

Beer & Soda

Beer & Soda in general

In the soda manufacturing processes, CO₂ (carbon dioxide) is added to soda and mineral water to generate carbonic acid, H₂CO₃.

Carbonic acid makes the soda taste refreshing. Another positive effect of carbonation is that it reduces the risk of bacteria growing in the beverage.

CO₂ is also used as propellant gas for beer and soda in restaurants and bars because it does not affect the taste or smell of the beverage.

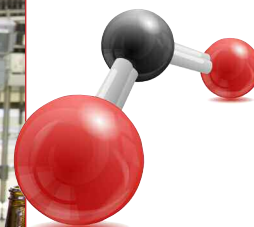
In many cases, the CO₂ that is formed during the fermentation process in breweries is used to produce carbonated soft drinks.

Why the need to measure CO₂?

People occasionally die from exposure to carbon dioxide. In one incident, nine people were admitted to

Facts & Figures

- Beer is the world's most widely consumed alcoholic beverage and is the third most popular drink overall after water and tea.
- More than 133 billion litres of beer are sold per year
- According to USA Today, North Dakota consumes the most beer per capita at 43.3 gallons of beer per year per person. New Hampshire is second at 42.2 gallons.



CO₂ molecule, beverage production plant.

the hospital after they had visited the ladies restroom at the same restaurant. The sickness was due to a leakage of carbon dioxide at the restaurant. CO₂ is a heavy gas and the restroom was located at a low point in the building. Therefore the restrooms were filled with carbon dioxide. CO₂ is hard to detect by smell or sight and, for that reason, it is important to always measure the gas wherever there is a risk of high concentrations such as in bottling plants, soda production facilities or beer breweries.

How does it work?

The recommended safe indoor CO₂ concentration is between 800-1000 ppm. A slightly higher concentration can cause drowsiness or headaches. When CO₂ reaches levels up to 80,000 ppm humans may experience convulsions, immediate paralysis and, in worst case, death.

Continuous measurement of the air with alarms set for critical

concentrations at breweries, pubs and restaurants reduces the danger significantly. Utilizing measurement and alarm devices helps to make people feel safe and allows management to worry less about undetected CO₂ leaks.

Reduced costs

Any big accident can be very costly for a company. The restaurant, in the example above, had to close down while the police made a full investigation into the cause of the catastrophe. This is, of course, expensive both in time, money and reputation. The government has to pay to investigate if the accident was a crime or not. This is all very costly and totally unnecessary if the proper measurement instruments are in place. Maintaining proper levels of CO₂ in the workplace ensures employees are more alert and productive.