Denhardt's Reagent
50X Solution
Molecular Biology

packaging		Mfr. No
5 mℓ	AmberGlass	**BP515-5**

DNase	Not detected
Optical Absorbance of a 5X Solution (at 278nm)	0.6-0.8
pH of 1X solution (at 25°C)	5.0-7.0
Protease	Not detected
RNase	Not detected

Applications: Denhardt's Reagent is used as a blocking agent in DNA hybridizations.
Components: <1% each of Ficoll*, Polyvinylpyrrolidone, and Bovine Albumin; and Water. Each 5mℓ of 50X Solution contains 50mg each of Ficoll*, Polyvinylpyrrolidone, and Bovine Albumin.
[26873-85-8 (Ficoll*)] ; [9003-39-8 (Polyvinylpyrrolidone)] ; [9048-46-8 (Bovine Albumin)]
Recommended Storage: -20°C

Denhardt's Reagent
50X Powder
Molecular Biology

packaging		Mfr. No
150 mg	AmberGlass	**BP520-5**

DNase	Not detected
Optical Absorbance of a 5X Solution (at 278nm)	0.6-0.8
pH of 1X solution (at 25°C)	5.0-7.0
Protease	Not detected
RNase	Not detected

Applications: Denhardt's Reagent is used as a blocking agent in DNA hybridizations.
A 50X concentrate is obtained by reconstituting with 5mℓ of sterile water.
Components: 50mg each of Ficoll*, Polyvinylpyrrolidone, and Bovine Albumin. [26873-85-8 (Ficoll)] ; [9003-39-8 (Polyvinylpyrrolidone)] ; [9048-46-8 (Bovine Albumin)]
Recommended Storage: 2°C to 8°C

Formamide
Molecular Biology

packaging		Mfr. No
100 mℓ	AmberGlass	**BP227-100**
500 mℓ	AmberGlass,EcoSafPak*	**BP227-500**

CH_3NO
CAS: 75-12-7
MW: 45.04
EINECS: 200-842-0
H360D
P201, P308+P313

Assay	>=99.0%
Conductivity	<=350µmhos/cm
Copper	<=0.0001%
Freezing Point	1.0°-3.0°C
Iron	<=0.0005%
Lead	<=0.0005%
Optical Absorbance at 280nm	<=0.1
Zinc	<=0.0005%

H2NCH:O; CH3NO; F.W. 45.04
Applications: Molecular Biology-grade Formamide is commonly used in nucleic acid hybridization and sequencing.
It requires pretreatment with a mixed-bed resin.
Recommended Storage: 4°C
EcoSafPak* is an environmentally friendly packaging system made of 100% recyclable material by an SFI certified supplier.
Vacuum distilled and packaged under Nitrogen

Saline-Sodium Phosphate-EDTA
20X solution

packaging		Mfr. No
1 ℓ	PolyBottle	**BP1328-1**
4 ℓ	PolyPac*	**BP1328-4**
20 ℓ	PolyPac*	**BP1328-20**

0.2M NaH_2PO4, 3.0M NaCl and 0.02M EDTA
CAS: [7647-14-5 (Sodium Chloride)], [7558-80-7 (Sodium Phosphate Monobasic, anhydrous)], [60-00-4 (Ethylenediamine Tetraacetic Acid)]

DNase	Not detected
Ethylenediaminetetraacetic acid	0.6%
Molarity of NaCl	3 ±0.10M
pH (20X solution) (at 23°C)	7.4±0.1
Protease	Not detected
RNase	Not detected
Sodium Biophosphate	2.8%
Sodium (Na)	2.8% phosphate
sodium chloride	17.5 %

Filtered through a 2-5 micron filter.
Applications: Saline-Sodium Phosphate-EDTA is used in bacterial screening and hybridization procedures.
0.2M NaH_2PO_4, 3.0M NaCl and 0.02M EDTA
Recommended storage: RT

Dextran
White to Off-white Powder

packaging		Mfr. No
100 g	PolyBottle	**BP1580-100**

CAS: 9004-54-0

Heavy Metals (Pb)	<=0.0005%
Loss on drying	<=5%
pH of 1% Solution in 0.9% NaCl	6.5 ±0.3
Sulfated ash	<=1%

Applications: Dextran may be used with Polyethylene Glycol under certain conditions in the fractionation of proteins, cells, virus particles, and other macromolecules.
Dextran at neutral pH may be autoclaved.
Average M.W. of 500.000
Recommended Storage: RT

Dextran Sulfate Sodium Salt
White to Off-white Powder

packaging		Mfr. No
100 g	PolyBottle	**BP1585-100**
500 g	PolyBottle	**BP1585-500**

CAS: 9011-18-1

Moisture	<=7.5%
Sulfur Content	17-20%

Applications: Dextran Sulfate accelerates the rate of hybridization of DNA or RNA bound to membranes and may be used in Southern and Northern blotting procedures.
Average M.W. of 500.000
Recommended Storage: RT

Hybridization Cocktail
50% Formamide
Molecular Biology

packaging		Mfr. No
50 mℓ	PolyBottle	**BP1575-50**

DNase	Not detected
RNase	Not detected
Suitability for Nucleic Acid Hybridization	To pass test

Applications: Hybridization Cocktail is formulated for use in Southern and Northern transfers, dot blots, and in situ DNA and RNA hybridizations.
Components: <85.0% Formamide, 2.2% Sodium Citrate Dihydrate, 4.4% Sodium Chloride, and <6.0% Dextran, Hydrogen Sulfate, Sodium Salt [75-12-7 (Formamide)] ; [6132-04-3 (Sodium Citrate Dihydrate)] ; [7647-14-5 (Sodium Chloride)] ; [9011-18-1 (Dextran, Hydrogen Sulfate, Sodium Salt)]
Recommended Storage: -20°C

Saline-Sodium Citrate
20X solution
Molecular Biology

packaging		Mfr. No
1 ℓ	PolyBottle	**BP1325-1**
4 ℓ	PolyPac*	**BP1325-4**
20 ℓ	PolyPac*	**BP1325-20**

CAS: [7647-14-5 (Sodium Chloride)], [6132-04-3 (Sodium Citrate Dihydrate)]

DNase	Not detected
NaCl Molarity	3 ±0.10M
pH (20X solution) (at 23°C)	7.0±0.1
Protease	Not detected
RNase	Not detected

Filtered through a 2-5 micron filter.
Applications: Saline-Sodium Citrate (SSC) is used as a buffer in Southern Blot transfer protocols.
Recommended storage: RT

8-Hydroxyquinoline
White to Light-buff Needles or Powder

packaging		Mfr. No
100 g	AmberGlass	**BP436-100**

C_9H_7NO
CAS: 148-24-3
MW: 145.16
EINECS: 205-711-1
H319, H315, H335, H332,
H312, H302, H341
P281, P260, P301+P312,
P304+P340, P302+P352,
P280, P305+P351+P338

Assay	>=99.0%
Insoluble in Alcohol	<=0.05%
Melting Point	72.5°-74.0°C
Residue after ignition	<=0.05%
Suitability for Magnesium Determination	To pass test
Sulfate (SO_4)	To pass test (about 0.02%)

Applications: 8-Hydroxyquinoline is used to stabilize phenol.
Recommended Storage: RT

Ammonium Acetate
White Crystals

packaging		Mfr. No
500 g	AmberGlass	**BP326-500**
1 kg	AmberGlass	**BP326-1**

$C_2H_7NO_2$
CAS: 631-61-8
MW: 77.08

Assay	>=97.0%
Chloride (Cl)	<=5ppm
Heavy Metals (Pb)	<=5ppm
Insoluble matter	<=0.005%
Iron	<=5ppm
Nitrate	<=0.001%
Optical Absorbance of a 1M Solution at 254nm	<=0.02
Optical Absorbance of a 1M Solution at 280nm	<=0.01
Optical Absorbance of a 1M Solution at 350nm	<=0.01
pH of 5% Solution (at 25°C)	6.7-7.3
Residue after ignition	<=0.01%
Sulfate (SO_4)	<=0.001%

Applications: Ammonium Acetate can be used to precipitate DNA from enzymatic reactions.
Recommended Storage: 4°C

Cesium Chloride
Crystalline Powder

packaging		Mfr. No
500 g	PolyBottle	**BP1595-500**
1 kg	PolyBottle	**BP1595-1**

ClCs EINECS: 231-600-2
CAS: 7647-17-8
MW: 168.36

Assay	>=99.5%
DNase	Not detected
Lithium metal in liquid paraffin	<=0.0002%
Potassium	<=0.03%
Protease	Not detected
Refractive Index (50% solution at 25°C)	1.369 ±0.005
RNase	Not detected
Sodium	<=0.02%
UV A260nm of a 50% Solution (w/v)	<=0.08

Applications: This economical grade of Cesium Chloride can be used where low levels of metal ion impurities do not interfere. It is recommended for isolating phage DNA, plasmid DNA, or total RNA.
Recommended Storage: RT

Cesium Chloride
White Crystalline Powder

packaging		Mfr. No
100 g	PolyBottle	**BP210-100**
500 g	PolyBottle	**BP210-500**
1 kg	PolyBottle	**BP210-1**

ClCs EINECS: 231-600-2
CAS: 7647-17-8
MW: 168.36

Assay	>=99.999%
DNase	Not detected
Lithium metal in liquid paraffin	<=1ppm
Potassium	<=2ppm
Protease	Not detected
Refractive Index of a 50% Solution	1.369 ±0.002
RNase	Not detected
Sodium	<=4ppm
UV A260nm of a 50% Solution (w/v)	<=0.02

Applications: This Molecular Biology-grade cesium chloride is ideal for UV analysis of nucleic acids during density-gradient centrifugation and for the isolation of plasmid DNA, phage DNA, virus particles, and RNA.
Recommended Storage: RT

Ethanol, Absolute (200 proof) DNase-, RNase- and Protease-Free
Molecular Biology Grade

packaging		Mfr. No
100 mℓ	Amber Glass	**BP2818-100**
500 mℓ	Amber Glass	**BP2818-500**
4 ℓ	Amber Glass	**BP2818-4**

C_2H_6O H225
CAS: 64-17-5 P210, P240
MW: 46.07

Acetone, Isopropyl alcohol	To pass test
Assay	>=99.5%
Benzene	<=2 ppm
DNase	Not detected
Infrared spectrum	Conforms to ref.
Methanol	<=0.1%
Protease	Not detected
Residue after evaporation	<=0.001%
RNase	Not detected
Solubility in water	Pass test
Substances darkened by H_2SO_4	Pass test
Substances reducing KMnO 4	Pass test
Titratable acid	<=0.0005mEq /g
Titratable base	<=0.0002mEq /g
Water Content	<=0.2%

Applications: For the purification and precipitation of biomolecules such as nucleic acids and proteins. It is also used in histology to prepare staining and destaining reagents and for dehydrating tissues prior to embedding.
Recommended storage: RT

Ethylenediamine Tetraacetic Acid 0.5 M Solution, pH 8.0 (for DNA Work)
Clear, Colorless Liquid

packaging		Mfr. No
100 mℓ	AmberGlass	**BP2482-100**
500 mℓ	AmberGlass	**BP2482-500**
1 ℓ	AmberGlass	**BP2482-1**
20 ℓ	PolyPac*	**BP2482-20**

$(HOOCCH_2)_2NCH_2CH_2N(CH_2COOH)_2$;$C_{10}H_{16}N_2O_8$ H319
CAS: 60-00-4 P280, P305+P351+P338
MW: 292.25

Molarity	0.475-0.525 M
pH	8.0±0.1

Applications: EDTA is used extensively in molecular biology to minimize metal ion impurities in reaction buffers. Ideal for DNA work.
Recommended Storage: RT

Guanidine Hydrochloride
Colorless-to-white Crystals

packaging		Mfr. No
500 g	PolyBottle	**BP178-500**
1 kg	PolyBottle	**BP178-1**

CH_5N_3.HCl H315, H302, H319
CAS: 50-01-1 P301+P312, P302+P352,
MW: 95.53 P280, P305+P351+P338
EINECS: 200-002-3

Absorbance of a 6M Solution at 260nm	<=0.03
Absorbance of a 6M Solution at 280nm	<=0.01
Arsenic	<=5ppm
Assay	>=99.5%
Iron	<=5ppm
Lead	<=5ppm

$H_2NC(NH_2):NH{\cdot}HCl;CH_5N_3{\cdot}HCl;F.W.95.53$
Applications: Guanidine Hydrochloride is a strong protein-denaturing agent used in the isolation of RNA from cell extracts. RNase activity is inhibited in the presence of this reagent.
Recommended Storage: RT

Guanidine Thiocyanate
White Crystalline Powder

packaging		Mfr. No
250 g	PolyBottle	**BP221-250**
1 kg	PolyBottle	**BP221-1**

$CH_5N_3.CHNS$ P280, P301+P330+P331,
CAS: 593-84-0 P305+P351+P338, P310,
MW: 118.16 P302+P352, P273,
H312, H332, H302, H412, P233
H314, EUH032

A280nm (70% in H_2O at 25°C)	<=0.8
Assay	>=99.0%
Melting Point	117°-122°C
Solubility (70% in H_2O at 25°C)	Clear and haze-free

Applications: A more powerful denaturing agent than Guanidine Hydrochloride, Guanidine Thiocyanate is suitable for the isolation of intact RNA from cell extracts.
Recommended Storage: RT

Isopropanol
Molecular Biology-Grade

packaging		Mfr. No
500 mℓ	Amber Glass	**BP2618-500**
1 ℓ	Amber Glass	**BP2618-1**
2.5 ℓ	Amber Glass	**BP2618-212**
4 ℓ	Amber Glass	**BP2618-4**

C_3H_8O H225, H336, H319
CAS: 67-63-0 P261, P280,
MW: 60.1 P305+P351+P338, P210,
EINECS: 200-661-7 P240

Acetone	<=0.002%
Assay	>=99.9%
Color (APHA)	<=5 APHA
DNase	Not detected
Fluorescence Background (as Quinine Sulfate)	<=1 ppb
Optical Abs. at 205nm	<=1
Optical Abs. at 220nm	<=0.20
Optical Abs. at 230nm	<=0.10
Optical Abs. at 254nm	<=0.015
Propionaldehyde	<=0.002%
Protease	Not detected
Ref. index at 25°C	Inclusive between 1.3740-1.3760
Residue after evaporation	<=1 ppm
RNase	Not detected
Solubility in water	To pass test
Substances reducing KMnO 4	To pass test
Titrat. acid or base	<=0.0001mEq/g.
Water Content	<=0.05%

Applications: Used in fundamental applications, such as purification and precipitation of nucleic acids and proteins and preservation of biological specimens.
Recommended storage: RT

Phenol/Chloroform/Isoamyl Alcohol
125:24:1 Mixture, pH 4.3, Liquid

packaging		Mfr. No
100 mℓ	CoatedAmberGlass/PoisonPack	**BP1754I-100**
400 mℓ	CoatedAmberGlass/PoisonPack	**BP1754I-400**

CAS: 108-95-2 P280, P301+P330+P331,
EINECS: 203-632-7 P302+P350, P304+P340,
H301, H314, H341, H318, P305+P351+P338, P310,
H331, H311, H351, H373 P260

Assay	>99.0%
Optical Absorbance at 330nm	<0.2
Optical Absorbance at 405nm	<0.1
Optical Absorbance at 510nm	<0.1
pH	4.3±0.2

Applications: This mixture is used to purify total RNA from mixtures containing RNA, DNA, and protein.
Recommended Storage: 4°C
UN 2821; DOT Class 6.1:Poison

Phenol/Chloroform/Isoamyl Alcohol
25:24:1 Mixture, pH 5.2, Liquid

packaging		Mfr. No
100 mℓ	CoatedAmberGlass/PoisonPack	**BP1753I-100**
400 mℓ	CoatedAmberGlass/PoisonPack	**BP1753I-400**

CAS: 108-95-2 P280, P301+P330+P331,
EINECS: 203-632-7 P302+P350, P304+P340,
H301, H314, H341, H318, P305+P351+P338, P310,
H331, H311, H351, H373 P260

Assay	>99.0%
Optical Absorbance at 330nm	<0.2
Optical Absorbance at 405nm	<0.1
Optical Absorbance at 510nm	<0.1
pH (with buffer)	5.2±0.3

Applications: This mixture is used for extracting protein from nucleic acid preparations.
Recommended Storage: 4°C
UN 2821; DOT Class 6.1:Poison

Phenol/Chloroform/Isoamyl Alcohol
25:24:1 Mixture, pH 6.7/8.0, Liquid

packaging		Mfr. No
100 mℓ	CoatedAmberGlass/PoisonPack	**BP1752I-100**
400 mℓ	CoatedAmberGlass/PoisonPack	**BP1752I-400**

CAS: 136112-00-0
H341, H373, H314, H351, H301, H311, H331
P301+P330+P331, P280, P305+P351+P338, P310, P281, P304+P340, P260

Assay	>99.0%
Optical Absorbance at 330nm	<0.2
Optical Absorbance at 405nm	<0.1
Optical Absorbance at 510nm	<0.1
pH	6.7±0.2

Applications: This mixture is used for extracting protein from crude nucleic acid preparations.
Recommended Storage: 4°C
UN 2821; DOT Class 6.1:Poison

Phenol, Saturated
pH 4.3, Liquid

packaging		Mfr. No
100 mℓ	CoatedAmberGlass/PoisonPack	**BP1751I-100**
400 mℓ	CoatedAmberGlass/PoisonPack	**BP1751I-400**

C_6H_5OH
MW: 94.04
H301, H311, H331, H314, H373, H341
P280, P302+P350, P301+P330+P331, P305+P351+P338, P304+P340, P301+P310, P260

Assay	>99.0%
Optical Absorbance at 330nm	<0.2
Optical Absorbance at 405nm	<0.1
Optical Absorbance at 510nm	<0.1
pH (with buffer)	4.3±0.2

Applications: Phenol saturated with Tris buffer is used for purifying RNA.
Capped with a layer of buffer.
Recommended Storage: 4°C
UN 2821; DOT Class 6.1:Poison

Phenol, Saturated
pH 6.6/7.9, Liquid

packaging		Mfr. No
100 mℓ	CoatedAmberGlass/PoisonPack	**BP1750I-100**
400 mℓ	CoatedAmberGlass/PoisonPack	**BP1750I-400**

H314, H331, H373, H341, H311
P280, P302+P350, P301+P330+P331, P305+P351+P338, P304+P340, P301+P310, P260

Assay	>99.0%
DNase	Not detected
Optical Absorbance at 330nm	<0.2
Optical Absorbance at 405nm	<0.1
Optical Absorbance at 510nm	<0.1
pH	6.6±0.2
pH (with buffer)	7.9±0.2
RNase	Not detected

Applications: Phenol saturated with Tris buffer is used in DNA extraction procedures.
Capped with a layer of buffer.
Recommended Storage: 4°C
UN 2821; DOT Class 6.1:Poison

Proteinase K
From Tritirachium album

Molecular Biology

packaging		Mfr. No
50 mg	PolyBottle	**BP1700-50**
100 mg	PolyBottle	**BP1700-100**
500 mg	PolyBottle	**BP1700-500**

CAS: 39450-01-6
EINECS: 254-457-8
H315, H319, H335, H334
P261, P280, P305+P351+P338

DNase	Not detected
RNase	Not detected
Specific Activity	>=30U/mg

Applications: Proteinase K is widely used in the isolation of DNA and RNA from cell and tissue preparations. It is a wide-spectrum protease, inactivating many enzymes, including endogenous nucleases.
Recommended Storage: -20°C
Not on TSCA inventory: for R and D use only; not for manufacturing or commercial purposes.

Sodium Acetate Anhydrous
White Crystals or Granular Powder

packaging		Mfr. No
500 g	PolyBottle	**BP333-500**
1 kg	PolyBottle	**BP333-1**

$C_2H_3NaO_2$ EINECS: 204-823-8
CAS: 127-09-3
MW: 82.03

Assay	>=99.0%
Calcium (Ca)	<=0.005%
Chloride (Cl)	<=0.002%
Heavy Metals (Pb)	<=0.001%
Insoluble matter	<=0.01%
Iron	<=0.001%
Loss on Drying (at 120°C)	<=1.0%
Magnesium (Mg)	<=0.002%
pH of 5% Solution (at 25°C)	7.0-9.2
Phosphate (PO_4)	<=0.001%
Sulfate (SO_4)	<=0.003%

Applications: Sodium Acetate is added to DNA reactions to facilitate ethanol precipitation of the DNA.
Recommended Storage: RT

Sodium Acetate Trihydrate
Colorless-to-white Crystals

packaging		Mfr. No
500 g	PolyBottle	**BP334-500**

$C_2H_3NaO_2.3H_2O$
CAS: 6131-90-4
MW: 136.08

Assay	99.0-101.0%
Calcium (Ca)	<=0.005%
Chloride (Cl)	<=0.001%
Heavy Metals (Pb)	<=5ppm
Insoluble matter	<=0.005%
Iron	<=5ppm
Magnesium (Mg)	<=0.002%
pH of 5% Solution (at 25°C)	7.5-9.2
Phosphate (PO_4)	<=5ppm
Potassium	<=0.005%
Substances Reducing Permanganate	To pass test
Sulfate (SO_4)	<=0.002%

Applications: The trihydrate form of Sodium Acetate can be used for many of the same applications as the anhydrous form.
Recommended Storage: RT

Sodium Chloride-Tris-EDTA (STE) Buffer
10X, pH 8.0

packaging		Mfr. No
100 mℓ	PolyBottle	**BP2479-100**
500 mℓ	PolyBottle	**BP2479-500**
1 ℓ	PolyBottle	**BP2479-1**

DNase	Not detected
pH of 1X solution (at 25°C)	7.9-8.1
Protease	Not detected
RNase	Not detected

Applications: STE buffer is suitable for biomolecular lab procedures.
10X Solution contains 100mM Tris-HCl, 10mM EDTA, and 1M NaCl.
Autoclaved.
[77-86-1 (Tris Base)] ; [60-00-4 (EDTA)] ; [7647-01-0 (HCl)] ; [7647-14-5 (NaCl)]
Recommended Storage: RT
Filtered through a 5-micron filter.

Sodium Chloride-Tris-EDTA Buffer
1X, pH 8.0

packaging		Mfr. No
500 mℓ	PolyBottle	**BP2478-500**
1 ℓ	PolyBottle	**BP2478-1**

DNase	Not detected
pH (at 25°C)	7.9-8.1
Protease	Not detected
RNase	Not detected

Applications: STE buffer is suitable for biomolecular lab procedures.
1X solution contains 10mM Tris-HCl, 1mM EDTA and 100mM NaCl.
Autoclaved.
[77-86-1 (Tris Base)] ; [60-00-4 (EDTA)] ; [7647-01-0 (HCl)] ; [7647-14-5 (NaCl)]
Recommended Storage: RT
Filtered through a 5-micron filter.

Spermidine Trihydrochloride
White Crystalline Powder

packaging		Mfr. No
1 g	AmberGlass	**BP2540-1**
5 g	AmberGlass	**BP2540-5**
25 g	AmberGlass	**BP2540-25**

$C_7H_{19}N_3.3HCl$
CAS: 334-50-9
MW: 254.63
EINECS: 206-379-0
H319, H335, H315
P261, P302+P352, P280, P305+P351+P338

Assay	>=99%
FTIR	Conforms to standard
Melting Point	253°-263°C

Applications: Spermidine Trihydrochloride forms stable compounds with nucleic acids. It is used in biochemical research.
Recommended Storage: Store below 20°C, desiccate.

SurePrep* FFPE RNA Isolation Kit
For the rapid and efficient extraction and purification of RNA (including microRNA) from FFPE samples

packaging	Mfr. No
50 preps	**BP2816-50**

Average Yield	Variable due to age of parrafin blocks; 2-3 µg of total RNA per 1mg of fresh FFPE hamster kidney
Binding capacity per column	Up to 50µg RNA
Maximum amount of starting material	5 slices of 20mm thick paraffin slices (25 mg of unsectioned block)
Maximum loading volume per spin column	650 µℓ
Size of RNA purified	All sizes, including small RNA and microRNA (<200n.t.)
Time to complete 10 purifications	1 to 4 hours

Applications: Rapid method for the isolation and purification of total RNA from formaldehyde-fixed paraffin-embedded (FFPE) tissue samples.
Description: High quality and integrity of the isolated RNA - The purified total RNA is of the highest quality and integrity, and can be used in any sensitive downstream applications; Isolate a diversity of RNA species - All RNA species can be isolated, from large mRNA and ribosomal RNA down to microRNA (miRNA) and small interfering RNA (siRNA); High yields - The FFPE RNA Purification Kit allows for the purification of high yields of total RNA; No phenol:chloroform extractions - Total RNA is isolated from FFPE tissue samples without the use of harmful chemicals such as phenol or chloroform; Rapid procedure - Isolate total RNA from FFPE tissue sections using a rapid spin column format in as little as 1 hour
Components: Enzyme incubation buffer (6mL); Digestion buffer (20mL); Wash solution (22mL); Binding solution (20mL); Proteinase K (12mg); DNase I (1 vial); Elution buffer (6mL); Spin columns (50); Collection tubes (50); Elution tubes, 1.7mℓ (50).
Recommended storage: RT

SurePrep* Plant/Fungi Total RNA Purification Kit

For the rapid purification of total RNA (including microRNA) from plants and fungi

packaging	Mfr. No
50 preps	**BP2817-50**

Average yield: 50mg Grape leaves	35 µg
Average yield: 50mg Peach leaves	30 µg
Average yield: 50mg Plum leaves	32 µg
Average yield: 50mg Tobacco leaves	60 µg
Average yield: 50mg Tomato leaves	60 µg
Column binding capacity	50 µg
Maximum amount of starting material: Fungi (wet weight)	50 µg
Maximum amount of starting material: Plant cells	1 X 106cells
Maximum amount of starting material: Plant tissues	50 mg
Maximum column loading volume	650 µℓ
Size of RNA purified	All sizes, including small RNA and microRNA (<200n.t.)
Time to complete 10 purifications	30 min

Applications: Rapid method for the isolation and purification of total RNA from a wide range of plant and filamentous fungi species.
Description: No liquid nitrogen required for homogenization - Liquid nitrogen is not required for homogenization of samples, making RNA purification rapid and convenient; Isolate RNA from a wide range of samples - Total RNA can be isolated from a wide range of plant and filamentous fungi samples; Isolate a diversity of RNA species - All sizes of RNA are isolated from large mRNA down to microRNA, without the use of phenol or chloroform; Isolate total RNA, including viral RNA - RNA samples can be used for the detection of viral pathogens, as viral RNA is isolated with the total RNA; High yield of RNA - High yields of purified RNA can be isolated with this kit; No phenol:chloroform extractions - Total RNA is isolated without the use of harmful chemicals such as phenol or chloroform. RNA is of the highest quality and can be used in a number of downstream applications.
Components: Wash solution (22mL); Lysis solution (40mL); Elution buffer (6mL); Spin columns (50); Collection tubes (50); Elution tubes, 1.7mℓ (50).
Recommended storage: RT

SurePrep* Soil DNA Isolation Kit

For the rapid preparation of inhibitor-free DNA from common types of soil

packaging	Mfr. No
50 preps	**BP2815-50**

Column binding capacity	50 µℓ
Maximum column loading volume	650 µℓ
Maximum soil input	250 mg
Time to complete 10 purifications	30 min
Type of soil processed	All common soil types, including clay, loam and sandy soil

Applications: Isolation and purification of total DNA from microorganisms in soil and sediment samples, such as bacteria, fungi, and algae.
Description: Process all types of soil - All types of soil samples can be processed with this kit, including common soil samples such as clay, loam and sandy soil; Remove all humic acid from DNA samples - The kit removes all traces of humic acid using the provided Bead Tubes and a combination of chemical and physical homogenization and lysis. All the brown colour is removed from the samples; Rapid detection of microorganisms in soil samples - Isolate total DNA from all microorganisms found in soil, including bacteria, fungi and algae; Fast and easy processing - Rapid spin column format allows for the isolation of DNA in under 30 minutes; .Isolate high quality total DNA - The purified DNA is free from all inhibitors including humic acid, and can be used directly in downstream applications including PCR.
Components: Lysis additive (6mL); Binding solution (6mL); Lysis solution (45mL); Wash solution I (30mL); Wash solution II (18mL); Elution buffer (6mL); Spin columns (50); Collection tubes (50); Beads (30g); Screw cap tubes (50); Elution tubes, 1.7 mℓ (50).
Recommended storage: RT

SurePrep* Water RNA/DNA Purification Kit

For the rapid isolation of DNA/RNA from microorganisms in non-turbid water samples

packaging	Mfr. No
25 preps	**BP2814-25**

Maximum filter column loading volume	20 mℓ
Maximum spin column loading volume	650 µℓ
Maximum water input	100 mℓ
Elution volume	100 µℓ
safety	10 mℓ
Time to complete 10 purifications	45 min

Applications: Isolation and purification of total RNA and DNA simultaneously from all microorganisms found in environmental water samples, including bacteria, fungi, and algae.
Description: Rapid isolation of DNA/RNA from microorganisms in non-turbid water samples -Only three buffers are required to complete isolation of total DNA and RNA from all microorganisms found in water, including bacteria, fungi and algae; Complete column purification - The RNA and DNA are both column purified simultaneously using the same column; Fast and easy processing - Rapid spin column format allows for the isolation of both RNA and DNA in under 45 minutes; Isolate highly concentrated RNA and DNA - The purified RNA and DNA is eluted in low volumes, allowing for the direct use of the nucleic acid in downstream applications; Isolate a diversity of RNA species - All sizes of RNA are isolated, from large mRNA down to microRNA, without the use of phenol or chloroform
Components: Lysis solution (15mL); Enzyme incubation buffer (4mL); Nucleic acid elution buffer (4mL); Nucleic acid wash solution (11mL); Spin columns (25); Collection tubes (25); Elution tubes, 1.7mℓ (25); Bead tubes (25); Filter column, 0.45µm (25).
Recommended storage: RT

N-Methylpyrrolidinone

packaging		Mfr. No
4 ℓ	AmberGlass,EcoSafPak*	**BP1172-4**

C_5H_9NO
CAS: 872-50-4
MW: 99.13
H319, H315, H335, H360D

P201, P308+P313, P261, P302+P352, P280, P305+P351+P338

Assay (GC)	>=99.8%
Color (APHA)	<=20
IR	Conforms to standard
Optical Absorbance at 265nm	<=1.0
Optical Absorbance at 270nm	<=0.7
Optical Absorbance at 300nm	<=0.3
Optical Absorbance at 400nm	<=0.02
Titratable Base	<=0.001mEq/g
Water	<=0.05%

Recommended storage: RT
Also available in recyclable FisherPak* and NOWPak* containers. EcoSafPak* is an environmentally friendly packaging system made of 100% recyclable material by an SFI certified supplier.

Fisher BioReagents* SurePrep* Small RNA Purification Kit

Optimized for enrichment of small RNA by removing large RNA for studying regulation of gene expression

- Isolate all small RNA molecules (<200 nucleotides)
- Minimal contamination from large RNA molecules and genomic DNA
- Fast and easy processing using rapid spin-column format
- No phenol or chloroform extractions
- High quality small RNA such as miRNA and siRNA can be used in various downstream applications

BP2801-25

APPLICATIONS: Purified small RNA is suitable for use in RT-PCR, Northern blotting, and microarray analysis

INCLUDES: Lysis solution (2 x 20mL), Wash solution (22mL), RNA elution buffer (6mL), large RNA removal columns (25), small RNA enrichment columns (25), Collection tubes (50), Elution tubes (1.7mL) (50) and Product insert

STORAGE CONDITIONS: All solutions should be kept tightly sealed and stored at room temperature. Reagents should remain stable for at least two years in unopened containers.

Kit Specifications	
Column binding capacity	50µg
Maximum column loading volume	600µL
Size of RNA Purified	<200 nt
Maximum amount of starting material:	
Animal cells	3×10^6 cells
Animal tissues	25mg
Bacteria	5×10^8 cells
Plant tissues	50mg
Time to complete ten purifications	45 minutes

No. of Preps	MFR No.
25	BP2801-25

Fisher BioReagents* SurePrep* Leukocyte RNA Purification Kit

Rapid method for the isolation and purification of total leukocyte (white blood cell) RNA from mammalian blood samples

- Fast and easy processing using rapid spin-column format
- Differential red blood cell lysis allows for the removal of a majority of globin mRNA
- Isolate total leukocyte RNA, including all small RNA species
- No phenol or chloroform extractions
- High quality leukocyte RNA can be used in a number of downstream applications

BP2807-50

APPLICATIONS: Purified RNA is suitable for use in real time PCR, reverse transcription PCR, Northern blotting, RNase protection and primer extension, and expression array assays

INCLUDES: RBC Lysis Solution (180mL); Binding Solution (25mL); Wash Solution (22mL); RNA Elution Buffer (6mL); Spin Columns (50); Collection Tubes (50); Elution tubes (1.7mL) (50); Product Insert (1)

STORAGE CONDITIONS: All solutions should be kept tightly sealed and stored at room temperature. The RBC Lysis Solution should be stored at 4°C upon arrival. These reagents should remain stable for at least two years in their unopened containers.

Kit Specifications	
Column binding capacity	50µg
Maximum Column Loading Volume	600µL
Size of RNA Purified	All sizes, including small RNA (<200 nt)
Maximum Blood Input	2mL or 3 x 10^6 Leukocytes
Minimum Blood Input	10µL
Time to complete ten purifications	45 minutes
Average Yield: 500µL human blood	1.5µg

No. of Preps	MFR No.
50	BP2807-50

Fisher BioReagents* SurePrep* TrueTotal* RNA Purification Kit

Rapidly isolate and purify total RNA from a variety of biological sources

- Fast and easy processing using rapid spin-column format
- Isolate all sizes of RNA including large RNA and small RNA species
- No phenol or chloroform extractions
- Isolate and detect RNA from as little as a single animal cell
- Purify total RNA from a variety of biological sources such as cultured animal cells, tissue samples, blood, bacteria, yeast, fungi and plants

BP2800-50

APPLICATIONS: Purified intact RNA is suitable for Quantitative RT-PCR, Northern blotting, RNase protection, and expression array assays

INCLUDES: Lysis solution (40mL), Wash solution (22mL), Elution buffer (6mL), Micro spin columns (50), Collection tubes (50), Elution tubes (1.7mL) (50) and product insert

STORAGE CONDITIONS: All solutions should be kept tightly sealed and stored at room temperature. Reagents should remain stable for at least two years in unopened containers.

Kit Specifications	
Column binding capacity	50µg
Maximum column loading volume	600µL
Size of RNA Purified	All sizes, including small RNA (<200 nt)
Maximum amount of starting material:	
Animal cells	3×10^6 cells
Animal tissues	25mg
Blood	100µL
Bacteria	1×10^9 cells
Yeast	1×10^8 cells
Fungi	50mg
Plant tissues	50mg
Time to complete ten purifications	20 minutes
Average yields†	
HeLa cells (1×10^6 cells)	15µg
E. coli (1×10^9 cells)	50µg

† Average yields will vary depending upon a number of factors including species, growth conditions, and developmental stage.

No. of Preps	MFR No.
50	BP2800-50

Fisher BioReagents* SurePrep* RNA Cleanup and Concentration Kit

Provides a rapid method to purify and concentrate RNA isolated using other methods such as phenol:chloroform extraction or after enzymatic reactions

- Fast and easy processing using rapid spin-column format
- Suitable for all sizes of RNA, from large mRNA to microRNA (miRNA)
- Able to clean up RNA isolated using different methods, including phenol/chloroform extractions
- Efficient RNA cleanup from various enzymatic reactions such as labeling, DNase treatment and in vitro transcription

BP2809-50

STORAGE CONDITIONS: All solutions should be kept tightly sealed and stored at room temperature. Reagents should remain stable for at least two years in unopened containers.

Kit Specifications	
Column binding capacity	50µg
Size of RNA Purified	All sizes, including small RNA (<200 nt)
Maximum Amount of Starting Material	50µg of RNA
Minimum Elution Volume	20µL
Time to complete ten purifications	20 minutes
Average Recovery	≥90%

APPLICATIONS: Purified RNA is suitable for Quantitative RT-PCR, Northern blotting, RNase protection, primer extension, and expression array assays

INCLUDES: Binding solution (2 x 20mL), Wash solution (22mL), RNA elution buffer (6mL), Collection tubes (50), Spin columns (50), Elution tubes (1.7mL) (50), Product insert

No. of Preps	MFR No.
50	BP2809-50

Fisher BioReagents* SurePrep* RNA/Protein Purification Kit

Rapid method for the isolation and purification of total RNA and proteins sequentially from a single sample using the same column in less than 20 minutes

- Fast and easy processing using rapid spin-column format
- All columns for RNA purification and protein purification provided
- Sequentially isolate high quality RNA and proteins from a single lysate – no need to split the lysate
- Isolate all sizes of RNA, from large mRNA and rRNA down to microRNA (miRNA)
- No phenol or chloroform extractions
- Purify total RNA and proteins from a variety of biological sources such as cultured animal cells, tissue samples, blood, bacterica, yeast, fungi or plants

BP2806-50

APPLICATIONS: Purified total RNA and protein from same biological sample for studies of gene expression including gene silencing experiments, mRNA knockdowns, or experiments correlating RNA and protein expression levels. RNA qualified for use in real time PCR, reverse transcription PCR, Northern blotting, RNase protection and expression array assays. Proteins suitable for use in SDS-PAGE analysis and Western blots.

INCLUDES: Lysis solution (40mL); Nucleic acid wash solution (22mL); Nucleic acid elution buffer (15mL); Protein column regeneration buffer (30mL); Protein column activation and wash buffer (60mL); Protein pH binding buffer (4mL); Protein elution buffer (8mL); Enzyme incubation buffer (6mL); Protein neutralizer (2mL); Protein loading dye (2mL); Spin colulmns (50); Collection tubes (150); Product insert (1)

STORAGE CONDITIONS: The Protein Loading Dye should be stored at -20°C upon arrival. All other solutions should be kept tightly sealed and stored at room temperature. These reagents should remain stable for at least one year in their unopened containers.

Kit Specifications	
Column binding capacity	50µg for RNA
	200µg for protein
Maximum Column Loading Volume	600µL
Size of RNA Purified	All sizes, including small RNA (<200 nt)
Maxium Amount of Starting Material:	
Animal Cells	3 x 10^6 cells
Animal Tissues	25mg
Blood	100µL
Bacteria	1 x 10^9 cells
Yeast	1 x 10^8 cells
Fungi	50mg
Plant Tissues	50mg
Time to complete ten purifications	30 minutes
Average Yield*	
HeLa Cells (1 x 10^6 cells)	15µg RNA
HeLa Cells (1 x 10^6 cells)	150µg protein

** Average yields will vary depending upon a number of factors including species, growth conditions used and developmental stage.*

No. of Preps	MFR No.
50	BP2806-50

Fisher BioReagents* SurePrep* Nuclear or Cytoplasmic RNA Purification Kit

Rapid method for the isolation and purification of both nuclear and cytoplasmic RNA from cultured animal cells and animal tissue samples

- Fast and easy processing using rapid spin-column format
- High quality intact RNA can be used in various downstream applications
- Enrich for cytoplasmic or nuclear RNA depending on downstream application
- No genomic DNA contamination in the cytoplasmic fraction
- No phenol or chloroform extractions
- Isolate all sizes of RNA from each fraction, including all small RNA molecules (>200 nt)
- Kit provides sufficient reagents to perform either 50 cytoplasmic RNA preparations or 25 cytoplasmic and nuclear preparations

BP2805-50

APPLICATIONS: Purification of Nuclear and Cytoplasmic RNA suitable for real time PCR, reverse transcription PCR, Northern blotting, RNase protection and primer extension, and expression array assays.

INCLUDES: Lysis solution (20mL); Wash solution (22mL); Binding solution (25mL); RNA elution solution (6mL); Spin columns (50); Collection tubes (50); Elution tubes (1.7mL) (50); Product insert (1)

STORAGE CONDITIONS: All solutions should be kept tightly sealed and stored at room temperature. These reagents should remain stable for at least two years in their unopened containers.

Kit Specifications	
Column binding capacity	50µg
Maximum Column Loading Volume	600µL
Size of RNA Purified	All sizes, including small RNA (<200 nt)
Maximum Amount of Starting Material:	
Animal Cells	3 x 10^6 cells
Animal Tissues	15mg
Time to complete ten purifications	45 minutes
Average Yields*	
HeLa Cells - cytoplasmic (1 x 10^6 cells)	15µg
HeLa Cells - nuclear (1 x 10^6 cells)	≈3.5µg

No. of Preps	MFR No.
50 (Cyto); 25 (Nuc & Cyto)	BP2805-50

Fisher BioReagents* SurePrep* Urine Bacterial RNA Purification Kit

Designed for the rapid preparation of bacterial RNA from human or animal urine samples

- Fast and easy processing using rapid spin-column format
- Isolate total RNA, from large mRNA down to microRNA (miRNA)
- No phenol or chloroform extractions
- Isolate RNA from both Gram negative and Gram positive bacteria, including *E. coli, Proteus spp., Klebsiella spp., Enterobacter spp., Serratia spp., Pseudomonas spp., Clostridial ssp.* and *Leptospirosis spp.*, as well as *Chlamydia trachomatis* and *Neisseria gonorrhoeae*

BP2804-50

APPLICATIONS: Purified bacterial RNA suitable for real time PCR, reverse transcription PCR, Northern blotting, RNase protection, primer extension, and expression array assays.

INCLUDES: Lysis solution (40mL); Wash solution (22mL); RNA elution buffer (6mL); Spin columns (50); Collection tubes (50); Elution tubes (1.7mL) (50); Product insert (1)

STORAGE CONDITIONS: All solutions should be kept tightly sealed and stored at room temperature. These reagents should remain stable for at least two years in their unopened containers.

Kit Specifications	
Column binding capacity	50µg
Volume of Urine Processed	10-50mL
Size of RNA Purified	All sizes, including small RNA (<200 nt)
Time to complete ten purifications	30 minutes
Average Yield	~0.5µg RNA per 1 x 10^7 cells (Varies due to cell density of sample)

No. of Preps	MFR No.
50	BP2804-50

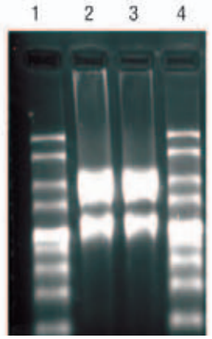
Fisher BioReagents* MOPS 10X Buffer for Agarose RNA Electrophoresis

Convenient, easy to use 10X concentrated solution

A low ionic strength buffer used for electrophoretic separation of formaldehyde-denatured RNA.

- Easy to dilute solution, pH 7.0
- One-year shelf life
- 0.2-micron filtered
- RNase and DNase free
- Available in 500mL and 1L sizes, both in poly translucent bottles

Quantity	MFR No.
500mL	BP2900-500
1L	BP2900-1



Lanes 2 and 3 demonstrate the electrophoresis of 1µg of purified RNA from E. coli, resolved on a 1.5% denaturing formaldehyde-agarose gel, using the MOPS 10X Buffer (BP2900), diluted to 1X as a running buffer. Lanes 1 and 4 contain a 1kb RiboLadder RNA standard (BP2811-50). Electrophoresis was performed at 100V for 70 min., and the gel was stained with ethidium bromide (BP1302-10).

Fisher BioReagents SurePrep* Urine Exfoliated Cell RNA Purification Kit

Rapid method for the isolation and purification of total RNA from exfoliated cells that have been shed into the urine from the urinary tract

- Fast and easy processing using rapid spin-column format
- Isolate total RNA, from large mRNA down to microRNA (miRNA)
- RNA can be isolated and detected from as little as 100 exfoliated cells
- Isolate high quality total RNA from urine
- No phenol or chloroform extractions

BP2803-50

APPLICATIONS: Purified RNA from urine exfoliated cells suitable for real time PCR, reverse transcription PCR, Northern blotting, RNase protection and primer extension, and expression array assays

INCLUDES: Lysis solution (40mL); Wash solution (22mL); RNA elution solution (6mL); Spin columns (50); Collection tubes (50); Elution tubes (1.7mL) (50); Product insert (1)

STORAGE CONDITIONS: All solutions should be kept tightly sealed and stored at room temperature. These reagents should remain stable for at least two years in their unopened containers.

Kit Specifications	
Column binding capacity	50µg
Volume of Urine Processed	1-50mL
Maximum Input of Exfoliated Cells	1 x 10^6 cells
Size of RNA Purified	All sizes, including small RNA (<-200 nt)
Time to complete ten purifications	20 minutes
Average Yield	~1µg RNA per 1 x 10^5 cells (varies due to cell density of sample)

No. of Preps	MFR No.
50	BP2803-50

Fisher BioReagents* SurePrep* RNA/DNA/Protein Purification Kit

Rapid method for the isolation and purification of total RNA, genomic DNA and proteins sequentially from a single sample of cultured animal cells, tissue samples, blood, bacteria, yeast, fungi or plants

The total RNA, genomic DNA and proteins are all column-purified using the same column. This kit is ideal for researchers who are interested in studying the genome, proteome and transcriptome of a single biological sample, such as studies of gene expression including gene silencing experiments or mRNA knockdowns, studies involving biomarker discovery, studies in epigenetics, and for characterization of cultured cell lines.

BP2802-50

- Fast and easy processing using rapid spin-column format
- All columns for RNA, DNA and protein purification provided
- Sequential isolation of nucleic acids and proteins from a single lysate, no need to split the lysate
- Isolate all sizes of RNA, including large mRNA and rRNA to microRNA (miRNA)
- Isolate high quality total RNA
- Isolate high quality genomic DNA with a molecular weight ≥ 30kb
- High yields of isolated proteins
- No phenol or chloroform extractions

APPLICATIONS: Purifed RNA, DNA and protein suitable for assays such as PCR, real time PCR, reverse transcription PCR, Northern blotting, RNase protection, expression array assays, DNA sequencing, Southern blotting, SNP analysis, SDS-PAGE and Western Blots

INCLUDES: Lysis solution (40mL); RNA wash solution (20mL); RNA elution solution (6mL); gDNA wash solution (15mL); gDNA elution buffer (15mL); Protein column regeneration buffer (30mL); Protein column activation and wash buffer (60mL); Protein pH binding buffer (4mL); Protein elution buffer (8mL); Protein neutralizer (2mL); Protein loading dye (2mL); Spin columns (50); Collection tubes (200); Product inserts (1)

STORAGE CONDITIONS: The Protein Loading Dye should be stored at -20°C upon arrival. All other solutions should be kept tightly sealed and stored at room temperature. These reagents should remain stable for at least one year in their unopened containers

Kit Specifications	
Column binding capacity	50µg for RNA
	20µg for DNA
	200µg for protein
Maximum column loading volume	600µL
Size of RNA Purified	All sizes, including small RNA (<200nt)
Size of DNA Purified	≥30kb
Maximum amount of starting material:	
Animal cells	3 × 10^6 cells
Animal tissues	25mg
Blood	100µL
Bacteria	1 × 10^9 cells
Yeast	1 x 10^8 cells
Fungi	50mg
Plant tissues	50mg
Time to complete ten purifications	30 minutes
Average Yields*	
HeLa Cells (1 x 10^6 cells)	15µg RNA
HeLa Cells (1 x 10^6 cells)	8µg DNA
HeLa Cells (1 x 10^6 cells)	150µg protein

** Average yields will vary depending upon a number of factors including species, growth conditions used and developmental stage.*

No. of Preps	MFR No.
50	BP2802-50