

*HAWKES BAY AMATEUR WINEMAKERS
AND BREWERS CLUB*



June 2019

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Hi everyone,

Just a note to wish Norm a speedy recovery from recent surgery. I spoke with him today and he is hale and hearty and I'm sure we will see him around the club more frequently from now on.

The next meeting is on the 18th June and will start at 7.30pm at the Deaf Clubrooms Lee Street, Taradale.

Brian, our tech expert, is going to give us an insight into navigating our website (address above) and the National website. Both these sites carry a lot of useful information for brewers and winemakers.

It was agreed that subs will be raised to \$30. Raffles to remain at \$2.

Subs can be paid by internet banking to;

HB Amateur Winemakers & Brewers Club

Ac 11 6421 0003872 11 (put your name in the reference field).

ANZ Bank Havelock North

Upcoming Club Visit. Our club is going to visit Abbey Winery and Brewery (Fat Monk) on Saturday the 29th June at 11am. Permit the brewer will give us a tour of the brewery and then we can go to the cellar door and taste some beers. The place is open for lunches, I think they do platters. Abbey is just through Bridge Pa village on the right heading towards the mountains and HW50 intersection.

May Meeting

David gave us an incite into identifying styles according to our beer specs. He had a Red Ale, a Lager and an Ordinary Bitter which we tasted and identified the characters that are in the specs. Thanks David for your input.

Well, we have started the club monthly competitions for the 2018/19 club year. In this meeting we judged;

- Medium Red Grape, No Medal awarded
- Essence Based Liqueur, Brian a Bronze.
- Brown and Mild Ales, Nigel Bronze for Southern Brown Ale and Brian Bronze for Mild Ale.

The raffle winner was Hans.

We have some good news for the raffles for this year, there will be \$20 gift vouchers from the Brew Shop, who have kindly agreed to sponsor some of our raffles this year. Check out their website on; www.brewshop.co.nz

Upcoming classes for club night competitions;

Points cup; The classes being judged for the next two months are;

June	4 8	Dry White Grape Medium Red Fruit	Stout	7	1, 2, 3, 4, 5
July	5 13/14/15	Medium White Grape Dry, Medium and Sweet Other Ingredient	Strong Ale (> 6% Alc) and Porter	8 6	1, 2, 3, 4 1, 2
	36 L2	Sparkling Cider Naturally Infused Liqueur			

For the beer entries, there are 5 classes open to you, so I have added the specifications below.

B7: Stout

B7.1 Sweet Stout

Colour: Garnet to black in colour.

Body: Medium-full to full-bodied and creamy. **Aroma:** Mild roasted grain aroma. Fruitiness can be low to moderately high. Diacetyl low to none. Hop aroma low to none.

Palate: Dark roasted grains and malts dominate. Hop bitterness is moderate (lower than in dry stout). Medium to high sweetness (often from the addition of lactose). Low to moderate fruity esters. Diacetyl low to none. **Head:** Creamy tan to brown head. **Carbonation:** Low to moderate carbonation. .

Alc/vol: 4 –6%

O.G: 1.042 –1.056

B7.2 Oatmeal Stout

Colour: Garnet to black in colour. **Body:** Medium-full to full body

Aroma: Mild roasted grain aromas. Hop aroma low to none. A light oatmeal aroma is optional. **Palate:** Medium sweet to medium dry palate, with the complexity of oats and dark roasted grains present. Medium hop bitterness with the balance toward malt. Diacetyl medium-low to none. Hop flavour medium-low to none.

Head: Thick, creamy, persistent tan- to brown-coloured head.

Carbonation: Medium to medium-high carbonation.

Alc/vol: 4.2 –5.9%

O.G: 1.048 –1.065

B7.3 Dry Stout (Irish)

Colour: Garnet to black in colour. **Body:** Medium-light to medium-full body

Aroma: Coffee-like roasted barley and roasted malt aromas are prominent. Esters medium-low to none. No diacetyl. Hop aroma low to none.

Palate: Moderate roasted, grainy sharpness and medium to high hop bitterness. Medium-low to no fruitiness, and medium to no hop flavour. No diacetyl.

Head: Thick, creamy, long-lasting, tan- to brown-coloured head

Carbonation: Low to moderate carbonation.

Alc/vol: 4 –5.5%

O.G: 1.036 –1.056

B7.4 Foreign Extra Stout

Colour: Garnet to black in colour. **Body:** Medium-full to full body

Aroma: Roasted grain aromas moderate to high.. Fruitiness medium to high. Stronger versions can have the aroma of alcohol. Hop aroma low to none. Diacetyl low to none. **Palate:** Sweet to moderately high. Roasted grain and malt character can be moderate to high. The roasted flavours may taste of coffee, chocolate, or lightly burnt grain. Little to no hop flavour. Very low to no diacetyl.

Head: Large tan to brown head with good retention.

Carbonation: Moderate to moderately-high carbonation

Alc/vol: 5.5 –8%

O.G: 1.056 –1.075

B7.5 Imperial Stout

Colour: Colour may range from very dark reddish-brown to jet black

Body: Full to very full-bodied.

Aroma: Rich and complex, with variable amounts of roasted grains, maltiness, fruity esters, hops, and alcohol. Fruity esters may be low to moderately strong,. Hop aroma can be very low to quite aggressive. An alcohol

character may be present, sharp, hot or solventy. No diacetyl

Palate: Rich, deep, complex and frequently quite intense, with variable amounts of roasted malt/ grains, maltiness, fruity esters, hop bitterness and flavour, and alcohol. Medium to aggressively high bitterness. Medium-low to high hop flavour (any variety). Alcohol strength should be evident, but not hot, sharp, or solventy. No diacetyl. Dry to sweet in flavour. **Head:** Deep tan to dark brown head

Carbonation: Low to moderate


Alc/vol: 8 –12+% **OG:** 1.075 –1.095+

Fat Monk; This is a monthly beer competition for entries not being competed for in the points cup for that month. We are changing this monthly format, to encourage our members to present their latest and greatest concoctions.

This also gives you a chance to bring a brew, that you think could be worthy of an entry into the Nationals and are not sure on the class in which to enter it. Our members will no doubt be able to point you in the right direction.



This months " H  P, T  PIC (Hop Topic).

This month we are going to discuss; "Finding faults in our beer ".

One of the other new fields that we are keen to evolve as a club in is training beer judges. This month, four of our members will be attending Massey University to be tested and judged on their knowledge of beer brewing and hopefully will be awarded creditation, to judge beer at National and regional competitions.

Many of the faults are applicable to all types of fermentation, i.e, wine, cider and beer.

I have numbered these in alphabetical order. The numbers will be shown to relate to some really basic prevention activities. I personally believe that the most important matters in brewing are;

- A Sterilisation and cleanliness.
- B Fermentation at the correct and at a constant temperature (more than a three degree swing in the temp can make your yeast go a bit crazy and create that funky "home brew taste").
- C Healthy and happy yeast.
- D Correct time in the fermenting stage.
- E Poor habits and brewing practice, like squeezing the juice out of your grains too much, dirty/rusty brewing gear, not cooling your wort fast enough, etc.
- F Poor storage of your beer, this include introducing enough Co2 to your keg or bottle.

I have sourced several publications and "borrowed" content to summarise the faults below. At the bottom of the newsletter, I have included some of the full cheat sheet/information sheets on faults.

1 **Astringency**: (a slight acidic or bitter taste). **Causes**; Excessive sparging, hot-side aeration; yeast autolization (destruction of the yeast cells),

excessive or oxidized trub carried over into the ferment. I liken this to squeezing a tea bag hard. **Remedy;** Next time, check that you have a healthy yeast strain, let your wort run off without squeezing the grains.

2 **Alcoholic taste; Causes;** Your fermentation temperature was too low, your yeast was unhealthy, or you added too much sugar or sugary adjuncts (additives). **Remedy;** Next time; raise the fermentation temperature, change the yeast or adjuncts that you added. This time, aging the beer may help.

3 **Acetone taste; Causes;** Your fermentation temperature was too high, or you may have received an infection in this brew. **Remedy;** Lower your mash temperature next time, address that you have used the correct yeast strain.

4 **Bitter-vegetable taste: Causes;** From deteriorated hops (oxidized beta-acids in the hops). **Remedy;** Next time use fresh hops and always store your hops in a fridge or freezer.

5 **Buttery (diacetyl), butterscotch, popcorn flavours:** It can range from being really bad and like rancid butter, this is likely to be from lactic-acid bacteria **Causes;** Slight or pleasant diacetyl flavour is more often from low pitching rate, under oxygenation, petite mutants in culture yeast, or characteristic of specific yeast strain. Also from beer racked off its primary sediment too early or oxidized in the secondary. **Remedy;** Try another yeast strain next time. Oxidising your yeast at pitching is a very good way to minimise this.

6 **Cooked corn aroma / flavour: This could be DMS (Dimethyl Sulphide).** **Causes;** Pilsner and lager grains naturally have DMS in them, small amounts in some beer styles is allowed. Also caused from poorly malted barley especially six row; high moisture malt; hot wort not chilled quickly enough; coliform bacteria contamination. **Remedy;** this is normally boiled off in a 90 minute boil, but you must allow the DMS to escape by not covering your boil pot with a lid.

7 **Cardboard Taste: Causes;** too much air in the bottle headspace; oxidised in the ferment; warm storage mishandling; insufficient boil; **Remedy;** Try introducing Co2 into you kegs or purging your bottles with it, prior to filling with your brew. Store your beer in a cool space and drink fresh.

8 **Celery odour: Causes** probably from a tainted yeast culture. (Hafnia protea contamination). **Remedy;** Try another yeast strain next time.

9 **Disagreeable smell / taste; turbidity, acidity: Causes;** Pediococcus or Bacillus contamination of the primary ferment. This is a lactic bacteria and often found in lager type beers. This spoilage happens in the late stage of the fermentation. **Remedy;** Try a lower pH in your water and the type of hop can also prevent this.

10 **Estery/Fruity aroma /flavour: Causes;** From esters, higher alcohols, acetates of higher alcohols. The consequence of under oxygenation of the pitching yeast, too high fermentation temperature, too low pitching rate, or a

deteriorated yeast strain. When unpleasant estery and combined with vegetal aroma and flavour it is from coliform contamination of the wort or yeast culture. **Remedy;** Oxidising your yeast at pitching is a very good way to minimise this. Time in the bottle may fix this problem

11 Gelatinous precipitate: Causes; Excessive sparging; poorly degraded hemicellulose. **Remedy;** Next time run less sparge (rinsing/hot) water through your grains.

12 Grassy; Causes; From your hops. **Remedy;** Next time reduce your dry hopping or check your hops for freshness. Check that oxygen is not getting into your brew.

13 Green apple flavour: From acetaldehyde, the principal volatile acid in beer. **Causes;** From too high a fermentation temperature; yeast strain characteristics; bacterial contamination from the ester Ethyl hexanoate. **Remedy;** Next time; finish the attenuation (conversion of sugars into alcohol) by allowing the fermentation to complete, pitch healthy yeast or add a yeast nutrient. Oxidising your yeast at pitching may also help.

14 Gushing: VERY common with newer brewers (and me on club night!!) **Causes;** Excess of priming sugars; beer not fermented out before packaging; temperature fluctuation; mishandling; old infected malt; iron in water; wild yeast contamination. **Remedy;** Add less priming sugars in your bottle when bottling.

15 Haze: Causes; Poor mash digestion; Insufficient boil; wild yeast; bacteria; oxidation of beer; poor starch conversion in mash. **Remedy;** Look closely at your basic brewing habits and practices, as there is a lot that can go wrong here. Use or a whirfloc tablet/Irish Moss in the boil may help.

16 Lack of head: Causes; Excessive protein rest; over modified malt; too high on adjunct ratio; lipids in the ferment (excessive sparging or autolyzed (broken down) yeast) over-foaming in the ferment, repeated foaming due to rough beer transfers; over-boiling; insufficient or deteriorated hops; contact with oil. **Remedy;** A protein rest on the grain at 50 degrees only needs to be for about 15-30 minutes, you then need to amp up the temperature to 67(ish).

17 Medicinal aroma / flavour (Phenolic): Causes; From wild yeast or bacteria; chlorine in the ferment either from water source or improper rinsing of chlorine sterilisation product; plastic leaching contamination; excess of phenolic material from over sparging or weak wort boil. Accentuated by high fermentation temperatures. **Remedy;** Boil your water first if you have chlorine. Cover your fermenter and prevent wild yeast. Cool your beer quickly. Whole hops can also affect this.

18 Metallic. Causes; Likely to be from excessive water salts or poor hygiene on your brewing equipment. **Remedy;** Check for rust on your gear and ensure that you use stainless steel and passivated and that all of the equipment is clean.

- 19 Musty (stale, cellar like).** **Causes;** likely to be oxidation of your wort. **Remedy;** Avoid oxidation, check water for its freshness, check your sanitation and avoid or lower the level of smokey malts.
- 20 Plastic (Phenolic) a band aid type flavour;** **Causes;** likely to be an infection. **Remedy;** Avoid high fermentation temperatures.
- 21 Rotten egg odour:** Hydrogen sulphide; yeast strain characteristics; **Causes;** Fermentation by wild yeast; weak fermentation; in bottled or kegged beer it may be from contamination by Zymomonas bacteria, which is more resistant to sugars and ethanol. **Remedy;** Cover your fermenter and prevent wild yeast.
- 22 Roughness:** **Causes;** Abnormal water composition, insufficient boil, excess tannin, excessive or alkaline sparging, insufficient kettle evaporation, hot-side aeration. **Remedy;** Check your sparging and boiling techniques. Also use good quality water with a good brewing salts balance (pH).
- 23 Skunky odour:** **Causes;** Beer light-struck. Avoid direct sunlight during brewing and in package; reduce headspace. **Remedy;** The easiest fix, store your beer in a dark cool place. Once it is skunky, pour a new one, as this can happen really quickly in the summer (drink quicker when you are out in the sun).
- 24 Smokey;** Taste and/or smell. : **Causes;** Scorch from your boil. **Remedy;** Check you don't boil over, or have scorched mash in your brew. Dark malts may contribute, as may infection.
- 25 Solvent or fusel;** **Causes;** Yeast issues. **Remedy;** Check that you are pitching enough healthy yeast or raise your fermentation temperature.
- 26 Sour or acidic taste:** **Causes;** From too low pH (too much acid added); or having the wort sitting for too long at low temperatures. This causes a lactic or acetic acid bacterial contamination. **Remedy;** Look at your brewing salt additions and your pH in the wort.
- 24 Spicy (Phenolic),** **Causes;** This is caused by the yeast strain, Belgium beers are well known for this and this flavour is encouraged in these styles. Your fermentation temperature may affect this. **Remedy;** Try a new yeast type, more suited to that beer style.
- 25 Sulphury aroma and flavour:** **Causes;** Too low on fermentation temperature; poor rinsing of sulphur-based sterilisation product; from wild yeast, Zymomonas or coliform bacteria. May be yeast strain specific, or from autolization of sedimented yeast. **Remedy;** Except when from bacterial contamination, may be reduced by aging or by scrubbing with carbon dioxide.
- 26 Thinness:** You will taste this. **Causes;** Wort extract too low; excessive mash protein digestion; dextrin-poor extract, from too low conversion temperature. **Remedy;** Look at your mash temperature and the amount of wort that you are extracting from the grain.

27 Vinegar; Acetic like, with a vinegar like sour taste. **Causes;** Possible infection, or oxidation. **Remedy;** Check for the source of the oxidation getting into your brew, as it is likely to be aerobic. Check your yeast strain.

28 Yeasty; Bread like **Causes;** Not enough time for the yeast to finish its job (flocculate) or the wrong yeast strain. **Remedy;** Change your yeast, allow time for it to finish or use less yeast in the next brew. Time may fix this.

Conclusion.

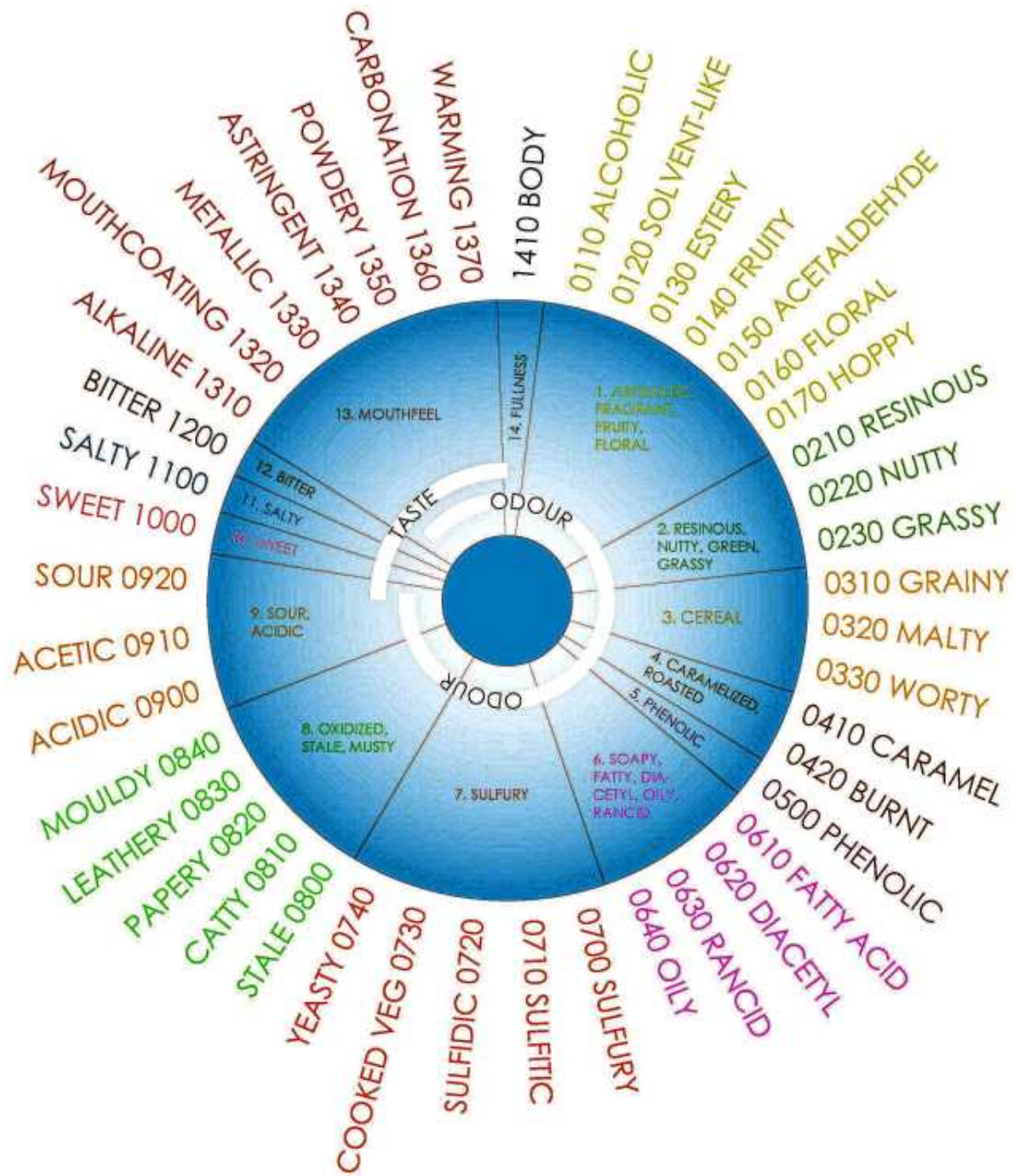
As a club, we are very committed to helping our members learn about brewing. This includes us teaching members how to judge. Next weekend the four members will go and view the Massey University brewing set up and will be evaluated on their skills and knowledge. Hopefully this will be the first of other visits and we can send other members over for training.

All the best to the initial four members.

See you on the 19th in Taradale at club night.

Nigel

Beer Flavour Wheel





BEER FAULT LIST

AHA/BJCP Sanctioned Competition Program
See <http://www.bjcp.org/fauls.php> for a complete list



<http://www.bjcp.org>

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<http://www.homebrewersassociation.org>

Characteristic	Possible Solutions
Acetaldehyde fresh cut green apples	Make sure fermentation is vigorous using healthy yeast. Allow full attenuation. Leave beer on yeast longer. Oxygenate wort fully. Try another yeast strain. Make sure sufficient yeast nutrients are available. Let beer age longer.
Alcoholic/Hot spicy, vinous, warming from Ethanol and higher alcohols	Lower fermentation temperature. Use a less attenuative yeast strain. Check yeast health. Use less fermentables. Use less sugary adjuncts. Check for possible infection. Raise mash temperature. Let beer age longer before consuming.
Astringent Mouth-puckering, lingering harshness, husk-like graininess	Don't oversparge. Don't overcrush grain. Don't boil grain. Don't sparge with water above 170°. Don't sparge with water with a high pH (over 6). Use water with lower sulfate content. Use less dark grains (especially black malt). Use less whole hops (especially high-alpha hops or simply large quantities of hops). Avoid use of raw spices, fruit pith and fruit skins.
Diacetyl Buttery, Butterscotch, Movie Popcorn	Try another yeast strain. Oxygenate wort before fermentation. Reduce primary fermentation temperature. Use a warmer/longer secondary fermentation. Use healthy yeast in sufficient quantity. Make sure sufficient yeast nutrients are available (including reducing adjunct use). Check for infection. Allow beer to rest on yeast until fully attenuated. Don't rack, filter or fine too early. Don't crash-cool yeast. If lager, raise temperature for a diacetyl rest at end of fermentation. Bottle condition beer at cellar temperatures. Avoid adding oxygen during fermentation.
DMS (Dimethyl Sulfide) Cooked corn	Use a long, rolling, open boil. Reduce amount of pilsner malt. Cool quickly before pitching yeast. Check for infection. Make sure you use a healthy, vigorous yeast starter.
Estery Fruity (strawberry, pear, banana, apple, grape, citrus)	Lower fermentation temperature. Try a cleaner yeast strain. Oxygenate wort sufficiently. Reduce original gravity. Check hop variety for fruity characteristics. Avoid carrying over excessive break into fermenter. Pitch a sufficient quantity of yeast (avoid yeast stress). Bottle condition and age beer longer at cellar temperatures to reduce esters.
Grassy Fresh-cut grass, green leaves	Reduce dry-hopping or quantity of whole hops. Avoid oxygen pickup. Check hops and malt for freshness.
Light-struck Skunky, catty	Don't expose wort/beer to sunlight after hops have been added. Don't use clear or green glass bottles. Avoid use of Cluster hops in late hop additions.
Medicinal (chlorophenolic) Chloro-septic, medicine cabinet	Avoid water with chlorine or chloramines (use RO water if necessary). Avoid bleach sanitizers. Reduce astringency/grain husk sources. Avoid excessive whole hop use. Check for infection.
Metallic Iron, copper, coins, blood	Check water for metallic ions. Reduce water salts. Check equipment condition for rust. Make sure stainless steel equipment is properly passivated. Fully rinse sanitizer. Try using RO water and add salts as needed.
Musty Stale, moldy, cellar-like	Avoid oxidation (see Oxidized). Check sanitation. Avoid peat-smoked malt. Check water for freshness and taste. Use fresh ingredients (especially malt and hops).
Oxidized Stale, papery, cardboard	Check for oxygen being introduced into beer post-fermentation. Don't splash when racking/bottling. Check caps and/or keg seals for good fit. Purge bottles/kegs with CO ₂ prior to filling. Store beer cool. Drink beer when fresh.
Plastic (Phenolic) Band-aid, electrical tape, styrene	Check for infection. Check yeast strain and health. Lower fermentation temperature.
Solvent/Fusel Hot burning on palate	Lower fermentation temperature. Pitch a sufficient quantity of healthy, active yeast. Check for infection. Try a different yeast strain.
Sour/Acidic Lactic acid, citric acid, sharp, clean sourness	Check for infection. Check yeast strain. Don't mash for long periods of time at low temperatures.
Smoky (Phenolic) Smoke-like, charcoal, burnt	Check for scorched mash or boil. Check excessive use of dark malts. Check for infection.
Spicy (Phenolic) Clove, pepper, vanilla, etc.	Use a different yeast strain and/or hop variety. Adjust fermentation temperature (sometimes higher, sometimes lower, depending on yeast strain and beer style).
Sulfury Rotten eggs, burning matches	Check for infection. Check water for excessive sulfates. Check yeast health. Check for yeast autolysis (beer left on yeast too long at warm temperatures). Try another yeast strain.
Vegetal Cooked, canned or rotten vegetables (cabbage, celery, onion, asparagus, parsnip)	Encourage a fast, vigorous fermentation (use a healthy, active starter to reduce lag time; this is often due to bacterial contamination of wort before yeast becomes established). Check sanitation. Check for aged, stale, or old ingredients (especially old liquid malt extract). Avoid oversparging at low temperatures.
Vinegary Acetic Acid, vinegar-like sourness	Check for infection. Check yeast strain. Check for oxidation sources (acetobacter is aerobic).
Yeasty Brady, sulfury, yeast-like	Use a more flocculent yeast strain. Allow yeast sufficient time to flocculate. Filter beer or use clarifying agents. Avoid carrying over as much yeast. Age the beer longer. Try another yeast strain.

Other very good reads that look at beer faults in detail;

https://londonamateurbrewers.co.uk/wp-content/uploads/2015/05/Complete_Beer_Fault_Guide.pdf

https://www.cicerone.org/sites/default/files/resources/off_flavor.pdf