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Purification methods for water used in the preparation of carbonated drinks

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Objective: Water is the main constituent of carbonated soft drinks; hence the treatment of water by different chemical and disinfection methods is very important in the determination of the quality of carbonated soft drinks produced.
Methodology: Water samples used for producing carbonated cola and orange flavored drinks were tested for chemicals and also microbial load. These samples were treated with soda lime and reverse osmosis accompanied with ozone treatment before being used for the preparation of carbonated soft drinks. The tests were performed on day 0, 15 , 30 and 60 post production of the carbonated soft drinks.
Results and conclusion: Soft drinks prepared by using water treated with reverse osmosis contained lowest total ash, brix and pH. This sample was shown to have the highest total acidity in comparison with other water treatment methods. However, the amount of dry juice and density in the drinks, produced from water treated differently did not show any statistical differences. ($p<0.01$). Soft drinks produced using water treated with ozone gas and reverse osmosis were sterile and safe. In the test panel quality experiments, the carbonated soft drinks produced using such water samples show minimum level of unfavorable fermentation odor and alcohol flavor. Favorite flavour was at the maximum level with no turbidity and sedimentation detected. The reverse osmosis and ozone disinfection treatment methods could be the most effective and economical methods for the preparation carbonated soft drinks.