

## Minutes of MCBA Meeting Leicester, 18<sup>th</sup> January, 2014

The Western, 70 Western Road, Leicester, LE3 0GA

Chair Ray C. Attendees: Allan G, Peter F, Alan Q, Tim L, Steve R, John C, Malc N, Russell P, Jon D, Judith S, Jim S, Steve H, Fraser A, Mike C, Jody E, David S.

1. The meeting started at 11.40 am and the Chair welcomed everyone to the meeting. It was felt that introductions were not necessary. The Chair explained how the yeast trial had been conducted. A batch of wort was split into 5 X 1 gallon demijohns and fermented with a different yeast. The yeasts used were: Nottingham, SO4, US05, White Labs WLP002 and White Labs WLP005. The recipe for the beer and notes on the yeasts are in the appendix.
2. While the beers were being poured, Allan G gave a report on the yeast survey , having circulated a questionnaire previously to members.

Observations on yeast questionnaire:

There were 18 responses in total. 1/3 use dry yeasts only, 1/3 use liquid yeasts as a rule and the other 1/3 are mixed. Often used as back up by those who normally use wet yeasts. The most popular dried yeasts are SO4 and Nottingham. 1/3 have used Wyeast but mostly only once or twice. Generally not very popular. A notable exception is Jon A who normally uses it. White Labs-2/3<sup>rd</sup> have used this and about 50% of those who use it use it on a regular basis Brew Lab Slants-Only 4 of us have used these and then generally only once or twice. Own Slants-About 50% of us have used these and all attended our yeast day. Mike C uses these as a general rule. Reculturing from a bottle-1/3 have used this method but not very often. Exception is Peter F who uses Shepherd Neame for 60% of his brews. Other-Russell P makes cider from yeast on skin of fruit and Mike C and John C use yeast from breweries. Jim uses cider yeast for beers.

3. Tasting of the 5 versions of the beer fermented with different yeasts took place. It was suggested to add a score for bitterness to the scoring sheet. The beer fermented with WLP005 had clear faults and it was discounted from the comparison. When it was pitched the WLP005 looked quite dark, although it was in date. Peter F made the point that we do not know how liquid yeasts are handled in transit. SO4 had the best performance in fermentation, as it started quickly, finished quickly and then flocculated well. There was surprisingly little difference between the beers and many tasters commented on this. I was expecting to detect much bigger differences between the beers. Several members said that they would stick to their usual yeast, as there was not much difference. After the tasting there was a vote on the preferred beer and WLP002 was the winner by a nose ahead of Nottingham.

Table of results of scores

Yeast strain	Malt aroma (out of 10)	Hop aroma (out of 10)	Malt flavour (out of 10)	Hop flavour (out of 10)	Overall score (out of 10)	Total score out of 50	Bitterness
Nottingham	5	4.3	5.9	5.7	6.3	27.2	5.6
SO4	4.1	4.3	5.5	5.9	6.1	25.8	6.2
US05	4.9	4.9	5.3	6.1	6.3	27.5	4.8
WLP002	5	4.7	6.5	6.4	7.2	29.8	5.2

Average scores for 15 tasters

Yeast strain    Comments

Nottingham	<b>good, most bitter , most bitter and sweetest, sour, slight sweetness, dry,bitter finish, clean flavour</b>
SO4	<b>unusual aroma , low bitter and least flavour, good balance, very dry, bitter, clean flavour</b>
US05	bitter, sharp bitterness, ginger, lively, good balance, dry, sweet , yeasty
WLP002	<b>good, low bitterness and smooth, good body, dry, sweetest, good mouth feel/body</b>

4. Tasting of two batches of wheat beer fermented with two different yeasts. Russell P had fermented two batches of the same wort with either a Munich Weissbier yeast or a Saison yeast. The two beers were completely different. The Saison yeast gave a very distinctive character to the beer. The beer brewed with the Saison yeast had more character. With the Munich yeast the beer was cleaner tasting and sweeter, with more spicy character. The final gravity for the Saison was 1008 and for the Munich 1012.

5. Tim L served the same wheat beer either clear or with the yeast roused (cloudy). The yeast used was T58. Most people agreed that the beer seemed sweeter with the yeast in suspension.

6. During lunch sugar solutions of different original gravities (1060, 1040, 1010 and 1000) were available to test the accuracy of hydrometers and refractometers. The 1060 and 1040 solutions were made by multiplying degrees Plato by 4, so for example a SG1040 solution is 10 degrees Plato which is 10 g sugar per 100 ml water. SG1000 was tap water and not distilled water. SG1010 was obtained from the following table on the internet: <http://www.brewersfriend.com/plato-to-sg-conversion-chart/>

The only recorded values were for four refractometers, which tended to under-read at the top end and to over-read at the bottom end. Anecdotally, the hydrometers provided accurate readings.

SG	Mean refractometer reading
1060	1058
1040	1040
1010	1012
1000	1001

7. Peter F led a discussion on brewing yeasts, which covered dried yeasts, wet yeasts and reculturing yeast from commercial bottle-conditioned beers (see notes in appendix).

8. Tasting of members beers. Steve H brought along a very nice liquorice stout at 4.8%. This was very smooth with the liquorice flavour apparent. Allan G had a comparison of the same stout fermented with two different yeasts, WLP004 and SO4. The stout brewed with WLP004 had a cleaner taste and was smoother and more rounded. Jody E had his first attempt at a black IPA. This had a very good hop aroma and flavour and was a good example of the style.

9. Future events: next meeting March 8<sup>th</sup> at the Canal House in Nottingham.

April 12<sup>th</sup> is the joint competition with NCB at Saltaire. The beer to be brewed is a "speciality beer" and about half a dozen members expressed an interest.

The UK Homebrew competition is on 16<sup>th</sup>-18<sup>th</sup> May at Hixon and was an excellent event last year.

The May meeting in Birmingham is to be rescheduled as the original date clashed with the UK Homebrew competition. July meeting will be in Burton.

Birmingham Beer Bash 24-26<sup>th</sup> July – craft beer festival (several members attended last year and it was a very good event).

A joint meeting with NCB is to take place in Sheffield in either late October or early November and will replace our normal November meeting. About a dozen members expressed an interest in this event.

10. Treasurer's report: current balance £177.97, Peter F

The meeting closed at 15.50

## Recipe used for yeast bitter

# yeast bitter

20 litres  
All Grain

1.046 <sub>-OG</sub> → 1.013 <sub>-FG</sub> → 4.3% <sub>ABV</sub>	35 IBU	7.9°L SRM
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### Yeast

None

### Fermentables

3.78 kilograms

<b>Maris</b> <i>37ppg, 4°L</i>	<b>Otter</b>	<b>3.5 kilograms</b> 92.5%
<b>Crystal</b> <i>33ppg, 80°L</i>	<b>80L</b>	<b>0.14 kilograms</b> 3.8%
<b>Wheat</b> <i>37ppg, 2°L</i>		<b>0.14 kilograms</b> 3.8%

### Hops

0.1 kilograms

<b>Fuggles</b> <i>5%, Leaf</i>		<b>50 grams</b>
Pioneer <i>12%, Leaf</i>		<b>25 grams</b>
<b>Target</b> <i>11%, Leaf</i>		<b>25 grams</b>

### Miscellaneous

None

<b>Wort</b>	<b>Chiller</b>
<i>Other</i>	

### Boil

1 hour, 21.86 litres

<b>Fuggles</b> <i>5%, Leaf</i>	<b>hops</b>	<b>25 grams</b> 60 minutes (+0)
<b>Wort Chiller</b>		15 minutes (+45)
<b>Fuggles</b> <i>5%, Leaf</i>	<b>hops</b>	<b>25 grams</b> 0 minutes (+60)
<b>Pioneer</b> <i>12%, Leaf</i>	<b>hops</b>	<b>25 grams</b> 0 minutes (+60)

### Ferment

14 days, single stage

<b>Start</b>	<b>fermentation</b>	<b>21°C</b> 14 days (+0 days)
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## Notes on yeast strains used in the comparison, from the manufacturers.

### Nottingham - Danstar

Quick start to fermentation, which can be completed in 4 days above 17°C.

- High attenuation, reaching a final gravity near 1008 (2°P).
- Fermentation rate, fermentation time and degree of attenuation is dependent on inoculation density, yeast handling, fermentation temperature and the nutritional quality of the wort.
- Shows flocculation at completion of fermentation, and settling is promoted by cooling and use of fining agents and isinglass.
- The aroma is slightly estery, almost neutral and does not display malodours when properly handled. Because of flocculation, it may tend to slightly reduce hop bitter levels.
- Best when used at traditional ale temperatures after rehydration in the recommended manner.
- Lager-style beer has been brewed with Nottingham, however low fermentation temperature requires adaptation of the pitching rate to ensure proper attenuation.

### SO4- Fermentis

A well-known, commercial English ale yeast, selected for its fast fermentation character and its ability to form a very compact sediment at the end of the fermentation, helping to improve beer clarity. This yeast is recommended for the production of a large range of ale beers where big flavour is desired.

### US05 - Fermentis

American ale yeast producing well balanced beers with low diacetyl and a very clean, crisp end palate. Forms a firm foam head and presents a very good ability to stay in suspension during fermentation.

### WLP002 – White labs

A classic ESB strain from one of England's largest independent breweries. This yeast is best suited for English style ales including milds, bitters, porters, and English style stouts. This yeast will leave a beer very clear, and will leave some residual sweetness.

### WLP005 – White labs

This yeast is a little more attenuative than WLP002. Like most English strains, this yeast produces malty beers. Excellent for all English style ales including bitter, pale ale, porter, and brown ale.

### **Notes on the method and fermentation for the yeast comparison**

Yeast bitter, 1038 OG, 21°C fermentation temp (ambient temperature – no temperature control used)

Dosing rate for yeast : 5 g for dried yeast , half a vial for liquid yeast in 4 litres

Yeasts: Nottingham , so4, us 05 , wlp002, wlp005

25 g fuggles in last 15 min , 25 g pioneer at end of boil

Wort cooled to 25°C , fermented at 21°C

SO4 and Nottingham showing early signs of activity after 4 hours

After 16 hour all fermenting well - good head

Wlp005 most vigorous fermentation

Wlp05 still going after 2 weeks even at colder temp 10°C in garage (possible infection)

After 2 days SO4 finished - fastest fermenter.

After 7 days US 05 clearing but still cloudy. Wlp002 clear

. So4 really clear. Nottingham still cloudy. Wlp005 still working!

After. 7 days moved to garage - ambient temp about 4 C

Bottled at day 14 . Clarity; wlp002 clearest, Nottingham quite clear , so4 clear , us05 quite cloudy .

Wlp05 cloudy

Final gravity:

uso5 1005 hoppy aroma

So4 1002

Wlp02 1002 very clear

Notts 1005 quite clear

Wlp05 hoppy aroma 1006

In bottle :

Notts very clear

Wlp002 very clear

Wlp005 not so clear

So4 very clear

US05 clear