

Bitter Czesława 2.0

- Gravity **13.6 BLG**
- ABV ---
- IBU **51**
- SRM **10.9**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

Batch size

- Expected quantity of finished beer **14 liter(s)**
- Trub loss **5 %**
- Size with trub loss **14.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **7 %/h**
- Boil size **17.2 liter(s)**

Mash information

- Mash efficiency **83 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **9.7 liter(s)**
- Total mash volume **12.9 liter(s)**

Steps

- Temp **62 C**, Time **25 min**
- Temp **67 C**, Time **45 min**

Mash step by step

- Heat up **9.7 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **25 min** at **62C**
- Keep mash **45 min** at **67C**
- Sparge using **10.7 liter(s)** of **76C** water or to achieve **17.2 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|----------------|-------|-----|
| Grain | Pale Malt (2 Row) UK | 2.8 kg (86.7%) | 78 % | 7 |
| Grain | Briess - Wheat Malt, White | 0.3 kg (9.3%) | 85 % | 5 |
| Grain | Caramel/Crystal Malt - 120L | 0.08 kg (2.5%) | 72 % | 120 |
| Grain | Black Barley (Roast Barley) | 0.05 kg (1.5%) | 55 % | 985 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|--------------------|--------|--------|------------|
| Boil | Magnum | 15 g | 30 min | 13.5 % |
| Aroma (end of boil) | Fuggles | 20 g | 35 min | 4.5 % |
| Boil | East Kent Goldings | 20 g | 20 min | 6.7 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale | Dry | 7 g | Safale |