

# Beer Education Series: Edge City Brewery

## About Edge City Brewery:

Edge City Brewery was founded in 2032 by brothers John and Jared Thomas, who grew up in Asheville. The name Edge City describes what they've been seeking – a community on the edge of revitalization, and their desire to live on the edge. The brothers grew up being outdoors, but want their outdoor vibe to be reflected in an urban setting and style. They use local ingredients and have a focus on sustainability and eco-friendly practices. Beers are brewed on a three-barrel system, before being gravity fed to the eight fermentation tanks below.

## The Beers We Are Sampling:

**1. Movers & Shakers** [India Pale Lager, 5%]: An India Pale Lager hopped with Cashmere, Blanc and Citra. Fermented on lager yeast. Light, refreshing, citrus and tropical notes.

### BICP Analysis of International Pale Lager:

**Aroma:** Low to medium malt aroma, tending towards grainy or slightly corny-sweet. Hop aroma ranges from very low to a medium, spicy or floral hop presence.

**Appearance:** Pale straw to gold in color. White, frothy head which may not be long lasting. Very clear.

**Mouthfeel:** Light to medium body. Moderately high to highly carbonated. Can have a slight carbonic bite on the tongue.

**Taste:** Low to moderate levels of grainy-malt flavor, with a crisp, dry, well-attenuated finish. The grain character can be somewhat neutral, or show a light bready-crackery quality or up to moderate corny or malty sweetness. Hop flavor ranges from none to medium levels, and often shows a floral, spicy, or herbal character. Hop bitterness at medium-low to medium. Balance may vary from slightly malty to slightly bitter, but is relatively close to even.

**2. Hideaway** [Dark Mexican Lager, 5.2%]: A Dark Mexican Lager brewed with smoked pecan wheat malt and fermented on a clean Mexican Lager strain of yeast. Conditioned for weeks until crisp. Notes of pecan wood, toasted walnuts, figs, and raisins.

### BICP Analysis of International Dark Lager:

**Aroma:** Little to no malt aroma; may have a light corn character. Medium-low to no roast and caramel malt aroma. Hop aroma may range from none to light spicy or floral hop presence. While a clean fermentation profile is generally most desirable, low levels of yeast character (such as a light apple fruitiness) are not a fault. A light amount of DMS or corn aroma is not a fault.

**Appearance:** Deep amber to dark brown with bright clarity and ruby highlights. Foam stand may not be long lasting, and is beige to light tan in color.

**Mouthfeel:** Light to medium-light body. Smooth with a light creaminess. Medium to high carbonation.

**Taste:** Low to medium malty sweetness with medium-low to no caramel and/or roasted malt flavors (and may include hints of coffee, molasses or cocoa). Hop flavor ranges from none to low levels, and is typically floral, spicy, or herbal. Low to medium hop bitterness. May have a very light fruitiness. Moderately crisp finish. The balance is typically somewhat malty. Burnt or moderately strong roasted malt flavors are a defect.

**3. Flannel SZN** [Brown Ale, 5.8%]: A Brown Ale rested and conditioned on Roasted Pecans.

### BICP Analysis of English Brown Ale:

**Aroma:** Light, sweet malt aroma with toffee, nutty, or light chocolate notes, and a light to heavy caramel quality. A light but appealing floral or earthy hop aroma may also be noticed. A light fruity aroma may be evident, but should not dominate.

**Appearance:** Dark amber to dark reddish-brown color. Clear. Low to moderate off-white to light tan head.

**Mouthfeel:** Medium-light to medium body. Medium to medium-high carbonation.

**Taste:** Gentle to moderate malt sweetness, with a light to heavy caramel character and a medium to dry finish. Malt may also have a nutty, toasted, biscuity, toffee, or light chocolate character. Medium to medium-low bitterness. Malt-hop balance ranges from even to malt-focused; hop flavor low to none (floral or earthy qualities). Low to moderate fruity esters can be present.

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

## Dropping Some Beer Knowledge:

### 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

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## – 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**

- **Cashmere Hops:** Developed by Washington State University and released in 2013, Cashmere is the result of a marriage of Cascade and Northern Brewer. Fortuitously, it features alpha acids higher than that of Cascade. A good dual-purpose hop, Cashmere showcases flavors lemon, lime and melon, exhibits a smooth bitterness and is mildly aromatic with a subtle herbal bouquet. Aroma: Smooth bitterness, herbal aroma, flavors of lemon, lime and melon.

Alpha Acid Composition	7.7%-9.1%	Humulene Oil Composition	26%-29%
Beta Acid Composition	3.3%-7.1%	Caryophyllene Oil	12%-13%
Co-Humulone Composition	22%-24%	Farnesene Oil	1%
Myrcene Oil Composition	39%-42%	Substitute Hops	Cascade

- **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.

Alpha Acid Composition	10%-15%	Humulene Oil Composition	7%-12%
Beta Acid Composition	3%-4.5%	Caryophyllene Oil	5%-8%
Co-Humulone Composition	20%-35%	Farnesene Oil	1%
Myrcene Oil Composition	60%-70%	Substitute Hops	Simcoe®, Cascade (US), Centennial, Mosaic®

- **Hallertau Blanc Hops:** Hallertau Blanc, daughter of Cascade, was released to the world in 2012. Established on the Hüll farm in the German Hallertau region, it was grown primarily for use in American-style Ales. Hallertau Blanc's flavor profile is said to be fruity, with wine-like qualities of gooseberry and grass, similar to that of Sauvignon Blanc. It also features a complex aroma profile with notes of cassis and elderflower in addition to grapes, grapefruit and lemongrass. Other notes detected in trials have been passionfruit, pineapple and gooseberry. Aroma: Flavors of white-wine and fruit, aromas of cassis, elderflower, grapes, grapefruit and lemongrass.

Alpha Acid Composition	9%-12%	Humulene Oil Composition	0%-3%
Beta Acid Composition	4.5%-6%	Caryophyllene Oil	0%-2%
Co-Humulone Composition	22%-26%	Farnesene Oil	0%-3.5%
Myrcene Oil Composition	50%-75%	Substitute Hops	Nelson Sauvin

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