

Beer Education Series: Neoteric Brewing

About Neoteric Brewing:

Neoteric Brewing Company is solely owned and operated by head-brewer Mike Tessari and his wife Alex from Huntersville, NC. Mike is a long-time home brewer and beer fan who eventually found himself obsessed with the art of making the craft and sharing his creations with friends and family. Eventually, he found himself tapped out of being able to brew more and have enough tasters. He sees Neoteric Brewing as an extension of his passion, simply providing the place for people to relax and enjoy his good brews with others. Without any outside investors, Alex and Mike took the financial and emotional leap to find that space for his “brew home” and, while the road to get there was rarely easy, it has paid off and his dream is now a reality. Mike and Alex are hands on and look forward to meeting the community of Huntersville and enjoy a Neoteric beer with ya’!!!

The Beers We Are Sampling:

1. **4 Non Blondes [American Blonde, 5.0%]:** Named after the 90's alternative rock band this blonde ale is a light, refreshing easy drinker with notes of citrus from a Citra dry hop. Has 19 IBUs.

BJCP Analysis of Blonde Ale:

Aroma: Light to moderate sweet malty aroma, possibly with a light bready or caramelly note. Low to moderate fruitiness is optional, but acceptable. May have a low to medium hop aroma, and can reflect almost any hop variety although citrusy, floral, fruity, and spicy notes are common.

Appearance: Light yellow to deep gold in color. Clear to brilliant. Low to medium white head with fair to good retention.

Mouthfeel: Medium-light to medium body. Medium to high carbonation. Smooth without being heavy.

Taste: Initial soft malty sweetness, but optionally some light character malt flavor (e.g., bread, toast, biscuit, wheat) can also be present. Caramel flavors typically absent; if present, they are typically low-color caramel notes. Low to medium fruity esters optional, but are welcome. Light to moderate hop flavor (any variety), but shouldn't be overly aggressive. Medium-low to medium bitterness, but the balance is normally towards the malt or even between malt and hops. Finishes medium-dry to slightly malty-sweet; impression of sweetness is often an expression of lower bitterness than actual residual sweetness

2. **Cool Hand Luke [Irish Red Ale, 6.5%]:** Made with Citra, Cascade and Amarillo hops. Light caramel notes and subtle sweetness and a light juicy citrus finish. Has 36 iBUs.

BJCP Analysis of Irish Red Ale:

Aroma: Low to moderate malt aroma, either neutral-grainy or with a lightly caramelly-toasty-toffee character. May have a very light buttery character (although this is not required). Hop aroma is low earthy or floral to none (usually not present). Quite clean.

Appearance: Medium amber to medium reddish-copper color. Clear. Low off-white to tan colored head, average persistence.

Mouthfeel: Medium-light to medium body, although examples containing low levels of diacetyl may have a slightly slick mouthfeel (not required). Moderate carbonation. Smooth. Moderately attenuated.

Taste: Moderate to very little caramel malt flavor and sweetness, rarely with a light buttered toast or toffee-like quality. The palate often is fairly neutral and grainy, or can take on a lightly toasty or biscuity note as it finishes with a light taste of roasted grain, which lends a characteristic dryness to the finish. A light earthy or floral hop flavor is optional. Medium to medium-low hop bitterness. Medium-dry to dry finish. Clean and smooth. Little to no esters. The balance tends to be slightly towards the malt, although light use of roasted grains may increase the perception of bitterness slightly.

3. **Dubbel Struggle [Belgian Dubbel, 7.5%]:** Flavors of chocolate, caramel and toast with notes of banana from the Belgian yeast. Has 26 IBUs.

BJCP Analysis of Belgian Dubbel:

Aroma: Complex, rich-sweet malty aroma, possibly with hints of chocolate, caramel and/or toast. Moderate fruity esters (usually including raisins, plums, and dried cherries). Esters sometimes include banana or apple. Spicy phenols and higher alcohols are common (may include light clove and spice, peppery, rose-like and/or perfume-y notes).

Appearance: Dark amber to copper with reddish depth of color. Generally clear. Large, dense, long-lasting, creamy off-white head.

Mouthfeel: Medium-full body. Medium-high carbonation, which can influence the perception of body. Low alcohol warmth.

Taste: Rich, complex medium to medium-full rich-sweet malt flavor on the palate yet finishes moderately dry. Complex malt, ester, alcohol and phenol interplay (raisin flavors are common; dried fruit flavors are welcome; clove or pepper spiciness is optional). Balance is always toward the malt. Medium-low bitterness that doesn't persist into the aftertaste. Low spicy, floral, or herbal hop flavor is optional and not usually present.

4. Ladies Choice!

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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

Hop 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]: Terrnanger, Spalt, Hallertauer, Saaz; *Spalt, Styrian Goldings, Perle, Hersbrucker*

Example of Malt & Hop Profiles:

- **Pecan Smoked Wheat Malts:** This malt is produced using our Appalachian Wheat and locally-sourced Pecan wood. The pecan imparts a delicious, fruity that blends perfectly the bread notes of the malted wheat. This malt was developed using a bakery quality wheat variety. Germination and kilning were designed to create a rich, fresh-baked bread flavor and aroma.

Extract FG: 83.0%
S/T Ratio: 56

Protein: 10.7%
Alpha Amylase: 12.1

Color: 3.0 SRM
DP: 86

- **Citra Hops:** released to the brewing world in 2008. Now one of the most coveted high-impact aroma hops in the US, particularly among craft brewers, it boasts a complex lineage that includes the likes of Hallertau Mittelfrüh (father), Tettnanger (US), Brewer's Gold and East Kent Golding. Gene Probasco is credited with having first bred Citra in 1990. Citra, as the name implies, has a strong citrusy profile. This is largely credited to its very high myrcene content. It has an extraordinary flavor profile of grapefruit, lime and tropical fruits but despite its high alphas, brewers often warn against its use for bittering, which is considered by some to be harsh and undesirable. Aroma: Citrus, grapefruit, lime, tropical fruits, harsh bitterness.

o **Alpha Acid: 10-15%**

o **Humulene Oil Composition: 7-12%**

o **Caryophyllene Oil: 5-8%**

o **Substitute Hops:** Simcoe®, Cascade (US), Centennial, Mosaic®

Beta Acid: 3-4.5%

Co-Humulone Composition: 20-35%

Farnesene Oil: 1%

Myrcene Oil Composition: 60-70%

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