

# **Molecular Biology Grade Ethanol**

Catalogue Number	Volume
BP2818-100	100mL
BP2818-500	500mL
BP2818-4	4L

Fisher BioReagents Molecular Biology Grade Ethanol (BP2818) is an ultrapure molecular biology grade ethanol used for the purification and precipitation of biomolecules such as nucleic acids and proteins.

It can be used in histology to prepare staining and destaining reagents and for dehydrating tissues prior to embedding.

### **KEY FEATURES**

- 1.200 proof, absolute alcohol
- 2. Molecular Biology Grade Ethanol is tested for DNase, RNase, and Protease to ensure absence of these enzymes
- 3. Product meets the ACS specifications for Absolute Ethyl Alcohol
- 4.0.2 micron filtered
- **5.** Water  $\leq 0.2\%$

### **APPLICATIONS**

- 1. Purification and precipitation of nucleic acids (DNA and RNA) and proteins
- 2. Preparation of staining and destaining solutions
- 3. Dehydration of cells and tissues prior to paraffin wax embedding
- 4. Extraction medium
- 5. Chromatographic reagent



# **PRODUCT SPECIFICATIONS**

Name of product	Absolute Ethyl Alcohol, Molecular Biology Grade		
Product Part Numbers and Package Configurations.	BP2818-100, 100mL, amber glass bottle		
	BP2818-500, 500mL, amber glass bottle		
	BP2818-4, 4L, amber glass bottle		
Appearance	Colorless liquid		
Infrared Spectrum	Conforms		
Purity (Assay)	99.5% by Volume		
Impurity (Benzene by GC)	≤2ppm		
DNase	Pass test		
RNase	Pass test Pass test		
Protease			
Endotoxin	N/A		
Use Test	N/A		
ACS Specifications	Meets ACS Specifications		
Color (APHA)	10 Maximum		
Solubility in Water	Pass test		
Acetone, IPA	Pass test		
Residue after evaporation	0.001% Maximum		
Titrable acid	0.0005 meq/g		
Titrable base	0.0002 meq/g		
Substances darkened by sulfuric acid	Pass test		
Substances reducing permanganate	Pass test		
Water (KF)	≤0.2%		
Methanol	0.1% Maximum		

### MOLECULAR BIOLOGY GRADE ETHANOL PRODUCT PERFORMANCE

Results have been generated using Agilent Bioanalyzer for DNase and RNase, and protein gel data for protease, to demonstrate the absence of these enzymes in BP2818, Fisher BioReagents Molecular Biology Grade Ethanol.

#### **DNase test for BP2818**

Three lots of BP2818 were tested for the absence of DNase.

Gel-like Bioa data from 1. N Bioanalyzer 2. P 3 & 5 & 7 &	<ul> <li>analyzer Lane Identification</li> <li>legative control</li> <li>ositive control, 5 U of DNase</li> <li>4. BP2818, Lot # 1</li> <li>6. BP2818, Lot # 2</li> <li>8. BP2818, Lot # 3</li> </ul>
141 120 - 120 - 110 -	DNA fragments are present in all three lots

0										present in all three lots
n-										of Molecular Biology
0-	-	_	_	_	_	_	_	_	_	Grade Ethanol as seen
0-	=			_	-	_	_	_	_	in the dark bands shown
0-	_	=		=	-	-	-	-	_	in Laws 2 through 0 and
a	_	_								In Lanes 3 through 8 and
0	_	_		_	history		-	-		matches negative control
0-	_	_	_	_	_	_	_	_	_	shown in Lane 1.
0 -										
9-			2			\$				

For the positive control in Lane 2, DNA is degraded by the presence of DNase and is not present compared to the negative control.

### RESULT

There is no DNase contamination found in any of the three lots of Ethanol and is shown through the presence of DNA.

# **RNase test for BP2818**

Three lots of BP2818 were tested for the absence of RNase.

Gel-like data from Bioanalyzer	Bioanaly 1. Nega 2. Positi 3 & 4. B 5 & 6. B 7 & 8. B	<ul> <li>Bioanalyzer Lane Identification</li> <li>Negative control</li> <li>Positive control, 5 U of RNase</li> <li>3 &amp; 4. BP2818, Lot # 1</li> <li>5 &amp; 6. BP2818, Lot # 2</li> <li>7 &amp; 8. BP2818, Lot # 3</li> </ul>				
9-41 addre Sergen (Sergin (Se	14 C3mpin 53mpin 73mpin 7	RNA fragments are present in all three lots of Molecular Biology Grade Ethanol (4000 nt and 2000 nt) as seen in the dark bands shown in Lanes 3 through 8 and matches negative control shown in Lane 1.				

For the positive control in Lane 2, RNA is degraded by the presence of RNase and is not present compared to the negative control.

### RESULT

There is no RNase contamination found in any of the three lots of Ethanol and is shown through the presence of RNA.

#### Protease test for BP2818, Fisher BioReagents Molecular Biology Grade Ethanol Three lots of BP2818 were tested for the absence of protease.

the negative control.

12.5% EZ-Run Protein Gel, BP7712-100 150V for 60 min.

#### **Bioanalyzer Lane** Identification

- 1. Negative control 2. Positive control, 5 U of Proteinase K enzyme 3 & 4. BP2818, Lot # 1
- 5 & 6. BP2818, Lot # 2 7 & 8. BP2818, Lot # 3



For the positive control in Lane 2, BSA is degraded by the Proteinase K enzyme and is not present compared to

BSA protein fragments are present in all three lots of Molecular Biology Grade Ethanol as seen in the dark bands shown in Lanes 3 through 8 and matches negative control shown in Lane 1.

# RESULT

There is no protease contamination found in any of the three lots of Ethanol and is shown through the presence of BSA protein.

**Thermo Fisher Scientific** Geel West Zone 2 Janssen Pharmaceuticalaan 3a 2440 Geel - Belgium Tel. +32 14 57 52 11 Fax +32 14 59 26 10 www.acros.com











# Water (o.1 Micron Filtered) Molecular Biology Grade

Catalogue Number	Volume
BP2819-100	100mL
BP2819-1	1L
BP2819-4	4L
BP2819-10	10L
BP2819-20	20L

Fisher BioReagents Molecular Biology Grade Water (BP 2818) is ideal for many fundamental procedures such as PCR, electrophoresis, DNA sequencing and buffers for enzymatic analyses.

#### **KEY FEATURES**

- 1. 0.1 micron filtered to ensure high purity
- 2. Tested for DNase, RNase, and Protease to ensure absence of these hydrolytic enzymes
- 3. Deionized for very low metal ion content
- 4. Variety of product pack sizes to meet various laboratory needs

# **APPLICATIONS**

- 1. Ideal for making reagents, rinsing glass and plastic ware, and sample preparation
- 2. DNA/RNA/Protein extraction and purification
- 3. Used to prepare buffers for enzymatic reactions
- 4. PCR technology, blotting applications, and DNA sequencing





# **PRODUCT SPECIFICATIONS**

Name of Product	Water, Molecular Biology Grade		
Product Part Numbers and Package	BP2819-100, 100mL, poly bottle		
Configurations.	BP2819-1, 1L , poly bottle		
	BP2819-4, 4L , PolyPac		
	BP2819-10, 10L , PolyPac		
	BP2819-20, 20L , PolyPac		
Conductivity at 25° C	< 2µS/cm		
pH at 25° C	5.4 - 7.0		
Resistivity	>16 megohm-cm		
DNase	Not detected		
RNase	Not detected Not detected		
Protease			
Trace Metal Ion Impurity Levels (ppb max)*:			
Cadmium (Cd)	10           20           10		
Calcium (Ca)			
Chromium (Cr)			
Cobalt (Co)	10		
Copper (Cu)	10		
Iron (Fe)	10		
Lead (Pb)	10		
Magnesium (Mg)	10		
Manganese (Mn)	10		
Molybdenum (Mo)	10		
Nickel (Ni)	10		
Potassium (K)	10		
Selenium (Se)	10		
Vanadium (V)	10		
Zinc (Zn)	10		

\*Low metal content in water ensures a minimal quantity of free ions which allows the researcher to prepare optimized enzymatic reaction buffers by adjusting the concentration of the appropriate metal ion cofactor(s) in the buffer.

# **RELATED PRODUCTS**

The following Fisher BioReagents products are used in a variety of molecular biology research applications and are particularly suitable for use with Fisher BioReagents BP2819 Water, Molecular Biology Grade.

	Catalogue Number	Product Description
	BP160-100	Agarose, Low EEO, Multipurpose, 100g
	BP1360-100	Agarose, Low Melting, <1kb DNA/RNA, 100g
	BP1356-100	Agarose, Broad Separation Range for DNA/RNA, 100g
	BP1356-500	Agarose, Broad Separation Range for DNA/RNA, 500g
	BP1302-10	Ethidium Bromide, 1% Solution, 10mL
	BP2483-100	EDTA 0.5 M (DEPC-treated), 100mL
	BP2483-1	EDTA 0.5 M (DEPC-treated), 1L
	BP152-1	Tris base DNase RNase protease free, electrophoresis tested, 1kg
	BP1700-100	Proteinase K DNase and RNase free, 100mg
	BP2476-100	Tris-EDTA, 1X Solution, pH 7.4, 100mL
	BP2476-500	Tris-EDTA, 1X Solution, pH 7.4, 500mL
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# FISHER BIOREAGENTS WATER SELECTION GUIDE

The chart below summarizes the various water products used in Life Science Research.

Fisher BioReagents Water Portfolio			Purity Specification				Nuclease and Protease Activity Specification			General Applications				
Catalog No.	Description	Quantity/ Packaging	DEPC treated	Sterile (Autoclave)	0.2 µm Filtered	0.1 µm Filtered	Deionized for Low Metal Ion Content	DNase Not Detected	RNase Not Detected	Protease Not Detected	DNA work	RNA work	Protein work	Routine Life Science Research*
BP2485-4	Water,	4L PolyPac			x									x
BP2485-20	Biotech Grade	20L PolyPac			Х									~
BP2470-1	Water, Sterile DNA Grade	1L Poly Bottle		Х	Х			Х		Х	Х		Х	
BP561-1	Water, Sterile For RNA Work, DEPC- Treated and Nuclease-free	1L Poly Bottle	х	х	х			Х	Х	Х		х		
BP2484-50	Water, Sterile, DEPC-treated	50mL Poly Bottle	v	v	v			v	v	v		v		
BP2484-100	and Nuclease Free	100mL Poly Bottle	^	^	^			^	^	^		^		
BP2819-100		100mL Poly Bottle												
BP2819-1	Water, Molecular	1L Poly Bottle				Y	x	Y	x	Y	v		x	x
BP2819-4	Biology Grade	4L PolyPac				~	~	^	~	~	Λ		Λ	Λ
BP2819-10		10L PolyPac												
BP2819-20		20L PolyPac												

\*Buffers, wash and rinse solutions, etc.

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# Isopropanol, Molecular Biology Grade

BP2618-1 2000,00 RSD

#### Isopropanol, Molecular Biology Grade

Catalog No.	Size	Packaging
BP2618-500	500mL	Amber Glass
BP2618-1	1L	Amber Glass
BP2618-212	2.5L	Amber Glass
BP2618-4	4L	Amber Glass

High purity Isopropanol (IPA) is a staple reagent chemical used in many life science laboratories. Fisher BioReagents<sup>®</sup> has developed a new ultrapure Isopropanol, Molecular Biology Grade that can be used in fundamental applications such as purification and precipitation of nucleic acids and proteins, and preservation of biological specimens.

#### **Key Features**

- 1. Ultrapure Isopropanol (assay > 99.9%) for molecular biology work
- 2. Tested for DNase, RNase, and Protease to ensure absence of these hydrolyzing enzymes
- 3. Water < 0.05%
- 4. Low UV optical absorbance
- 5. Variety of product pack sizes to meet various laboratory needs
- 6. Meets the Optima<sup>™</sup> specifications for ultrapure isopropanol

#### **Applications**

- 1. Extraction and purification of nucleic acids, proteins, fats, and lipids
- 2. Preservation of biological specimens (nontoxic alternative to formaldehyde)
- 3. Disinfectant reagent
- 4. Chromatography

#### Laboratory Markets

- 1. Academic labs (cell and molecular biology)
- 2. Biotechnology industry
- 3. Pharmaceutical industry
- 4. Government research labs

#### **Product Specifications**

Name of Product	Isopropanol, Molecular Biology Grade
Part No.	BP2618
Assay (by GC)	≥ <b>99.9%</b>
Color (APHA)	≤ 5
Fluorescence Background (as Quinine Sulfate)	≤ 1ppb
Residue after Evaporation	≤ 1ppm
Refractive Index (at 25°C)	1.3740 - 1.3760
Water	$\leq 0.05\%$
Solubility in Water	Pass Test
Titratable Acid or Base	≤ 0.0001 meq/g
Substances Reducing Permanganate	Pass Test
Optical Absorbance	
at 205nm	≤ 1.00
at 220nm	≤ 0.20
at 230nm	≤ 0.10
at 254nm	≤ 0.015
Carbonyl Compounds	
Acetone	$\leq 0.002\%$
Propionaldehyde	$\leq 0.002\%$
DNase	Not Detected
RNase	Not Detected
Protease	Not Detected

#### **Related Products**

Fisher BioReagents Functionally Tested for Molecular Biology Research

Water (0.1	Micron	Filtered),	Molecular	Biology	Grade
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Catalog No.	Pack Size
BP2819-100	100mL
BP2819-1	1L
BP2819-4	4L
BP2819-10	10L
BP2819-20	20L

#### Absolute Ethanol (200 proof), Molecular Biology Grade

Catalog No.	Pack Size
BP2818-100	100mL
BP2818-500	500mL
BP2818-4	4L

Additional Products		
Part Number	Product Description	
BP1356-100	Agarose, Broad Separation Range for DNA/RNA, 100g	
BP160-100	Agarose, Low EEO, Multipurpose, 100g	
BP1360-100	Agarose, Low Melting, < 1kb DNA/RNA, 100g	
BP118-500	EDTA, 500g	
BP1302-10	Ethidium Bromide, 1% Solution, 10mL	
BP2578-100	exACTGene 1kb DNA Ladder, load 100 lanes	
BP2900-500	MOPS 10X Solution, 500mL	
BP2900-1	MOPS 10X Solution, 1L	
BP1752I-100	Phenol/Chloroform/Isoamyl Alcohol, 25:24:1 Mixture, 100mL	
BP1752I-400	Phenol/Chloroform/Isoamyl Alcohol, 25:24:1 Mixture, 400mL	
BP399-1	Phosphate Buffered Saline, 10X Solution, 1L	
BP1700-100	Proteinase K, 100mg	
BP1335-1	Tris-Acetate-EDTA (TAE), 10X Solution, 1L	
BP1333-1	Tris-Borate-EDTA (TBE), 10X Solution, 1L	
BP2476-100	Tris-EDTA, 1X Solution, pH 7.4, 100mL	
BP2476-500	Tris-EDTA, 1X Solution, pH 7.4, 500mL	
BP2484-50	Water, Sterile (Nuclease Free, DEPC-treated), 50mL	
BP2484-100	Water, Sterile (Nuclease Free, DEPC-treated), 100mL	

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