

## 1. Identification

Product identifier	Phenacetin	
Other means of identification		
Catalog number	1513005	
CAS number	62-44-2	
Synonyms	p-Acetophenetidide * Acetphenetidin	
Chemical name	Acetamide, N-(4-ethoxyphenol)-	
Recommended use	Specified quality tests and assay use only.	
Recommended restrictions	Not for use as a drug. Not for administration to humans or animals.	
Manufacturer/Importer/Supplier/Distributor information		
Manufacturer		
Company name	U. S. Pharmacopeia	
Address	12601 Twinbrook Parkway Rockville MD 20852-1790 United States	
Telephone	RS Technical Services	301-816-8129
Website	<a href="http://www.usp.org">www.usp.org</a>	
E-mail	<a href="mailto:RSTECH@usp.org">RSTECH@usp.org</a>	
Emergency phone number	CHEMTRAC within US & Canada	1-800-424-9300
	CHEMTRAC outside US & Canada	+1 703-527-3887

## 2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Acute toxicity, oral	Category 4
	Carcinogenicity	Category 1A
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	

### Label elements



Signal word	Danger
Hazard statement	Harmful if swallowed. May cause cancer.
Precautionary statement	
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.
Response	If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth. If exposed or concerned: Get medical advice/attention.
Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	Pharmacologically active material.

### 3. Composition/information on ingredients

#### Substance

Chemical name	Common name and synonyms	CAS number	%
Phenacetin	p-Acetophenetidide Acetphenetidin	62-44-2	100

### 4. First-aid measures

#### Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

#### Skin contact

Rinse skin with water/shower. Get medical attention if irritation develops and persists.

#### Eye contact

Rinse with water. Get medical attention if irritation develops and persists.

#### Ingestion

Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

#### Most important symptoms/effects, acute and delayed

Pharmacologically active material. Occupational exposure may cause physiological effects.

#### Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Do not induce vomiting. Perform gastric lavage. Administer activated charcoal as an aqueous slurry, unless contraindicated. For seizures, administer a benzodiazepine intravenously, followed by phenobarbital or propofol if the seizures recur. Monitor for hypotension, dysrhythmias, respiratory depression, and need for endotracheal intubation. Evaluate for hypoglycemia, electrolyte disturbances, hypoxia. For methemoglobinemia, administer methylene blue and/or ascorbic acid.

#### General information

Remove from exposure. Remove contaminated clothing. For treatment advice, seek guidance from an occupational health physician or other licensed health-care provider familiar with workplace chemical exposures. In the United States, the national poison control center phone number is 1-800-222-1222. If person is not breathing, give artificial respiration. If breathing is difficult, give oxygen if available. Persons developing serious hypersensitivity (anaphylactic) reactions must receive immediate medical attention.

### 5. Fire-fighting measures

#### Suitable extinguishing media

Water. Foam. Dry chemical or CO<sub>2</sub>. Use fire-extinguishing media appropriate for surrounding materials.

#### Unsuitable extinguishing media

None known.

#### Specific hazards arising from the chemical

No unusual fire or explosion hazards noted.

#### Special protective equipment and precautions for firefighters

Wear suitable protective equipment.

#### Fire fighting equipment/instructions

Use water spray to cool unopened containers. As with all fires, evacuate personnel to a safe area. Firefighters should use self-contained breathing equipment and protective clothing.

#### Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

#### General fire hazards

No unusual fire or explosion hazards noted.

### 6. Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Wear appropriate personal protective equipment. Avoid inhalation of dust from the spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. For personal protection, see section 8 of the SDS.

#### Methods and materials for containment and cleaning up

For waste disposal, see section 13 of the SDS. Avoid the generation of dusts during clean-up. Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean surface thoroughly to remove residual contamination.

#### Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

### 7. Handling and storage

#### Precautions for safe handling

As a general rule, when handling USP Reference Standards, avoid all contact and inhalation of dust, mists, and/or vapors associated with the material. Clean equipment and work surfaces with suitable detergent or solvent after use. After removing gloves, wash hands and other exposed skin thoroughly. Select and use containment devices and personal protective equipment based on a risk assessment of material potency and exposure potential.

**Conditions for safe storage, including any incompatibilities** Store in tight container as defined in the USP-NF. This material should be handled and stored per label instructions to ensure product integrity.

## 8. Exposure controls/personal protection

<b>Occupational exposure limits</b>	No exposure limits noted for ingredient(s).
<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
<b>Appropriate engineering controls</b>	For laboratory operations, use local exhaust ventilation or a ventilated enclosure for high energy operations such as particle sizing. Control exposures to below the occupational exposure level (if available). Select and use containment devices and personal protective equipment based on a risk assessment of exposure potential. Cover all containers for solutions and slurries while being transferred.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>Eye/face protection</b>	Wear safety glasses with side shields, chemical splash goggles, or full face shield, if necessary. Base the choice of protection on the job activity and potential for contact with eyes or face. An emergency eye wash station should be available.
<b>Skin protection</b>	
<b>Hand protection</b>	Wear nitrile or other impervious gloves if skin contact is possible. When the material is dissolved or suspended in an organic solvent, wear gloves that provide protection against the solvent.
<b>Other</b>	Train employees in proper gowning and degowning practices. Wear lab coat. Base the choice of skin protection on the job activity, potential for skin contact and solvents and reagents in use. Do not wear protective garments in common areas (e.g., cafeterias) or out-of-doors.
<b>Respiratory protection</b>	Respirators are generally not required for laboratory operations. Use a tight-fitting full-face respirator with HEPA filters for spill cleanup. Choose respiratory protection appropriate to the task and the level of existing engineering controls.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>General hygiene considerations</b>	Handling practices in this SDS are recommendations for laboratory use of reference standards. Procedures for any other uses or quantities should be determined after an appropriate assessment.

## 9. Physical and chemical properties

<b>Appearance</b>	Appearance descriptions are general information and not specific to any USP lot.
<b>Physical state</b>	Solid.
<b>Form</b>	Powder.
<b>Color</b>	White.
<b>Odor</b>	Odorless.
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	273.2 - 275 °F (134 - 135 °C)
<b>Initial boiling point and boiling range</b>	467.6 - 473 °F (242 - 245 °C)
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Very slightly soluble.
<b>Solubility (other)</b>	Acetone: Soluble.

Chloroform: Slightly soluble.  
Diethyl ether: Slightly soluble.  
Ethanol: Slightly soluble.

**Partition coefficient (n-octanol/water)** 1.58 = log Kow

**Auto-ignition temperature** Not available.

**Decomposition temperature** Not available.

**Viscosity** Not available.

**Other information**

**Chemical family** Aniline derivative.

**Molecular formula** C10-H13-N-O2

**Molecular weight** 179.21 g/mol

## 10. Stability and reactivity

**Reactivity** The product is stable and non-reactive under normal conditions of use, storage and transport.

**Chemical stability** Material is stable under normal conditions.

**Possibility of hazardous reactions** No dangerous reaction known under conditions of normal use.

**Conditions to avoid** Contact with incompatible materials.

**Incompatible materials** Strong oxidizing agents. Strong reducing agents. Acids. Strong bases.

**Hazardous decomposition products** NOx. Irritating and/or toxic fumes or gases. Emits toxic fumes under fire conditions.

## 11. Toxicological information

### Information on likely routes of exposure

**Inhalation** Knowledge about health hazard is incomplete.

**Skin contact** Knowledge about health hazard is incomplete.

**Eye contact** Knowledge about health hazard is incomplete.

**Ingestion** Harmful if swallowed.

**Symptoms related to the physical, chemical, and toxicological characteristics** Cyanosis (blue tissue condition, nails, lips, and/or skin). Headache. Dizziness. Drowsiness. Weakness. Insomnia. Skin rash. Seizures.

### Information on toxicological effects

**Acute toxicity** Harmful if swallowed.

Product	Species	Test Results
Phenacetin (CAS 62-44-2)		

#### Acute

##### **Inhalation**

LC50 Mouse 33900 mg/m<sup>3</sup>

##### **Oral**

LD50 Mouse 866 mg/kg

**Skin corrosion/irritation** Knowledge about health hazard is incomplete.

**Serious eye damage/eye irritation** Knowledge about health hazard is incomplete.

##### **Respiratory or skin sensitization**

**Respiratory sensitization** Knowledge about health hazard is incomplete.

**Skin sensitization** Knowledge about health hazard is incomplete.

**Germ cell mutagenicity** Knowledge about mutagenicity is incomplete.

##### **Mutagenicity**

Ames test

Result: Negative.

Chromosome aberration

Result: Positive.

**Mutagenicity**

Mutagenicity: DNA strand break assay in rat hepatocytes

Result: Negative.

Mutagenicity: In vivo assays in rodents, (chromosomal aberration, sister chromatid exchange, micronucleus)

Result: Equivocal.

Mutagenicity: Sex-linked recessive lethal mutations in Drosophila

Result: Negative.

Unscheduled DNA synthesis

Result: Negative.

**Carcinogenicity**

May cause cancer.

Carcinogenicity, administered orally at doses ranging from 0.5 to 2.5% in the diet.

Result: Benign and malignant urinary tract tumors in mice and rats. Nasal cavity tumors in rats.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

Phenacetin (CAS 62-44-2) 1 Carcinogenic to humans.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not regulated.

**US. National Toxicology Program (NTP) Report on Carcinogens**

Phenacetin (CAS 62-44-2) Known To Be Human Carcinogen.

Reasonably Anticipated to be a Human Carcinogen.

**Reproductive toxicity**

Based on available data, the classification criteria are not met.

Epidemiological studies have not shown an association between therapeutic use of this material during pregnancy and an increased incidence of birth defects.

**Reproductivity**

600 - 1200 mg/kg/day Reproductivity / developmental, administered orally during gestation.

Result: Not teratogenic. Decreased fetal weights and minor malformations.

Species: Rat

Reproductivity / developmental, administered during gestation in doses 2 to 17 times the human dose.

Result: Not teratogenic. Maternal toxicity and fetotoxicity at the highest doses.

Species: Rat

**Specific target organ toxicity - single exposure**

Knowledge about health hazard is incomplete.

**Specific target organ toxicity - repeated exposure**

Knowledge about health hazard is incomplete.

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**Further information**

Pharmacologically active material. Occupational exposure may cause physiological effects.

## 12. Ecological information

**Ecotoxicity**

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

**Persistence and degradability**

No data is available on the degradability of this product.

**Bioaccumulative potential****Octanol/water partition coefficient log Kow**

1.58, = log Kow

**Mobility in soil**

No data available.

**Other adverse effects**

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. Disposal considerations

**Disposal instructions**

Dispose in accordance with all applicable regulations. Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste.

**Local disposal regulations**

Dispose in accordance with all applicable regulations.

<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>US RCRA Hazardous Waste U List: Reference</b>	
Phenacetin (CAS 62-44-2)	U187
<b>Waste from residues / unused products</b>	Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied.

## 14. Transport information

<b>DOT</b>	Not regulated as dangerous goods.
<b>IATA</b>	Not regulated as dangerous goods.
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable.
<b>General information</b>	It is the shipper's responsibility to determine the correct transport classification at the time of shipment.

## 15. Regulatory information

<b>US federal regulations</b>	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
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### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Phenacetin (CAS 62-44-2) 0.1 % One-Time Export Notification only.

### CERCLA Hazardous Substance List (40 CFR 302.4)

Phenacetin (CAS 62-44-2) Listed.

### SARA 304 Emergency release notification

Not regulated.

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

<b>Hazard categories</b>	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
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### SARA 302 Extremely hazardous substance

Not listed.

### SARA 311/312 Hazardous chemical

### SARA 313 (TRI reporting)

Not regulated.

### Other federal regulations

#### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

#### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

#### Safe Drinking Water Act (SDWA)

### US state regulations

#### US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Phenacetin (CAS 62-44-2) Listed: October 1, 1989

### International Inventories

<b>Country(s) or region</b>	<b>Inventory name</b>	<b>On inventory (yes/no)*</b>
Australia	Australian Inventory of Chemical Substances (AICS)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s).  
 A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

<b>Issue date</b>	10-03-2005
<b>Revision date</b>	10-05-2018
<b>Version #</b>	03
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