

Beer Education Series: Devil's Logic Brewing

About Devil's Logic Brewing:

On the edge of Cherry and Elizabeth and a mile from Trade & Tryon, we're 'next door' to the best of Charlotte. Our taproom and brewing facility are in the former American Billiards building. We are a diverse island of misfits that launches beer into space, have beach parties in our walk-in cooler, and take our GoPro to places we shouldn't talk about. We are a brewery that wants to make great beer and provide a space where everyone can come together and get a little crazy

The Beers We Are Sampling:

1. **Pasing** [Munich Helles Lager, 4.7%]: A Traditional Munich Helles Lager with low bitterness and moderate malt sweetness. Subtle spicy and floral hop aromas!

BJCP Analysis of Munich Helles:

Aroma: Moderate grainy-sweet malt aroma. Low to moderately-low spicy, floral, or herbal hop aroma. While a clean aroma is most desirable, a very low background note of DMS is not a fault. Pleasant, clean fermentation profile, with malt dominating the balance. The freshest examples will have more of a malty-sweet aroma.

Appearance: Medium yellow to pale gold. Clear. Persistent creamy white head. The color may be darker than expected for the base style.

Mouthfeel: Medium body. Medium carbonation. Smooth, well-lagered character. Significant astringent, phenolic, smoke-derived harshness is a fault.

Taste: Moderately malty start with the suggestion of sweetness, moderate grainy-sweet malt flavor with a soft, rounded palate impression, supported by a low to medium-low hop bitterness. The finish is soft and dry, not crisp and biting. Low to moderately-low spicy, floral or herbal hop flavor. The malt dominates the hops in the palate, finish, and aftertaste, but the hops should be noticeable. There should not be any residual sweetness, simply the impression of maltiness with restrained bitterness. Very fresh examples will seem sweeter due to the fresh, rich malt character that can fade with time. Clean fermentation profile.

2. **Guided by Impatience** [Kellerbier, 5.1%]: Unfiltered German Lager with a modern approach to the style. Using a traditional Pilsner Malt base, we then added malted wheat and flaked rice to enhance its body while keeping it light and crisp, then we combined Hallertau Mittelfruh, a staple hop in German brewing, with Citra late in the boil. This brings together a spice hop character with floral aromas along with citrusy and stone fruit notes.

BJCP Analysis of Kellerbier:

The original Kellerbier is a Märzen-type lager from the Franconia region of Germany, but other traditional versions are based on Munich Helles and Dunkel lagers. Variations based on Pils are a more modern invention with a wider international following and higher production.

Aroma: May have an added bready, yeasty character from the yeast. Clean. Pale versions can have a more robust hop character. Dark versions can have a richer malt profile.

Appearance: Can be somewhat hazy or cloudy, but never murky. Likely a little darker in appearance than the base style.

Mouthfeel: May have a bit more body and a creamier texture than the base style. Carbonation typical of or lower than the base style.

Taste: May have an added bready, yeasty character from the yeast. Pale versions can have a more robust hop character. Dark versions can have a richer malt profile, but should never be roasty. May be slightly more bitter than the base style, and be a little heavier in the finish. Fully fermented with a clean fermentation profile; should not have eggy, buttery, apple-like, or similar flaws.

3. **Lucifest** [Märzen, 5.9%]: Lucifest is a Festbier that has moderate bitterness with notes of toast and dough. Spicy floral aromas are from the noble hop, Hallertau Mittelfruh. Welcome to fall!

BJCP Analysis of Märzen:

Aroma: Moderate intensity aroma of German malt, typically rich, bready, somewhat toasty, with light bread crust notes. Clean lager fermentation character. No hop aroma. Caramel, dry-biscuity, or roasted malt aromas inappropriate. Very light alcohol might be detected, but should never be sharp. Clean, elegant malt richness should be the primary aroma.

Appearance: Amber-orange to deep reddish-copper color; should not be golden. Bright clarity, with persistent, off-white foam stand.

Mouthfeel: Medium body, with a smooth, creamy texture that often suggests a fuller mouthfeel. Medium carbonation. Fully attenuated, without a sweet or cloying impression. May be slightly warming, but the strength should be relatively hidden.

Taste: Initial malt flavor often suggests sweetness, but finish is moderately-dry to dry. Distinctive and complex maltiness often includes a bready, toasty aspect. Hop bitterness is moderate, and the hop flavor is low to none (German types: complex, floral, herbal, or spicy). Hops provide sufficient balance that the malty palate and finish do not seem sweet. The aftertaste is malty, with the same elegant, rich malt flavors lingering. Noticeable caramel, biscuit, or roasted flavors are inappropriate. Clean lager fermentation profile.

Thank you for joining Charlotte Beer Babes® for the June 2022 Beer Ed Series at Sugar Creek Brewing!

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4. **Mo Gose** [Gose, 4.6%]: A Gose style ale conditioned on oranges and mangoes.

BJCP Analysis of Gose:

Aroma: Light to moderately fruity aroma of pome fruit. Light sourness, slightly sharp. Noticeable coriander, which can have an aromatic lemony quality, and an intensity up to moderate. Light bready, doughy, yeasty character like uncooked sourdough bread. The acidity and coriander can give a bright, lively impression. The salt may be perceived as a very light, clean sea breeze character or just a general freshness, if noticeable at all.

Appearance: Unfiltered, with a moderate to full haze. Moderate to tall white head with tight bubbles and good retention. Effervescent. Yellow color.

Mouthfeel: High to very high carbonation. Effervescent. Medium-light to medium-full body. Salt may give a slightly tingly, mouthwatering quality and a rounder, thicker mouthfeel. Yeast and wheat can also add a little body, but shouldn't feel heavy due to the thinning effects of acidity.

Taste: Noticeable sourness, medium-low to medium-high. Moderate bready or doughy malt flavor. Light to moderate fruity character of pome fruit, stone fruit, or lemons. Light to moderate salt character, up to the threshold of taste; the salt should be noticeable (particularly in the initial taste) but not taste overtly salty. Very low bitterness. No hop flavor. Dry, fully-attenuated finish, with acidity not hops balancing the malt. Acidity can be more noticeable in the finish, and enhance the refreshing quality of the beer. The acidity should be balanced, not forward (although historical versions could be very sour). No THP.

5. **Choose 1 WILDCARD for your final Ladies Choice Selection!**

Dropping Some Beer Knowledge:

What is an Ester? An Ester is an organic compound made by replacing the hydrogen of an acid by an alkyl or other organic group. Many naturally occurring fats and essential oils are esters of fatty acids. Esters have a characteristic pleasant, fruity odor and are common in organic and biological materials. They are used mostly in the flavor and fragrance industry.

Malts: Base vs Specialty:

- Base Malt: The larger percentage of a grain bill used to make a beer. These malts provide enzymes to convert malt starches into sugars. Provides extra enzymes to convert specialty malts/adjuncts without enough enzymes of their own to convert into sugars. Includes: Pale Malt, Pilsner Malt, Vienna Malt, Munich Malt, Rye Malt, & Wheat Malt. 2-Row vs 6-Row: Differentiates based on the formation of corns on the barley stalk rows.
- Specialty Malt: Smaller percentage of a grain bill used to make a beer. These malts are cracked & steeped to release the sugars and flavor compounds. The color of a beer typically comes more from the Specialty Malts. Includes: Roasted Malts, Chocolate Malt, Crystal/Caramel Malts, Smoked/Peated Malts, Acidulated Hops

Oils, Acids, and Regions:

- Hop Oils: Main source of flavor and aroma from hops; provide non-bitter tastes/aromas for hops.
 - o Myrcene: natural organic compound that is classified as a hydrocarbon. In thyme, bay, parsley, lemongrass, cannabis. Used in the perfume industry.
 - o Humulene: named after the scientific name for hops, *Humulus lupulus*, it's an isomer of Caryophyllene. Key part of hops that gives the "hoppy" aroma. It's been found to possess anti-inflammatory properties, and is being studied.
 - o Caryophyllene: one of the oils that help to give black pepper its spiciness. Gives a strong dry wood, pepper, earthy flavor, and an herbal character. This compound has been seen to reduce inflammation & been in anti-cancer studies. Used in the perfume industry.
- Bittering: During longer boil times hop oils evaporate, so they're added at beginning of boil to impart bitterness.
- Aroma: During shorter boil times and dry hopping, hop oils don't evaporate as much, so get the non-bitter aspects of the hops during shorter boil times and/or flameout/dry-hopping additions.
- Alpha Acid: Basis of bittering; quick breakdown: Humulone, Cohumulone, Adhumulone, Posthumulone, Prehumulone.
- Beta Acid: Slow breakdown: Lupulone, Colupulone, Adlupulone.
- Noble Hops [original Hops, Central Europe]: Terranger, Spalt, Hallertauer, Saaz; *Spalt, Styrian Goldings, Perle, Hersbrucker*

Example of Hop Analysis:

Mosaic Hops: Released in 2012 by the Hop Breeding Company, LLC, Mosaic hops feature complex but clean flavor characteristics and are known for their triple-use profile encompassing bittering, flavor and aroma. They have high alpha acids but low cohumulone which makes them pleasantly hoppy, carrying flavors of mango, pine, citrus and herbs and aromas of tropical and stone fruit. Mosaic is the first daughter of Simcoe and Nugget as has been humorously referred to by some as "Citra on steroids".

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| o Alpha Acid Composition: 11.5%-13.5% | Beta Acid Composition: 3.2%-3.9% |
| o Co-Humulone Composition: 24%-26% | Retains 75% alpha acid after 6 mos storage at 20°C (68°F) |
| o Myrcene Oil Composition: 47%-53% | Humulene Oil Composition: 13%-16% |
| o Caryophyllene Oil: 5%-8% | Farnesene Oil: None |
| | Substitute Hops: Citra |

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