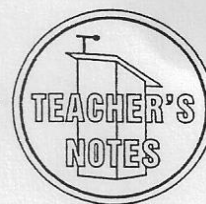


Activity 5



Grade 7 Science and Technology Strand 2: Pure Substances and Mixtures

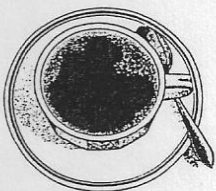
Identify Solutes and Solvents in Solutions Teacher's Answers (page 17)



Instructions: Identify the solutes and solvents in various kinds of liquid, gaseous and solid solutions. Use this word list to fill in the blanks. The first word(s) in each pair is the solvent, the second word(s) is the solute.

Word list: ☐ water/animal protein; ☐ water/sodium fluoride; ☐ acetone/colour particles; ☐ water/flour; ☐ water/coffee powder; ☐ water/concentrated apple juice; ☐ water/salt; ☐ water/liquid acetic acid; ☐ nitrogen/oxygen; ☐ water/carbon dioxide; ☐ copper/zinc; ☐ silver + tin + zinc/mercury; ☐ copper(75%)/nickel(25%); ☐ gold(92%)/copper(8%); ☐ gold(58%)/copper(42%); ☐ gold(50%)/copper(50%)

Coffee



Solvent= Water
Solute= Caffeine

22-karat Gold Coin



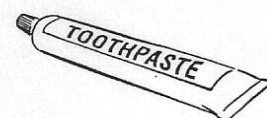
Solvent= Gold (92%)
Solute= Copper (8%)

Vinegar



Solvent= Water
Solute= Liquid
acetic acid

Toothpaste



Solvent= Water
Solute= Sodium
fluoride

Soda Water



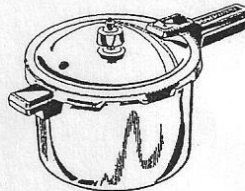
Solvent= Water
Solute= Carbon
dioxide

Pasta



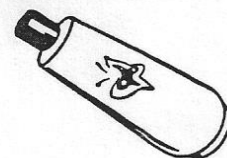
Solvent= Water
Solute= Flour

Brass Cooking Pot



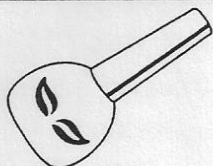
Solvent= Copper
Solute= Zinc

Hair Conditioner



Solvent= Water
Solute= Animal
protein

Nail Polish



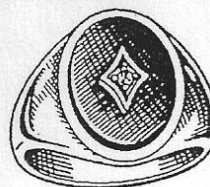
Solvent= Acetone
Solute= Colour
particles

Apple Juice



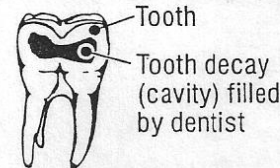
Solvent= Water
Solute= Concentrated
apple juice

14-karat Ring



Solvent= Gold(58%)
Solute= Copper(42%)

Amalgam



Solvent= Silver +
tin + zinc
Solute= Mercury

Ocean water



Solvent= Water
Solute= Salt

Nickel coin



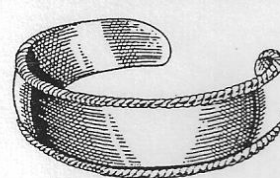
Solvent= Copper(75%)
Solute= Nickel(25%)

Air



Solvent= Nitrogen
Solute= Oxygen

10-karat Bracelet



Solvent= Gold(50%)
Solute= Copper(50%)

Solutions can be found in different states (solid, liquid and gas). Find a list of solutions and identify the solvent and solute in each by filling out the following table. See how many you can find!

Liquid – Liquid Solutions

Solution	Solvent	Solute
orange juice	water	orange flavour
wine	water	alcohol
hand sanitizer	alcohol	water
vinegar	water	acetic acid
sport drink	water	electrolytes

Gas - Gas Solutions

Solution	Solvent	Solute
air	nitrogen	oxygen
rocket fuel	hydrogen	oxygen
welding gases	acetylene	oxygen
fart	methane	air
bbq fuel	propane	air

Liquid - Gas Solutions

Solution	Solvent	Solute
pop	water	carbon dioxide
spray paint	paint	propellant gas

Solid - Solid Solutions

Solution	Solvent	Solute
14k gold	gold	copper
10k gold	copper	gold
brass	copper	zinc
nickel coin	copper	nickel
stainless steel	iron	chromium