



# The Midland Craft Brewers Association



Brewing crafted ales.....at home

## Brewing Records Questionnaire Results and Analysis

### Introduction

Including mine, there were 28 completed questionnaires and I consider this to be a very satisfactory response. I was puzzled at the No answer for some of the questions, eg, yeast pitching temperature. However, whilst outlining some of the preliminary findings at the Derby meeting it became apparent that some members measured variables such as these, but didn't record them.

For this reason I contacted some of the initial respondents who answered no to what I consider to be some key variables. The second column in the table incorporates their answers and show that these variables are measured, although not recorded. There are also some excerpts from their responses towards the end of this document. (I have made a few minor changes for consistency, etc, but they are largely verbatim.)

Another interesting point that came out in the discussion and informal chat after the meeting is that several of us have begun to think about what we record and why. There is some comment on this and the above point in the analysis below.

Q1 Do you use brewing software Y 61%

This is much higher than I expected.

Q2 If yes, please give name

Beer Engine (7) 41%

Excel (3) 18%

Promash (3) 18%

Beersmith (2) 12%

Other (2) 12%

Three members used their own "software", based on Excel.

Q3 Do you have PC or MAC

PC (22) 79%

MAC (3) 11%

Linux (2) 7%

No computer (1) 3%

Q4	Do you keep manual records?	Y	79%
	<b>Do you usually record/calculate the following</b>		
Q5	Aims/objectives of the brew	Y	50%
	I found this a little surprising but on checking my records discovered that I have been doing this only over the last three years. After the beer has been brewed I then write down the extent to which the aims were achieved. Personally, I find this a useful exercise		
Q6	Your recipe	Y	100%
	One of only two 100 percent Yes responses.		
Q7	Recipe calculations	Y	82%
	Perhaps there is some ambiguity here? I always devise my own recipes but I know that some members often, or always, follow a recipe (so no calculations are necessary). This could explain some, or even all, of the No responses.		
Q8	Estimated IBU	Y	82%
	Same comment as for Q7.		
Q9	OG	Y	100%
	Not surprisingly, this is the only other 100% Yes response		
Q10	FG	Y	89%
	I suspect that this is an example where it is measured but not recorded. Presumably, members who answered No also answered No to the abv and ME questions.		
Q11	abv	Y	82%
	With hindsight, I should have asked, if No, why not.		
Q12	The gravity when you stop sparging	Y	39%
	Rather lower than I expected, but perhaps it is measured and not recorded? Another possible explanation for this low figure is that many respondents usually collect a fixed amount of wort.		
Q13	Amount of wort collected	Y	75%
Q14	Other gravities, eg: at beginning, after 5L		36%

Only one in three do this. I do it because I think it may shed some light on mash efficiency. However, I haven't yet got around to trying to do some analysis.

Q15 The PH of mashing-in liquor Y 7%

I used to but I ceased when I realized that my water treatment always gave around the same figure (6.0)

Q16 The PH in your mash tun Y 21%

Q17 Your mash efficiency? Y 46%

Readers of Brewers Contact will know of my long-standing interest in this variable. It is obviously not shared by all of us but I still find it an interesting and important figure.

Q18 Hot break additions Y 57%

This question was badly worded and caused some respondents a problem. What I meant was do you use Protofloc, or a similar product.

Q19 Yeast pitching procedures, eg starter, sprinkle Y 61%

Q20 Skimming procedures, if used Y 35%

Perhaps the "if used" at the end of the question was unnecessary. Many respondents said that they didn't skim.

Q21 Priming/reseeding, etc, procedures Y 68%

Q22 Hot liquor treatment details Y 79%

Q23 Strike temperature Y 82%

Same comment as for Q12.

Q24 Mashing in temperature Y 89%

Same comment as for Q12.

Q25 Mash end temperature Y 71%

I answered No because since adopting the Thermobox as a mash tun, it didn't take long to realise that the temperature drop in 90 minutes was always about 0.7 degrees. So, not even measured now, let alone recorded.

Q26 Mash time Y 93%

Mine is always the same, but I still record it. I am presuming that the two respondents who don't record it use a standard mash time and hence feel it unnecessary to record.

Q27	Sparge time	Y	43%
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I suspect that this doesn't vary much and hence is thought not worth recording.

Q28	Boiling time	Y	93%
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Mine is always the same, but I still record it.

Q29	Cooling time (cold break time)	Y	43%
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Mine is always about the same, but I still record it.

Q30	Temperature at end of cold break	Y	29%
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This low figure does surprise me.

Q31	Yeast pitching temperature	Y	64%
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Measured but not recorded?

Q32	Fermentation time	Y	82%
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Q33	Date beer put into containers	Y	86%
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Q34	Notes on how your beer tastes	Y	54%
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Q35	Comments from other tasters	Y	32%
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Presumably because many members don't get much, or indeed, any feedback from other members, friends, etc?

#### **Please list any other records usually kept**

Several mentioned cost and/or stock control of ingredients. Others included, time in second fermenter, amount of hot liquor used, outside temperature.

#### **Briefly explain main reason for keeping records**

Repeatability, consistency, continuous improvement, tweaking recipes, problem solving, poor memory.

#### **Main reason for not keeping records**

Laziness, always use others' recipes, narrow range of beers brewed, consistent procedures.

**Any comments on your brewing software, eg ease of use, cost effectiveness.**

Beer Engine was generally favourably mentioned. Simple to use, free, comprehensive, and so on.

Software from the USA is criticised for unfamiliar names and terminology.

**The Follow-up Survey**

As mentioned in the Introduction some respondents to the initial questionnaire were given a short follow-up set of questions to further probe the measuring but not recording issue. Their responses are below. Thanks to Richard B, Mike C, Ray C, Ernie G, Allan G, Simon J, and Steve H for replying.

Q10 FG. I do not measure the final gravity as I have concerns about infection. I do have a refractometer that I could use, but it is difficult to calculate the FG from the refractometer reading due to the alcohol content. I think I will start doing this routinely. When is the final gravity measured? Secondary fermentation can continue for a long time.

Q23 Strike temperature. I always measure it to ensure that the water is at the correct temperature, but do not record it as I do not see the point.

Q30 I always measure the temperature at the end of the cold break to make sure that it is safe to pitch in the yeast. Again I do not record it.

Q31 I always measure the temperature to make sure that it is safe to pitch in the yeast. Again I do not record it.

Over the years I suppose I have got used to measuring things and not recording them.

I rely on the temperature of my cold water supply for my cold break which happens in the fermenter, then I always ferment on the cold break, the mighty micro's do this.

For some strange reason the end temperature in the fermenter after the run off always finishes at 20 degrees even though my water supply can fluctuate between 16 and 18c So now I don't even bother measuring or record these temperatures.

I sprinkle Nottingham Yeast on the top at this temperature, and so far my sweet wort seems to ferment around the 24hr mark.

OG I take using a refractometer and if it is at or near where it was last time I did the brew, I'm happy.

FG I don't do. My normal routine is to brew on Saturday and bottle/keg next Saturday. By visual inspection of the beer in the FV I judge if it is ready or not. (I check it most days to monitor progress.)

Temp at end of cold break: I use tap water in a copper coil

placed directly into the boiler which is a converted stainless beer keg. I judge the end of cold break by feeling the outside of the keg. When it begins to feel cool to the touch, it's done!

I cool using my wort chiller to an average target of about 22c-24 degrees. However this average is a bit of a guess due to the different temperatures at various levels in the boiler. Transferring to the fermenter equalises the temperature. I'm rarely too low but if too high I use the wort chiller again to lower the temperature down to 22-24 and pitch the yeast straight away making sure my wort and yeast (rehydrated) are at about the same temperature. My fermentation cabinet is normally set at 19 so the wort adjusts to this level. The higher initial temperature seems to get the fermentation off to a good start. I do not record this detail as I follow the same procedure each time.

In response to Q30, as I use an immersion chiller in the boiler I cool until the boiler wall (plastic bucket) 'feels' cold enough for me to drain the wort into my fermentation vessel such that it will be cool enough to pitch once transfer has taken place. Not very scientific, I know.

My fermentation vessel (another plastic bucket) has a strip thermometer stuck to it, ensure the temp. on this strip thermometer is between about 18 to 24°C before pitching. My experience has shown that the wort has almost always been within this temperature range after I have drained the boiler when it 'feels' cold enough.

So, in answer to Q31, whilst I monitor it, I do not record the temp. at which the yeast has been pitched.

Q23 I use a thermometer to check the correct temperature but I do not record it.

Q24 as above

Q30 I do not measure or record the cold break

Q31 I use a thermometer to check the correct temperature but I do not record it.

Yes of course, I do measure both strike temperature and mash in/out temperatures.

As for cold break, I just chill to around 22C and then run off into fermenter, pitching the yeast during transfer.

## Frequency of Responses

The table shows questions five to 35 ranked by frequency of yes responses. The First column shows the responses from the original questionnaire. The Second column shows the yes responses after feedback from those who measure but don't record.

Question	First	Second
Q6	100	100
Q9	100	100
Q26	93	93
Q28	93	93
Q10	89	93
Q24	89	96
Q33	86	86
Q7	82	82
Q8	82	82
Q11	82	82
Q23	82	93
Q32	82	82
Q22	79	79
Q13	75	75
Q25	71	71
Q21	68	68
Q31	64	71
Q19	61	61
Q18	57	57
Q34	54	54
Q5	50	50
Q17	46	46
Q27	43	43
Q29	43	43
Q12	39	39
Q14	36	36
Q35	32	32
Q30	29	39
Q20	25	25
Q16	21	21
Q15	7	7

## Conclusions

Most of the respondents measure and/or keep records of many of what I consider to be important variables in the brewing process. What doesn't show up in the responses is that some brewers don't use instruments such as thermometers for some measurements. Instead they rely on past experience, touch, etc. This is one of the reasons I have included the responses to the follow-up survey.