

## Extra Bitter #1

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **23**
- SRM **15.1**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **21.6 liter(s)**
- Total mash volume **27 liter(s)**

### Steps

- Temp **53 C**, Time **10 min**
- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **30 min**

### Mash step by step

- Heat up **21.6 liter(s)** of strike water to **57.1C**
- Add grains
- Keep mash **10 min** at **53C**
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **72C**
- Sparge using **9.1 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

| Type  | Name                           | Amount          | Yield | EBC |
|-------|--------------------------------|-----------------|-------|-----|
| Grain | Simpsons - Maris Otter         | 3 kg (55.6%)    | 81 %  | 6   |
| Grain | Biscuit Malt                   | 0.25 kg (4.6%)  | 79 %  | 45  |
| Grain | Pszeniczny                     | 0.5 kg (9.3%)   | 85 %  | 4   |
| Grain | Cara Gold Castlemalting        | 0.25 kg (4.6%)  | 78 %  | 120 |
| Grain | Caramel/Crystal Malt - 10L     | 0.1 kg (1.9%)   | 75 %  | 20  |
| Grain | Brown Malt (British Chocolate) | 0.1 kg (1.9%)   | 70 %  | 128 |
| Grain | Czekoladowy pszeniczny         | 0.1 kg (1.9%)   | 60 %  | 788 |
| Grain | Płatki owsiane                 | 0.3 kg (5.6%)   | 85 %  | 3   |
| Grain | Chit Malt                      | 0.75 kg (13.9%) | 50 %  | 2   |
| Grain | Jęczmień palony                | 0.05 kg (0.9%)  | 55 %  | 985 |

### Hops

| Use for | Name     | Amount | Time   | Alpha acid |
|---------|----------|--------|--------|------------|
| Boil    | Tettnang | 25 g   | 45 min | 4 %        |

|      |                    |      |        |       |
|------|--------------------|------|--------|-------|
| Boil | East Kent Goldings | 25 g | 15 min | 5.1 % |
| Boil | Tettnang           | 25 g | 15 min | 4 %   |

## Yeasts

| Name                       | Type | Form  | Amount  | Laboratory       |
|----------------------------|------|-------|---------|------------------|
| FM10 O czym szumią wierzby | Ale  | Slant | 1500 ml | Fermentum Mobile |

## Extras

| Type        | Name | Amount | Use for | Time   |
|-------------|------|--------|---------|--------|
| Water Agent | sól  | 5 g    | Boil    | 60 min |

## Notes

- F1 - 29/09 - 12 BLG  
F2 - 09/10 - 5 BLG  
but. - 03/11 - 3 BLG,  
CO2 vol 1,8

ABV 4.9% Odfermentowanie 75.8%  
*Nov 3, 2019, 9:55 AM*

- Lepiej przerobić na STOUT  
+ laktoza  
+ IBU  
+muscavado  
- mnije karmelu  
- inne drożdże  
min 16 BLG  
*Dec 1, 2019, 7:19 PM*