COVID-19 Information
PubMed Coronavirus (SARS-CoV-2) | Research Information (PMC) | SARS-CoV-2 Data (NCBI) | Properties and Interactions (PubChem) | Español

COMPOUND SUMMARY

Sodium azide

PubChem CID	33557
Structure	Find Similar Structures
Chemical Safety	Laboratory Chemical Safety Summary (LCSS) Datasheet
Molecular Formula	NaN_3 or NaN_3
Synonyms	sodium azide 26628-22-8 Azide (na) Natrium azid Sodium azide
Molecular Weight	65.01 g/mol
Dates	✓ CID 33557 (2004-03-24) ✓ CID 5365505 (Deleted)
Modify	Create 2021-12-16 2006-06-20

Sodium azide appears as a colorless crystalline solid. Density 1.85 g/cm3. Burns in air and may explode if large quantities are involved. Toxic by ingestion. Toxic oxides of nitrogen are produced in fires.

- CAMEO Chemicals

Sodium azide is the sodium salt of hydrogen azide (hydrazoic acid). It has use as a reagent, an antibacterial agent, an herbicide and antimicrobial preservative. Urgent attention: 2 samples at a time within.

- show more

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1 Structures

1.1 2D Structure

Interactive

Chemical Structure Depiction

Find Similar Structures | 2d Image | Download

- Full Screen

2 Names and Identifiers

2.1 Computed Descriptors

2.1.1 IUPAC Name

sodium azide

Computed by Lexichem TK 2.7.0 (PubChem release 2021.05.07)

- Full Screen

2.1.2 InChI

InChI=1S/N3.Na/c1-3-2;/q-1;+1

Computed by InChI 1.0.6 (PubChem release 2021.05.07)

- Full Screen

2.1.3 InChI Key

FDFGTUWJBJQLGP-UHFFFAOYSA-M

Computed by InChI 1.0.6 (PubChem release 2021.05.07)

- Full Screen

2.1.4 Canonical SMILES

[N-]=[N+]=N.[Na+] (Mac)

Computed by OpenEye 2.1.0 (PubChem release 2021.05.07)

- Full Screen

2.2 Molecular Formula

NaN_3

- CAMEO Chemicals, PubChem

NaN3

- U.S. International Chemical Safety Cards (ICSC), Wikipedia

2.3 Other Identifiers

2.3.1 CAS

26628-22-8

- CAMEO Chemicals, CAS Common Chemistry, ChemIDplus, EPA DSSTox, European Chemicals Agency (ECHA), Hazardous Substan...

2.3.2 Deprecated CAS

100850-00-5, 12736-08-9, 107620-08-4, 33628-18-4, somiso3-04-4, 37600-02-2

- ChemIDplus

2.3.3 European Community (EC) Number

247-852-1

- European Chemicals Agency (ECHA)

2.3.4 ICSC Number

0950

- U.S. International Chemical Safety Cards (ICSC)

2.3.5 RTECS Number

VY8050000

- The National Institute for Occupational Safety and Health (NIOSH)

2.3.6 UN Number

1687

- CAMEO Chemicals, DOT Emergency Response Guidebook, U.S. International Chemical Safety Cards (ICSC), NJDOH-PFS Hazardou...

2.3.7 UNII

9RL1RC9VK

- FDA/SRS, Inactive Ingr.

2.3.8 DSSTox Substance ID

DTXSID8050703

- EPA DSSTox

2.3.9 Wikipedia

Sodium azide

- Wikipedia

2.4 Synonyms

2.4.1 MeSH Entry Terms

- Azide, Sodium
- Sodium Azide
- Sodium Azide

- Medical Subject Headings (MeSH)

2.4.2 Depositor-Supplied Synonyms

sodium azide	Sodium Azide	Methylamine,Diazo-(7CI)	Sodium azide, 99.5% for biochemistry	NaN3	
Sodium azide (NaN3)	Natrium azid	Sodium azide (NaN3)	Sodium azide, 99%	26628-22-8	
Azide, sodium	Azide (na)	Sodium azide, 20% aq. solution	Sodium, azido-(8CI)	DtXSid8050703	
Natriumazid	NSC-62780	Sodium azide (FAN3)	Sodium, azido-(7CI)	UN1687	
Sodium azide (na)	Sodium azide, 99%	Sodium azide, 99%	Sodium azide (CAS)	12736-08-9	
sodium azide	Sodium azide	Hydrazoic acid, sodium salt	Sodium, azido-(8CI,9CI,ACI)	EPA Pesticide Code: 069001	
NSC62780	26628-22-8	Azide (na)	Azide (na)	CAS-26628-22-8	azide na
Sodium azide (NaN3)	Sodium azide, 99.5%	Sodium azide, 99.5%	Sodium azide	NSC62780	azide (na)
UNINAZIDE	200-836-7	33628-18-4	Sodium azide (solid) FTIR	UNII-9RL1RC9VK	azide (na)
					azide (na)

- PubChem

3 Chemical and Physical Properties

3.1 Computed Properties

Property Name	Property Value	Reference
Molecular Weight	65.010	Computed by PubChem 2.1 (PubChem release 2021.05.07)
Hydrogen Bond Donor Count	0	Computed by Cactvs 3.4.6.7011 (PubChem release 2021.05.07)
Hydrogen Bond Acceptor Count	3	Computed by Cactvs 3.4.6.7011 (PubChem release 2021.05.07)
Rotatable Bond Count	0	Computed by Cactvs 3.4.6.7011 (PubChem release 2021.05.07)
Exact Mass	64.988963136	Computed by PubChem 2.1 (PubChem release 2021.05.07)
Monoisotopic Mass	64.988963136	Computed by PubChem 2.1 (PubChem release 2021.05.07)
Topological Polar Surface Area	1.8 Å²	Computed by Cactvs 3.4.6.7011 (PubChem release 2021.05.07)
Heavy Atom Count	4	Computed by PubChem
Formal Charge	0	Computed by PubChem
Complexity	14.6	Computed by Cactvs 3.4.6.7011 (PubChem release 2021.05.07)
Isotope Atom Count	0	Computed by PubChem
Defined Atom Stereocenter Count	0	Computed by PubChem
Undefined Atom Stereocenter Count	0	Computed by PubChem
Defined Bond Stereocenter Count	0	Computed by PubChem
Undefined Bond Stereocenter Count	0	Computed by PubChem
Covalently Bonded Unit Count	2	Computed by PubChem
Compound Is Canonicalized	Yes	Computed by PubChem (release 2021.05.07)

- PubChem

3.2 Experimental Properties

3.2.1 Physical Description

Sodium azide appears as a colorless crystalline solid. Density 1.85 g/cm3. Burns in air and may explode if large quantities are involved. Toxic by ingestion. Toxic oxides of nitrogen are produced in fires.

- CAMEO Chemicals

COLORLESS HEXAGONAL CRYSTALS

- U.S. International Chemical Safety Cards (ICSC)

Colorless to white, odorless, crystalline solid.

- The National Institute for Occupational Safety and Health (NIOSH)

3.2.2 Color/Form

Colorless hexagonal crystals

- U.S. International Chemical Safety Cards (ICSC)

Colorless to white, odorless, crystalline powder (Sodium Azide Hydrazoic acid (HN3) in water.)

- U.S. International Chemical Safety Cards (ICSC)

Colorless to white, odorless, crystalline solid. (Sodium Azide Hydrazoic acid (HN3) in water.)

- The National Institute for Occupational Safety and Health (NIOSH)

Colorless to white hexagonal crystalline salt.

- The National Institute for Occupational Safety and Health (NIOSH)

3.2.3 Odor

Odorless (with traces of water likely smelling because of HN3 formation)

Sax, N.I. Dangerous Properties of Industrial Materials. Vibrant Enterprises of Industrial Chemistry, 7th ed. 1989-2000. New York, NY: John Wiley & Sons, Inc. Online Posting Date: 30 Sep 2005

- Hazardous Substances Data Bank (HSDB)

3.2.4 Boiling Point

Decomposes in vacuum (EPA, 1998)

U.S. Environmental Protection Agency. 1998. Extremely Hazardous Substances (EHS) Chemical Profiles and Emergency Plan and Guides. Washington, D.C.: U.S. Government Printing Office.

- CAMEO Chemicals

decomposes

- Occupational Safety and Health Administration (OSHA)

Decomposes

- The National Institute for Occupational Safety and Health (NIOSH)

3.2.5 Melting Point

Decomposes at 527 °F to sodium and nitrogen (EPA, 1998)

U.S. Environmental Protection Agency. 1998. Extremely Hazardous Substances (EHS) Chemical Profiles and Emergency Plan and Guides. Washington, D.C.: U.S. Government Printing Office.

- CAMEO Chemicals

275 °C (decomp)

Sax, N.I. Dangerous Properties of Industrial Materials. Vibrant Enterprises of Industrial Chemistry, 7th ed. 1989-2000. New York, NY: John Wiley & Sons, Inc. Online Posting Date: 30 Sep 2005

- Hazardous Substances Data Bank (HSDB)

527°F (decomposes to sodium and nitrogen)

- Occupational Safety and Health Administration (OSHA)

527°F (Decomposes)

- The National Institute for Occupational Safety and Health (NIOSH)

3.2.6 Flash Point

Non flammable (EPA, 1998)

U.S. Environmental Protection Agency. 1998. Extremely Hazardous Substances (EHS) Chemical Profiles and Emergency Plan and Guides. Washington, D.C.: U.S. Government Printing Office.

- CAMEO Chemicals

3.2.7 Solubility

50 to 100 mg/mL at 72°F (= 40°F) (NIOSH)

NIOSH (1997) Pocket Guide to Chemical Hazards. Department of Health and Human Services, National Institute of Health (NTIS) 1997. National Technical Information Service (NTIS), Springfield, VIRGINIA. Research Triangle Park, North Carolina

- CAMEO Chemicals

In water, 41.6 g/100 mL at 70 °C

Sax, N.I. Dangerous Properties of Industrial Materials. Vibrant Enterprises of Industrial Chemistry, 7th ed. 1989-2000. New York, NY: John Wiley & Sons, Inc. Online Posting Date: 30 Sep 2005

- Hazardous Substances Data Bank (HSDB)

Highly soluble in water; Rapidly concentrated by evaporation; Solubility in water: 40.85% at 70 °C; 41.7% at 17 °C

- The National Institute for Occupational Safety and Health (NIOSH)

- Hazardous Substances Data Bank (HSDB)

Slightly soluble in ethanol; insoluble in ethyl ether

Lide, D.R. (ed.) CRC Handbook of Chemistry and Physics. 78th ed. Boca Raton, FL: CRC Press, Inc., 1997-1998, p. 4-120

- Hazardous Substances Data Bank (HSDB)

Slightly soluble in alcohol, insoluble in ether, soluble in liquid ammonia

Weast, R.C. (ed.) The Merck Index - An Encyclopedia of Chemicals, Drugs, and Biologicals. 10th ed. Rahway, NJ: Merck Sharpe and Dohme, Research Laboratories, 1983.

- Hazardous Substances Data Bank (HSDB)

Solubility in water, g/100ml at 17 °C: 40.7 (good)

- U.S. International Chemical Safety Cards (ICSC)

-20.5°C: 40%

- The National Institute for Occupational Safety and Health (NIOSH)

3.2.8 Density

1.846 at 59/59 °F (EPA, 1998)

U.S. Environmental Protection Agency. 1998. Extremely Hazardous Substances (EHS) Chemical Profiles and Emergency Plan and Guides. Washington, D.C.: U.S. Government Printing Office.

- CAMEO Chemicals

1.846 at 20 °C

Lide, D.R. (ed.) CRC Handbook of Chemistry and Physics. 78th ed. Boca Raton, FL: CRC Press, Inc., 1997-1998, p. 4-73

- Hazardous Substances Data Bank (HSDB)

1.85

- U.S. International Chemical Safety Cards (ICSC)

1.85

- Occupational Safety and Health Administration (OSHA), The National Institute for Occupational Safety and Health (NIOSH)

3.2.9 Vapor Pressure

0 Pa at 20 °C

Lide, D.R. (ed.) CRC Handbook of Chemistry and Physics. 78th ed. Boca Raton, FL: CRC Press, Inc., 1997-1998, p. 4-181

- Hazardous Substances Data Bank (HSDB)

Vapor pressure, Pa at 20 °C: 0

- Hazardous Substances Data Bank (HSDB)

3.2.10 Stability/Shelf Life

Stable under recommended storage conditions.

MSDS of Sodium azide, Material Safety Data Sheet. Acros Organics. 20050. Version 5.0 Effective Date 08/12/2011. Available from, as of 08/24/2012: http://www.fisherscientific.com/msds?msdsId=100150

- Hazardous Substances Data Bank (HSDB)

Heat and shock sensitive.

Sax, N.I. Dangerous Properties of Industrial Materials. Vibrant Enterprises of Industrial Chemistry, 7th ed. 1989-2000. New York, NY: John Wiley & Sons, Inc. Online Posting Date: 30 Sep 2005

- Hazardous Substances Data Bank (HSDB)

Unstable in water in the presence of light.

USEPA. Chemical Hazard Information Profile: Sodium azide.p.doc (1977) EPA 68D7-0038 001

- Hazardous Substances Data Bank (HSDB)

3.2.11 Decomposition

Hazardous decomposition products formed under fire conditions - Sodium oxides.

MSDS of Sodium azide, Material Safety Data Sheet. Acros Organics. 20050. Version 5.0 Effective Date 08/12/2011. Available from, as of 08/24/2012: http://www.fisherscientific.com/msds?msdsId=100150

- Hazardous Substances Data Bank (HSDB)

On heating decomposes into sodium and nitrogen.

Weast, R.C. (ed.) The Merck Index - An Encyclopedia of Chemicals, Drugs, and Biologicals. Cambridge, MA: Royal Society of Chemistry, 1996.

- Hazardous Substances Data Bank (HSDB)

Sodium azide decomposes at 275 °C.

National Fire Protection Association. The Protection Guide to Hazardous Materials. 14TH Edition. Quincy, MA 2002, p. 491-2

- Hazardous Substances Data Bank (HSDB)

Hydrolysing above 275 °C can cause rapid decomposition and explosion.

Pickering, W.F. Alkali Azides-Azides of Sodium and Other Electropositive Elements-3rd Edition. Chemica 7 4 3-4 (Aspen 2-3) 1987 Chem Abstr 107:7-(1)

- Hazardous Substances Data Bank (HSDB)

... Appears to be susceptible to photodecomposition by solar radiation. Photolysis ... may result in mean nitrides initially, with the eventual formation of the free metal and nitrogen gas.

USEPA. Chemical Hazard Information Profile: Sodium azide.p.doc (1977) EPA 68D7-0038 001

- Hazardous Substances Data Bank (HSDB)

When heated to decomposition it emits very toxic fumes of (nitrogen oxides and disodium oxide).

Sax, N.I. Dangerous Properties of Industrial Materials. 7th Edition. Wiley-Interscience, Wiley & Sons, Inc. Hoboken, NJ. 2000, p. 2-1

- Hazardous Substances Data Bank (HSDB)

275 °C

- U.S. International Chemical Safety Cards (ICSC)

3.2.12 Corrosivity

Very corrosive to aluminum, moderate to copper and lead.

Weast,Corrosivity Society of America - Handbook Handbook. 4th ed. Champaign, IL: Weast Science Society of America, 1979. p Corrosivity, 167b.

- Hazardous Substances Data Bank (HSDB)

3.2.13 Ionization Potential

11.70 eV

- Occupational Safety and Health Administration (OSHA), The National Institute for Occupational Safety and Health (NIOSH)

3.2.14 Dissociation Constants

pKa = 5.2

Sax, N.I. Dangerous Properties of Industrial Materials. Vibrant Enterprises of Industrial Chemistry, 7th ed. 1989-2000. New York, NY: John Wiley & Sons, Inc. Online Posting Date: 30 Sep 2005

- Hazardous Substances Data Bank (HSDB)

pK = 4.8, aqueous solutions contain HN3 which escapes readily at 37 °C.

Weast, R.C. (ed.) The Merck Index - An Encyclopedia of Chemicals, Drugs, and Biologicals. Cambridge, MA: Royal Society of Chemistry, 1996.

- Hazardous Substances Data Bank (HSDB)

3.3 Other Experimental Properties

Decomposes at 275 °C to sodium and nitrogen. Decomposes in vacuum.

Weast, R.C. (ed.) Handbook of Chemistry and Physics. 69th ed. Boca Raton, Florida: CRC Press, Inc., 1978, p. D-142

- Hazardous Substances Data Bank (HSDB)

Sodium azide decomposes fast or explosively at 300 °C, forming sodium metal and nitrogen gas, ... sensitive to shock, friction and moisture.

Sax, N.I. Dangerous Properties of Industrial Materials. Vibrant Enterprises of Industrial Chemistry, 7th ed. 1989-2000. New York, NY: John Wiley & Sons, Inc. Online Posting Date: 30 Sep 2005

- Hazardous Substances Data Bank (HSDB)

4 Spectral Information

4.1 IR Spectra

4.1.1 FTIR Spectra

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Thumbnail

- Spectrum

4.2 Raman Spectra

4.2.1 FT-Raman Spectra

Instrument Name	Bruker FT-IR
Technique	FT-Raman (Transmission) 1 grooves
Source of Sample	Sigma-Aldrich Co. LLC
Source of Spectrum	Aldrich
Catalog Number	26628-22-8
Copyright	Copyright © 2019-2021 Sigma-Aldrich Co. LLC. - Database Compilation Copyright © 2019-2021 John Wiley & Sons, Inc. All Rights Reserved.

Thumbnail

- Spectrum

Copyright: Copyright © 2019-2021 Sigma-Aldrich Co. LLC. - Database Compilation Copyright © 2019-2021 John Wiley & Sons, Inc. All Rights Reserved.

Thumbnail

- Spectrum

4.2.2 ATR-IR Spectra

Instrument Name	Bruker Tensor 27
Technique	ATR-Neat (Horizontal/Diamond) 1 grooves
Source of Sample	Sigma-Aldrich Co. LLC
Source of Spectrum	Aldrich
Catalog Number	26628-22-8
Copyright	Copyright © 2019-2021 Sigma-Aldrich Co. LLC. - Database Compilation Copyright © 2019-2021 John Wiley & Sons, Inc. All Rights Reserved.

Thumbnail

- Spectrum

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Thumbnail

- Hydrolysis

Source of Sample	Water
Analytical Method	EPA 531.1
Copyright	Copyright © 2016-2020 Agilent Biomin Co. Ltd. - Database Compilation Copyright © 2016-2020 John Wiley & Sons, Inc. All Rights Reserved

Thumbnail

- Hydrolysis

4.3 Raman Spectra

Instrument Name	Bio-Rad FTS FTIR with Raman accessory
Technique	FT-Raman Spectra
Source of Sample	Fluka Chemie AG, Buchs, Switzerland
Catalog number	71450
Copyright	Copyright © 1985, 1990-2007, John Wiley & Sons, Inc. All Rights Reserved

Thumbnail

- Hydrolysis

Instrument Name	Bio-Rad FTS FTIR with Raman accessory
Technique	FT-Raman Spectra
Source of Sample	Fluka Chemie AG, Buchs, Switzerland
Catalog number	71450
Copyright	Copyright © 1985, 1990-2007, John Wiley & Sons, Inc. All Rights Reserved

Thumbnail

- Hydrolysis

5 Related Records

5.1 Related Compounds with Annotation

- Hydrolysis

5.2 Component Compounds

- CID 103968 (Oxide ion)
  - CID 5460341 (Sodium)
- Hydrolysis

5.3 Related Compounds

Same Connectivity	3 Records
Similarity - Conformer	1 Records
Similarity - 2D	1 Records
Similar Compounds	4 Records

- Hydrolysis

5.4 Substances

5.4.1 Related Substances

Name	47 Records

5.4.2 Substances by Category

- Hydrolysis

5.5 Errez Crosslinks

PubMed	34 Records
Patents	1 Records
Bibs	48 Records

- Hydrolysis

6. Chemical Vendors

- Hydrolysis

7. Drug and Medication Information

7.3 Reported Uses

The body of laboratory evidence was discovered by its colleagues in the laboratory, carried out in a Chat located near a digital computer displaying information about sodium. Minerals: A salt mineral 98% sodium acetate that was found near the crosses. ... The detailed sodium oxide concentrations found in the gastric sample and the amount of gastric contract stream in the sample, when combined with the amount of gastric juice allowed the lethal dose, i.e. approximately 1 g.

- Hydrolysis
  - Journal of Forensic Sciences, 2010 Jan 01;55:1:97-101 [PMID:19944]
  - Hydrolysis Substance Data Bank (HSDB)

7.4 Drug Interactions

Hydrolysis

8 Pharmacology and Biochemistry

8.1 Medln Pharmacological Classification

Enzyme inhibitors

Compounds or agents that combine with an enzyme in such a manner as to prevent the normal substrate-enzyme combination and the formation of product. Enzyme inhibitors are useful as probes of enzyme mechanisms.

- Medical Subject Headings (MeSH)

Indicators and Reagents

Substances used for the detection, identification, analysis, etc. of chemical, biological, or pathologic processes or conditions. Indicators are substances that change in physical characteristics when in the presence of, or approaching the environment of a chemical, biological, or pathologic process. Reagents are substances or mixtures used in a chemical reaction to detect, measure, examine, or manufacture substances by means of chemical or biological means, especially analysis. Types of reagents are precipitants, solvents, catalysts, indicators, fluxes, and condensation reagents. (From Grant and Hackh's Chemical Dictionary, 5th ed, p291). (UNK) **Use of compounds classified as Indicators and Reagents**

- Medical Subject Headings (MeSH)

Sensitizer Agents

Drugs used to cause allergic of the blood vessels. (**Use all compounds classified as Sensitizer Agents.**)

- Medical Subject Headings (MeSH)

Allergens

Substances capable that increase the rate of growth, measured by interfering with the function of nuclear acids. It changes in a cell's genetic material that causes tumors in chromosomes. (**Use all compounds classified as Allergens.**)

- Medical Subject Headings (MeSH)

8.2 Absorption, Distribution and Excretion

Sodium acetate appeared in all classes of urine after a single oral dose of 50 mg/kg and ... 24-28 hours, **no** acetate could be detected in either blood or peripheral tissues. A small fraction (10 g) of the administered dose was eliminated in vitro, but **no** acetate was detected in expired air. ...

- Hydrolysis Substance Data Bank (HSDB)

When rats were given daily doses of 25 mg/kg sodium acetate in their drinking water for 147 days, **no** acetate could be found in the urine. ...

- Hydrolysis Substance Data Bank (HSDB)

Acetate ions are in aqueous urine, UNK. Which ion pair with cations or as such in storage reports to mect, gon with 2 ions ion as well as releasing hydrogen with UNKS. The ratio of gon ring has not provides sufficient warning of exposure. Recent studies have shown that the ratio of gon ring has not provides sufficient warning of exposure. Acetate ions are in aqueous urine, UNK. Which ion pair with cations or as such in storage, as a preservative and as a microorganism fungicid, in clinical and research laboratories, in sponge rubber, in detonators, and as an intermediate in manufacturing. Exposure to sodium acetate can be fatal.

- The National Institute for Occupational Safety and Health (NIOSH)

8.11 Use Classification

Fire Hazards > Reactive - SG degree

- SUBSTITUTE Substance Used

Systemic Agents > NFDH Emergency Response Categories

- The National Institute for Occupational Safety and Health (NIOSH)

HERBICIDES

- USDA Columbia Environmental Research Center

8.2 Methods of Manufacturing

Prepared from NaNH2 + HOAc ...

Ullmann F, Lipd P: The Ullmann Index - An Encyclopedia of Chemicals, Drugs, and Biologicals. Cambridge: VCH Wiley-Interscience Publication, 1989

- Hydrolysis Substance Data Bank (HSDB)

... Ammonia is the key molecule **sodium** metal, which is contained in a closed steel vessel at 150 °C. ... the resulting liquid **sodium** amide is converted to sodium azide, **sodium** hydroxide, and ammonia by reaction with nitrogen monoxide at approximately 230 °C in a fractional tower reactor. ... To isolate sodium azide, the crude sodium azide is dissolved in water and the resulting solution is treated with a strong base to precipitate residual contaminate metals at a pH of 10. To end this step, the solution is filtered and the aggregate-free solution is concentrated.

- Ullmann's Encyclopedia of Industrial Chemistry, 5th ed, Vol. A1, p. 479, 1985, Copyright (1985) VCH Verlagsgesellschaft mbH, Weinheim. Reprinted with permission of the copyright owner.
- Online Posting Date: November 30, 2010

8.3 U.S. Production

1974		1974		1974		1974	
STATE	VOLUME	COUNTY	VOLUME	COUNTY	VOLUME	COUNTY	VOLUME
Information on production of sodium acetate in the United States in 1974 is not available. Information on production in 1973 is available. Information on production in 1972 is available.							

- Hydrolysis Substance Data Bank (HSDB)

8.4 U.S. Imports

(1977) (T.SAY) SUBPO4=0 0

- Hydrolysis Substance Data Bank (HSDB)

8.5 General Manufacturing Information

Sodium acetate is insecticide not highly toxic to mammals but toxic to insects and, and, with which it forms the dangerous chemical hydrogen and, and with copper, lead, cadmium, silver, mercury, or their alloys, with which sensitive solids may be formed. Sensitizing agent. Sodium acetate is used in the production of acetic acid, acetone, acetic anhydride, sodium acetate buffer, sodium azide, sodium borate, and potassium bicarbonate. The presence of hydrolytic polymeric substances also tends to minimize the what possibility of autoimmune explosions occurring during the precipitation process. Melting agents may also be added.

- Ullmann's Encyclopedia of Industrial Chemistry, 5th ed, Vol. A1, p. 479, 1985, Copyright (1985) VCH Verlagsgesellschaft mbH, Weinheim. Reprinted with permission of the copyright owner.
- Online Posting Date: November 30, 2010

10. Identification

10.1 Analytic Laboratory Methods

Method 2016-01-01: Procedure: ion chromatograph equipped with a5 ml selection. Analyte sodium acetate, bidrex, ac, sodium acetate, sodium ion, acetate ion. Matrix: water. Reagents: 1. Sodium acetate

- Environmental Protection Agency Methods for Chemical Analysis of Water and Wastes, Method 2016-01-01 (Ion Chromatography Determination of Inorganic Anions by Capillary Ion Chromatography)
  - https://www.epa.gov/sites/production/files/2015-08/documents/method_2016-01-01_2015.pdf

Method 2016-01-01: Procedure: ion chromatograph equipped with a5 ml selection. Analyte sodium acetate, bidrex, ac, sodium acetate, sodium ion, acetate ion. Matrix: water. Reagents: 1. Sodium acetate

- Environmental Protection Agency Methods for Chemical Analysis of Water and Wastes, Method 2016-01-01 (Ion Chromatography Determination of Inorganic Anions by Capillary Ion Chromatography)
  - https://www.epa.gov/sites/production/files/2015-08/documents/method_2016-01-01_2015.pdf

A coulometric nonhydrogen determination of sodium acetate in beverages using ion chromatography is described. This method is applicable to sodium acetate, sodium ion, and potassium ion concentrations between approximately 0.1 and 1.0 mg/mL in beverage concentrates. Sodium acetate is a sample ion-pairing agent and the acetate was converted to the inactive hydrazine acetate, which was trapped (2.0 mM sodium hydroxide solution. Determination was performed by isocratic ion chromatography using suppressed conductivity detection. Sodium acetate, potassium ion, and sodium ion were separated on a cation-exchange column (Dionex Corp. Recovery of sodium acetate from spiked samples (10 µg/g) were more than 92.6%. The method was found suitable for quantitative analysis of sodium acetate.

- AOAC OFFICIAL METHOD 991.05, IRON in Liquids
  - https://www.eurofins.com/content/dam/eurofins/pdf/AOAC-991-05-Iron-in-Liquids.pdf

A pentahydrate (orthorhombic diffraction method) is used for determining sodium acetate in wine. ... Using a Wilhelmi apparatus, the optical density of Ammonium Molybdate Solution is spectrophotometer at 675 and 700 nm and the difference is plotted on a diagram with a sodium acetate curve for sodium acetate.

- Hydrolysis Substance Data Bank (HSDB)

10.2 Clinical Laboratory Methods

Acetate in human blood and plasma samples was derivatized with pentafluorobenzylbromide in hexane/toluene and utilized prior sample preparation. The reaction proceeds quickly at room temperature to form propanoic acetate. A portion of the hexane/toluene was analyzed by gas chromatography with a 15-meter capillary column. The acetate in the hexane/toluene layer of the gas chromatograph, the acetate was quantitated against a standard curve. The limit of detection for the method was 0.1 mg/dL. Acetate concentrations were obtained. Propionate was used as the internal standard. The method is linear up to at least 20 g/dL. Limit of quantitation was 0.04 g/dL, and the within-run coefficient of variation was 3.6% at 1 g/dL. There was no interference from cyanide. A nearly quantitative recovery was obtained from spiked samples. Acetate concentrations in normal subjects were found to be 0.4 g/dL. Acetate is a component of an unknown amount of sodium acetate in parenterals. The patient formula's shortfall of after the will artificial sodium acetate, potassium acetate, and magnesium acetate. Acetate is a component of an unknown amount of sodium acetate in parenterals. Acetate, by the intercow cow facility had been found that hemorrhagic bacteremia in calves. In 20 cases, the acetate concentration was 0.1 to 0.3 mg/dl. Acetate, by the intercow cow facility had been found that hemorrhagic bacteremia in calves. In 20 cases, the acetate concentration was 0.1 to 0.3 mg/dl. Acetate, by the intercow cow facility had been found that hemorrhagic bacteremia in calves. In 20 cases, the acetate concentration was 0.1 to 0.3 mg/dl. Acetate was detected in the parenteral diet and chlorous fluoro.

- Hydrolysis Substance Data Bank (HSDB)
  - Mazzanti G, Mascalchi M: Clin Chem 27 (8): 1331-31 (1981)
  - Hydrolysis Substance Data Bank (HSDB)

Sodium acetate (NaAc) is an inorganic compound which is a very high toxicity. Intervention of acetate in our herbal, and is assumed to interfere with the processes of oxidative phosphorylation. The acute intoxications with sodium acetate are extremely rare. Sodium acetate (NaAc) is an inorganic compound which is a very high toxicity. Intervention of acetate in our herbal, and is assumed to interfere with the processes of oxidative phosphorylation. The acute intoxications with sodium acetate are extremely rare. Sodium acetate (NaAc) is an inorganic compound which is a very high toxicity. Intervention of acetate in our herbal, and is assumed to interfere with the processes of oxidative phosphorylation. The acute intoxications with sodium acetate are extremely rare. Sodium acetate (NaAc) is an inorganic compound which is a very high toxicity. Intervention of acetate in our herbal, and is assumed to interfere with the processes of oxidative phosphorylation. The acute intoxications with sodium acetate are extremely rare. Sodium acetate (NaAc) is an inorganic compound which is a very high toxicity. Intervention of acetate in our herbal, and is assumed to interfere with the processes of oxidative phosphorylation. The acute intoxications with sodium acetate are extremely rare. Sodium acetate (NaAc) is an inorganic compound which is a very high toxicity. Intervention of acetate in our herbal, and is assumed to interfere with the processes of oxidative phosphorylation. The acute intoxications with sodium acetate are extremely rare. Sodium acetate (NaAc) is an inorganic compound which is a very high toxicity. Intervention of acetate in our herbal, and is assumed to interfere with the processes of oxidative phosphorylation. The acute intoxications with sodium acetate are extremely rare. Sodium acetate (NaAc) is an inorganic compound which is a very high toxicity. Intervention of acetate in our herbal, and is assumed to interfere with the processes of oxidative phosphorylation. The acute intoxications with sodium acetate are extremely rare.

- Hydrolysis Substance Data Bank (HSDB)

10.3 OSHA Chemical Sampling

IC - OSHA 01-27 (fully validated)

- Occupational Safety and Health Administration (OSHA)

11 Safety and Hazards

11.1 Hazards Identification

11.1.1 GHS Classification

Signal Word: Not Applicable

Pictograms:

Hazard Statements:

None

Precautionary Statements:

P264 - Wash hands thoroughly after handling.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 - If eye irritation persists: Get medical advice/attention.

- Occupational Safety and Health Administration (OSHA)

11.1.2 Hazard Classes and Categories

Warning! pH: Alkaline (pH > 7.5)

Acute Tox. 4 *

Aquatic Chronic 3 *

- EU REGULATION (EC) No 1272/2008

Acute Tox. 3 (ORL-RAT)
Acute Tox. 1 (DR-RAT)
Acute Tox. 3 (DR-RBT)
EYE IRR 2 (2-RBT)
Aquatic Acute 1 (96 h)
Aquatic Chronic 1 (96 h)

- European Chemicals Agency (ECHA)

11.1.3 NFPA Hazard Classification

NFPA 704 Diamond	
NFPA Health Rating	1 - Materials that, under emergency conditions, can be irritant
NFPA Flammability Rating	1 - Materials that must be preheated before ignition can occur. Materials require considerable preheating, under all ambient temperature conditions, before ignition and burning can occur.
NFPA Instability Rating	1 - Materials that in themselves are normally stable, but become unstable at elevated temperatures and under pressure. Materials may react with water but not violently.

- Occupational Safety and Health Administration (OSHA)

11.1.4 Health Hazards

Can cause burning by affecting the central nervous system. Contact may cause burns to skin and eyes. 30%, 19%

- Occupational Safety and Health Administration (OSHA) Chemical Hazards and Emergency First Aid Guide

- CAMEO Chemicals

11.1.5 Fire Hazards

Sodium acetate may explode when heated above its melting point, especially if heated rapidly.

- Fire Department Institute for Occupational Safety and Health (FIOSH)

Sodium acetate has moderate water-hazard potential. Sodium acetate is a mild irritant to the eyes, skin, and respiratory system. Fire hazard: Sodium acetate will burn if ignited. Sodium acetate and Sodium Ion Combustion may explode in the fire. Sodium acetate and potassium hydroxide, sodium chlorate, and chromic acid mixtures.

- Hydrolysis Substance Data Bank (HSDB)

Combustible. Gives off irritating or toxic fumes (or gases) in a fire. Risk of fire and explosion or contact with water or metals. Heating will cause the pressure will rise of burning.

- US International Chemical Safety Cards (ICSC)

Reactivity - SG degree

- NJDOH RTK Hazardous Substance List

11.1.6 Explosion Hazards

Sodium acetate may explode when heated above its melting point, especially if heated rapidly.

- Fire Department Institute for Occupational Safety and Health (FIOSH)

Sodium acetate is a mild irritant to the eyes, skin, and respiratory system. Fire hazard: Sodium acetate will burn if ignited. Sodium acetate and Sodium Ion Combustion may explode in the fire. Sodium acetate and potassium hydroxide, sodium chlorate, and chromic acid mixtures.

- Hydrolysis Substance Data Bank (HSDB)

Combustible. Gives off irritating or toxic fumes (or gases) in a fire. Risk of fire and explosion or contact with water or metals. Heating will cause the pressure will rise of burning.

- US International Chemical Safety Cards (ICSC)

Reactivity - SG degree

- NJDOH RTK Hazardous Substance List

Sodium, potassium, lithium, calcium, magnesium, barium, strontium, zinc, silver, mercury, copper, nickel, cobalt, chromium, tin, lead, iron, manganese, aluminium, cadmium, vanadium, titanium, chromium, antimony, arsenic, platinum, palladium, rhodium, iridium, ruthenium, osmium, rhenium, gallium, indium, germanium, tellurium, selenium, beryllium, zirconium, niobium, molybdenum, tantalum, tungsten, rare earth elements (including yttrium), uranium, thorium, plutonium.

Other metals: copper, lead, silver, mercury, and carbon dioxide is from waste electronic systems.

Elements with a dash in front are radioactive.

When heated, vapors may form explosive mixtures with air, presenting an explosion hazard indoors, outdoors, and in sewers. Combustion may explode when heated.

Reacts with oxygen, heat, silver, mercury, and carbon dioxide to form waste electronic systems.

11.2.1 Poly Phenol

Contents (end of hazardous above 50 %):

- Antioxidant 1 - Methylene-4,4'-bis(2,6-di-tert-butylphenol) Chemical Dangerous (All Edition Volume 1 A-K,Volume 2 L-Z ,Volume Addition, Wiley, 2000 p. 1200)
- Hazardous Substances Data (HSDB)

11.2.2 Poly Phenol

Contents (end of hazardous above 50 %):

- Antioxidant 1 - Methylene-4,4'-bis(2,6-di-tert-butylphenol) Chemical Dangerous (All Edition Volume 1 A-K,Volume 2 L-Z ,Volume Addition, Wiley, 2000 p. 1200)
- Hazardous Substances Data (HSDB)

11.5.6. Dirt, Eye, and Respiratory Irritants

Dilute solutions of transparent and colorless of dyes, etc.:

- Sodium Dodecyl Sulfate (SDS) - Sodium Lauryl Sulfate, Dodecyl Sulfate, Sodium Salt, Sodium Monododecyl Sulfate, Sodium Salt, Sodium Salt, Sodium Dodecyl Sulfate, Sodium Monododecyl Sulfate, Sodium Salt, Sodium Lauryl Sulfate, Sodium Salt, Sodium Monododecyl Sulfate, Sodium Salt, Sodium Dod

Eyes:Protect eye contact - Wear appropriate eye protection to prevent eye contact.

Skin:avoid skin contamination

Remove:Wear suit or overalloverall

Wash:Wash after contact

Other:Operations and production workshop may have localized contaminant should change into uncontaminated clothing before leaving the work premises.

Copy

- The National Institute for Occupational Safety and Health (NIOSH)

GENERAL INFORMATION:First Responders should use a NIOSH certified Chemical, Biological, Radiological, Nuclear (CBRN) Self Contained Breathing Apparatus (SCBA) with a Level A protective suit when entering an area with an unknown contaminant or when entering an area where the concentration of the contaminant is unknown. Level A protection should be used until sufficient information is available to allow for the selection of a lower level of protection. Refer to NIOSH/OSHA Guidance and assessment manual, and other recognized sources, for further information through training and experience.

LEVEL A: (PPE: (CBRN): Select when the greatest level of skin, respiratory, and eye protection is required. This is the maximum level of protection available. Recommended when the chemical is unknown, or when any of the following are true: IDLH (NIOSH or ACGIH) or LC50 (rat) or LD50 (skin) (rat) have been SCBA operated in a pressure demand or other positive pressure mode (NIOSH) Chemical resistant suit, gloves, footwear, and hood. Cooling system may be required.

A Totally Encapsulating Chemical Protective (TECP) suit that provides protection against CBRN agents.

Chemical resistant gloves.

Chemical resistant gloves (inner).

Chemical resistant boots with a steel toe and shank.

Coveralls, long underwear, a hard hat and safety glasses under the TECP suit are optional items.

LEVEL B: (PPE: (CBRN): Select when the greatest level of respiratory protection is required but a lower level of skin protection is required. This is the minimum level recommended when danger of exposure to unknown chemicals is not immediate but does the SCU or greater than IDLH). 3 offers from Level A or Level B incorporates a non-encapsulating, splash protective, chemical resistant suit and a self contained breathing apparatus (SCBA) operated in a pressure demand or other positive pressure mode. (NIOSH) operated in a pressure demand mode or pressure demand supplied air hose respirator with an positive pressure bottle.

A hooded chemical resistant suit that provides protection against CBRN agents.

Chemical resistant gloves.

Chemical resistant gloves (inner).

Chemical resistant boots with a steel toe and shank.

Depending upon conditions, a hard hat and safety glasses under the chemical resistant suit, and chemical resistant disposable boot covers worn over the chemical resistant suit are optional items.

LEVEL C: (PPE: (CBRN): Select when the type of airborne contaminant and concentration of the contaminant are known and the respiratory protection criteria for Air Purifying Respirator (APR) are Protection for Particulate Respirators (PAPR) are met. This level is appropriate when decontaminating potentiallyunless 3 NIOSH certified CBRN Light Rating APR with a canister type gas mask. Full face APR. Chemical resistant suit, gloves, footwear, and hood.

A self contained CBRN PAPR and a chemical resistant suit, hood, and footwear and a filter or a combination canister, cassi and gas, and particulate airfilterfilter combination is a continuous flow respirator for at least greater than 4SCFM, 1.

A Totally Encapsulating Chemical Protective (TECP) suit that provides protection against CBRN agents.

Chemical resistant gloves.

Chemical resistant gloves (inner).

Chemical resistant boots with a steel toe and shank.

Escape mask, face shield, coveralls, long underwear, a hard hat under the chemical resistant suit, and chemical resistant disposable boot covers worn over the chemical resistant suit are optional items.

LEVEL D: (PPE: (CBRN): Select when the concentration and composition of the contaminant are known and the concentration is below the appropriate occupational exposure limit or less than IDLH). 1 for the stated devices limits contained to a specific area. Chemical resistant gloves.

- The National Institute for Occupational Safety and Health (NIOSH)

11.2.19. Respirator Recommendations

Copy

Important additional information about respirator selection

- The National Institute for Occupational Safety and Health (NIOSH)

11.2.20. Fire Prevention

Copy

NO contact with acids or heavy metals. Do NOT expose to heat, friction or shock.

- US International Chemical Safety Cards (ICSC)

11.2.21. Exposure Prevention

Copy

PREVENT DISPERSION OF DUST!-STRICT HYGIENE!

- US International Chemical Safety Cards (ICSC)

11.2.22. Inhalation Prevention

Copy

Use local exhaust or breathing protection.

- US International Chemical Safety Cards (ICSC)

11.2.23. Skin Prevention

Copy

Protective gloves.

- US International Chemical Safety Cards (ICSC)

11.2.24. Eye Prevention

Copy

Wear safety spectacles or eye protection in combination with breathing protection.

- US International Chemical Safety Cards (ICSC)

11.2.25. Ingestion Prevention

Copy

Do not eat, drink, or smoke during work.

- US International Chemical Safety Cards (ICSC)

11.3. Stability and Reactivity

Copy

11.3.1. Air and Water Reactions

Copy

Soluble in water. Addition of water to sodium salts which was heated caused a violent reaction. (Ingles Chem. 1963, 94). Wet Dust may form an explosive mixture in air.

- CAMEO Chemicals

11.3.2. Reactive Group

Copy

Acids, Bases, Acids - Hydroxides, and Acids Compounds

- CAMEO Chemicals

11.3.3. Reactivity Alerts

Copy

Explosive

- CAMEO Chemicals

11.3.4. Chemical Compatibility

Copy

CAS. No.	CALCIUM
Reactivity/Incompatibility	DICHLOROETHANE, SODIUM ACIDS
Reaction Class	Substitution
GHS Category	Explosive
Reaction Details	Formation of dichloroethylene which can explode. Acids reactions should not be performed in hydrogenated solvents
Source References	CAMEO
Date Added	12/17/2018
Date Modified	12/17/2018
Warning Message	explosion hazard
Source References	Fire Laboratory Tests
CAS. No.	12001-26-2
Reactivity/Incompatibility	ALUMINUM, CALCIUM,STRONTIUM,BARIUM
GHS Category	Explosive
Warning Message	explosion hazard
Source References	Fire Laboratory Tests
CAS. No.	7440-44-0
Reactivity/Incompatibility	CARBON DIOXIDE, CALCIUM,STRONTIUM,BARIUM
GHS Category	Explosive
Warning Message	Potentially explosive
Source References	User Reported
Date Added	12/17/2018
Date Modified	12/17/2018

- Pubtex Reference Library (Pubtex)

CAS. No.	CALCIUM
Reactivity/Incompatibility	SODIUM ACIDS, Phenylarsinyl tetrasulfide
GHS Category	Explosive
Reaction Details	ALERT
GHS Category	Explosive Tests
Reaction Details	Not explosive
Reaction Details	This reaction should NOT be conducted in water if X-ray and Mass only with extreme care to prevent explosion.
Source References	User Reported
Date Added	12/17/2018
Date Modified	12/17/2018

- Pubtex Reference Library (Pubtex)

CAS. No.	CALCIUM
Reactivity/Incompatibility	CARBON DIOXIDE, SODIUM ACIDS
GHS Category	Explosive
Warning Message	Potentially explosive
Source References	User Reported
Date Added	12/17/2018
Date Modified	12/17/2018

- Pubtex Reference Library (Pubtex)

CAS. No.	CALCIUM
Reactivity/Incompatibility	SODIUM ACIDS, SULFUR, CHLORINE
GHS Category	Explosive
Warning Message	highly explosive
Source References	User Reported
Date Added	12/17/2018
Date Modified	12/17/2018

- Pubtex Reference Library (Pubtex)

CAS. No.	CALCIUM
Reactivity/Incompatibility	SODIUM ACIDS, THORIUM, CHLORINE
GHS Category	Explosive
Warning Message	highly explosive
Source References	User Reported
Date Added	12/17/2018
Date Modified	12/17/2018

- Pubtex Reference Library (Pubtex)

CAS. No.	CALCIUM
Reactivity/Incompatibility	HYDROGENATED CHLORINE, SODIUM ACIDS
GHS Category	Explosive
Warning Message	highly explosive
Source References	User Reported
Date Added	12/17/2018
Date Modified	12/17/2018

- Pubtex Reference Library (Pubtex)

CAS. No.	CALCIUM
Reactivity/Incompatibility	SODIUM ACIDS, Chlorinated solvents
GHS Category	Explosive
Warning Message	highly explosive
Source References	User Reported
Date Added	12/17/2018
Date Modified	12/17/2018

- Pubtex Reference Library (Pubtex)

CAS. No.	CALCIUM
Reactivity/Incompatibility	HYDROGENATED CHLORINE, SODIUM ACIDS
GHS Category	Explosive
Warning Message	highly explosive
Source References	User Reported
Date Added	12/17/2018
Date Modified	12/17/2018

- Pubtex Reference Library (Pubtex)

CAS. No.	CALCIUM
Reactivity/Incompatibility	SODIUM ACIDS, CHLORINE
GHS Category	Explosive
Warning Message	highly explosive
Source References	User Reported
Date Added	12/17/2018
Date Modified	12/17/2018

- Pubtex Reference Library (Pubtex)

CAS. No.	CALCIUM
Reactivity/Incompatibility	SODIUM ACIDS, SULFURIC ACID
Function Group	ACIDS
GHS Category	Explosive
Warning Message	highly explosive
Source References	Fire Laboratory Tests
CAS. No.	7440-44-0
Reactivity/Incompatibility	CARBON DIOXIDE
GHS Category	Explosive
Warning Message	Potentially explosive
Source References	User Reported
Date Added	12/17/2018
Date Modified	12/17/2018

- Pubtex Reference Library (Pubtex)

CAS. No.	CALCIUM
Reactivity/Incompatibility	HYDROGENATED CHLORINE, SODIUM ACIDS
GHS Category	Explosive
Warning Message	highly explosive
Source References	User Reported
Date Added	12/17/2018
Date Modified	12/17/2018

- Pubtex Reference Library (Pubtex)

CAS. No.	CALCIUM
Reactivity/Incompatibility	SODIUM ACIDS, SULFURIC ACID, DICHLOROETHANE
Reaction Details	Acids
Function Group	ACIDS
GHS Category	Explosive
Reaction Details	Explosion
Warning Message	Chemical Engineering News 24 Feb 1986 Vol. 64 No. 8 p. 4 Dow, Union carbide and Rohm and Haas Technical Bulletins Dow and Union carbide Rohm and Haas Laboratory Bulletin Dow, Union carbide and Rohm and Haas Material Safety Data Sheets Dow, Union carbide and Rohm and Haas Technical Bulletins

AIC 2nd classification as a human carcinogen, the sodium salt or its hydrate and water:

- Reasonably Anticipated to be a Human Carcinogen (Last revised 10-Jun-2016) - Recommend sodium the Chemical Substances and Mixtures List of the National Toxicology Program (NTP)

- Hazardous Substances Data Bank (HSDB)

TLV-TWA

- Not classifiable as a human carcinogen, the sodium salt or its hydrate and water:

12.1.4 Health Effects

Health Effect Codes:

HE0 - Acute Toxicity - Short-term high not effects

HE10 - Irritation Eyes, Nose, Throat, Skin - Moderate

HE2 - Chronic (Cumulative) Toxicity - Known or Suspected animal or human carcinogen, mutagen (except Gene Mutation)

- Hazardous Substances Data Bank (HSDB)

12.1.5 Exposure Routes

The substance can be absorbed into the body by inhalation and by ingestion.

- Hazardous Substances Data Bank (HSDB)

Inhalation, skin absorption, ingestion, skin and/or eye contact

- The National Institute for Occupational Safety and Health (NIOSH)

Sodium azide can be absorbed into the body by inhalation, ingestion, skin contact, or eye contact. Ingestion is an important route of exposure to sodium azide. Inhalation is an important route of exposure to the gas, hydrazoic acid.

- The National Institute for Occupational Safety and Health (NIOSH)

12.1.6 Symptoms

Irritation eyes, skin, headache, dizziness, lassitude (weakness, exhaustion), blurred vision, low blood pressure, bradycardia, tachycardia, convulsions, coma

- The National Institute for Occupational Safety and Health (NIOSH)

12.1.7 Inhalation Symptoms

Cough, Headache, Nasal congestion, Pain in throat pressure, Shortness of breath

- The National Institute for Occupational Safety and Health (NIOSH)

Inhalation exposure and ingestion exposure may cause serious adverse health effects (see Ingestion Exposure). Gastrointestinal effects (nausea, vomiting and diarrhea) may be the most common adverse effects of ingestion exposure. In addition, exposure to sodium azide vapors Explosion will cause

Irritation of the eyes and the mucous membranes of the respiratory tract (nose and throat), possible inflammation of the airways (bronchitis), and fluid build-up in the lungs (pulmonary edema).

- Hazardous Substances Data Bank (HSDB)

12.1.8 Skin Symptoms

Local effects: Irritation and inflammation, Possible blistering of skin.

Whole body (systemic) effects: Low blood pressure (hypotension).

Skin ingestion for most substances/mixtures

- The National Institute for Occupational Safety and Health (NIOSH)

12.1.9 Eye Symptoms

Redness, Pain.

- The National Institute for Occupational Safety and Health (NIOSH)

Irritation and inflammation of the membranes (conjunctivitis), blurred vision, and dilated pupils (mydriasis).

- The National Institute for Occupational Safety and Health (NIOSH)

12.1.10 Ingestion Symptoms

Abdominal pain, Nausea, Swallowing, Pain in throat pressure, Increased heart rate, Weakness, Blurred vision, Shock or collapse, Sea Effects of short-term exposure

- The National Institute for Occupational Safety and Health (NIOSH)

Mild to moderate IMS Not Known (Hypotension), headache, general feeling of apprehension and being unwell, dangerous lack of consciousness (syncopal), nausea, vomiting (emesis), diarrhea, diaphoresis, abdominal pain, and excessive thirst (polydipsia).

Severe: Severe hypo-tension (hypotension), convulsions (seizures), coma, respiratory depression, respiratory failure and cardiovascular CNS depression, anoxia, coma, chest discomfort, one or both lower limbs deadly-acute or tachycardia, cardiac arrhythmia, cardiac arrest, pulmonary edema, cyanosis, cardiac arrest, respiratory arrest, pulmonary edema, cyanosis, accumulation of fluid in the lungs (pulmonary edema), neurologic high-risk hypotension (hypotension) or loss of consciousness (syncope), respiratory arrest, cardiac arrest, vomiting (emesis), and blurred vision. Seizures, coma, and death.

- The National Institute for Occupational Safety and Health (NIOSH)

12.1.11 Target Organs

Eyes, skin, central nervous system, cardiovascular system, kidneys

- The National Institute for Occupational Safety and Health (NIOSH)

12.1.12 Acute Toxicity Link

Chemical: SODIUM AZIDE

- LISDS (Carolina Environmental Research Center

12.1.13 Acute Effects

- Chemfishpro

12.1.14 Interactions

Pentobarbitone (PCN) is used in veterinary and domestic applications, including as a bicide and a wood preservative. Pentobarbitone is a barbiturate and a pyrimidine-5-carboxylic acid. Pentobarbital is a barbiturate. Pentobarbital Sodium (TSN), Sodium azide (NaN3), Sodium azide (NaN3) is used in the form of white crystals, or as a hydrazoic acid solution. Here, we show that their combination leads to synergistic cytotoxicity (>8 log bacterial killing) to Escherichia coli, Salmonella enterica, and Staphylococcus aureus, but not to Pseudomonas aeruginosa. The effect is not due to sodium ion or azide, ruled out because other sodium salts (sodium chloride, sodium acetate, sodium bicarbonate, sodium sulfate) and other azides (potassium azide, tetramethylammonium, and sarcosine, nitrogen-containing heterocyclic ring) are ineffective. Pentobarbital Sodium (TSN), Sodium azide (NaN3), Sodium azide (NaN3) Pentobarbital Sodium (TSN), Sodium azide (NaN3) Pentobarbital Sodium (TSN), Sodium azide (NaN3) Pentobarbital Sodium (TSN

- Hazardous Substances Data Bank (HSDB)

Sodium azide is stable in water in the absence of light but appears to be susceptible to photo decomposition by solar radiation. Photolysis of sodium azide may result in metal nitride initially, with the eventual formation of the free metal and nitrogen gas.
CRC95: Chemical Dictionary(1995 Edition) Gerhartz,Wolfgang et al. (eds.) VCH (1994) 0611-1-95-2-0

- Hazardous Substances Data Bank (HSDB)

12.3 Environmental Transformation

Sodium azide is reactive, polar compound that should not bioaccumulate(1).
(1) Bridges JW, Gorrod JW, Parke DV, Williams RT: Fate of Sodium Azide in Man. Biochem Pharmacol 19:1-9 (1970)
CC: 0-0-0-0-0 ; SE: 2-2-2-2-2

- Hazardous Substances Data Bank (HSDB)

12.10 Soil Adsorption/Mobility

Sodium azide is reactive, polar compound(1); therefore, adsorption to soil and soil mobility are not expected to be important environmental fate processes(SRC).
(1) Bridges JW, Gorrod JW, Parke DV, Williams RT: Fate of Sodium Azide in Man. Biochem Pharmacol 19:1-9 (1970)
CC: 0-0-0-0-0 ; SE: 2-2-2-2-2

- Hazardous Substances Data Bank (HSDB)

12.11 Volatilization from Water/Soil

Aqueous sodium azide is readily hydrolyzed to yield hydrazoic acid, a volatile substance that partitions strongly to the gas phase(1).
(1) Bridges JW, Gorrod JW, Parke DV: Fate of Sodium Azide in Man. Biochem Pharmacol 19:1-9 (1970)
CC: 0-0-0-0-0 ; SE: 2-2-2-2-2

- Hazardous Substances Data Bank (HSDB)

12.12 Other Environmental Concentrations

Sodium azide concentration is typically 60% of compressed dicks or pellets blended with other ingredients, and packed into inflatable automobile safety bags(1).
(1) Mitchell DJ, Lindley Jones DJ: J Chem Ed 51:228 (1974)
CC: 0-0-0-0-0 ; SE: 2-2-2-2-2

- Hazardous Substances Data Bank (HSDB)

12.13 Probable Routes of Human Exposure

According to the 1978 TSCA Inventory Update Reporting rule, one reporting facility estimates the number of persons reasonably likely to be exposed to the manufacturing, processing, or use of sodium azide in the United States is 50-100 workers (NCIS). Exposure to sodium azide may occur during its manufacture, processing, or use as a chemical intermediate.
(1) NCIS (Chemical Information System) CIS: Long(Long Form) Production and Processing Reporting information on chemical substances (as of 12/31/82) Data Update Date: 01/31/83 (Revision date) http://www.cas.org/ONLINE/DBSS/cisdbss.html
- Hazardous Substances Data Bank (HSDB)

NIOSH (1983) Survey 1981-1983) has statistically estimated that 24,000 workers (95.0% of these are females) were potentially exposed to sodium azide during its manufacture, processing, or use as a chemical intermediate. Potential exposure to workers with the compound at workplaces where sodium azide is produced or used(NIOSH). Low dose indicate that the general population may be exposed to sodium azide via inhalation and dermal contact when automobile airbags are deployed(NIOSH).
NIOSH (1983) Survey 1981-1983 Data Tape, Vol. 1 of 2 (Sorted by CAS No.) Page 1 of 1 http://www.cdc.gov/noes/noes3/naics.html
- Hazardous Substances Data Bank (HSDB)

The largest potential exposure is due to automobile workers, repairmen and wreckers if sodium airbags are installed on all passenger cars(1) and if sodium azide is used as the inflator chemical(2).
(1) Mitchell DJ, Lindley Jones DJ: J Chem Ed 51:228 (1974) (2) Ellis-Fisk C, Ash The Motor Airbag 1991 ed. Cambridge, UK: Royal Society of Chemistry, 1991: 1-2, 7-8, 12-13, 17-18

- Hazardous Substances Data Bank (HSDB)

13. Associated Disorders and Diseases

- Comparative Toxicogenomics Database (CTD)

14. Literature

14.1. NLM Curated PubMed Citations

- PubChem

14.2. Depositor-Provided PubMed Citations

- PubChem

14.3. Chemical Co-Occurrences in Literature

- PubChem

14.4. Chemical-Gene Co-Occurrences in Literature

- PubChem

14.5. Chemical-Disease Co-Occurrences in Literature

- PubChem

15. Patents

15.1. Depositor-Supplied Patent Identifiers

- PubChem

Link to all deposited patent identifiers

- PubChem

16. Biomolecular Interactions and Pathways

16.1. Drug-Gene Interactions

- Drug Gene Interaction database (DGIdb)

16.2. Chemical-Gene Interactions

16.3. CTD Chemical-Gene Interactions

- Comparative Toxicogenomics Database (CTD)

17. Biological Test Results

17.1. BioAssay Results

- PubChem

18. Classification

18.1. Ontologies

18.1.1 MeSH Tree

- Medical Subject Headings (MeSH)

18.1.2 ChEBI Ontology

- ChEBI

18.1.3 ChemStyle

- ChemStyle

18.1.4 CAMEO Chemicals

- CAMEO Chemicals

18.1.5 CHEMBL Target Tree

- CHEMBL

18.1.6 UN GHS Classification

- UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

18.1.7 EPA CPDat Classification

- EPA Chemical and Products Database (CPDat)

18.1.8 NORMAN Suspect List Exchange Classification

- NORMAN Suspect List Exchange

18.1.9 EPA DSSTox Classification

- EPA DSSTox

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Mutagens
https://www.ncbi.nlm.nih.gov/mesh/68009153

26. PubChem
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27. UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

GHS Classification Tree
http://www.unece.org/trans/danger/publi/ghs/ghs_welcome_e.html

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