

Answers

1. Carbon dioxide is an important ingredient in soft drink. How is it added to these drinks?

Lemonade: The reaction between bicarbonate soda and lemon produces carbon dioxide.

Ginger beer: Yeast provides carbon dioxide through the process of fermentation.

2. What separation technique is used to keep ginger and lemon bits out of the ginger beer?

Soft drink recipes can use filtration to keep solids out. In lemonade, some lemon squeezers filter lemon juice from lemon solids. In ginger beer, the mixture is strained.

3. How could you make the lemonade more concentrated?

Heat the lemon/water/sugar mixture, before bicarbonate is added.

4. Does carbon dioxide dissolve into the solvent?

A small amount of carbon dioxide dissolves in water, under normal conditions, to form an acidic solution. If carbon dioxide is pumped into water under pressure a great deal more dissolves but it is unstable, much like a supersaturated solution. This means that when the pressure is released, or a solid particle is placed in the solution, gas bubbles are formed producing the fizz (or effervescence).