Phenol-Chloroform reagents

Extraction with phenol and phenol/chloroform mixtures is a universal method for purification of DNA and RNA. Proteins and restriction enzymes are removed by phenol and chloroform in disrupting protein secondary structure causing proteins to denature and precipitate from solution. Although each of these solvents is capable of performing this function alone, the two materials together remove proteins from solution much more effectively. Nucleic acids are recovered in the liquid phase.
Pure Phenol and chloroform reagents are biotechnology grade products in order to offer you a safer and easier alternative to the use of crystalline phenol.
During phenol extraction, the precipitated proteins collect at an interphase between the aqueous and organic layers. It is very important to understand the effect of pH on the performance of phenol.
For the purification of DNA, the use of phenol at pH above 7.0 is desirable in order to collect DNA in the upper aqueous layer of a phenol extraction (phenol saturated, pH8: UP87336A). At lower pH (4.5), DNA and proteins are collected at the interphase although RNA can be collected in the aqueous phase (phenol saturated, pH4.5 : UP893305).
Phenol and chloroform are supplied as solution alone, premixed with chloroform and isoamyl alcohol to reduce the extraction time.

Selection guide

	DNA purification	RNA purification
Phenol	±	±
• Phenol saturated, pH8	±	.
• Chloroform	±	.
• Chloroform : isoamyl	±	.
• Phenol : Chloroform	±	.
• Phenol :Chloroform, 5:1 (pH 4.5)	.	±
• Phenol :Chloroform, 1:1 (pH 4.5)	.	±
• Phenol S/P	±	.

Phenol

C_6H_5OH ; MW : 94.11
High quality reagents for use in nucleic acid purification.

Description	Cat.#	Qty
Phenol, Crystalline, Ultra Pure Grade	**146653**	100 g
	146654	500 g
Phenol, Crystals, ACS Grade	**892220**	250 g
	892222	500 g
	892221	1.5 kg
Phenol, Liquified, USP Grade	**N13410**	500 ml

Phenol saturated, pH 6,9-8

DNAse, RNAse, Protease : free
Purity : 99.9%

Description	Cat.#	Qty
Phenol saturated, pH 8	**UP87336A**	100 ml
	UP87336B	500 ml

Chloroform : isoamyl alcohol 24 : 1

Molecular Biology Grade
DNAse, RNAse, Protease : free
Purity (chloroform and isoamyl alcohol) : 99.9%

Description	Cat.#	Qty
Chloroform : isoamyl alcohol 24 : 1	**UP899254**	450 ml
	UP899255	950 ml

Phenol saturated, pH 4.5

Molecular Biology Grade
DNAse, RNAse, Protease : free
Purity : 99.9%

Description	Cat.#	Qty
Phenol saturated, pH 4.5	**UP893305**	100 ml
	UP893306	400 ml

Chloroform

Stabilized with amylene
DNAse, RNAse, Protease : free
Purity : 99.9%

Description	Cat.#	Qty
Chloroform	**UP046904**	950 ml

Phenol : Chloroform

Ready-to-use solution
No manipulation of hazardous products
Reduces extraction time
Purity (phenol) : 99.9%

Description	Cat.#	Qty
Phenol : Chloroform	**UP873357**	100 ml
isoamyl alcohol 25 : 24 : 1 - Molecular Biology Grade	**UP873358**	500 ml

Phenol : Chloroform, 5:1 (pH 4.5) Premixed with isoamyl alcohol (25:24:1)

An optimized mixture that can be used directly to replace the phenol and chloroform recommended in the one-step method of Chomczynski and Sacchi.
Biotechnology grade

Description	Cat.#	Qty
Phenol : Chloroform, 5:1 (pH 4.5)	**585330**	100 ml
Premixed with isoamyl alcohol (25:24:1)	**585331**	400 ml

Phenol : Chloroform, 1:1 (pH 5.2) Premixed with isoamyl alcohol (25:24:1)

A 1:1 mixture useful for preparing RNA with maximal recovery of poly (A+) RNA for subsequent mRNA purification and generation of cDNA.
biotechnology grade

Description	Cat.#	Qty
Phenol : Chloroform, 1:1 (pH 5.2)	**574420**	100 ml
Premixed with isoamyl alcohol (25:24:1)	**574421**	400 ml

Phenol S/P™ Products

Interchim offers two Phenol S/P™ products, Phenol S/P™, Buffer Saturated and Phenol : Chloroform : Isoamyl Alcohol S/P™ (25:24:1), for maximum convenience and superior performance. Both Phenol S/P™ mixtures are ready-to-use single-phase solutions that do not have to be equilibrated with a buffering solution prior to use. These newest phenol products for DNA purification allow the end user to extract proteins in less time and with fewer associated hazards than preparing traditional phenol solutions in the lab.
Phenol S/P™ mixtures are produced using biotechnology grade reagents to ensure a high quality, nuclease-free product. Appearing as single-phase solutions at room temperature, these phenol mixtures may exhibit two phases when properly stored at 2-8°C.

Description	Cat.#	Qty
Phenol S/P™, Buffer Saturated	**N15070**	100 ml
	N15071	400 ml
Phenol:Chloroform:Isoamyl Alcohol S/P™ (25:24:1)	**N15080**	100 ml
	N15081	400 ml

Other biochemicals ; see the section "Biochemicals"

Cesium Chloride

CsCl ; MW : 168.36
A high purity reagent used to prepare density gradients for isolation of plasmid DNA, phage, or cellular RNA.

Cesium Chloride, Biotech Grade

Biotechnology Grade
DNase, RNase free
Purity : 99.5%

Description	Cat.#	Qty
Cesium Chloride, Biotech Grade	**583021**	50 g
	583022	100 g
	583023	500 g

Cesium Chloride, Ultra Pure Grade

Purity : 99.9%

Description	Cat.#	Qty
Cesium Chloride, Ultra Pure Grade	**19544A**	50 g
	19544B	100 g
	19544D	250 g
	19544C	500 g

Guanidine

Guanidine Thiocyanate, a powerful protein denaturant, is most often used to inactivate endogenous RNases in the isolation of RNA from various tissues and bacteria. When used with acid-equilibrated phenol or phenol:chloroform, a solution of Guanidine Thiocyanate and â-Mercaptoethanol is very effective in disrupting both cytoplasmic and nuclear membranes while maintaining the integrity of the RNA.
CH_5N_3HCl ; MW 95.53 ; CAS: 50-01-1

Guanidine Hydrochloride

Inhibition of RNAse and Protease Activity
Purity (HPLC) > 99.5%
Chlorides, Sulfates : < 0.01%
OD 260 : < 0.03 OD 280 : < 0.15
As Pb Fe content : < 0.0005%
DNase, RNase, Proteases : non detected

Description	Cat.#	Qty
Guanidine Hydrochloride	**018381**	100 g
	UP018380	500 g

Guanidine HCl

Proteomics grade
Same specifications as Guanidine #01838, but also protease free

Description	Cat.#	Qty
Guanidine Hydrochloride	**01838J**	100 g
	01838L	250 g

Guanidine HCl, Low Ash

Does not contain anti-caking agent.
Ammonium Chloride <=0.5%
Ash <=0.4 %
Moisture (KF) <=0.3 %
Purity >98.5%

Description	Cat.#	Qty
Guanidine Hydrochloride, Low Ash	**280062**	500 g
	390063	5 kg

Guanidine Hydrochloride, 8 M Solution

A convenient premixed solution of the biotechnology grade powder easily diluted for almost any RNA or protein purification procedure.

Description	Cat.#	Qty
Guanidine HCl, 8 M Solution, Biotechnology grade	**N14630**	4 L
Guanidine HCl, 8 M Solution, Proteomics Grade (Protease free)	**GS3780**	4 L

Guanidine Thiocyanate, Powder

A powerful protein denaturant used to inactivate endogenous RNases during the isolation of RNA from tissues and bacterial cultures.
CH_5N_3CHNS ; MW : 118.16
Purity : 99.0%
Nucleases and Proteases free
OD 280nm (70%, Water) <=0.8
Dnase, Rnase free

Description	Cat.#	Qty
Guanidine Thiocyanate, Powder	**12829E**	50 g
	12829F	250 g
	12829G	500 g

Other Biochemicals

Depurination solution

Biotechnology grade
Contains 0.25M HCl

Description	Cat.#	Qty
Depurination solution	**N13630**	1 L
	N13631	2 L

Glucose-Tris-EDTA Solution (GTE Buffer) 1X Sterile Solution, pH 8.0

A biotechnology grade solution for DNA purification procedures. Nucleases free

Description	Cat.#	Qty
Glucose-Tris-EDTA Solution (GTE Buffer)	**N13550**	100 ml
1 x Sterile Solution, pH 8.0	**N13551**	500 ml
	N13552	1 L

Contents :
Glucose : 50 mM ; Tris. : 25 mM ; EDTA : 10 mM

8M Lithium Chloride Solution

Biotechnology grade, nuclease-free, protease-free

8M Lithium Chloride Solution comes especially formulated for RT PCR preparation and cDNA synthesis. This solution is a 8 Molar preparation of lithium chloride in deionized water and is highly concentrated for easy dilution. It is ideal for the precipitation of RNA right after total RNA isolation or *in vitro* transcription. The lithium chloride is the key to this process, as it efficiently precipitates the RNA, but does not precipitate the DNA, protein, or free nucleotide triphosphates.

Description	Cat.#	Qty
8M Lithium Chloride Solution	**GS3320**	100 ml
	GS3321	500 ml

Lysis Solution 0.2 N NaOH and 1% SDS

Ultra Pure Grade
An ultra pure reagent for alkaline lysis of bacterial cells used in standard DNA purification procedures.

Description	Cat.#	Qty
Lysis Solution 0.2 N NaOH and 1% SDS	**N14440**	500 ml

Biochemicals for nucleic acid extraction

Polyethylene glycol 8000 (PEG-8000)

Biotechnology grade. DNase, RNase free
Purity : 99%
$HOCH_2CH_2(OCH_2CH_2)nOH$
MW : 7000-9000

Description	Cat.#	Qty
Polyethylene glycol 8000 (PEG-8000)	**85871A**	500 g
	85871B	1 kg
	85871C	2.5 kg
Polyethylene glycol 8000 (PEG-8000)	**529160**	100 ml
30% sterile solution in 1.6M NaCl	**529161**	500 ml

Potassium Acetate

Ultra pure grade. DNase, RNase free

Description	Cat.#	Qty
Potassium Acetate, 1.0 M Solution, pH 7.5	**N14490**	250 ml
Potassium Acetate, 3.0 M Solution, pH 5.0, Biotech	**N14110**	1 L
Potassium Acetate, 3.0 M Solution, pH 5.5, Biotech	**181380**	500 ml

Sodium Acetate, 3 M Sterile Solution pH 5.2

A biotechnology grade solution prepared using DEPC for critical applications. DNase RNase free

Description	Cat.#	Qty
Sodium Acetate, 3 M Sterile Solution pH 5.2	**963020**	100 ml

Sodium Hydroxyde

NaOH ; MW : 40

Description	Cat.#	Qty
Sodium Hydroxide Beads, reagent grade, > 98.5 %	**14181P**	1 kg
	14181N	5 kg
Sodium Hydroxyde pellets, ACS grade, > 97 %	**14181F**	500 g
	14181G	1 kg
	14181H	5 kg

Tris-EDTA Buffer (TE Buffer) 1X Sterile Solution, pH 8.0

Biotechnology grade. Solution for DNA purification and storage. DNase, RNase free
Contents : Tris :10 mM, EDTA :1 mM

Description	Cat.#	Qty
Tris-EDTA Buffer (TE Buffer) 1 x Sterile Solution, pH 8.0	**587521**	100 ml
	587520	500 ml