



**Becton, Dickinson and Company**  
BD, Franklin Lakes, NJ  
07417 USA  
www.bd.com

# SAFETY DATA SHEET

## 1. Identification

### Product identifier

Product No.:	Product name:	Common name(s), synonym(s)
930400	BD™ ChloroPrep™ Sterile Solution Applicator Clear, 3mL	

### Other means of identification

**SDS number:** 088100321920

### Recommended use and restriction on use

**Recommended use:** Skin Antiseptic

**Restrictions on use:** For External Use Only

### Manufacturer/Importer/Supplier/Distributor Information

#### Manufacturer

**Company Name:** Becton Dickinson  
**Address:** 1550 Northwestern Dr  
El Paso, TX 79912 USA  
**Telephone:** 800-523-0502 (Monday to Friday 8 a.m. to 5 p.m. CT)  
**Fax:**  
**Contact Person:** Customer Service

**Emergency telephone number:** ChemTrec 1 800 424 9300

## 2. Hazard(s) identification

### Hazard Classification

#### Physical Hazards

Flammable liquids Category 2

#### Health Hazards

Serious Eye Damage/Eye Irritation Category 2A

Specific Target Organ Toxicity -  
Single Exposure Category 3

#### Environmental Hazards

Acute hazards to the aquatic  
environment Category 2

Chronic hazards to the aquatic  
environment Category 3

### Label Elements

**Hazard Symbol:**

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<b>Signal Word:</b>	Danger
<b>Hazard Statement:</b>	H225: Highly flammable liquid and vapor. H319: Causes serious eye irritation. H336: May cause drowsiness or dizziness. H401: Toxic to aquatic life. H412: Harmful to aquatic life with long lasting effects.
<b>Precautionary Statements</b>	
<b>Prevention:</b>	P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233: Keep container tightly closed. P242: Use non-sparking tools. P273: Avoid release to the environment.
<b>Response:</b>	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. P370+P378: In case of fire: Use water for extinction.
<b>Storage:</b>	P403+P233: Store in a well-ventilated place. Keep container tightly closed.
<b>Disposal:</b>	P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
<b>Other hazards which do not result in GHS classification:</b>	None.

### 3. Composition/information on ingredients



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## Mixtures

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
2-Propanol		67-63-0	62.3%
D-Gluconic acid, compd. with N1,N14-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediiimidamide (2:1)		18472-51-0	2.3%

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

## 4. First-aid measures

<b>General information:</b>	Get medical attention if symptoms occur.
<b>Ingestion:</b>	Drink plenty of water. Get medical attention immediately.
<b>Inhalation:</b>	Move to fresh air. Get medical attention if any discomfort continues.
<b>Skin Contact:</b>	Wash skin thoroughly with soap and water.
<b>Eye contact:</b>	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if symptoms persist.

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

**Symptoms:** No data available.

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

**Treatment:** No data available.

## 5. Fire-fighting measures

**General Fire Hazards:** Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate.

### Suitable (and unsuitable) extinguishing media

**Suitable extinguishing media:** Use: Water. Water fog. Dry chemical. Alcohol foam.

**Unsuitable extinguishing media:** Not applicable

**Specific hazards arising from the chemical:** No data available.



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### Special protective equipment and precautions for firefighters

**Special fire fighting procedures:** No unusual fire or explosion hazards noted.

**Special protective equipment for fire-fighters:** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures:** See Section 8 of the SDS for Personal Protective Equipment.

**Methods and material for containment and cleaning up:** Small quantities may be flushed to drains with plenty of water. Large Spillages: Absorb spillage with non-combustible, absorbent material. Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

**Notification Procedures:** Considering the size of the packaging, the risk is regarded as minimal.

**Environmental Precautions:** Avoid release to the environment.

## 7. Handling and storage

**Precautions for safe handling:** Do not eat, drink or smoke when using the product. Avoid ingestion. For External Use Only Avoid contact with eyes, skin, and clothing.

**Conditions for safe storage, including any incompatibilities:** Store in a cool, dry place. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of flammable liquids. Store at room temperature (20-25°C). Avoid excessive heat (40°C). Store isolated from oxidizers, ignition sources, and explosives. Consult local fire codes for additional storage information. Keep out of reach of children.

## 8. Exposure controls/personal protection

### Control Parameters

#### Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
2-Propanol	TWA	400 ppm 980 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	500 ppm 1,225 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	400 ppm 980 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	STEL	500 ppm 1,225 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	AN ESL	200 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (12



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			2010)
	ST ESL	2,000 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (12 2010)
	AN ESL	492 µg/m <sup>3</sup>	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (12 2010)
	ST ESL	4,920 µg/m <sup>3</sup>	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (12 2010)
	TWA PEL	400 ppm 980 mg/m <sup>3</sup>	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (08 2010)
	STEL	500 ppm 1,225 mg/m <sup>3</sup>	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (08 2010)
	TWA	200 ppm	US. ACGIH Threshold Limit Values (12 2010)
	STEL	400 ppm	US. ACGIH Threshold Limit Values (12 2010)
	STEL	500 ppm 1,225 mg/m <sup>3</sup>	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	REL	400 ppm 980 mg/m <sup>3</sup>	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	PEL	400 ppm 980 mg/m <sup>3</sup>	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	LEL	2.0 %	US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values (10 2017)
	IDLH	2,000 ppm	US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values (10 2017)

**Biological Limit Values**

Chemical Identity	Exposure Limit Values	Source
2-Propanol (acetone: Sampling time: End of shift at end of work week.)	40 mg/l (Urine)	ACGIH BEI (03 2013)

**Appropriate Engineering Controls**

Adequate ventilation should be provided so that exposure limits are not exceeded.

**Individual protection measures, such as personal protective equipment**

**General information:** Eye bath.

**Eye/face protection:** Wear safety glasses with side shields (or goggles).

**Skin Protection**

**Hand Protection:** Latex gloves for normal use, Nitrile gloves recommended for spill cleanup

**Other:** No special precautions.

**Respiratory Protection:** None should be needed.

**Hygiene measures:** Avoid contact with eyes.

**9. Physical and chemical properties**



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## Appearance

<b>Physical state:</b>	liquid
<b>Form:</b>	liquid
<b>Color:</b>	Clear
<b>Odor:</b>	Alcohol
<b>Odor threshold:</b>	No data available.
<b>pH:</b>	estimated 7.0
<b>Melting point/freezing point:</b>	No data available.
<b>Initial boiling point and boiling range:</b>	87.0 °C
<b>Flash Point:</b>	19.4 °C
<b>Evaporation rate:</b>	No data available.
<b>Flammability (solid, gas):</b>	Flammable liquid
<b>Upper/lower limit on flammability or explosive limits</b>	
<b>Flammability limit - upper (%):</b>	12.7 %(V)
<b>Flammability limit - lower (%):</b>	2.2 %(V)
<b>Explosive limit - upper (%):</b>	No data available.
<b>Explosive limit - lower (%):</b>	No data available.
<b>Vapor pressure:</b>	43 hPa
<b>Vapor density:</b>	No data available.
<b>Relative density:</b>	0.880
<b>Solubility(ies)</b>	
<b>Solubility in water:</b>	Soluble
<b>Solubility (other):</b>	Soluble
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Auto-ignition temperature:</b>	Product is not self-igniting.
<b>Decomposition temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.
<b>Other information</b>	
<b>Minimum ignition temperature:</b>	425 °C

## 10. Stability and reactivity

<b>Reactivity:</b>	No data available.
<b>Chemical Stability:</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions:</b>	Not determined.
<b>Conditions to avoid:</b>	Excessive heat.
<b>Incompatible Materials:</b>	Strong oxidizers, potassium dioxide, bromine pentafluoride, acetyl bromide, acetyl chloride, platinum, sodium



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**Hazardous Decomposition Products:** Carbon Dioxide. Carbon Monoxide. Chlorinated compounds.

## 11. Toxicological information

### Information on likely routes of exposure

**Ingestion:** Due to the small packaging the risk of ingestion is minimal.

**Inhalation:** None under normal conditions.

**Skin Contact:** Prolonged or repeated skin contact may cause drying, cracking, or irritation.

**Eye contact:** Do not get in eyes.

### Symptoms related to the physical, chemical and toxicological characteristics

**Ingestion:** No data available.

**Inhalation:** No specific symptoms noted.

**Skin Contact:** Repeated exposure may cause skin dryness or cracking.

**Eye contact:** Causes serious eye irritation. May cause permanent damage if eye is not immediately irrigated.

### Information on toxicological effects

#### Acute toxicity (list all possible routes of exposure)

**Oral**  
**Product:** ATEmix: 73,913.04 mg/kg

**Dermal**  
**Product:** No data available.

**Inhalation**  
**Product:** No data available.

**Repeated dose toxicity**  
**Product:** No data available.

**Specified substance(s):**  
2-Propanol NOAEL (Rat, Inhalation, >= 104 Weeks): 5,000 ppm(m) Inhalation  
Experimental result, Key study

**Skin Corrosion/Irritation**  
**Product:** No data available.



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**Specified substance(s):**

2-Propanol in vivo (Rabbit): Not Classified Experimental result, Key study

D-Gluconic acid, compd. with N1,N14-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanedii midamide (2:1) in vivo (Rabbit): Not irritant Experimental result, Key study

**Serious Eye Damage/Eye Irritation**

**Product:** No data available.

**Respiratory or Skin Sensitization**

**Product:** No data available.

**Specified substance(s):**

2-Propanol Skin sensitization:, in vivo (Guinea pig): Non sensitising

**Carcinogenicity**

**Product:** No data available.

**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

No carcinogenic components identified

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

No carcinogenic components identified

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

No carcinogenic components identified

**Germ Cell Mutagenicity**

**In vitro**

**Product:** No data available.

**In vivo**

**Product:** No data available.

**Reproductive toxicity**

**Product:** No data available.

**Specific Target Organ Toxicity - Single Exposure**

**Product:** No data available.

**Specific Target Organ Toxicity - Repeated Exposure**

**Product:** No data available.





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**Aspiration Hazard**

**Product:** No data available.

**Other effects:** No data available.

**12. Ecological information**

**Ecotoxicity:**

**Acute hazards to the aquatic environment:**

**Fish**

**Product:** No data available.

**Specified substance(s):**

2-Propanol LC 50 (Pimephales promelas, 96 h): 8,680 mg/l  
LC 50 (Western mosquitofish (Gambusia affinis), 24 h): > 1,400 mg/l Mortality  
LC 50 (Bluegill (Lepomis macrochirus), 96 h): > 1,400 mg/l Mortality  
LC 50 (Fathead minnow (Pimephales promelas), 48 h): 10,400 mg/l Mortality  
LC 50 (Harlequinfish, red rasbora (Rasbora heteromorpha), 96 h): 4,200 mg/l Mortality

D-Gluconic acid, compd. with N1,N14-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediimi damide (2:1) LC 50 (Danio rerio, 96 h): 2.08 mg/l Experimental result, Key study  
LC 10 (Poecilia reticulata, 5 d): 22 mg/l Experimental result, Supporting study  
LC 0 (Danio rerio, 96 h): 2 mg/l Experimental result, Key study  
LC 100 (Danio rerio, 96 h): 3.6 mg/l Experimental result, Key study

**Aquatic Invertebrates**

**Product:** No data available.

**Specified substance(s):**

2-Propanol EC 100 (Daphnia magna, 24 h): > 10,000 mg/l Experimental result, Supporting study  
EC 50 (Daphnia magna, 24 h): 9,714 mg/l Experimental result, Supporting study  
LC 50 (Daphnia magna, 24 h): > 10,000 mg/l Experimental result, Key study  
LC 50 (Common shrimp, sand shrimp (Crangon crangon), 48 h): 900 - 1,950 mg/l Mortality  
LC 50 (Common shrimp, sand shrimp (Crangon crangon), 96 h): 750 - 1,650 mg/l Mortality

D-Gluconic acid, compd. with N1,N14-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediimi EC 100 (Daphnia magna, 48 h): 0.12 mg/l Experimental result, Key study  
EC 50 (Daphnia magna, 48 h): 0.087 mg/l Experimental result, Key study  
ED 0 (Daphnia magna, 48 h): 0.04 mg/l Experimental result, Key study  
EC 50 (Daphnia magna, 48 h): 0.05 - 0.1 mg/l Experimental result, Not specified



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damide (2:1)

**Chronic hazards to the aquatic environment:**

**Fish**

**Product:** No data available.

**Aquatic Invertebrates**

**Product:** No data available.

**Specified substance(s):**

D-Gluconic acid, compd. with N1,N14-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediimi damide (2:1)  
NOAEL (Daphnia magna, 21 d): 20.6 µg/l Experimental result, Key study  
EC 50 (Daphnia magna, 21 d): 35.8 µg/l Experimental result, Key study  
LOAEL (Daphnia magna, 21 d): 61.8 µg/l Experimental result, Key study  
EC 100 (Daphnia magna, 21 d): 61.8 µg/l Experimental result, Key study

**Toxicity to Aquatic Plants**

**Product:** No data available.

**Persistence and Degradability**

**Biodegradation**

**Product:** No data available.

**Specified substance(s):**

2-Propanol 53 % (5 d) Detected in water. Experimental result, Key study  
D-Gluconic acid, compd. with N1,N14-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediimid amide (2:1)  
52 % Detected in water. Experimental result, Key study  
100 % Detected in water. Experimental result, Not specified  
79 % Detected in water. Experimental result, Key study  
71 % Detected in water. Experimental result, Key study  
90 % (28 d) Detected in water. Experimental result, Not specified

**BOD/COD Ratio**

**Product:** No data available.

**Bioaccumulative potential**

**Bioconcentration Factor (BCF)**

**Product:** No data available.

**Specified substance(s):**



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D-Gluconic acid, compd. with N1,N14-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediimide (2:1)	Leuciscus idus, Bioconcentration Factor (BCF): 42 Aquatic sediment Experimental result, Key study Leuciscus idus, Bioconcentration Factor (BCF): 40 Aquatic sediment Experimental result, Key study Green algae (Chlorella fusca vacuolata), Bioconcentration Factor (BCF): 2,560 (Static) Carp (Leuciscus idus melanotus), Bioconcentration Factor (BCF): 42 (Renewal)
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**Partition Coefficient n-octanol / water (log Kow)**

**Product:** No data available.

**Specified substance(s):**  
2-Propanol Log Kow: 0.05

**Mobility in soil:** No data available.

**Known or predicted distribution to environmental compartments**

2-Propanol	No data available.
D-Gluconic acid, compd. with N1,N14-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediimide (2:1)	No data available.

**Other adverse effects:** No data available.

**13. Disposal considerations**

**General information:** Dispose of waste and residues in accordance with local authority requirements.

**Disposal instructions:** Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. RCRA D001

**Contaminated Packaging:** No data available.



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## 14. Transport information

### DOT

UN Number:	UN 1219
UN Proper Shipping Name:	Isopropanol
Transport Hazard Class(es)	
Class:	3
Label(s):	3
Packing Group:	II
Marine Pollutant:	No
Special precautions for user:	Ltd. Qty

### IMDG

UN Number:	UN 1219
UN Proper Shipping Name:	ISOPROPANOL
Transport Hazard Class(es)	
Class:	3
Subsidiary risk:	3
EmS No.:	F-E, S-D
Packing Group:	II
Environmental Hazards	
Marine Pollutant:	No
Special precautions for user:	Ltd. Qty

### IATA

UN Number:	UN 1219
Proper Shipping Name:	Isopropanol
Transport Hazard Class(es):	
Class:	3
Subsidiary risk:	3
Packing Group:	II
Environmental Hazards	
Marine pollutant:	No
Special precautions for user:	EQ

## 15. Regulatory information

### US Federal Regulations

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**  
None present or none present in regulated quantities.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**  
None present or none present in regulated quantities.



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**CERCLA Hazardous Substance List (40 CFR 302.4):**

<u>Chemical Identity</u>	<u>Reportable quantity</u>
2-Propanol	100 lbs.

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

**Hazard categories**

- Fire Hazard
- Immediate (Acute) Health Hazards
- Flammable (gases, aerosols, liquids, or solids)
- Serious eye damage or eye irritation
- Specific target organ toxicity (single or repeated exposure)
- Hazards Not Otherwise Classified (HNOC)

**SARA 302 Extremely Hazardous Substance**

None present or none present in regulated quantities.

**SARA 304 Emergency Release Notification**

<u>Chemical Identity</u>	<u>Reportable quantity</u>
2-Propanol	100 lbs.

**SARA 311/312 Hazardous Chemical**

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
2-Propanol	10000 lbs
D-Gluconic acid, compd. with N1,N14-bis(4-chlorophenyl)-3,12-diimino-2,4,11,13-tetraazatetradecanediimidamide (2:1)	10000 lbs

**SARA 313 (TRI Reporting)**

<u>Chemical Identity</u>	<u>Reporting threshold for other users</u>	<u>Reporting threshold for manufacturing and processing</u>
2-Propanol	10000 lbs	25000 lbs.

**Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)**

None present or none present in regulated quantities.

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

None present or none present in regulated quantities.

**US State Regulations**

**US. California Proposition 65**

None present or none present in regulated quantities.



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**US. New Jersey Worker and Community Right-to-Know Act**

Chemical Identity  
2-Propanol

**US. Massachusetts RTK - Substance List**

Chemical Identity  
2-Propanol

**US. Pennsylvania RTK - Hazardous Substances**

Chemical Identity  
2-Propanol

**US. Rhode Island RTK**

Chemical Identity  
2-Propanol

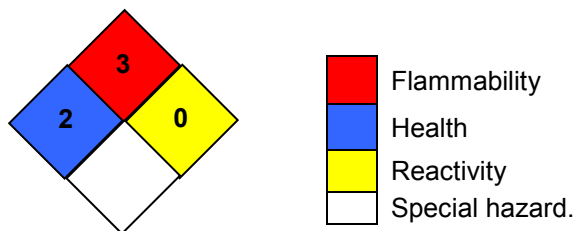
**16. Other information, including date of preparation or last revision**

**HMIS Hazard ID**

<b>Health</b>	2	B - Safety Glasses & Gloves
<b>Flammability</b>	3	
<b>Physical Hazards</b>	0	
<b>PERSONAL PROTECTION</b>		<b>B</b>

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; \*Chronic health effect

**NFPA Hazard ID**



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

**Issue Date:** 08/28/2019



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**Version #:** 1.0

**Revision Information:**

**Further Information:** No data available.

**Disclaimer:**

Disclaimer:

The information contained herein has been obtained from various sources and is believed to be correct as of the date issued. However, neither BD nor any of its subsidiaries assumes any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability for a particular use of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. BD provides SDS in electronic form so the information may be more easily accessed. Due to the possibility of errors during transmission, BD makes no representations as to the completeness or accuracy of the information.