg	288.75

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### Buffer Substances

Prod.No.	Prod.No.	Prod.No.	Prod.No.
M6204.0100	HEPES, tissue culture grade	100 g	43.70
M6204.0250	HEPES, tissue culture grade	250 g	98.32
M6204.0500	HEPES, tissue culture grade	500 g	163.87
M6204.1000	HEPES, tissue culture grade	1 kg	292.24
M6206.0050	MES anhydrous, research grade	50 g	32.91
M6206.0100	MES anhydrous, research grade	100 g	51.81
M6206.0250	MES anhydrous, research grade	250 g	104.55
M6206.0500	MES anhydrous, research grade	500 g	152.25
M6207.0050	MES monohydrate buffer grade	50 g	28.88
M6207.0100	MES monohydrate buffer grade	100 g	41.48
M6207.0250	MES monohydrate buffer grade	250 g	84.24
M6207.0500	MES monohydrate buffer grade	500 g	138.60
M6208.0100	MOPS , ultra pure for molecular biology use, min. 99.5%	100 g	48.05
M6208.0250	MOPS , ultra pure for molecular biology use, min. 99.5%	250 g	100.54
M6208.0500	MOPS , ultra pure for molecular biology use, min. 99.5%	500 g	170.52
M6208.1000	MOPS , ultra pure for molecular biology use, min. 99.5%	1 kg	280.96
M6257.0100	MOPS buffer grade, min. 99.5%	100 g	39.60
M6257.0250	MOPS buffer grade, min. 99.5%	250 g	79.54
M6257.0500	MOPS buffer grade, min. 99.5%	500 g	130.20
M6257.1000	MOPS buffer grade, min. 99.5%	1 kg	208.43
M6371.0025	MOPSO buffer grade, min. 99.0%	25 g	24.73
M6371.0100	MOPSO buffer grade, min. 99.0%	100 g	63.79
M6209.0100	PIPES, ultrapure	100 g	53.55
M6209.0250	PIPES, ultrapure	250 g	123.90
M6209.1000	PIPES, ultrapure	1 kg	339.68
M6348.0250	Potassium dihydrogen phosphate, cell culture grade	250 g	24.10
M6348.0500	Potassium dihydrogen phosphate, cell culture grade	500 g	28.40
M6348.1000	Potassium dihydrogen phosphate, cell culture grade	1 kg	46.70
M3294.0500	Sodium acetate trihydrate, analytical grade	500 g	27.04
M3294.1000	Sodium acetate trihydrate, analytical grade	1 kg	37.55
M3294.5000	Sodium acetate trihydrate, analytical grade	5 kg	138.20
M6075.0500	Sodium dihydrogen phosphate dihydrate, BioChemica	500 g	24.58
M6075.1000	Sodium dihydrogen phosphate dihydrate, BioChemica	1 kg	39.60
M6075.5000	Sodium dihydrogen phosphate dihydrate, BioChemica	5 kg	143.39
M6076.1000	Sodium dihydrogen phosphate monohydrate, BioChemica	1 kg	36.87
M6076.5000	Sodium dihydrogen phosphate monohydrate, BioChemica	5 kg	148.85
M6210.0500	Tris buffer grade, min. 99.5%.	500 g	35.12
M6210.1000	Tris buffer grade, min. 99.5%.	1 kg	53.89
M6210.5000	Tris buffer grade, min. 99.5%.	5 kg	202.17
M6212.0250	TRISxHCl	250 g	45.62
M6212.0500	TRISxHCl	500 g	79.38
M6212.1000	TRISxHCl	1 kg	132.30
M6211.0250	TRISxHCl p.A.	250 g	35.12
M6211.0500	TRISxHCl p.A.	500 g	68.74
M6211.1000	TRISxHCl p.A.	1 kg	112.82
M6211.5000	TRISxHCl p.A.	5 kg	451.50

**Boric Acid**(Molecular biology grade,  $\text{H}_3\text{BO}_3$ , MW = 61.83 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3273.0500	Boric acid Molecular biology grade, min. 99.8%	500 g	27.04
M3273.1000	Boric acid Molecular biology grade, min. 99.8%	1 kg	35.46
M3273.5000	Boric acid Molecular biology grade, min. 99.8%	5 kg	99.06

**Specification**

Min. 99.8%; pH (5% in water): 3.8-4.8; solubility (water, 20°C): 50g/L; MP = 185°C; water: max. 0.3%; chloride: max. 0.001%; phosphate: max. 0.0002%; sulphate: max. 0.005%; As: max. 0.0001%; Pb: max. 0.0005%; Ca: max. 0.002%; Fe: max. 0.0002%; Mg: max. 0.0005%; Cu: max. 0.0005%; Na: max. 0.002%.

**Use**

Crystals for molecular biology buffers (Peacock A.C. and Dingman C.W. (1968) Biochemistry, 7, 668; Ogden R.C. and Adams D.A. (1987) Methods Enzymol., 152, 61).

**Storage and shipment**

Shipped at RT, store at RT in a dry place.

**Citric Acid Trisodium salt dihydrate**(Tri-sodium citrate dihydrate, analytical grade,  $\text{C}_6\text{H}_5\text{Na}_3\text{O}_7 \times 2 \text{H}_2\text{O}$ , MW = 294.10 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3275.0500	Citric acid trisodium salt dihydrate, p.A. min. 99.0%	500 g	29.29
M3275.1000	Citric acid trisodium salt dihydrate, p.A. min. 99.0%	1 kg	40.56
M3275.5000	Citric acid trisodium salt dihydrate, p.A. min. 99.0%	5 kg	148.72

**Specifications**

Min. 99.5%; pH (5%, water): 7.5-9.0; solubility (water, 25°C): 720g/L; MP = 150°C; chloride: max. 0.001%; phosphate: max. 0.002%; sulphate: max. 0.005%; Pb: max. 0.0005%; Fe: max. 0.001%

**Storage and shipment**

Shipped and stored at RT.

**Citric Acid Monohydrate**(Analytical grade,  $\text{C}_6\text{H}_8\text{O}_7 \times \text{H}_2\text{O}$ , MW = 210.14 g/mol)

Prod.No.	Product	Pack-size	Price in €
M6022.1000	Citric acid monohydrate buffer grade	1 kg	23.28
M6022.1001	Citric acid monohydrate buffer grade	10 kg	118.67
M6022.5000	Citric acid monohydrate buffer grade	5 kg	69.10

**Specifications**

min. 99.5% (titr.); solubility in water (25°C): 1630g/L; MP = 135-153°C; CAS: [5949-29-1]; Cl: max. 0.01%; Oxalat: max. 0.05%; sulfate: max. 0.05%; Cu: max. 0.001%; Fe: max. 0.005%; Pb: max. 0.001%.

**Storage and shipment**

Shipped and stored at RT.

**Ionic Detergents**

Prod.No.	Product	Pack-size	Price in €
M3315.1000	5% SDS Solution	1 L	19.90
M3315.0250	5% SDS Solution	250 mL	6.67
M3441.0100	N-Cetyl-N,N,N-trimethylammoniumbromid	100 g	21.53
M3441.0500	N-Cetyl-N,N,N-trimethylammoniumbromid	500 g	67.99
M3292.1000	SDS, Molecular Biology grade, 20% stock solution	1 L	48.07
M3292.1010	SDS, Molecular Biology grade, 20% stock solution	10 x 100 mL	67.60
M3292.0500	SDS, Molecular Biology grade, 20% stock solution	500 mL	31.55
M3290.1000	SDS, Molecular Biology grade, min. 99.5%	1 kg	141.63
M3290.0100	SDS, Molecular Biology grade, min. 99.5%	100 g	22.18
M3290.0250	SDS, Molecular Biology grade, min. 99.5%	250 g	48.64
M3290.0500	SDS, Molecular Biology grade, min. 99.5%	500 g	80.12
M3291.1000	SDS, research grade, min. 97%	1 kg	43.31
M3291.0250	SDS, research grade, min. 97%	250 g	19.20
M3291.0500	SDS, research grade, min. 97%	500 g	28.18

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### SDS Sodium Dodecylsulfate, ultrapure

(Dodecyl sodium sulphate, sodium laurylsulfate, molecular biology grade, C<sub>12</sub>H<sub>25</sub>NaO<sub>4</sub>S, MW = 288.38 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3290.1000	SDS, Molecular Biology grade, min. 99.5%	1 kg	141.63
M3290.0100	SDS, Molecular Biology grade, min. 99.5%	100 g	22.18
M3290.0250	SDS, Molecular Biology grade, min. 99.5%	250 g	48.64
M3290.0500	SDS, Molecular Biology grade, min. 99.5%	500 g	80.12

#### Specifications

min. 99.5%; pH (10% in water): ca. 7.0 ; chloride: max. 0.005%; phosphate: max. 0.0001%; Pb: max. 0.0001%; K: max. 0.005%; water: max. 0.05%; DNase and RNase not detectable.

#### Storage and shipment

Store at room temperature.

#### Literature

Laemmli U.K. (1970) Nature, 227,680-Harewood K. and Wolff III J.S: (1973) Anal. Biochem., 55, 573 - Nielsen T.B. and Reynolds J.A. (1978), Methods Enzymol., 48, 3 -Suzuki H. and Terada T. (1988) Anal Biochem., 172, 259.

#### Safety

R : 20/21/22-36/37/38; S : 22-26-28-26; SDS is harmful. Handle under chemical hood. Do not breathe dust. It is strongly recommended to use ready-to-use SDS 20% stock solution from Genaxxon bioscience.

### SDS Sodium Dodecylsulfate, pure

(Dodecyl sodium sulphate, sodium laurylsulfate, research grade, C<sub>12</sub>H<sub>25</sub>NaO<sub>4</sub>S, MW = 288.38 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3291.1000	SDS, research grade, min. 97%	1 kg	43.31
M3291.0250	SDS, research grade, min. 97%	250 g	19.20
M3291.0500	SDS, research grade, min. 97%	500 g	28.18

#### Specifications

min. 97.0%; pH (0.1 M in water) : 6.5-8.0; chloride : max. 0.005%; water: max. 0.5%

#### Storage and shipment

Store at room temperature.

#### Safety

R: 20/21/22-36/37/38; S: 22-26-28-26; SDS is harmful. Handle powder under a chemical hood. Do not breathe dust. It is strongly recommended to use ready-to-use SDS 20% stock solution from Genaxxon BioScience.

### SDS Sodium Dodecylsulfate (20% stock solution (w/v))

(Dodecyl sodium sulphate, sodium laurylsulfate, molecular biology grade, C<sub>12</sub>H<sub>25</sub>NaO<sub>4</sub>S, MW = 288.38 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3292.1000	SDS, Molecular Biology grade, 20% stock solution	1 L	48.07
M3292.1010	SDS, Molecular Biology grade, 20% stock solution	10 x 100 mL	67.60
M3292.0500	SDS, Molecular Biology grade, 20% stock solution	500 mL	31.55

#### Specifications

Composition : 200g/L SDS ultrapure; pH (20% in water): 7.0 +/- 0.2; A<sub>260nm</sub> (1cm/10% in water): max. 0.05.

#### Storage and shipment

Store at room temperature.

#### Safety

R: 20/21/22-36/37/38; S: 22-26-28-26

#### Use

The SDS 20% stock solution is filtered and ready-to-use; SDS may precipitate at temperatures below 15° C: dissolve precipitate SDS by warming in a water bath at 37° C.

## Substrates

Prod.No.	Product	Pack-size	Price in €
M6255.0050	2-Nitrophenyl-2-acetamido-2-deoxy-a-D-galactopyranoside (min. 99.0% HPLC)	50 mg	324.45
M6255.0100	2-Nitrophenyl-2-acetamido-2-deoxy-a-D-galactopyranoside (min. 99.0% HPLC)	100 mg	535.50
M3158.0005	3,3',5',5'-Tetramethylbenzidine (TMB)	5 g	70.82
M3158.0025	3,3',5',5'-Tetramethylbenzidine (TMB)	25 g	238.92
M3339.0100	4-Chloro-1-Naphtol (0.48 mM solution)	100 mL	44.01
M3338.0005	4-Chloro-1-Naphtol (min. 99.0% HPLC)	5 g	30.38
M3338.0010	4-Chloro-1-Naphtol (min. 99.0% HPLC)	10 g	50.32
M3338.0025	4-Chloro-1-Naphtol (min. 99.0% HPLC)	25 g	99.68
M6250.0250	4-Nitrophenyl a-L-fucopyranoside Purity >99%	250 mg	120.75

## Substrates

Prod.No.	Product	Pack-size	Price in €
M6250.1000	4-Nitrophenyl a-L-fucopyranoside Purity >99%	1 g	393.75
M6251.0005	4-Nitrophenyl a-L-manopyranoside Purity >99%	5 g	169.08
M6251.0025	4-Nitrophenyl a-L-manopyranoside Purity >99%	25 g	551.25
M6252.0001	4-Nitrophenyl b-D-xylopyranoside Purity >99%	1 g	101.45
M6252.0005	4-Nitrophenyl b-D-xylopyranoside Purity >99%	5 g	362.25
M6254.0050	4-Nitrophenyl-2-acetamido-2-deoxy-a-D-galactopyranoside (min. 99.0% HPLC)	50 mg	301.88
M6254.0100	4-Nitrophenyl-2-acetamido-2-deoxy-a-D-galactopyranoside (min. 99.0% HPLC)	100 mg	611.28
M6256.0001	4-Nitrophenyl-2-acetamido-2-deoxy-b-D-glucopyranoside (min. 99.0% HPLC)	1 g	106.05
M6256.0005	4-Nitrophenyl-2-acetamido-2-deoxy-b-D-glucopyranoside (min. 99.0% HPLC)	5 g	430.50
M3210.0010	Acetyl-Coenzym A	10 mg	34.07
M3210.0050	Acetyl-Coenzym A	50 mg	122.32
M3210.0100	Acetyl-Coenzym A	100 mg	221.11
M3196.0001	BCIP, molecular biology grade,	1 g	87.15
M3196.0005	BCIP, molecular biology grade,	5 g	375.94
M3196.0250	BCIP, molecular biology grade,	250 mg	35.31
M3196.0500	BCIP, molecular biology grade,	500 mg	60.44
S5437.0100	Collagenase Substrate	100 mg	236.25
M6253.0005	Fluorescein-dilaurate	5 g	201.59
M6253.0025	Fluorescein-dilaurate	25 g	467.25
M3197.0001	HighPure IPTG, dioxan free, (min. 99.5%).	1 g	31.15
M3197.0005	HighPure IPTG, dioxan free, (min. 99.5%).	5 g	81.75
M3197.0025	HighPure IPTG, dioxan free, (min. 99.5%).	25 g	367.88
M3197.0050	HighPure IPTG, dioxan free, (min. 99.5%).	50 g	654.01
M3198.0010	IPTG, dioxan free, molecular biology grade	10 g	102.20
M3198.0025	IPTG, dioxan free, molecular biology grade	25 g	233.00
M3198.0050	IPTG, dioxan free, molecular biology grade	50 g	413.44
M3160.0001	Luminol (min. 97.5%)	1 g	22.32
M3160.0005	Luminol (min. 97.5%)	5 g	42.78
M3160.0025	Luminol (min. 97.5%)	25 g	162.38
M6055.0001	NAD	1 g	35.51
M6055.0005	NAD	5 g	112.59
M6055.0010	NAD	10 g	181.38
M6055.0025	NAD	25 g	339.10
M6056.0001	NAD reduced Na-salt	1 g	43.47
M6056.0005	NAD reduced Na-salt	5 g	169.21
M6056.0010	NAD reduced Na-salt	10 g	294.92
M6057.0001	NADP Na-salt	1 g	110.23
M6057.0005	NADP Na-salt	5 g	357.15
M6057.0250	NADP Na-salt	250 mg	38.28
M6058.0001	NADPH Na4-salt, min. 96%	1 g	452.85
M6058.0100	NADPH Na4-salt, min. 96%	100 mg	72.43
M6058.0500	NADPH Na4-salt, min. 96%	500 mg	275.14
M3202.0001	Naphthol-AS-BI-phosphate	1 g	131.25
M3202.0250	Naphthol-AS-BI-phosphate	250 mg	35.44
M3203.0001	Nitro Blue Tetrazolium Chloride, Molecular Biology grade	1 g	72.38

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### Substrates

Prod.No.	Product	Pack-size	Price in €
M3203.0005	Nitro Blue Tetrazolium Chloride, Molecular Biology grade	5 g	300.44
M3203.0500	Nitro Blue Tetrazolium Chloride, Molecular Biology grade	500 mg	48.48
M3325.0001	Rose-Gal - Red-Gal molecular biology grade	1 g	257.25
M3325.0025	Rose-Gal - Red-Gal molecular biology grade	25 mg	29.29
M3325.0100	Rose-Gal - Red-Gal molecular biology grade	100 mg	61.59
M3159.0030	TMB ready-to-use solution	30 mL	49.36
M3159.0100	TMB ready-to-use solution	100 mL	128.04
M3204.0001	X-Gal, Molecular biology grade (min. 99.0%)	1 g	83.74
M3204.0005	X-Gal, Molecular biology grade (min. 99.0%)	5 g	350.51
M3204.0250	X-Gal, Molecular biology grade (min. 99.0%)	250 mg	36.81
M3205.0050	X-Glu, molecular biology grade	50 mg	66.68
M3205.0250	X-Glu, molecular biology grade	250 mg	236.25
M3205.0500	X-Glu, molecular biology grade	500 mg	393.75

### BCIP

#### (5-Bromo-4-chloro-3-indolyl phosphate p-toluidine salt)

(X-Phos p-toluidine salt, molecular grade,  $C_8H_6BrClNO_4P \times C_7H_9N$ , MW = 433.64 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3196.0001	BCIP, molecular biology grade,	1 g	87.15
M3196.0005	BCIP, molecular biology grade,	5 g	375.94
M3196.0250	BCIP, molecular biology grade,	250 mg	35.31
M3196.0500	BCIP, molecular biology grade,	500 mg	60.44

#### Specifications

Min. 99% HPLC; pH (5% in water): 1.0-2.0; solubility (water, 20°C): 582g/L, MP = 120°C; chloride: max. 0.001%, Pb: max. 0.005%, Mn: max. 0.00005%; free acid: max. 0.1%; residue on ignition: max. 0.005%

#### Use

Chromogenic substrate for phosphatase. Toluidine salt is reported to be more stable than all others (Horwitz J.P. et al. (1966) J.Med.Chem., 9, 447).

#### Storage and shipment

Shipped at RT, store at -20°C, keep away from light.

### HighPure IPTG, dioxan free

(Isopropyl- $\beta$ -D-Thiogalactopyranoside, molecular biology grade,  $C_9H_{18}O_5S$ ; MW = 238.30 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3197.0001	HighPure IPTG, dioxan free, (min. 99.5%).	1 g	31.15
M3197.0005	HighPure IPTG, dioxan free, (min. 99.5%).	5 g	81.75
M3197.0025	HighPure IPTG, dioxan free, (min. 99.5%).	25 g	367.88
M3197.0050	HighPure IPTG, dioxan free, (min. 99.5%).	50 g	654.01

#### Specifications

Min. 99.5% (HPLC); MP = 110-112°C; specific rotation (20°/D, c=1 water): -31°/+2°C; water: max. 0.5%; dioxane: not detectable.

#### Storage and shipment

Shipped at RT. Store at -20°C, away from light.

#### Use

The lactose operon from *E. coli* is under negative control of the *lac* repressor protein, which specifically binds to the operator of the *E. coli* genome. IPTG is the most used synthetic inducer of the *lac* operon as it is both active at very low concentrations and not subject to enzymatic degradation.

**IPTG, dioxan free**(Isopropyl- $\beta$ -D-Thiogalactopyranoside, molecular biology grade, C<sub>9</sub>H<sub>18</sub>O<sub>5</sub>S; MW = 238.30 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3198.0010	IPTG, dioxan free, molecular biology grade	10 g	102.20
M3198.0025	IPTG, dioxan free, molecular biology grade	25 g	233.00
M3198.0050	IPTG, dioxan free, molecular biology grade	50 g	413.44

**Specifications**

Min. 95% (HPLC); MP = 110-112°C; specific rotation (20°/D, c=1 water): -31° +/- 2°C; water: max. 3%; dioxane: max. 15 ppm; inhibitor free: tested active in *lac* gene expression.

**Use**

Suitable for *lac* gene stimulation, an economical alternative to IPTG, dioxane free when used on a larger scale. See also above.

**Storage and shipment**

Shipped at RT. Store at -20°C, away from light.

**Naphtol-AS-BI phosphate**(C<sub>18</sub>H<sub>15</sub>BrNO<sub>6</sub>P, MW = 452.20 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3202.0001	Naphtol-AS-BI-phosphate	1 g	131.25
M3202.0250	Naphtol-AS-BI-phosphate	250 mg	35.44

**Specifications**

Min 95% (HPLC); solution (1% in methanol): clear, slightly yellowish.

**Storage and shipment**

Shipped at RT. Store at 2-8°C, keep away from light (packed under argon).

**Use**

Naphtol-AS-BI phosphate is a substrate for alkaline phosphatases (Guilbault G.G. (1976) *Methods Enzymol.*, **44**, 579). After hydrolysis of the non-fluorescent Naphtol-AS-BI phosphate by the enzyme, the resulting Naphtol-AS-BI can be measured by fluorescence methods. For a stock solution, 0.05 M solution in 200 mM sodium acetate (pH 5.0) or a 10 mM solution in DMF is suitable.

**X-Gal**(5-Bromo-4-chloro-3-indolyl- $\beta$ -D-Galactopyranoside, molecular biology grade, C<sub>14</sub>H<sub>15</sub>BrClNO<sub>6</sub>, MW = 408.63 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3204.0001	X-Gal, Molecular biology grade (min. 99.0%)	1 g	83.74
M3204.0005	X-Gal, Molecular biology grade (min. 99.0%)	5 g	350.51
M3204.0250	X-Gal, Molecular biology grade (min. 99.0%)	250 mg	36.81

**Specifications**

Assay min. 99.5% (HPLC); MP = 223°C; spec. Rotation (20°C/D; c=1,50% DMF): -62° +/- 2°; spec. Ext. (E 1%/ 1 cm, 233 nm MeOH): 830-845.

**Storage and shipment**

Shipped at RT. Store at -20°C. Keep away from light.

**Safety**

S: 22-24/25

**Use**

X-Gal is a chromogenic substrate for the  $\beta$ -galactosidase enzyme. It is used for the identification and selection of *lacZ+* bacteria (Lojda Z. et al. (1973) *Histochemie*, **34**, 361; Lin W.C. et al. (1990) *Cancer Res.*, **50**, 2808) Stock solutions are obtained by dissolving X-Gal at 20 mg/ml in DMF; store stock solutions at -20°C away from light.

**X-Glu**(5-Bromo-4-chloro-3-indolyl- $\beta$ -D-Glucopyranoside, molecular biology grade, C<sub>14</sub>H<sub>15</sub>BrClNO<sub>6</sub>; MW = 408.63 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3205.0050	X-Glu, molecular biology grade	50 mg	66.68
M3205.0250	X-Glu, molecular biology grade	250 mg	236.25
M3205.0500	X-Glu, molecular biology grade	500 mg	393.75

**Specifications**

Assay min. 98.0% (HPLC); MP = 235°C; spec. Rotation (20°C/D; c=1,50% DMF): -73° +/- 2°; solubility: 10mg in 1mL DMF (dimethylformamide).

**Storage and shipment**

Shipped at RT. Store at -20°C. Keep away from light.

**Use**

X-Glu is a chromogenic substrate for the  $\beta$ -glucosidase enzyme. It is used for the demonstration of  $\beta$ -glucosidase activity. Ref.: Horwitz J.P et al(1964) *J. Med. Chem.*, **7**, 574.

**Safety**

S: 22-24/25

## Chelating Agents

## EDTA Disodium salt dihydrate

(Ethylenediamino tetraacetic acid disodium salt dihydrate, analytical grade,  $C_{10}H_{14}N_2Na_2O_8 \times 2 H_2O$ , MW = 372.24 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3191.0500	EDTA disodium salt dihydrate p.A.	500 g	42.06
M3191.1000	EDTA disodium salt dihydrate p.A.	1 kg	72.10
M3191.5000	EDTA disodium salt dihydrate p.A.	5 kg	300.44

**Specifications**

Min. 99%; solubility (water, 20°C): 100g/L; pH(1%, water): 4.0-5.0; chloride: max. 0.005%; cyanide: max. 0.005%; sulphate: max. 0.01%; As: max. 0.0005%; Pb: max. 0.001%; Fe: max. 0.001%; Cu: max. 0.001%.

**Storage and shipment**

Shipped and stored at RT.

**Use**

EDTA is a chelator of Ca-, Mg- and Zn-ions and therefore may inhibit metallo-proteases or influence other biological processes which depend on metal ions.

**Safety**

S: 22

## EDTA Tetrasodium salt dihydrate

(Ethylenediamino tetraacetic acid tetrasodium salt dihydrate, analytical grade,  $C_{10}H_{14}N_2Na_4O_8 \times 2 H_2O$ , MW = 416.21 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3192.0500	EDTA tetrasodium salt dihydrate p.A.	500 g	25.92
M3192.1000	EDTA tetrasodium salt dihydrate p.A.	1 kg	39.35

**Specifications**

Min. 99%; solubility (water, 20°C): 1000g/L; pH(1%, water): ca. 11; MP = 400°C, water: ca. 8.0%; Pb: max. 0.001%; Fe: max. 0.001%.

**Storage and shipment**

Shipped and stored at RT.

**Use**

EDTA is a chelator of Ca-, Mg- and Zn-ions and therefore may inhibit metallo-proteases or influence other biological processes which depend on metal ions.

**Safety**

S: 22

## EDTA Disodium salt dihydrate

(molecular grade, Ethylenediamin  $C_{10}H_{14}N_2O_8 \times Na_2 \times 2H_2O$ , MW = 372.24 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3190.0250	EDTA disodium salt dihydrate, Molecular biology grade	250 g	33.05
M3190.0500	EDTA disodium salt dihydrate, Molecular biology grade	500 g	51.07
M3190.1000	EDTA disodium salt dihydrate, Molecular biology grade	1 kg	87.13

**Specifications**

Min. 99.0%, DNase and RNase free; solubility in water: 100 g/L, pH (1%, H<sub>2</sub>O) = 4.0 - 5.0. MW = 372.24 g/mol.

**Storage and shipment**

Shipped and stored at RT.

**Use**

EDTA is a chelator of Ca<sup>2+</sup>, Mg<sup>2+</sup> and Zn<sup>2+</sup> ions and therefore may inhibit metalloproteases or influence other biological processes which depend on metal ions.

**Safety**

S: 22

## EGTA Molecular biology grade

(molecular biology grade, Ethylene glycol Chel-De, Egtazic  $C_{14}H_{24}N_2O_{10}$ , MW = 380.4 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3193.0005	EGTA Molecular biology grade	5 g	24.79
M3193.0025	EGTA Molecular biology grade	25 g	84.12
M3193.0100	EGTA Molecular biology grade	100 g	241.85

**Specifications**

MP = 240°C (dec.), MW = 380.4 g/mol; C<sub>14</sub>H<sub>24</sub>N<sub>2</sub>O<sub>10</sub>, CAS: [67-42-5]

**Storage and shipment**

Shipped and stored at RT.

**Use**

High selectivity for Ca<sup>2+</sup>; Berman C. (1982) J. Biol. Chem. 257, 1953-7.

**Safety**

S: 22

## Density Gradient

Prod.No.	Product	Pack-size	Price in €
M3207.0100	Cesium chloride (99.9 %), Molecular biology grade	100 g	56.18
M3207.0250	Cesium chloride (99.9 %), Molecular biology grade	250 g	112.66
M3207.0500	Cesium chloride (99.9 %), Molecular biology grade	500 g	202.80
M3207.1000	Cesium chloride (99.9 %), Molecular biology grade	1 kg	345.50
M3208.0050	Cesium chloride (99.999 %), ultra pure	50 g	51.40
M3208.0100	Cesium chloride (99.999 %), ultra pure	100 g	85.31
M3208.0500	Cesium chloride (99.999 %), ultra pure	500 g	280.92
M3208.1000	Cesium chloride (99.999 %), ultra pure	1 kg	472.50
S3210.1000	D(+)-Sucrose, BioChemica	1 kg	22.53
S3210.1001	D(+)-Sucrose, BioChemica	10 kg	112.72
S3210.5000	D(+)-Sucrose, BioChemica	5 kg	76.89
S3211.0500	D(+)-Sucrose, Molecular biology grade.	500 g	25.54
S3211.1000	D(+)-Sucrose, Molecular biology grade.	1 kg	42.06
M3209.0010	Ficoll 400	10 g	30.04
M3209.0025	Ficoll 400	25 g	53.87
M3209.0100	Ficoll 400	100 g	147.00
S5399.0025	Sodium diatrizoate dihydrate (99.0%)	25 g	60.80
S5399.0100	Sodium diatrizoate dihydrate (99.0%)	100 g	107.30
S5399.0250	Sodium diatrizoate dihydrate (99.0%)	250 g	225.33
S5399.1000	Sodium diatrizoate dihydrate (99.0%)	1 kg	742.07

## Cesium Chlorid ultrapure

(Molecular biology grade, CsCl, MW = 168.36 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3208.0050	Cesium chloride (99.999 %), ultra pure	50 g	51.40
M3208.0100	Cesium chloride (99.999 %), ultra pure	100 g	85.31
M3208.0500	Cesium chloride (99.999 %), ultra pure	500 g	280.92
M3208.1000	Cesium chloride (99.999 %), ultra pure	1 kg	472.50

## Specifications

min. 99.999%; density (d<sub>20/4°C</sub>) 3.983g/cm<sup>3</sup>; solubility in water (20°C) 1800 g/l; MP 646°C; BP: 1300°C; DNase/RNase: not detectable. A<sub>260nm</sub>: max. 0.006, A<sub>280nm</sub>: max. 0.004; Al: max. 0.0001%; Ba: max. 0.0001%; Ca: max. 0.0001%; Cr: max. 0.0001%; Fe: max. 0.0001%; K: max. 0.0001%; Li: max. 0.0001%; Na: max. 0.0001%.

## Storage and shipment

Shipped at RT, store at 2-8°C.

## Use

For density gradient centrifugation (Miller H. (1987) Methods Enzymol., 152, 145; Dorin M. and Bornecque C.A (1995) BioTechniques, 18, 90)

## Ficoll 400

(Non-ionic synthetical Polymere of Sucrose, MW ca. 400.000 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3209.0010	Ficoll 400	10 g	30.04
M3209.0025	Ficoll 400	25 g	65.10
M3209.0100	Ficoll 400	100 g	183.75

## Specifications

White powder; water: max. 3%; intrinsic viscosity: 17mL/g; specific rotation: +56.5°; solution (10% in water): clear, colourless.

## Storage and shipment

Shipped at RT, store at RT in a dry place.

## Bibliography

Sambrock J. et al. (1989) Molecular cloning. A Laboratory Manual, 2<sup>nd</sup> Edition, page 6.12, Cold Spring Harbor, New York; Denhardt D.T. (1966) Biochem. Biophys. Res. Com., 23, 641. Ficoll is a Trademark of Pharmacia Biotech.

## VI. Molecular Biology

### D(+)-Sucrose

(Saccharose, molecular biology grade, C<sub>12</sub>H<sub>22</sub>O<sub>11</sub>, MW = 342.30 g/mol)

Prod.No.	Product	Pack-size	Price in €
S3211.0500	D(+)-Sucrose, Molecular biology grade.	500 g	25.54
S3211.1000	D(+)-Sucrose, Molecular biology grade.	1 kg	42.06

#### Specifications

min. 99.5%; spec. Rotation (20°/D; water): +66° +/-2° ;  
sulphate: max. 0.005%; glucose (TLC): max. 0.5%; water: max.  
0.1%

#### Use

Sucrose can be used in isopycnic centrifugation e.g. for the purification of mRNA from membrane-bound polysomes (Mechler B.M. (1987) Methods Enzymol., 152, 241).

#### Storage and shipment

Store at room temperature.

### Hybridisation

Prod.No.	Product	Pack-size	Price in €
M3184.0025	Dextran sulfate 40 sodium salt, 50% stock solution	25 mL	88.63
M3184.0050	Dextran sulfate 40 sodium salt, 50% stock solution	50 mL	157.73
M3184.0100	Dextran sulfate 40 sodium salt, 50% stock solution	100 mL	270.39
M3183.0025	Dextran sulfate 500 sodium salt, molecular biology grade	25 g	78.28
M3183.0050	Dextran sulfate 500 sodium salt, molecular biology grade	50 g	132.83
M3183.0100	Dextran sulfate 500 sodium salt, molecular biology grade	100 g	204.75
M3183.0250	Dextran sulfate 500 sodium salt, molecular biology grade	250 g	499.28
M3324.0100	Hybridisation solution	100 mL	on request
M3324.0500	Hybridisation solution	500 mL	on request
M3187.0001	Salmon sperm DNA (Na-salt) sonified.	1 g	42.92
M3187.0005	Salmon sperm DNA (Na-salt) sonified.	5 g	146.74
M3187.0010	Salmon sperm DNA (Na-salt) sonified.	10 g	209.48
M3186.0001	Salmon sperm DNA sodium salt	1 g	69.04
M3186.0005	Salmon sperm DNA sodium salt	5 g	270.64
M3186.0010	Salmon sperm DNA sodium salt	10 g	438.45
M3188.1000	SSC buffer (20X)	1 L	36.49
M3188.5000	SSC buffer (20X)	5 L	76.13

### Dextran sulphate sodium salt, powder

(Molecular biology grade, MW ca. 500.000 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3183.0025	Dextran sulfate 500 sodium salt, molecular biology grade	25 g	78.28
M3183.0050	Dextran sulfate 500 sodium salt, molecular biology grade	50 g	132.83
M3183.0100	Dextran sulfate 500 sodium salt, molecular biology grade	100 g	204.75
M3183.0250	Dextran sulfate 500 sodium salt, molecular biology grade	250 g	499.28

#### Specifications

Polyionic derivative of dextran with an average molecular weight of 500.000; chloride: max. 0.01%; Pb: max. 0.0005%; Ca: max. 0.02%; Fe: max. 0.0005%; Cu: max. 0.0005%; Mn: max. 0.0005%; Zn: max. 0.0005%.

#### Use

Dextran sulphate is used as an additive in hybridisation solutions to accelerate hybridisation of nucleic acids (Wetmur J.G. (1975) Biopolymers, 14, 2517; Sambrook J. et al. (1989) Molecular cloning. A Laboratory Manual, 2<sup>nd</sup> Edition, page 6.12, Cold Spring Harbor, New York).

#### Storage and shipment

Shipped at RT, store in dry place.

**Dextran sulphate sodium salt, 50% stock solution**

(Molecular biology grade)

Prod.No.	Product	Pack-size	Price in €
M3184.0025	Dextran sulfate 40 sodium salt, 50% stock solution	25 mL	88.63
M3184.0050	Dextran sulfate 40 sodium salt, 50% stock solution	50 mL	157.73
M3184.0100	Dextran sulfate 40 sodium salt, 50% stock solution	100 mL	270.39

**Specifications**

Dextran sulphate provided as a convenient ready-to-use 50% stock solution (w/v) in molecular biology grade.

**Storage and shipment**

Shipped at RT, store at -20°C.

**Use**

Dextran sulphate is used as an additive in hybridisation solutions to accelerate hybridisation of nucleic acids (Wetmur J.G. (1975) Biopolymers, 14, 2517; Sambrook J. et al. (1989) Molecular cloning. A Laboratory Manual, 2<sup>nd</sup> Edition, page 6.12, Cold Spring Harbor, New York).

**Salmon Sperm DNA sodium salt, high molecular weight**

(lyophilised, molecular biology grade)

Prod.No.	Product	Pack-size	Price in €
M3186.0001	Salmon sperm DNA sodium salt	1 g	69.04
M3186.0005	Salmon sperm DNA sodium salt	5 g	270.64
M3186.0010	Salmon sperm DNA sodium salt	10 g	438.45

**Specifications**

DNA extracted from salmon tests, phenol extracted and lyophilised; appearance: white filaments; DNase and RNase activities not detectable.

**Storage and shipment**

Store at 2-8°C.

**Use**

Added to prehybridisation and hybridisation solutions at a final concentration of 10mg/ml (Sambrook J. et al. (1989) Molecular cloning : A Laboratory Manual, 2. Edition, page 9.48, Cold Spring Harbor, New York).

**Salmon Sperm DNA (Na salt) sonified**

(lyophilised, molecular biology grade)

Prod.No.	Product	Pack-size	Price in €
M3187.0001	Salmon sperm DNA (Na-salt) sonified.	1 g	42.92
M3187.0005	Salmon sperm DNA (Na-salt) sonified.	5 g	146.74
M3187.0010	Salmon sperm DNA (Na-salt) sonified.	10 g	209.48

**Specifications**

DNA extracted from salmon tests and sonicated; appearance: powder; fragment size: 500-1000 bp, DNase and RNase activities not detectable. Also available in convenient ready-to-use solutions: 10mg/mL in DNase free and RNase free (DEPC treated) deionised water.

**Storage and shipment**

Shipped at RT, Store at 2-8°C.

**Use**

Added to prehybridisation and hybridisation solutions at a final concentration of 10 mg/ml (Sambrook J. et al. (1989) Molecular cloning: A Laboratory Manual, 2. Edition, page 9.48, Cold Spring Harbor, New York).

**Storage and shipment**

Shipped at RT, Store at 2-8°C.

**Hybridisation solution**

(Molecular biology grade, ready-to-use)

Prod.No.	Product	Pack-size	Price in €
M3324.0100	Hybridisation solution	100 mL	on request
M3324.0500	Hybridisation solution	500 mL	on request

**Specifications**

Convenient and reliable ready-to-use Hybridisation/Pre-hybridisation solution which contains: SSC (standard sodium citrate) 6X, Denhardt's solution 5X and 0.5% SDS. Free of DNases and RNases.

**Storage and shipment**

Shipped at RT. Store at -20°C.

**Use**

Used as the basic solution in prehybridisation (to reduce background, denatured sonificated fish sperm DNA is added at a final concentration of 100 mg/ml) and hybridisation procedures.

**Storage and shipment**

Shipped at RT. Store at -20°C.

## VI. Molecular Biology

### Chemicals - Solvents

Prod.No.	Product	Pack-size	Price in €
M6337.1000	2-Propanol p.A. (min. 99.7% GC)	1 L	21.85
M6337.1010	2-Propanol p.A. (min. 99.7% GC)	10 L	123.59
M6337.2500	2-Propanol p.A. (min. 99.7% GC)	2.5 L	41.65
M6337.5000	2-Propanol p.A. (min. 99.7% GC)	5 L	70.33
M6023.1000	Diethylene glycol	1 L	19.80
M6023.2500	Diethylene glycol	2.5 L	41.65
M6321.0500	DMF, Molecular biology grade (min. 99.5% GC)	500 mL	32.30
M6321.1000	DMF, Molecular biology grade (min. 99.5% GC)	1 L	53.33
M6321.2500	DMF, Molecular biology grade (min. 99.5% GC)	2.5 L	112.66
M6322.0500	DMF, p. A., (min. 99.5% GC)	500 mL	26.29
M6322.1000	DMF, p. A., (min. 99.5% GC)	1 L	44.31
M6322.2500	DMF, p. A., (min. 99.5% GC)	2.5 L	94.64
M6323.0100	DMSO, Cell culture grade	100 mL	21.78
M6323.0250	DMSO, Cell culture grade	250 mL	36.05
M6324.0100	DMSO, Molecular biology grade	100 mL	18.60
M6324.0500	DMSO, Molecular biology grade	500 mL	43.56
M6324.1000	DMSO, Molecular biology grade	1 L	64.38
M6325.0500	DMSO, p. A.	500 mL	32.90
M6325.1000	DMSO, p. A.	1 L	54.36
M6325.2500	DMSO, p. A.	2.5 L	107.30
M6326.1010	Ethanol 70 % BioChemica, denatured with ketones	10 L	66.92
M6326.2500	Ethanol 70 % BioChemica, denatured with ketones	2.5 L	20.48
M6326.5000	Ethanol 70 % BioChemica, denatured with ketones	5 L	36.87
M6352.0250	Ethanol 70 % p.A.	250 mL	19.12
M6352.0500	Ethanol 70 % p.A.	500 mL	30.04
M6352.1000	Ethanol 70 % p.A.	1 L	50.53
M6352.2500	Ethanol 70 % p.A.	2.5 L	106.52
M6353.0250	Ethanol 96%, p.A.	250 mL	25.95
M6353.0500	Ethanol 96%, p.A.	500 mL	40.97
M6353.1000	Ethanol 96%, p.A.	1 L	70.33
M6353.2500	Ethanol 96%, p.A.	2.5 L	152.95
M6341.0500	Ethanol absolute, BioChemica	500 mL	51.89
M6341.1000	Ethanol absolute, BioChemica	1 L	90.13
M6341.2500	Ethanol absolute, BioChemica	2.5 L	174.80
M6350.1000	Ethanol HPLC grade	1 L	111.98
M6350.2500	Ethanol HPLC grade	2.5 L	233.52
M6043.0500	Glycerol 87 % Molecular biology grade	500 mL	29.42
M6043.1000	Glycerol 87 % Molecular biology grade	1 L	41.93
M6043.2500	Glycerol 87 % Molecular biology grade	2.5 L	96.55
M6044.0500	Glycerol 87 % p.A.	500 mL	27.87
M6044.1000	Glycerol 87 % p.A.	1 L	36.85
M6044.2500	Glycerol 87 % p.A.	2.5 L	89.80
M3097.0500	Glycerol anhydrous Molecular biology grade	500 mL	31.90
M3097.1000	Glycerol anhydrous Molecular biology grade	1 L	46.45
M3097.2500	Glycerol anhydrous Molecular biology grade	2.5 L	100.95
M3268.0500	Glycerol anhydrous p.A.	500 mL	31.55

## Chemicals - Solvents

Prod.No.	Product	Pack-size	Price in €
M3268.1000	Glycerol anhydrous p.A.	1 L	51.07
M3268.2500	Glycerol anhydrous p.A.	2.5 L	111.16
M6331.0250	Isoamyl alcohol p.a. BioChemica	250 mL	21.46
M6331.0500	Isoamyl alcohol p.a. BioChemica	500 mL	28.00
M6331.1000	Isoamyl alcohol p.a. BioChemica	1 L	49.16
M6331.2500	Isoamyl alcohol p.a. BioChemica	2.5 L	102.42
M6332.0500	Methanol dried, p.A. (min. 99.8% GC)	500 mL	18.44
M6332.1000	Methanol dried, p.A. (min. 99.8% GC)	1 L	28.68
M6346.1000	Methanol HPLC-grade (min. 99.9% GC)	1 L	16.39
M6346.2500	Methanol HPLC-grade (min. 99.9% GC)	2.5 L	26.63
M6333.1000	Methanol p.A. (min. 99.8% GC)	1 L	18.44
M6333.1010	Methanol p.A. (min. 99.8% GC)	10 L	91.50
M6333.2500	Methanol p.A. (min. 99.8% GC)	2.5 L	31.41
M6333.5000	Methanol p.A. (min. 99.8% GC)	5 L	54.62

## Glycerol anhydrous

(Propanetriol, analytical grade, C<sub>3</sub>H<sub>8</sub>O<sub>3</sub>, MW = 92.10 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3097.0500	Glycerol anhydrous Molecular biology grade	500 mL	31.90
M3097.1000	Glycerol anhydrous Molecular biology grade	1 L	46.45
M3097.2500	Glycerol anhydrous Molecular biology grade	2.5 L	100.95

## Specifications

Min. 99.5%; refractive index (n<sub>20°/D</sub>): 1.4740; density (d<sub>20°/4°</sub>): 1.256-1.261; MP = 18°C; water: max. 0.5%; chloride: max. 0.0001%, sulphate: max. 0.001%; As: max. 0.0001%; Pb: max. 0.0001%; Fe: max. 0.0005%.

## Bibliography

Odgen R.C. and Adams D.A. (1987) Methods Enzymol., **152**, 61;  
Miller H. (1987) Methods Enzymol., **152**, 145.

## Storage and shipment

Shipped at RT, store at RT in a dry place (hygroscopic).

## Chemicals - Salts

Prod.No.	Product	Pack-size	Price in €
M6018.0500	Ammonium chloride p.A. BioChemica	500 g	19.12
M6018.1000	Ammonium chloride p.A. BioChemica	1 kg	28.68
M6018.5000	Ammonium chloride p.A. BioChemica	5 kg	113.35
M3271.0500	Ammonium sulfate Molecular biology grade	500 g	27.04
M3271.1000	Ammonium sulfate Molecular biology grade	1 kg	33.05
M3271.5000	Ammonium sulfate Molecular biology grade	5 kg	107.41
M3272.0500	Ammonium sulfate p.A.	500 g	21.03
M3272.1000	Ammonium sulfate p.A.	1 kg	28.54
M3272.5000	Ammonium sulfate p.A.	5 kg	112.66
M6368.0500	Calcium chloride hexahydrate	500 g	16.26
M6368.1000	Calcium chloride hexahydrate	1 kg	18.34
M6368.5000	Calcium chloride hexahydrate	5 kg	67.63
M6363.0100	Cetylpyridiniumbromide	100 g	25.73
M6363.0250	Cetylpyridiniumbromide	250 g	40.84
M6364.0100	Cetylpyridiniumchloride - Monohydrate	100 g	20.64
M6364.0500	Cetylpyridiniumchloride - Monohydrate	500 g	47.78
M6026.0500	di-Sodium hydrogen phosphate dihydrate (min. 99.0%)	500 g	24.60
M6026.1000	di-Sodium hydrogen phosphate dihydrate (min. 99.0%)	1 kg	38.23
M6025.1000	di-Sodium hydrogen phosphate dodecahydrate, BioChemica	1 kg	30.04

## VI. Molecular Biology

### Chemicals - Salts

Prod.No.	Product	Pack-size	Price in €
M6025.5000	di-Sodium hydrogen phosphate dodecahydrate, BioChemica	5 kg	98.76
M6027.0500	di-Sodium hydrogen phosphate, anhydrous (min. 99.0%)	500 g	25.95
M6027.1000	di-Sodium hydrogen phosphate, anhydrous (min. 99.0%)	1 kg	40.97
M3277.0005	DTE, molecular biology grade	5 g	45.41
M3277.0025	DTE, molecular biology grade	25 g	150.94
M6031.0005	DTT, BioChemica	5 g	41.95
M6031.0010	DTT, BioChemica	10 g	60.66
M6031.0025	DTT, BioChemica	25 g	124.26
M6031.0100	DTT, BioChemica	100 g	363.11
M3278.0005	DTT, Molecular biology grade	5 g	41.48
M3278.0010	DTT, Molecular biology grade	10 g	74.90
M3278.0025	DTT, Molecular biology grade	25 g	145.43
M6046.0250	Guanidine hydrochloride, BioChemica	250 g	41.32
M6046.0500	Guanidine hydrochloride, BioChemica	500 g	62.11
M6046.1000	Guanidine hydrochloride, BioChemica	1 kg	97.13
M3281.0100	Guanidine hydrochloride, Molecular biology grade	100 g	56.73
M3281.0250	Guanidine hydrochloride, Molecular biology grade	250 g	114.17
M3281.0500	Guanidine hydrochloride, Molecular biology grade	500 g	195.28
M3281.1000	Guanidine hydrochloride, Molecular biology grade	1 kg	315.46
M6032.0001	Guanidine hydrochloride, pure	1 kg	40.16
M6032.0005	Guanidine hydrochloride, pure	5 kg	141.49
M6032.0010	Guanidine hydrochloride, pure	10 kg	260.77
M6047.0250	Guanidine hydrochloride, ultrapure	250 g	54.14
M6047.0500	Guanidine hydrochloride, ultrapure	500 g	90.07
M6047.1000	Guanidine hydrochloride, ultrapure	1 kg	143.16
M6367.0100	Lithium acetate dihydrate (min. 99%)	100 g	18.21
M6367.0500	Lithium acetate dihydrate (min. 99%)	500 g	58.53
M6367.1000	Lithium acetate dihydrate (min. 99%)	1 kg	93.64
M3282.0050	Lithium chloride p.A.	50 g	25.54
M3282.0100	Lithium chloride p.A.	100 g	43.56
M3282.0250	Lithium chloride p.A.	250 g	82.62
M3282.0500	Lithium chloride p.A.	500 g	148.72
M3283.0500	Magnesium chloride hexahydrate p.A.	500 g	25.54
M3283.1000	Magnesium chloride hexahydrate p.A.	1 kg	45.07
M3283.5000	Magnesium chloride hexahydrate p.A.	5 kg	157.73
M6062.0500	Potassium acetate analytical grade	500 g	25.95
M6062.1000	Potassium acetate analytical grade	1 kg	34.47
M6062.5000	Potassium acetate analytical grade	5 kg	121.93
M6063.0500	Potassium chloride Molecular biology grade	500 g	27.31
M6063.1000	Potassium chloride Molecular biology grade	1 kg	38.24
M6063.5000	Potassium chloride Molecular biology grade	5 kg	139.29
M6064.1000	Potassium chloride, analytical grade	1 kg	31.41
M6064.5000	Potassium chloride, analytical grade	5 kg	118.81
M6052.0250	Potassium chloride, cell culture grade	250 g	17.07
M6052.0500	Potassium chloride, cell culture grade	500 g	21.03
M6052.1000	Potassium chloride, cell culture grade	1 kg	29.09

## Chemicals - Salts

Prod.No.	Product	Pack-size	Price in €
M6065.0500	Potassium dihydrogen phosphate Molecular biology grade	500 g	35.51
M6065.1000	Potassium dihydrogen phosphate Molecular biology grade	1 kg	57.36
M6066.0500	Potassium dihydrogen phosphate, analytical grade	500 g	28.68
M6066.1000	Potassium dihydrogen phosphate, analytical grade	1 kg	47.80
M6066.5000	Potassium dihydrogen phosphate, analytical grade	5 kg	177.53
M6067.0500	Potassium sulfate , analytical grade	500 g	20.83
M6067.1000	Potassium sulfate , analytical grade	1 kg	34.41
M6067.5000	Potassium sulfate , analytical grade	5 kg	134.99
M6382.0250	Salicylic acid sodium salt, p.A.	250 g	37.07
M6382.1000	Salicylic acid sodium salt, p.A.	1 kg	106.00
M6071.0050	Sodium azide pure	50 g	24.58
M6071.0100	Sodium azide pure	100 g	30.04
M6071.0500	Sodium azide pure	500 g	95.59
M6072.1000	Sodium carbonate anhydrous, analytical grade	1 kg	30.04
M6072.5000	Sodium carbonate anhydrous, analytical grade	5 kg	109.25
M6369.1000	Sodium carbonate decahydrate p.A.	1 kg	20.43
M6369.5000	Sodium carbonate decahydrate p.A.	5 kg	69.58
M6369.1010	Sodium carbonate decahydrate p.A.	10 kg	121.61
M6073.0500	Sodium chloride Molecular biology grade	500 g	18.44
M6073.1000	Sodium chloride Molecular biology grade	1 kg	23.63
M6073.5000	Sodium chloride Molecular biology grade	5 kg	65.57
M6074.1000	Sodium chloride p.A.	1 kg	18.03
M6074.1001	Sodium chloride p.A.	10 kg	76.07
M6074.5000	Sodium chloride p.A.	5 kg	49.88
M6024.0500	Sodium dihydrogen phosphate dihydrate (min. 99.0%)	500 g	24.58
M6024.1000	Sodium dihydrogen phosphate dihydrate (min. 99.0%)	1 kg	38.24
M6024.5000	Sodium dihydrogen phosphate dihydrate (min. 99.0%)	5 kg	119.68
M6366.0500	Sodium hydroxide Pellets (p.a.)	500 g	15.61
M6366.1000	Sodium hydroxide Pellets (p.a.)	1 kg	18.86
M6366.5000	Sodium hydroxide Pellets (p.a.)	5 kg	61.13
M6372.0025	Sodium Molybdate Dihydrate (p.A.)	25 g	18.69
M6372.0100	Sodium Molybdate Dihydrate (p.A.)	100 g	31.86
M6372.0250	Sodium Molybdate Dihydrate (p.A.)	250 g	66.98
M6371.0500	Sodium sulfate, anhydrous (min. 99.0%)	500 g	16.26
M6371.1000	Sodium sulfate, anhydrous (min. 99.0%)	1 kg	20.16
M6371.5000	Sodium sulfate, anhydrous (min. 99.0%)	5 kg	70.23
M6373.0250	Sodium Thiosulphate Pentahydrate (p.A.)	250 g	13.13
M6373.0500	Sodium Thiosulphate Pentahydrate (p.A.)	500 g	18.64
M6373.1000	Sodium Thiosulphate Pentahydrate (p.A.)	1 kg	24.94

## VI. Molecular Biology

### Dithioerythritol

(DTE, 1,4-Dithioerythritol, Cleland's Reagent, molecular biology grade,  $C_4H_{10}O_2S_2$ , MW = 154.25 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3277.0005	DTE, molecular biology grade	5 g	45.41
M3277.0025	DTE, molecular biology grade	25 g	150.94

#### Specifications

Min. 99.2%, MP = 83-85°C; pH (0.1 M in water): 4.0-6.0; Fe: max. 0.0005%; heavy metals: max. 0.001%.

#### Storage and shipment

Shipped at RT, store at 2 - 8°C.

#### Bibliography

Cleland W.W. (1964) *Biochemistry*, **3**, 480; Zahler W.L. and Cleland W.W. (1968) *J.Biol.Chem.*, **243**, 716).

### Dithiothreitol

(DTT; Clelands reagent, threo-1,4-Dimercapto-2,3-butanediol, molecular biology grade;  $C_4H_{10}O_2S_2$ , MW = 154.3 g/mol)

Prod.No.	Product	Pack-size	Price in €
M3278.0005	DTT, Molecular biology grade	5 g	41.48
M3278.0010	DTT, Molecular biology grade	10 g	74.90
M3278.0025	DTT, Molecular biology grade	25 g	145.43

#### Specifications

min. 99.5%, hygroscopic; MP = 42-44°C; pH (0.1 M in water): 4.0-6.0; water: max. 0.5%; DTT (oxidised): max. 0.002%,  $A_{283nm}$ : max. 0.05; solubility in water: 1500g/L.

#### Safety

R: 22-36/37/38; S: 26-36

#### Use

DTT is used like mercaptoethanol as a reagent stabilizing proteins, prohibiting oxidation of Cys residues. It can be used as substitute for mercaptoethanol in all experiments. Most important: It is by far less toxic than mercaptoethanol.

#### Storage and shipment

Shipped at room temperature. Please store at +2°C to +8°C.