

Specification Sheet

SIGMA-ALDRICH

Product Name	Sulfanilic acid, ACS reagent, 99%
Product Number	251917
Product Brand	SIAL
CAS Number	<u>121-57-3</u>
Molecular Weight	173.19

TEST

APPEARANCE (COLOR)
APPEARANCE (FORM)
TITRATION (T) NAOH 0.1M
SOLUBILITY (COLOR)
SOLUBILITY (TURBIDITY)
SOLUBILITY (METHOD)
SULFATED ASH
INFRARED SPECTRUM
CHLORIDE (CL)
NITRITE (NO2)
SULFATE (SO4)

SPECIFICATION

white to beige to gray
Powder
98.5 - 101.5 %
Colorless to Almost Colorless
0.02 % insoluble matter (Maximum)
C=5G IN50 ML 5% SODIUMCARBONATE
≤ 0.01 %
CONFORMS TO STRUCTURE
0.002 % (Maximum)
0.5 ppm (Maximum)
0.01 % (Maximum)

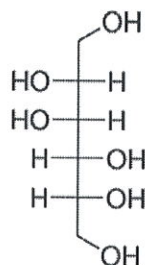
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D-Mannitol

tested according to Ph Eur

Synonym: Mannite, Mannitolum

CAS Number 69-65-8 | Empirical Formula (Hill Notation) C₆H₁₄O₆ | Molecular Weight 182.17 | Beilstein/REAXYS Number 1721898 | EC Number 200-711-8
MDL number MFCD00064287 | PubChem Substance ID 329751528²



SDS

SKU-Pack Size

Availability

Pack Size

Price (EUR)

17311-1KG-F

Available to ship on 20.08.19 - FROM

1 KG

71.00

Similar Products

To order products, please contact your local dealer. [Click here](#)

Product Recommendations



M8429

D-Mannitol

meets EP, FCC, USP
testing specifications



137096

D(-)-Mannitol



105988

D(-)-Mannitol

Properties

Related Categories	Carbohydrate Chemistry, Carbohydrate Derivatives, Carbohydrates, Cell Biology, Chemical Biology, More...
InChI Key	FBPFZTCFMRRESA-KVTDHHQDSA-N
assay	≥97%
mp	167-170 °C (lit.)
solubility	water: soluble(lit.)
Agency/Method	tested according to Ph Eur

Description

General description

D-Mannitol (Mannite, Mannitolum), an alditol, is a sweet tasting crystalline solid. It is naturally found in manna, olives, mushrooms and celery plants. It has been synthesized from glucose, via catalytic hydrogenation reaction. It is widely used as growth supplement in bacterial cultures.^[5]

D-Mannitol is an acyclic carbohydrate. Crystal parameters and space groups of the various polymorphic crystalline forms of mannitol have been reported. It has been proposed as an artificial sweetener.^[2] Synthesis of D-mannitol from D-glucose or D-glucose/D-fructose syrups in the presence of glucose isomerase and copper-on-silica has been proposed.^[4]

Application

D-Mannitol may be used in the preparation of the following:

- D-mannitol and L-iditol bis-epoxides, useful substrates for the synthesis of polyhydroxylated piperidines and azepanes^[3]
- chiral hydroxyl monophosphate, [(2S,3S,4S,5S)-3,4-dihydroxy-2,5-dimethyl-1-phenylphospholane]^[1]
- bisphospholanes, [1,2-bis[(2S,3S,4S,5S)-3,4-dihydroxy-2,5-dimethylphospholanyl]benzene] and [1,2-bis[(2S,3S,4S,5S)-2,5-diethyl-3,4-dihydroxyphospholanyl]benzene]^[1]

Biochem/physiol Actions

A sugar alcohol sweet tastant. Used in sweetness inhibition studies.

3050 Spruce Street, Saint Louis, MO 63103, USA

Website: www.sigmaaldrich.com

Email USA: techserv@sial.com

Outside USA: eurtechserv@sial.com

Product Specification

Product Name:
Hexane – for HPLC, ≥97.0% (GC)

Product Number: 34859
CAS Number: 110-54-3



Formula: C₆H₁₄
Formula Weight: 86.18 g/mol

TEST	Specification
Appearance (Colour)	Colorless
Appearance (Form)	Liquid
Free Acid AS CH ₃ COOH	≤ 0.001 %
Purity (GC)	≥ 97.00 %
Refractive Index N ₂₀ /D	1.373 - 1.377
Water (by Karl Fischer)	≤ 0.010 %
Residue after evaporation	≤ 0.0005 %
Infrared Spectrum	Conforms to Structure
UV Absorbance 250nm	≤ 0.01
UV Absorbance 225nm	≤ 0.1
UV Absorbance 220nm	≤ 0.7
Expiration Date Period	-----
1800 days	

Specification: PRE.0.ZQ5.10000011632

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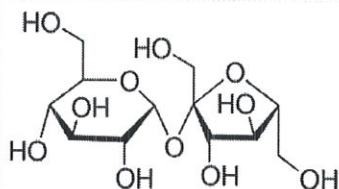
PHR1001 Supelco

Sucrose

Pharmaceutical Secondary Standard; Certified Reference Material

Synonym: α -D-Glc-(1 $\rightarrow$ 2)- β -D-Fru, α -D-Glucopyranosyl β -D-fructofuranoside, β -D-Fructofuranosyl- α -D-glucopyranoside, D(+)-Saccharose, Sugar

CAS Number 57-50-1 | Empirical Formula (Hill Notation) C₁₂H₂₂O₁₁ | Molecular Weight 342.30 | Beilstein/REAXYS Number 90825 | EC Number 200-334-9
 MDL number MFCD00006626 | PubChem Substance ID 329823032²



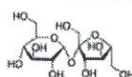
SKU-Pack Size	Availability	Pack Size	Price (EUR)
PHR1001-1G	Available to ship on 20.08.19 - FROM	1 G	54.70

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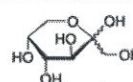
Product Recommendations



PHR1028
 1,4-Benzoquinone
 Pharmaceutical Secondary
 Standard; Certified
 Reference Material



47289
 Sucrose
 analytical standard



PHR1002
 Fructose
 Pharmaceutical Secondary
 Standard; Certified
 Reference Material

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Properties

Related Categories	Additional Standards, Analytical Standards, Analytical/Chromatography, Chromatography, I-Z, More...
grade	certified reference material pharmaceutical secondary standard
InChI Key	CZMRCDWAGMRECN-UGDNZRGBSA-N
mp	185-187 °C (lit.)
Featured Industry	Pharmaceutical (small molecule)
format	neat
pharmacopeia traceability	traceable to BP 818 Show More (10)

Description

General description

Certified pharmaceutical secondary standards for application in quality control provide pharma laboratories and manufacturers with a convenient and cost-effective alternative to pharmacopeia primary standards

Biochem/physiol Actions

A nonreducing disaccharide composed of GLUCOSE and FRUCTOSE linked via their anomeric carbons. It is obtained commercially from SUGARCANE, sugar beet (BETA VULGARIS), and other plants and used extensively as a food and a sweetener.

Analysis Note

These secondary standards offer multi-traceability to the USP, EP and BP primary standards, where they are available.

Other Notes

This product was designed, produced and verified for accuracy and stability in accordance with ISO/IEC 17025:2005 (AClass Cert AT-1467), ISO GUIDES 34:2009 (AClass Cert AR-1470).

Footnote

To see an example of a Certificate of Analysis for this material enter LRAB7831 in the slot below. This is an example certificate only and may not be the lot that you receive.

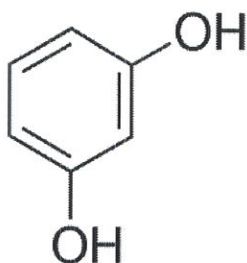
16101 Sigma-Aldrich

Resorcinol

meets analytical specification of Ph. Eur., BP, 98.5-100.5% (calc. to the dried substance)

Synonym: 1,3-Benzenediol

CAS Number 108-46-3 | Linear Formula C₆H₄-1,3-(OH)₂ | Molecular Weight 110.11 | Beilstein/REAXYS Number 906905 | EC Number 203-585-2 | MDL number MFCD00002269
 eCl@ss 39023402 | PubChem Substance ID 576475485



SDS		Similar Products	
SKU-Pack Size	Availability	Pack Size	Price (EUR)
16101-100G	Available to ship on 20.08.19 - FROM	100 G	38.00
16101-250G	Available to ship on 20.08.19 - FROM	250 G	76.50
16101-1KG	Available to ship on 20.08.19 - FROM	1 KG	247.00
16101-25KG	Only 6 left in stock (more on the way) - FROM	25 KG	1,800.00

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Product Recommendations



Y0000767
Resorcinol
European Pharmacopoeia
(EP) Reference Standard



307521
Resorcinol
ReagentPlus[®], 99%



R5645
Resorcinol
BioXtra, ≥99%

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65

Properties

Related Categories	Analytical/Chromatography, Pharmacopoeia, Pharmacopoeia A-Z More...
vapor density	3.8 (vs air)
vapor pressure	1 mmHg (21.1 °C)
InChI Key	GHMLBKRAJCXBS-UHFFFAOYSA-N
assay	98.5-100.5% (calc. to the dried substance)
form	solid
autoignition temp.	1126 °F
quality	meets analytical specification of Ph. Eur., BP
impurities	acidity or alkalinity, complies
	related subst., complies
	residual solvents, complies
	≤0.001% heavy metals (as Pb)
	≤0.01% free acid (as H ₂ SO ₄)
	≤0.01% free alkali (as NH ₃)
	≤0.01% pyrocatechol
ign. residue	≤0.05% (as SO ₄)
loss	≤1.0% loss on drying (on silica gel)
bp	178 °C/16 mmHg (lit.)
mp	109-112 °C (lit.)
solubility	water: soluble
anion traces	chloride (Cl ⁻): ≤100 mg/kg
	sulfate (SO ₄ ²⁻): ≤500 mg/kg
suitability	complies for appearance of solution
	complies for identity

Description

Application

Resorcinol has been used in resorcinol staining for visualizing the gangliosides.^[2] It has also been used for estimating sialic acids by colorimetric assay.^[3]

Biochem/physiol Actions

Resorcinol is an aromatic alcohol serves as an antiseptic. It reduces pain from painful nodules in patients suffering from Hidradenitis suppurativa (HS).^[1]

Safety Information

Symbol



GHS09

GHS05, GHS07,

Signal word

Danger

Hazard statements

H302-H315-H318-H400

Precautionary statements

P260-P301 + P312 + P330-P305 + P351 + P338 + P310

Personal Protective Equipment

dust mask type N95
(US), Eyeshields, Faceshields, Gloves

RIDADR

UN 2876 6.1 / PGIII

WGK Germany

2

RTECS

VG9625000

Flash Point(F)

260.6 °F

Flash Point(C)

127 °C

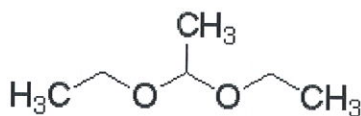
3050 Spruce Street, Saint Louis, MO 63103, USA

Website: www.sigmaaldrich.comEmail USA: techserv@sial.comOutside USA: eurtechserv@sial.com

Product Specification

Product Name:
Acetaldehyde diethyl acetal - 99%

Product Number: **A902**
CAS Number: 105-57-7
MDL: MFCD00009243
Formula: C₆H₁₄O₂
Formula Weight: 118.17 g/mol



TEST	Specification
Appearance (Color)	Colorless
Appearance (Form)	Liquid
Infrared spectrum	Conforms to Structure
Purity (GC)	≥ 98.5 %

Specification: PRD.0.ZQ5.10000018407

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Specification Sheet

SIGMA-ALDRICH

Product Name	<i>tert</i> -Butyl methyl ether, for HPLC, ≥99.8%
Product Number	34875
Product Brand	SIGALD
CAS Number	<u>1634-04-4</u>
Molecular Weight	88.15

TEST	SPECIFICATION
APPEARANCE (COLOR)	Colorless
APPEARANCE (FORM)	Liquid
COLOR (IN APHA)	≤ 10 APHA
PURITY (GC AREA %)	≥ 99.80 %
WATER (COULOMETR.)	≤ 0.01 %
RESIDUE (EVAPORATION)	≤ 0.0005 %
INFRARED SPECTRUM	CONFORMS TO STRUCTURE
UV-ABSORBANCE	A(210 NM): ≤ 1.00
UV-ABSORBANCE	A(220 NM): ≤ 0.40
UV-ABSORBANCE	A(250 NM): ≤ 0.10
UV-ABSORBANCE	A(260 NM): ≤ 0.05
UV-ABSORBANCE	A(300 NM): ≤ 0.005
UV-ABSORBANCE	A(400 NM): ≤ 0.005
ACIDITY	≤ 0.002 % (AS ACETIC ACID)
PEROXIDES	≤ 5 PPM (AS H ₂ O ₂)
EXPIRATION DATE PERIOD	1620 DAYS

Specification Sheet

SIGMA-ALDRICH®

Product Name	Thymol, meets analytical specification of Ph. Eur., BP, NF, 99-101%
Product Number	16254
Product Brand	SIAL
CAS Number	<u>89-83-8</u>
Molecular Weight	150.22

TEST	SPECIFICATION
ASSAY	99 - 101 %
MELTING POINT	REPORT RESULTS
RESIDUE (EVAPORATION)	≤ 0.05 %
APPEARANCE OF SOLUTION	Complying
ACIDITY	Complying
RELATED SUBSTANCES	GC: COMPLYING
RESIDUAL SOLVENTS	Complying
REMARKS	Identity, assay and impurities are complying to the monographs of the above mentioned pharmacopeias/codices.
RECOMMENDED RETEST PERIOD	30 MONTHS

3050 Spruce Street, Saint Louis, MO 63103, USA

Website: www.sigmaaldrich.com

Email USA: techserv@sial.com

Outside USA: eurtechserv@sial.com

Product Specification

Product Name:

L-Isoleucine - from non-animal source, meets EP, JP, USP testing specifications, suitable for cell culture, 98.5-101.0%

Product Number:

I7403

CAS Number:

73-32-5

MDL:

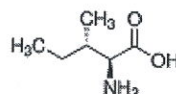
MFCD00064222

Formula:

C₆H₁₃NO₂

Formula Weight:

131.17 g/mol



TEST	Specification
Origin	Non-Animal Source
Appearance (Color)	White
Appearance (Form)	Powder or Crystals
Solubility (Color)	Colorless
Solubility (Turbidity)	Clear
0.5 g to 10 ml of 1M HCl	
Identity by IR	Conforms to Structure
Specific Rotation	40.0 - 41.5 °
EP/JP at 20 deg C; c = 4 in 6 M HCl	
Specific Rotation	38.9 - 41.8 °
USP at 25 deg C; c = 4 in 6 M HCl	
Chloride Content	Conforms
< or = 0.020%	
Ammonium	Conforms
< or = 0.02%	
Sulfate	Conforms
< or = 0.020%	
Iron (Fe)	Conforms
< or = 10 ppm	
Heavy Metals	Conforms
< or = 10 ppm	
Arsenic (As)	Conforms
< or = 1 ppm	
Loss on Drying	≤ 0.20 %
Residue on ignition (Ash)	≤ 0.10 %

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Website: www.sigmaaldrich.comEmail USA: techserv@sial.comOutside USA: eurtechserv@sial.com

Product Specification

Product Name:

L-Isoleucine - from non-animal source, meets EP, JP, USP testing specifications, suitable for cell culture, 98.5-101.0%

Product Number:

I7403

CAS Number:

73-32-5

MDL:

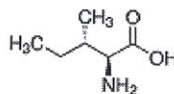
MFCD00064222

Formula:

C₆H₁₃NO₂

Formula Weight:

131.17 g/mol



TEST

Specification

Ninhydrin-Positive Substances

Conforms

pH

5.5 - 6.5

by EP/JP; 1.0 % in H₂O

Assay

98.5 - 101.0 %

dry basis

pH

5.5 - 7.0

USP; 1.0 % in H₂O

Endotoxin Assay

≤ 1 EU/mg

Cell Culture Test

Pass

Residual Solvents USP 467

Meets Requirements

Recommended Retest Period

4 years

Note

Meets USP, EP, and JP testing specifications

Specification: PRD.2.ZQ5.10000032452

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Specification Sheet

SIGMA-ALDRICH

Product Name	Ammonium iron(II) sulfate hexahydrate, BioUltra, ≥99.0% (RT)
Product Number	09719
Product Brand	SIAL
CAS Number	<u>7783-85-9</u>
Molecular Weight	392.14

TEST	SPECIFICATION
APPEARANCE (COLOR)	WHITE TO FAINTLY GREEN OR FAINTLY GREENISH-BLUE
APPEARANCE (FORM)	Powder or Crystals
REDOX TITRATION	99.0 - 101.0 %
REDOXTITRATION (METHOD)	PERMANGANATE TITRATION
METAL TRACE ANALYSIS (ICP)	CORRESPONDS TO REQUIREMENTS
CADMIUM (ICP)	≤ 5 mg/kg
COBALT (ICP)	≤ 50 mg/kg
CHROMIUM (ICP)	≤ 50 mg/kg
COPPER (ICP)	≤ 5 mg/kg
POTASSIUM (ICP)	≤ 50 mg/kg
MAGNESIUM (ICP)	≤ 100 mg/kg
MANGANESE (ICP)	≤ 500 mg/kg
SODIUM (ICP)	≤ 50 mg/kg
NICKEL (ICP)	≤ 100 mg/kg
LEAD (ICP)	≤ 5 mg/kg
STRONTIUM (ICP)	≤ 5 mg/kg
ZINC (ICP)	≤ 5 mg/kg
CHLORIDE (CL)	≤ 10 mg/kg
PHOSPHATE (PO4)	≤ 20 mg/kg
FERRIC IRON	≤ 50 mg/kg
SOLUBILITY (METHOD)	water 0.5M
APPEARANCE (SOLUTION)	CLEAR FAINTLY GREEN-YELLOW TO FAINTLY GREEN-BLUE
PH (SOLUTION)	2.5 - 4.0
RESIDUE (FILTER TEST)	NO RESIDUE
RECOMMENDED RETEST PERIOD	72 MONTHS

3050 Spruce Street, Saint Louis, MO 63103, USA

Website: www.sigmaaldrich.comEmail USA: techserv@sial.comOutside USA: eurtechserv@sial.com

Product Specification

Product Name:
1-Propanol - for HPLC, ≥99.9%

Product Number: 34871
CAS Number: 71-23-8
MDL: MFCD00002941
Formula: C₃H₈O
Formula Weight: 60.10 g/mol



TEST

Specification

Appearance (Color)	Colorless
Appearance (Form)	Liquid
UV Absorbance 275nm	≤ 0.0044
UV Absorbance 240nm	≤ 0.071
UV Absorbance 220nm	≤ 0.40
Purity (GC)	≥ 99.90 %
Water (by Karl Fischer)	≤ 0.05 %
Residue on Evaporation	≤ 0.005 %
Free Acid	≤ 0.001 %
as C ₂ H ₅ COOH	
Expiration Date Period	-----
1620 Days	

Specification: PRD.2.ZQ5.10000004460

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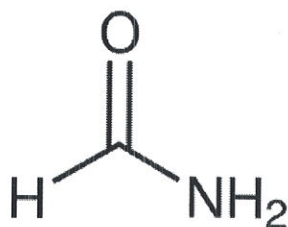
47670 Sigma-Aldrich

Formamide

puriss. p.a., ACS reagent, ≥99.5% (GC/T)

Synonym: Amide C₁, Formic amide

CAS Number 75-12-7 | Linear Formula HCONH₂ | Molecular Weight 45.04 | Beilstein/REAXYS Number 505995 | EC Number 200-842-0 | MDL number MFCD00007941
 PubChem Substance ID 329757333



SDS

Product 47670 has been discontinued.

Similar Products

Contact Technical Service

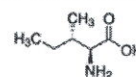
Product Recommendations



34871
1-Propanol
for HPLC, ≥99.9%



09719
Ammonium iron(II) sulfate
hexahydrate
BioUltra, ≥99.0% (RT)



17403
L-Isoleucine
from non-animal source,
meets EP, JP, USP testing
specifications, suitable for
cell culture, 98.5-101.0%

Properties

Related Categories

ACS Grade, Amber Glass Bottles, Analytical Reagents, Analytical Reagents for General Use, Analytical/Chromatography, More...

grade	ACS reagent
vapor density	1.55 (vs air)
vapor pressure	0.08 mmHg (20 °C)
	30 mmHg (129 °C)
InChI Key	ZHNUHDYFZUAESO-UHFFFAOYSA-N
grade	puriss. p.a.
assay	≥99.5% (GC/T)
autoignition temp.	932 °F
expl. lim.	2.7-19 %
impurities	≤0.02% free acid (as HCOOH)
	≤0.1% water
refractive index	n _{20/D} 1.447 (lit.)
	n _{20/D} 1.447
bp	210 °C (lit.)
mp	2-3 °C (lit.)
transition temp	transition temp 2.0-3.0 °C
density	1.132 g/mL at 20 °C
	1.134 g/mL at 25 °C (lit.)
cation traces	Ca: ≤5 mg/kg
	Cd: ≤1 mg/kg
	Co: ≤1 mg/kg
	Cr: ≤1 mg/kg
	Cu: ≤1 mg/kg
	Fe: ≤1 mg/kg
	K: ≤20 mg/kg
	Mg: ≤1 mg/kg
	Mn: ≤1 mg/kg
	Na: ≤20 mg/kg
	Ni: ≤1 mg/kg
	Pb: ≤1 mg/kg

Description

General description

Formamide is a colorless organic solvent.^[3] It has been reported to increase the precision of PCR (Polymerase Chain Reaction) studies.^[1] Microwave spectral study of its isotopic forms suggests that the molecule of formamide is nonplanar in which the H₂N-C group exhibits a shallow pyramid like structure.^[4]

Packaging

1, 2.5 L in glass bottle
4×25, 250 mL in glass bottle

Application

Formamide destabilizes nucleic acid duplexes and may be used, typically, at a concentration of 50%, in hybridization protocols requiring lower hybridization temperatures.

Zn: ≤1 mg/kg

suitability

in accordance for miscibility

Show Fewer Properties

Safety Information

Symbol



GHS08

Signal word

Danger

Hazard statements

H351-H360D-H373

Precautionary statements

P201-P260-P280-P308 + P313

RDADR

NONH for all modes of transport

WGK Germany

1

RTECS

LQ0525000

Flash Point(F)

347 °F

Flash Point(C)

175 °C

Specification Sheet

SIGMA-ALDRICH

Product Name	Acetic anhydride, puriss. p.a., ACS reagent, reag. ISO, reag. Ph. Eur., ≥99% (GC)
Product Number	33214
Product Brand	SIGALD
CAS Number	<u>108-24-7</u>
Molecular Weight	102.09

TEST	SPECIFICATION
PURITY (GC AREA %)	≥ 99 %
DENSITY D20/4	1.079 - 1.082
BOILING POINT	ca 139 Deg C
RESIDUE (EVAPORATION)	≤ 0.003 %
REDUCING SUBSTANCES	≤ 0.01 %
HEAVY METALS	≤ 0.0002 % (as Pb)
ALUMINIUM	≤ 0.5 PPM
BARIUM	≤ 0.1 PPM
BISMUTH	≤ 0.1 PPM
BORON	≤ 0.02 PPM
CALCIUM	≤ 0.5 PPM
CADMIUM	≤ 0.05 PPM
COBALT	≤ 0.02 PPM
CHROMIUM	≤ 0.05 PPM
COPPER	≤ 0.02 PPM
IRON	≤ 0.1 PPM
POTASSIUM	≤ 0.5 PPM
LITHIUM	≤ 0.1 PPM
MAGNESIUM	≤ 0.1 PPM
MANGANESE	≤ 0.02 PPM
MOLYBDENUM	≤ 0.1 PPM
SODIUM	≤ 0.5 PPM
NICKEL	≤ 0.02 PPM
LEAD	≤ 0.1 PPM
TIN	≤ 0.1 PPM
STRONTIUM	≤ 0.1 PPM
ZINC	≤ 0.2 PPM
CHLORIDE (CL)	≤ 0.0002 %
PHOSPHATE (PO4)	≤ 0.001 %
SULFATE (SO4)	≤ 0.0005 %
SUBSTANCES DARK BY H2SO4	complying
RECOMMENDED RETEST PERIOD	42 Months

Specification Sheet

SIGMA-ALDRICH

Product Name	Sodium octyl sulfate, for ion pair chromatography, LiChropur™, ≥99.0% (T)
Product Number	75073
Product Brand	SIAL
CAS Number	<u>142-31-4</u>
Molecular Weight	232.27

TEST**SPECIFICATION****APPEARANCE (COLOR)**

Colorless or White

APPEARANCE (FORM)

Powder or Crystals or Flakes

TITRATION (ION EXCHANGE)

≥ 99.0%

PROTON NMR SPECTRUM

CONFORMS TO STRUCTURE

210nm ≤ 0.10

220nm ≤ 0.06

TEST BY UV SPECTROSCOPY

230nm ≤ 0.04

260nm ≤ 0.02

500nm ≤ 0.02

CYCLIC VOLTAMMOGRAM

CORRESPONDS TO STANDARD CV

RESIDUE (FILTER TEST)

NO RESIDUE

FILTERTEST (METHOD)

10% in WATER (HOT)

RECOMMENDED RETEST PERIOD

42 MONTHS

3050 Spruce Street, Saint Louis, MO 63103, USA

Website: www.sigmaaldrich.com

Email USA: techserv@sial.com

Outside USA: eurtechserv@sial.com

Product Specification

Product Name:

Zinc chloride - puriss. p.a., ACS reagent, reagent ISO, reagent Ph. Eur., ≥98%

Product Number:

31650

CAS Number:

7646-85-7

MDL:

MFCD00011295

Formula:

Cl₂Zn

Formula Weight:

136.30 g/mol



TEST

Specification

Complexometric EDTA	98.0 - 100.5 %
Insoluble in Hydrochloric Acid	≤ 0.005 %
Total Nitrogen	≤ 0.002 %
Nitrate (NO ₃)	≤ 0.003 %
Sulfate (SO ₄)	≤ 20 ppm
Ammonium	≤ 50 ppm
Miscellaneous Assay	≤ 1.2 %
Oxide chloride (as ZnO)	
Miscellaneous Assay	Complying
Oxide chloride (as ZnO)	
pH	4.6 - 5.5
10%, 20 deg C	
Miscellaneous Assay	Complying
Al, Ca, Fe, Mg, and heavy metals	
Calcium (Ca)	≤ 0.001 %
Cadmium (Cd)	≤ 0.0005 %
Copper (Cu)	≤ 0.001 %
Iron (Fe)	≤ 0.0005 %
Magnesium (Mg)	≤ 0.001 %
Lead (Pb)	≤ 0.001 %
Note	Note
Identity, assay and impurities are complying to the monographs of the above mentioned pharmacopeias/codices.	

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Product Specification

Product Name:

Zinc chloride – puriss. p.a., ACS reagent, reagent ISO, reagent Ph. Eur., ≥98%

Product Number:

31650

CAS Number:

7646-85-7

MDL:

MFCD00011295

Formula:

Cl₂Zn

Formula Weight:

136.30 g/mol

**TEST****Specification**

Potassium (K)

≤ 0.02 %

Sodium (Na)

≤ 0.05 %

Specification: PRD.1.ZQ5.10000075383

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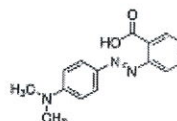
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Product Specification

Product Name:
Methyl Red - ACS reagent, crystalline

Product Number: 250198
CAS Number: 493-52-7
MDL: MFCD00002425
Formula: C₁₅H₁₅N₃O₂
Formula Weight: 269.30 g/mol



TEST

Specification

Appearance (Color)	Conforms to Requirements
Dark Red to Maroon to Purple	
Appearance (Form)	Conforms to Requirements
Powder or Crystalline Powder	
Melting Point	179 - 182 °C
Infrared spectrum	Conforms to Structure
Solubility (Turbidity)	Pass
0.1%, Ethanol	
Clear Solution With Only A Faint Trace of Turbidity or Insoluble Matter	
Visual Interval	Pass
pH 4.2 = Pink	
Visual Interval	Pass
pH 5.5 = Orange	
Visual Interval	Pass
pH 6.2 = Yellow	
Meets ACS Requirements	Current ACS Specification

Specification: PRD.1.ZQ5.10000021108

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Specification Sheet

SIGMA-ALDRICH

Product Name	Aluminum potassium sulfate dodecahydrate, puriss. p.a., ACS reagent, reag. Ph. Eur., ≥99.5%
Product Number	31242
Product Brand	SIGALD
CAS Number	<u>7784-24-9</u>
Molecular Weight	474.39

TEST**SPECIFICATION**

APPEARANCE (COLOR)	Colorless or White
APPEARANCE (FORM)	Powder or Crystals
TITRATION (ION EXCHANGE)	≥ 99.5 %
SOLUBILITY (COLOR)	complying
SOLUBILITY (TURBIDITY)	complying
SOLUBILITY (METHOD)	ACC. TO PH.EUR.
PH-TEST	3.0 - 3.5
PH (METHOD)	10 % in water , 20C
ACS SPECIFICATIONS	CORRESPONDS TO REQUIREMENTS
REMARKS ON ACS	INSOLUBLE MATTER ≤ 0.005 % HEAVY METALS (AS PB) ≤ 0.001 %
CADMIUM (ICP)	≤ 5 mg/kg
COPPER (ICP)	≤ 5 mg/kg
IRON (ICP)	≤ 5 mg/kg
SODIUM (ICP)	≤ 100 mg/kg
LEAD (ICP)	≤ 10 mg/kg
ARSENIC TRACES (MHS-AAS)	≤ 2 mg/kg
CHLORIDE (CL)	≤ 5 mg/kg
ION CHROMATOGRAPHY (NH₄⁺)	≤ 50 mg/kg
RECOMMENDED RETEST PERIOD	60 MONTHS

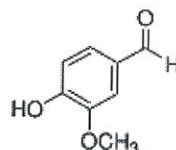
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Website: www.sigmaaldrich.comEmail USA: techserv@sial.comOutside USA: eurtechserv@sial.com

Product Specification

Product Name:
Vanillin - ReagentPlus®, 99%

Product Number: V1104
CAS Number: 121-33-5
MDL: MFCD00006942
Formula: C₈H₈O₃
Formula Weight: 152.15 g/mol



TEST

Specification

Appearance (Color)	White to Faint Yellow
Appearance (Form)	Powder or Crystals
Infrared spectrum	Conforms to Structure
Wavelength	344 - 350 nm
C = 0.005 g/l; 0.01 N NaOH (pH 12.3)	
Extinction Coefficient	≥ 24000
Wavelength	245 - 251 nm
Extinction Coefficient	≥ 8000
Carbon	62.2 - 64.1 %
Purity (GC)	≥ 98.5 %
Solubility (Turbidity)	Clear
C = 50 mg/ml (5%); Ethanol	
Solubility (Color)	Colorless to Very Faint Yellow

Specification: PRD.1.ZQ5.10000028310

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Specification Sheet

SIGMA-ALDRICH

Product Name	N,N-Dimethylformamide, puriss. p.a., ACS reagent, reag. Ph. Eur., ≥99.8% (GC)
Product Number	33120
Product Brand	SIGALD
CAS Number	<u>68-12-2</u>
Molecular Weight	73.09

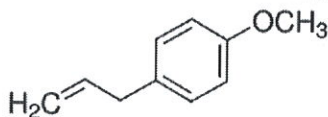
TEST	SPECIFICATION
COLOR (IN APHA)	≤ 15 APHA
TITRATABLE ACID	≤ 0.0005 MEQ/G
TITRATABLE BASE	≤ 0.003 MEQ/G
PURITY (GC AREA %)	≥ 99.8 %
DENSITY D20/4	0.948 - 0.950
REFRACTIVE INDEX N20/D	1.4290 - 1.4310
WATER (COULOMETR.)	≤ 0.1 %
RESIDUE (EVAPORATION)	≤ 50 PPM
ACIDITY	FREE ACID (AS CH ₃ COOH): ≤ 0.003 %
ALKALINITY	FREE ALKALI (AS NH ₃): ≤ 0.005 %
ALUMINIUM	≤ 0.00005 %
BARIUM	≤ 0.00001 %
BISMUTH	≤ 0.00001 %
BORON	≤ 0.000002 %
CALCIUM	≤ 0.00005 %
CADMIUM	≤ 0.000005 %
COBALT	≤ 0.000002 %
CHROMIUM	≤ 0.000002 %
COPPER	≤ 0.000002 %
IRON	≤ 0.00001 %
POTASSIUM	≤ 0.00005 %
LITHIUM	≤ 0.00001 %
MAGNESIUM	≤ 0.00001 %
MANGANESE	≤ 0.000002 %
MOLYBDENUM	≤ 0.00001 %
SODIUM	≤ 0.0001 %
NICKEL	≤ 0.000002 %
LEAD	≤ 0.00001 %
TIN	≤ 0.00001 %
STRONTIUM	≤ 0.00001 %
ZINC	≤ 0.00001 %
RECOMMENDED RETEST PERIOD	36 MONTHS

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05818 Supelco

4-Allylanisole

analytical standard

Synonym: *p*-Allylphenyl methyl ether, *p*-Methoxyallylbenzene, Chavicol methyl ether, Estragole, Isoanethole, Methyl chavicolCAS Number 140-67-0 | Linear Formula $\text{H}_2\text{C}=\text{CHCH}_2\text{C}_6\text{H}_4\text{OCH}_3$ | Molecular Weight 148.20 | Beilstein/REAXYS Number 1099454 | EC Number 205-427-8 | MDL number MFCD00008653 | PubChem Substance ID 329748173²

SDS

SKU-Pack Size

Availability

Pack Size

Similar Products

Price (EUR)

05818-1ML

Available to ship on 20.08.19 - FROM

1 ML

30.90

05818-5ML

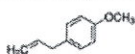
Estimated to ship on 11.09.19

5 ML

120.00

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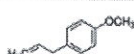
Product Recommendations



34098

Estragole

analytical standard



W241105

4-Allylanisole

≥98%, FCC



A29208

4-Allylanisole

98%

Properties

Related Categories

A - D, Additional Standards, Alphabetical Index of
Phytochemical Standards, Analytical
Standards, Analytical/Chromatography,
[More...](#)

grade	analytical standard
InChI Key	ZFMSMUAANRJZFM-UHFFFAOYSA-N
assay	≥98.5% (GC)
shelf life	limited shelf life, expiry date on the label
refractive index	<i>n</i> _{20/D} 1.521 (lit.) <i>n</i> _{20/D} 1.521
bp	215-216 °C(lit.)
density	0.965 g/mL at 25 °C(lit.)
Featured Industry	Food and Beverages

[Show Fewer Properties](#)

Description

General description

4-Allylanisole is one of the oxygenated aromatic biogenic volatile organic compounds (BVOCs) which is usually synthesized by plants.^[1]

Application

4-Allylanisole has been used as a reference standard for the analysis of 4-allylanisole in essential oils by high performance liquid chromatography (HPLC) equipped with fluorometric detector^[2] and in emissions from live vegetation by solid-phase microextraction (SPME) combined with proton transfer reaction mass spectrometry (PTR-MS).^[3] It may be used as a reference standard for the determination of 4-allylanisole in food products by simultaneous distillation-extraction (SDE) followed by analyses using capillary gas chromatography (GC)-flame ionization detector (FID) and GC-MS.^[4]

Safety Information

Symbol



GHS07

Signal word	Warning
Hazard statements	H302
Precautionary statements	P301 + P312 + P330
Personal Protective Equipment	Eyeshields, Faceshields, full-face respirator (US), Gloves, multi-purpose combination respirator cartridge (US), type ABEK (EN14387) respirator filter
WGK Germany	3
RTECS	BZ8225000

Flash Point(F)	177.8 °F
----------------	----------

Flash Point(C)	81 °C
----------------	-------

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Website: www.sigmaaldrich.com

Email USA: techserv@sial.com

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Product Specification

Product Name:

Boron trifluoride-methanol solution - 14% in methanol

Product Number:

B1252



MDL:

MFCD00011316

Formula:

CH₄BF₃O

Formula Weight:

99.85 g/mol

Storage Temperature:

2 - 8 °C

TEST

Specification

Appearance (Color)

Colorless

Appearance (Form)

Liquid

Appearance (Turbidity)

Clear

Boron

19.1 - 25.5 mg/ml

Purity Determined by ICP or by NaOH Titration.

Purity (Titration by NaOH)

12.0 - 16.0 %

Purity Determined by ICP or by NaOH Titration.

Suitability

Suitable

Suitable for Preparing Methyl Esters of Fatty Acids.

Specification: PRD.0.ZQ5.10000014672

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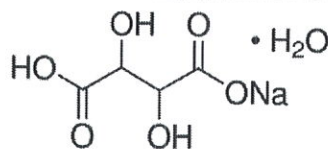
71680 Sigma-Aldrich

Sodium bitartrate monohydrate

purum p.a., ≥98.0% (T)

Synonym: L-(+)-Tartaric acid monosodium salt, Sodium hydrogen tartrate monohydrate

CAS Number 6131-98-2 | Empirical Formula (Hill Notation) C₄H₅NaO₆ · H₂O | Molecular Weight 190.08 | Beilstein/REAXYS Number 6099125 | EC Number 208-400-9
 MDL number MFCD00150038 | PubChem Substance ID 576523357



SDS

SKU-Pack Size

Availability

Pack Size

Similar Products

Price (EUR)

71680-250G

Available to ship on 20.08.19 - FROM

250 G

53.40

71680-1KG

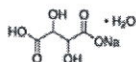
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1 KG

182.00

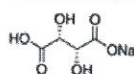
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Product Recommendations



71679

Sodium bitartrate monohydrate
 BioUltra, ≥99.0% (T)



289981

Sodium hydrogen tartrate
 98%



R1609

Sodium rhodizonate dibasic
 97%

Properties

Related Categories

Biochemicals and Reagents, Chelators, Essential
 Chemicals, Research Essentials, Salts,
 More...

InChI Key	LLVQEXSQFBTIRD-UHFFFAOYSA-M
grade	purum p.a.
assay	≥98.0% (T)
optical activity	[α] _D ²⁰ +21±2°, c = 1% in H ₂ O
anion traces	chloride (Cl ⁻): ≤50 mg/kg sulfate (SO ₄ ²⁻): ≤50 mg/kg
cation traces	Ca: ≤50 mg/kg Cd: ≤50 mg/kg Co: ≤50 mg/kg Cu: ≤50 mg/kg Fe: ≤50 mg/kg K: ≤100 mg/kg Ni: ≤50 mg/kg Pb: ≤50 mg/kg Zn: ≤50 mg/kg

Show Fewer Properties

Description

General description

Sodium bitartrate monohydrate (SBTMH) is an organometallic compound having nonlinear optical properties. Its synthesis at ambient temperature has been reported.^[1]

Safety Information

Personal Protective Equipment	Eyeshields, Gloves, type N95 (US), type P1 (EN143) respirator filter
RDADR	NONH for all modes of transport
WGK Germany	3

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Product Specification

Product Name:

Acetonitrile – for HPLC, gradient grade, ≥99.9%

Product Number:

34851

CAS Number:

75-05-8

MDL:

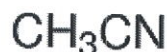
MFCD00001878

Formula:

C₂H₃N

Formula Weight:

41.05 g/mol



TEST

Specification

Appearance (Color)	Colorless
Appearance (Form)	Liquid
UV Absorbance 400nm	≤ 0.0044
UV Absorbance 250nm	≤ 0.0044
UV Absorbance 235nm	≤ 0.0044
UV Absorbance 230nm	≤ 0.0044
UV Absorbance 200nm	≤ 0.032
UV Absorbance 195nm	≤ 0.12
Purity (GC)	≥ 99.90 %
Residue on Evaporation	≤ 0.0005 %
Water (by Karl Fischer)	≤ 0.02 %
Fluorescence 254nm	≤ 1.0 ppb
As Quinine	
Fluorescence 365nm	≤ 0.5 ppb
As Quinine	
HPLC Absorbance 210 nm	≤ 3 mAU
HPLC Absorbance 254 nm	≤ 0.5 mAU
Baseline Drift 210nm	≤ 15 mAU
Alkalinity	≤ 0.0002 %
As NH ₃	
Free Acid (as Acetic Acid)	≤ 0.001 %
Expiration Date Period	
3 Years	

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Website: www.sigmaaldrich.comEmail USA: techserv@sial.comOutside USA: eurtechserv@sial.com

Product Specification

Product Name:

Acetonitrile - for HPLC, gradient grade, $\geq 99.9\%$

Product Number:

34851

CAS Number:

75-05-8

MDL:

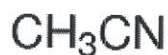
MFCD00001878

Formula:

C₂H₃N

Formula Weight:

41.05 g/mol

**TEST****Specification**

Specification: PRD.7.ZQ5.10000003951

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Specification Sheet

SIGMA-ALDRICH

Product Name	Acetic acid, puriss. p.a., ACS reagent, reag. ISO, reag. Ph. Eur., ≥99.8%
Product Number	33209
Product Brand	SIGALD
CAS Number	<u>64-19-7</u>
Molecular Weight	60.05

TEST	SPECIFICATION
COLOR (IN APHA)	≤ 10 APHA
TITRATABLE BASE	≤ 0.0004 MEQ/G
ASSAY	≥ 99.8 %
PURITY (GC AREA %)	≥ 99.8 %
GC MINOR COMPONENT 1 (AREA %)	≤ 0.01 %
MINOR COMPONENT 1	acetic anhydride
FREEZING POINT	≥ 16.3 DEG C
BOILING POINT	117 - 119 C
DILUTION TEST	mixable with H ₂ O: complying
WATER	≤ 0.4 %
RESIDUE (EVAPORATION)	≤ 0.0005 %
APPEARANCE	Complying
REDUCING SUBSTANCES	K ₂ Cr ₂ O ₇ red. matter: complying KMnO ₄ red. substances: complying
ACETALDEHYDE	≤ 0.0002 %
HEAVY METALS	≤ 0.00005 % (as Pb)
PROOF OF IDENTITY	COMPLYING
SILVER	≤ 0.000001 %
ALUMINIUM	≤ 0.000005 %
ARSEN	≤ 0.000001 %
BARIUM	≤ 0.000001 %
BERYLLIUM	≤ 0.000001 %
BISMUTH	≤ 0.00001 %
CALCIUM	≤ 0.00002 %
CADMIUM	≤ 0.000002 %
COBALT	≤ 0.000001 %
CHROMIUM	≤ 0.000005 %
COPPER	≤ 0.000001 %
IRON	≤ 0.00002 %
GERMANIUM	≤ 0.000005 %
POTASSIUM	≤ 0.00001 %
LITHIUM	≤ 0.000001 %
MAGNESIUM	≤ 0.00001 %
MANGANESE	≤ 0.000001 %
MOLYBDENUM	≤ 0.000002 %
SODIUM	≤ 0.00005 %
NICKEL	≤ 0.000005 %

LEAD	$\leq 0.000002 \%$
STRONTIUM	$\leq 0.000001 \%$
TITANIUM	$\leq 0.000001 \%$
THALLIUM	$\leq 0.000005 \%$
VANADIUM	$\leq 0.000001 \%$
ZINC	$\leq 0.000005 \%$
ZIRCONIUM	$\leq 0.00001 \%$
CHLORIDE (CL)	$\leq 0.00005 \%$
PHOSPHATE (PO4)	$\leq 0.00005 \%$
SULFATE (SO4)	$\leq 0.00005 \%$
RECOMMENDED RETEST PERIOD	42 Months

Specification Sheet

SIGMA-ALDRICH

Product Name	Tetrahydrofuran, inhibitor-free, for HPLC, ≥99.9%
Product Number	34865
Product Brand	SIGALD
CAS Number	<u>109-99-9</u>
Molecular Weight	72.11

TEST**SPECIFICATION**

APPEARANCE (COLOR)	Colorless
APPEARANCE (FORM)	Liquid
COLOR (IN APHA)	≤ 10 APHA
TITRATABLE ACID	FREE ACID ≤ 0.002 % AS ACETIC ACID
PURITY (GC AREA %)	≥ 99.90 %
WATER (COULOMETR.)	≤ 0.05 %
RESIDUE (EVAPORATION)	≤ 0.0005 %
INFRARED SPECTRUM	CONFORMS TO STRUCTURE
UV-ABSORBANCE	≤ 0.005 AT 400NM
UV-ABSORBANCE	≤ 0.005 AT 350NM
UV-ABSORBANCE	≤ 0.0044 AT 315NM
UV-ABSORBANCE	≤ 0.02 AT 300NM
UV-ABSORBANCE	≤ 0.046 AT 275 NM
UV-ABSORBANCE	≤ 0.18 AT 250NM
UV-ABSORBANCE	≤ 0.26 AT 245NM
UV-ABSORBANCE	≤ 1.0 AT 212NM
PEROXIDES	≤ 0.05 % (AS H ₂ O ₂)
EXPIRATION DATE PERIOD	900 DAYS

Specification Sheet

SIGMA-ALDRICH

Product Name	2-Propanol, puriss. p.a., ACS reagent, reagent ISO, reagent Ph. Eur., ≥99.8% (GC)
Product Number	33539
Product Brand	SIGALD
CAS Number	<u>67-63-0</u>
Molecular Weight	60.10

TEST	SPECIFICATION
APPEARANCE (COLOR)	Colorless
APPEARANCE (FORM)	Liquid
COLOR (IN APHA)	≤ 10 APHA
TITRATABLE ACID	FREE ACID ≤ 0.00074 % AS C ₂ H ₅ COOH
TITRATABLE BASE	FREE ALKALI ≤ 0.00017 % AS NH ₃
PURITY (GC AREA %)	≥ 99.80 %
GC MINOR COMPONENT 1 (AREA %)	0.00 - 0.01 %
GC MINOR COMPONENT 2 (AREA %)	0.00 - 0.10 %
MINOR COMPONENT 1	ETHANOL
MINOR COMPONENT 2	METHANOL
DENSITY D ₂₀ /4	0.784 - 0.786
REFRACTIVE INDEX N ₂₀ /D	1.377 - 1.378
BOILING RANGE (ASTM)	81 - 83 DEG C
SOLUBILITY	IN WATER: PASSES TEST
WATER (COULOMETR.)	≤ 0.10 %
RESIDUE (EVAPORATION)	≤ 0.001 %
REDUCING SUBSTANCES	≤ 0.0005 % RMNO ₄ RED. MATTER (AS O)
PEROXIDES	≤ 0.00034 % AS H ₂ O ₂
ALUMINIUM (ICP)	≤ 0.50 ppm
BARIUM (ICP)	≤ 0.10 ppm
BISMUTH (ICP)	≤ 0.10 ppm
BORON (ICP)	≤ 0.02 ppm
CALCIUM (ICP)	≤ 0.50 ppm
CADMIUM (ICP)	≤ 0.05 ppm
COBALT (ICP)	≤ 0.02 ppm
CHROMIUM (ICP)	≤ 0.02 ppm
COPPER (ICP)	≤ 0.02 ppm
IRON (ICP)	≤ 0.10 ppm
POTASSIUM (ICP)	≤ 0.50 ppm
LITHIUM (ICP)	≤ 0.10 ppm
MAGNESIUM (ICP)	≤ 0.10 ppm
MANGANESE (ICP)	≤ 0.02 ppm
MOLYBDENUM (ICP)	≤ 0.10 ppm
SODIUM (ICP)	≤ 1.00 ppm
NICKEL (ICP)	≤ 0.02 ppm
LEAD (ICP)	≤ 0.10 ppm
TIN (ICP)	≤ 0.10 ppm

STRONTIUM (ICP) ≤ 0.10 ppm**ZINC (ICP)** ≤ 0.10 ppm**SUBSTANCES DARK BY H₂SO₄**

PASSES TEST

CARBONYL COMPOUNDS ≤ 0.002 % AS ACETONE AND PROPIONALDEHYDE**RECOMMENDED RETEST PERIOD**

36 MONTHS

Specification Sheet

SIGMA-ALDRICH

Product Name	Potassium chloride, puriss., meets analytical specification of Ph. Eur., BP, USP, FCC, E508, 99-100.5% (AT), ≤0.0001% AI
Product Number	12636
Product Brand	SIGALD
CAS Number	<u>7447-40-7</u>
Molecular Weight	74.55

TEST	SPECIFICATION
APPEARANCE (COLOR)	White
APPEARANCE (FORM)	Powder or Crystals
ARGENTOMETR. TITRATION	99.0 -100.5 % (calc. to the dried substance)
SOLUBILITY (COLOR)	complying
SOLUBILITY (TURBIDITY)	complying
SOLUBILITY (METHOD)	ACC. TO PH.EUR.
LOSS ON DRYING	≤ 0.5 %
PHARMACOPOEA TESTS	corresponds to requirements Identity passes test Acidity or Alkalinity complying Barium (Ba) complying Heavy Metals (as Pb) ≤ 5 mg/kg Magnesium, Earthalkalimetals (as Ca) ≤ 200 mg/kg Iodide (I) Test complying
Remarks on Pharmacopoea Test	
ALUMINIUM (ICP)	≤ 1 mg/kg
CALCIUM (ICP)	≤ 50 mg/kg
CADMIUM (ICP)	≤ 1 mg/kg
IRON (ICP)	≤ 10 mg/kg
MAGNESIUM (ICP)	≤ 50 mg/kg
SODIUM (ICP)	≤ 700 mg/kg
LEAD (ICP)	≤ 2 mg/kg
ARSENIC TRACES (MHS-AAS)	≤ 0.5 mg/kg
MERCURY TRACES (AFS)	≤ 1 mg/kg
TOTAL SULFUR AS SO ₄ (ICP)	≤ 100 mg/kg
BROMIDE (BR)	≤ 1000 mg/kg
IODIDE (I)	≤ 50 mg/kg
RESIDUAL SOLVENTS (GLC-HS)	COMPLYING
RECOMMENDED RETEST PERIOD	60 MONTHS