

Clouds & Particles

More

2. Particles

Solution Worksheet 2

1.

a)

Cloud processing is transformation of aerosols in the cloud. Inside the droplet around the CCN particle, chemical reactions may take place and the original particle may also shrink or grow in size.

b)

Dry deposition: particles are removed from the atmosphere by falling on, or being trapped by, dry surfaces.

c)

Wet deposition: particles are removed from the atmosphere by atmospheric water like rain or snow. Occurs in or below the clouds.

2.

a)

Smaller particles are more dangerous to inhale than bigger ones because the finer the particle is, the deeper in the lung it will penetrate. These fine particles can be inhaled deep into the lungs, reaching the 600 millions of pulmonary alveoli. They can cause breathing and respiratory symptoms, irritation, inflammation and cancer.

b)

The chemical composition of particles also contributes to their health hazardousness. Some particles can act as carriers of hazardous chemicals, like pesticides, heavy metals, toxins... These toxics are then delivered into the lungs, where they can be absorbed into the blood and tissue.