



Saturday 16th March 2019 Minutes of Meeting

Venue: The Vat and Fiddle, Nottingham

Attendees

Chairman – IRB

SH,AB,SOT,VA,JD,MH,FB,JA,KH,NW,KK,TA,JC,SR,MC,BT,JF,MS,AR,AQ.

Apologies:AM,AG,JS,DM,RC,GD,SO,BK,AB.

1. Introductions

Introductions were kept brief as there was a full programme scheduled for the day.

2. Beer Off Flavours

The object of the exercise was to experience the common off flavours that can be found in beers and provide some explanation as to the possible causes. To accomplish this Sensory Training Kits manufactured by the Siebel Institute were purchased. These Kits are generally recognised as an industry standard.

To ensure that there was no cross contamination a fresh cup was used for each tasting and the pouring vessels were thoroughly washed for each sample. A reference commercial lager, crackers and water were put on each table.

The samples experienced were as follows.

Acetalehyde
Bitter (Isolone)
Contamination (Diacetyl and Acetic)
Dimethyl Sulphide
Diacetyl
Ethyl Hexonate-Ester
Isoamyl Acetate-Ester
Isovaleric Acid -Organic Acid
Lightstruck (Thiol)

Metallic
Papery (Trans 2 Nonenal)
Spicy (Eugenol).

A sheet was issued to each member providing the name of the off taste, the expected taste, where in the beer the fault can be detected and the levels, the likely cause of the off taste and the suggested resolution. Each off taste was discussed by the attendees, some were very prominent and others very subtle. One off taste was considered to improve the reference lager. Attached is a copy of the information sheet.

3. Beer Tastings

The first two beers were considered to have off tastes

1, JA presented a beer a barley wine and when tasted it was considered to taste of beef or marmite. John explained that it had been left in the fermenter for quite a long time at a high temperature on top of the yeast.

2 SOT's beer was a Vienna lager and this had a slight taste of acetaldehyde (apple).

3 MH, Belgium Blonde

4 VA, Belgium Dubbel at 7.7%

5 JC, Orange Saison, This was almost 2 years old a few members could taste the orange but it was very slight.

4. Competitions

SOT presented a sheet giving details of forthcoming competitions and the results of recent competitions. SOT, MH and AllenB had all won placings in those listed. These results gave the MCB the 2nd place in national competitions which was excellent for a small club, congratulations to all. See attached sheet for full details.

The details of entering competitions was discussed. This appeared to be fairly easy and it is hoped more members may be encouraged to participate.

KK gave some information of how to become a beer judge, he had gained his certificate by an online course and attending a taste test.

The matter of the MCB running an open competition was discussed and AllenB, BT, MH and JA were to form a subgroup to investigate the feasibility of this project.

5. July Meeting

The July meeting is to be held in the west region on the 13th, venue to be advised. The brewer of the year competition will be held at the meeting. The recent vote between a Golden Ale and a Pale Wheat Beer was a draw. The wheat beer was selected by the toss of a coin.

The following are the links to the BJCP guidelines for the competition wheat beer as previously emailed by TA

24A - A refreshing, elegant, tasty, moderate-strength wheat-based ale.

<http://www.bjcp.org/style/2015/24/24A/witbier/>

10A - A pale, refreshing German wheat beer with high carbonation, dry finish, a fluffy mouthfeel, and a distinctive banana-and-clove yeast character.

<http://www.bjcp.org/style/2015/10/10A/weissbier/>

6. Treasurers Report

MC reported that the current bank balance was £ 1308.87 and that the club now has 33 members. This figure did not include the cost of the equipment and chemicals purchased for today's meeting .




7. AOB



There was no other matters raised



A vote of thanks was given to IanRB for an excellent meeting.



8. Close of Meeting




The meeting closed at 16:00 hrs.

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| <p>Acetaldehyde</p>  | <p>Bruised apples, cidery, fruity, emulsion paint</p> | <p><u>Detectable in aroma and flavour</u></p> <p>Present in all beer typical 2-15mg/l Perception at 5-20mg/l At 6-8mg/l – perceived as fruity At higher levels – distinctive green apples</p> <p>Usually considered a fault at perceptible levels – except American Lite and standard lagers at very low levels</p> | <p>Two causes – incomplete fermentation where the precursor acetaldehyde is not converted to ethanol and oxidation of ethanol in finished beer – usually accompanied by other oxidation defects</p> | <p>Avoid – under pitching, poor yeast health, too cool fermentation, removing yeast from wort too early.</p> <p>Avoid oxidation when packaging</p> |
| <p>Bitter - Isolone</p>  | <p>Broccoli, dandelion leaves</p> | <p><u>Iso-alpha products from hops</u> Perception at 7-15mg/l</p> | <p>Over hopping</p> | <p><u>Recipe formulation, avoid over hopping</u></p> |
| <p>Contamination</p>  | <p>Sour and buttery Taster kit describes as Diacetyl & Acetic Acid <u>but also lacto-bacillus</u></p> | <p><u>Detectable in aroma and taste</u></p> <p>Acetic Acid - considered a fault at perceptible levels 130mg/l – present in most beer 30-200mg/l</p> <p><u>See Diacetyl below</u></p> | <p>Common sources – bacterial infection that oxidises ethanol most commonly Acetobacter – giving a white pellicle in conditioning vessel-, lactobacillus contamination</p> | <p>Proper pitching rates to reduce lag times. Proper sanitation of all cold side equipment</p> |

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| <p>DMS (-Dimethyl Sulfide)</p>  | <p>Cooked corn, cooked vegetable, sweet corn, tomato juice–</p> <p><u>A</u>at high concentrations boiled shrimp</p> | <p>Detectable in aroma and flavour</p> <p>Present in beer at 10-150µg/l <u>Detectable at</u>–at 25-50µg/l</p> <p>Low levels acceptable in light lagers, pilsner, maibock and cream ales</p> | <p>DMS is formed of SMM from malting and is created and usually driven off -on the boil, produced at sub boiling temperature.</p> <p>Pale lager malts have higher levels of SMM as do some adjuncts like corn. Can be formed by infection but <u>then</u> usually associated with other off flavours</p> | <p>Malt choice – English Pale and Darker malts have lower SMM levels, lower adjunct levels mean less SMM</p> <p>Avoid - weak or short boil and slow cooling times as DMS is produced below boiling temp,</p> <p>Avoid oversparging at low temperatures (160F)</p> |
| <p>Diacetyl</p>  | <p>Buttery, butterscotch, popcorn, slick / mouth coating feeling</p> | <p>Detected in aroma, flavour and mouthfeel</p> <p>Present in beer 8-600µg/l</p> <p>Typical threshold 20-40µg/l but genetic sensitivity from 0.2µg/l to insensitive.</p> <p>Low levels acceptable in Bohemian pilsners, English pale and brown ales, stouts , stouts, porters and English IPA and lagers</p> | <p>Fermentation by products usually cleaned up by complete fermentation Can be introduced by infection from lacto bacillus and Pedicoccus – usually through dirty beer lines and then associated with other off flavours as well</p> | <p>Avoid poor yeast management, mineral deficiency, slow or weak fermentation(low fermentation temperatures, poor oxidation of wort, low pitching rates, insufficient time), Healthy primary fermentation will <u>should</u> remove diacetyl</p> |

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| <p>Ethyl Hexonate - Ester</p>  | <p>Fruity, estery, green apples, fresh fennel, aniseed</p> | <p>Detected in flavour and aroma.</p> <p>Ester pProduced through fermentation.</p> <p>Present in all beers, a defect at high concentrations. <u>Other Esters depend on style.</u>—</p> <p><u>Typically 0.07-0.5mg/l and perceived at 0.15mg/0.25mg</u></p> <p>Can be low to high concentration depending on style</p> | <p>Mainly produced during primary fermentation <u>but can also double in a long secondary ferment.</u></p> | <p>Avoid incorrect fermentation -temp for strain especially over high fermentation temperatures – ferment at cool end of range, temperatures, excessive trub, underpitching yeast, higher gravity beer. Higher gravity beers produce more esters.</p> |
| <p>Isoamyl Acetate - Ester</p>  | <p>Banana, pear , pear drops peanut candy</p> | <p>Detected in flavour and aroma.</p> <p>Esters are produced through fermentation. Present in all beers, a defect at high concentrations— typically 0.08-6.6mg/l and perceived at 0.6mg-4.0 5mg/l</p> <p>Part of signature for German Wheat and Rye Beer Can be low to high concentration depending on style</p> | <p>Mainly produced during primary fermentation</p> | <p>See above - Ethyl Hexonate</p> |

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| <p>Isovaleric Acid – organic acid</p>  | <p>Old cheese, stale hops, sweaty socks</p> | <p>Detected in aroma and flavour</p> <p>Typical concentrations are 0.2-1.5mg/l and perception at 0.7-1mg/l although this can vary widely between individuals</p> <p>Always a fault – even in lambics where aged hops are used <u>but</u>, the beer is aged long enough to resolve the cheesy notes</p> | <p>Caused by oxidation of hops in storage to produce valeric butyric and methyl- butric acids. These acids are, imparted through high hopping rates and the use degraded hops or extracts. Can be occasionally produced by Brettanomyces either by accident or intent</p> <p>Will decrease with time and storage.</p> | <p>Avoidance use fresh hops and good sanitation</p> <p>Store hops appropriately at cool temps (freezer in oxygen free containers)</p> |
| <p>Lightstruck (-Thiol)</p>  | <p>Farty, fecal skunky, natural gas(as- mercaptan is added as a safety precaution)</p> | <p>Detected in aroma and flavour</p> <p>Typical concentrations 1-5ng/l for dark stored and 0.01-1.5µg/l for beer exposed to light</p> <p>Perceived at 4ng /l – always a fault and very common in mishandled green bottled lagers</p> | <p>Caused by reaction of UV light with riboflavin_s in beer that react with and break down hop derived sulphur containing iso-humulones <u>and</u>— liberating - mercaptan.</p> | <p>Avoid light and over bittering. Use brown bottles and opaque fermenters.</p> <p>Shop-keepers, don't leave your bottle of Hobgoblin in the fecking shop window for six weeks.</p> |

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| <p>Metallic</p>  | <p>Aluminium foil, blood like, coin like, coppery, ferrous, tin like</p> | <p>Detected in appearance, aroma , flavour and mouthfeel</p> <p>Typical concentrations are <0.5mg/l and threshold at 1-1.5mg/l – never appropriate in any style</p> | <p>Usually due to high levels of metallic ions in brewing liquor or leached from brewing equipment</p> | <p>To avoid treat liquor to remove excessive metallic ions.</p> <p>Don't use metallic equipment likely to corrode. Avoid prolonged contact between metal fittings and corrosives, thoroughly clean and air dry. Use stainless steel, food grade plastic or glass to store beer</p> |
| <p>Papery- Trans 2 Nonenal</p>  | <p>Cardboard, papery, wet cardboard</p> <p>At low levels ball point pen ink, old people!</p> | <p>Detected in Aroma and flavour.</p> <p>Typical levels <50ng/l in young beer and >0.2µg/l in older beer – perceived at 50-100ng/l</p> <p>Never appropriate in any style</p> | <p>Product of oxidisation/staling</p> <p>Caused by auto –oxidation of malt lipids and depends on length of time of storage, temperature of storage and amount of oxygen in packaged beer</p> | <p>Store beer at cooler temperature</p> <p>Do not over age-, especially, lighter lower alcohol (<6%abv) beers -</p> <p>Avoid introducing oxygen during handling and packaging</p> |
| <p>Spicy - Eugenol</p>  | <p>Cloves , all spice</p> | <p>Normally detectable in Aroma, flavour and mouthfeel. The flavour threshold of eugenol in beer is 130 µg / l. Desirable in some beer styles (Wheat Beer and Saison) – non-volatile so once in beer will not dissipate</p> | <p>Associated with use of warm fermentation temperatures and typically associated with beers of higher alcoholic strength. Arises from the oxidation of higher alcohol levels. May also come from wild yeast contamination or certain yeast strains with the phenolic off flavor (POF).</p> | <p>-</p> |

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Last Updated: 14/03/19

Recent MCB Placings and Upcoming Competitions.

If you know of any further upcoming competitions please let Sean know (midscraftbrewerswebmaster@gmail.com)
Please also let me know if you have placed in any competition

UPCOMING COMPETITIONS

| Date | Competition Name | www  | Status | Notes |
|--------------------|--|---|--|---|
| 06 & 13/04/2019 | 7th Bulgarian Homebrew Competition | http://homebrewers-bg.org/competitions | Closed for entries | annual event. 160 entries |
| 04/05/2019 | Wishbone Brewery May The 4 th Be with You | http://www.wishbonebrewery.co.uk/2018/12/01/may-the-4th-brew-with-you/ | Open for entries. Contact the brewery at competition@wishbonebrewery.co.uk | At Wishbone Brewery Keighley. This year it's Stouts & Porters up to 6%. 1 entry per brewer. Brewer must be present on 04/05/19 |
| 03-06/05/19 | Wales & West | http://walesandwest.org.uk/the-competition/ | Not a lot of info on the website on how to enter. | An NGWBJ and BJCP competition held in Torquay |
| 18-19/05/2019 | LAB Open 2019 | https://competitions.londonamateurbrewers.co.uk/labopen/@labcomps | Open for entries | Formerly the London & SE Comp. c. 400 entries. This year's event will be held at Four Pure Brewery. |
| 15/06/2019 | ACB Homebrew Competition | https://competition.angliancraftbrewers.org.uk/ | Open for entries 15/03/19 | Max 100 entries. 1 entry per brewer |
| Sept 2019 (TBC) | Welsh National Homebrew Competition | https://homebrewcompetition.wales/@WelshBrewComp | Not yet confirmed for 2019. | This has been held for the past few years at Tiny Rebel in Newport. Typically around 300 entries. |
| 1st-6th & 20/09/19 | Mevashlim - Craft Brewing Competition 2019 | http://mevashlim.b7homebrewclub.org/ | Opens for entries 16/06/19 | Israeli competition |
| 12/10/2019 | Prague Homebrewing Competition 2019 | http://brewprague.cz https://www.facebook.com/brewprague/ | Contact brewprague@gmail.com for details | Limited Categories. Czech Premium Pale Lager (3B), American Pale Ale (18B), Witbier (24A), All Brett IPA (28A), Baltic Porter (9C), Berliner Weisse (23A) |
| Oct 2019 (TBC) | Brew Brighton | http://competition.homebrewbrighton.co.uk/@brewbrighton | Not yet confirmed for 2019. | Annual event with a different challenge each year |
| Nov 2019 (TBC) | Brewcon World Series III | https://www.brewcon-worldseries.com/@BREW_CON | Not Open for entries yet | Held as part of Brewcon London. https://www.brewconlondon.com/ |
| Jan 2020 | Scottish Craft Brewers Annual Competition | www.scottishcraftbrewers.org/Competition@ScotCraftBrew | Not confirmed yet for 2020 | Annual Comp |