Bitter

- Gravity **9.5 BLG**
- ABV **---**
- IBU **27**
- SRM **6.4**
- Style **Standard/Ordinary Bitter**

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 **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **11.4 liter(s)**
- Total mash volume **15.2 liter(s)**

Steps

- Temp **67 C**, Time **60 min**

Mash step by step

- Heat up **11.4 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Sparge using **17.7 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	3.5 kg *(92.1%)*	79 %	6
Grain	Colorado Crystal 25EBC	0.2 kg *(5.3%)*	79 %	25
Grain	Strzegom Karmel 300	0.1 kg *(2.6%)*	70 %	299

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Target	20 g	60 min	9 %
Aroma (end of boil)	First Gold	25 g	5 min	8 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM11 Wichrowe Wzgórza	Ale	Slant	75 ml	Fermentum Mobile