
Gas Blend Matters

Test Shows Gas from Pre-mixed Cylinders Makes Beer Go Flat

Does the blend really matter?

This question gets asked every day in the world of draft beer. At **McDantim, Inc.** we've heard many different view points, all coming from very credible sources and very intelligent people. We finally decided to test the effect of typical premixed blends on draft beer and record the results.

Photos from the test are on the right. They clearly demonstrate that beer goes noticeably flat in the time beer is on tap under normal circumstances.

How we tested

This test was done on a half barrel of Miller Genuine Draft. The draft system was set to pour at one gallon per minute at 18 psig. Using a 30% blend of CO2 and 70% Nitrogen we poured one fifth of the keg each day for 5 days, simulating a keg on tap in a bar for 5 days.

The Results

As you see from the pictures, the beer was perfect when the keg was tapped. After one day the beer appears nearly identical to the beer from the new keg. Each day later, the beer was slightly more flat, with less than half the perfect head on the fifth and last day.

The beer looks and tastes flat and the glass on day 5 has 15% more beer in the glass, causing significant waste.

Conclusion

The wrong blend (30% CO2 in this case) will seriously damage beer causing waste and reducing the appeal of the otherwise wonderful product.



How Good Beers Go Flat

Precision Required

The amount of CO₂ required to keep beer properly carbonated is really quite precise. Different beer styles typically have different CO₂ contents but most American beers, whether premium or craft products, fall within a narrow band. To keep most American beers perfectly carbonated when stored at 38° F. a CO₂ pressure of 10 to 13 psig is required. That window can be pushed to 15 or 16 psig.

CO₂ Pressure vs. Total Pressure

“Total Pressure” is different than the CO₂ Pressure. The goal is still a “CO₂ pressure” of 10 to 13 psig. With your draft system operating at 18 psig the total pressure is 18 psig. If you used 100% CO₂ the CO₂ pressure would be 18 psig, 22% too much. The beer will become foamy like the beer on the left.

Getting it Right

Using mixed gas on this 18 psig dispense system the correct blend would be 80% CO₂. The total pressure would be 18 psig and the CO₂ pressure would be 13 psig leaving the beer perfectly carbonated. This is shown in the middle picture. The beer has exactly 100% of the CO₂ needed.

More CO₂ Please

Cylinders with 30% (or even worse, 25%) CO₂ used on this system will only have 38% of the required CO₂ pressure. Every day that the beer is on tap more CO₂ will leak out of the beer into the headspace and the beer will go flat exactly as shown in the photos on the first page and the example on the right on this page. Flat beer doesn't look as good, taste as good or sell as well.

Good News

Premixed Cylinders of gas in 25% and 30% CO₂ mixes are readily available because they are easier to mix, not because they are right for American beers. The **McDantim Trumix™** Blender is available from better beer equipment suppliers and mixes gas on site to exactly the blend required. The Trumix™ is available in a 2 blend model to provide one blend for Guinness

and similar beers and the other blend for lagers and ales. In addition to protecting the beer, mixing on-site with the Trumix™ is less expensive.

Contact Us

McDantim, Inc. has all the information you need to begin utilizing this valuable tool to save yourself money. Call our toll-free number (888) 735-5607 for your information kit.

