

SPECIAL BITTER

- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **31**
- SRM **10**
- Style **Special/Best/Premium Bitter**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **27.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.2 liter(s)**
- Total mash volume **18.9 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **76 C**, Time **1 min**

Mash step by step

- Heat up **14.2 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **1 min** at **76C**
- Sparge using **18.3 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------------|----------------|-------|-----|
| Grain | Soufflet Pale Ale | 4 kg (84.6%) | 80 % | 6 |
| Grain | Słód Caramunich Typ II Weyermann | 0.5 kg (10.6%) | 73 % | 120 |
| Grain | Biscuit Malt | 0.1 kg (2.1%) | 79 % | 45 |
| Grain | Chocolate Malt | 0.03 kg (0.6%) | 73 % | 887 |
| Grain | Strzegom Monachijski typ II | 0.1 kg (2.1%) | 79 % | 22 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|--------------------|--------|--------|------------|
| Boil | marynka | 20 g | 60 min | 7.2 % |
| Boil | East Kent Goldings | 10 g | 60 min | 5.4 % |
| Boil | East Kent Goldings | 20 g | 20 min | 5.4 % |
| Boil | Fuggles | 20 g | 5 min | 5.2 % |
| Boil | East Kent Goldings | 20 g | 0 min | 5.4 % |
| Boil | Fuggles | 15 g | 0 min | 5.2 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

| | | | | |
|----------------------------------|-----|-----|------|--------|
| Safale S-04 | Ale | Dry | 10 g | Safale |
| /Mangrove Jack's -M15 Empire Ale | | | | |