

# What Is Arsenic?

- ◆ Arsenic is a naturally occurring element in the earth's crust.
- ◆ Arsenic is usually found combined with one or more elements.
- ◆ Arsenic compounds are classified as:
  - ☞ Inorganic Arsenic (usually combined with oxygen, chlorine, or sulfur)
  - ☞ Organic Arsenic (combined with carbon & hydrogen)
- ◆ Organic arsenic is usually less harmful than inorganic arsenic.

## Properties

- ◆ Naturally occurring element
- ◆ No smell
- ◆ No taste
- ◆ Silver-gray crystalline solid
- ◆ Most arsenic compounds dissolve in water



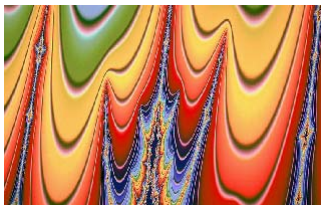
## Uses

### → Past

- ◆ Insecticides
- ◆ Herbicides
- ◆ Paints
- ◆ Dyes
- ◆ Rat baits

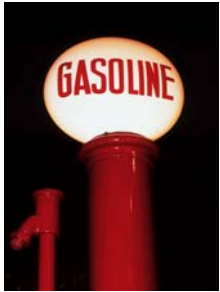
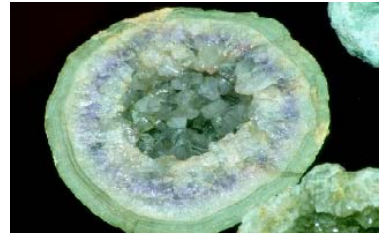
### → Current

- ◆ Wood Preservative
- ◆ Production of Glass
- ◆ Electronics Industry
- ◆ Manufacturing of copper and other metals
- ◆ Medicine



# Arsenic In The Environment

*Arsenic is an element that occurs naturally in the earth's crust. It is released to the environment from sources such as, volcanoes and erosion from mineral deposits.*



*Arsenic can also be released to the environment from human activities, such as, burning oil, coal, gasoline, and wood. It is also released when metals and chemicals are manufactured, through the use of pesticides, treated wood and when these materials are discarded.*

## What happens to arsenic when it enters the environment?

- ◆ Arsenic does not evaporate
- ◆ It gets into air when materials containing it are burned
- ◆ It settles from the air to the ground
- ◆ It doesn't break down, but can change from one form to another
- ◆ Organic arsenic builds up in the tissues of fish and shellfish, but most of the arsenic in fish is not harmful.

# Health Effects Of Arsenic

## How are People Exposed to Arsenic?



- ◆ Eating food containing arsenic
- ◆ Drinking water containing arsenic
- ◆ Breathing ambient air
- ◆ Breathing air at work sites
- ◆ Cigarette smoke



## How Arsenic Enters/Exits the Body:

- ◆ From the food we eat every day
- ◆ By drinking water containing arsenic or eating food cooked in this water
- ◆ By breathing air containing it
- ◆ Arsenic is quickly absorbed into the bloodstream
- ◆ Does not accumulate in the body
- ◆ Arsenic is removed from the body in the urine

## Known Health Effects

- ◆ Thickening and discoloration of the skin
- ◆ Stomach pain
- ◆ Nausea, vomiting, and diarrhea
- ◆ Numbness in the hands and feet
- ◆ Direct skin contact may cause redness and swelling.