Biter

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **20**
- SRM **20.4**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **120 min**
- Evaporation rate **15 %/h**
- Boil size **31.2 liter(s)**

Mash information

- Mash efficiency **25 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **42.5 liter(s)**
- Total mash volume **59.5 liter(s)**

Steps

- Temp **72 C**, Time **90 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **42.5 liter(s)** of strike water to **82.4C**
- Add grains
- Keep mash **90 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **5.7 liter(s)** of **76C** water or to achieve **31.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ II	7 kg *(41.2%)*	79 %	22
Grain	Strzegom Wiedeński	8 kg *(47.1%)*	79 %	10
Grain	Melanoiden Malt	0.5 kg *(2.9%)*	80 %	39
Grain	Abbey Castle	0.5 kg *(2.9%)*	80 %	45
Grain	Biscuit Malt	1 kg *(5.9%)*	79 %	45

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Flyer	20 g	60 min	9.8 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11 g	Safale