

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **23**
- SRM **4.5**

### Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **22.4 liter(s)**
- Total mash volume **28.8 liter(s)**

### Steps

- Temp **67 C**, Time **50 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **22.4 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **50 min** at **67C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **13 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	4.4 kg (68.8%)	80 %	4
Grain	Strzegom Wiedeński	1.2 kg (18.7%)	79 %	10
Grain	Pszenica niesłodowana	0.8 kg (12.5%)	75 %	3

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	20 g	25 min	13 %
Boil	Cashmere	10 g	25 min	7.3 %
Aroma (end of boil)	Amarillo	10 g	1 min	9.5 %
Aroma (end of boil)	Cashmere	20 g	1 min	7.3 %
Dry Hop	Citra	30 g	4 day(s)	12 %
Dry Hop	Enigma (AUS)	40 g	4 day(s)	17.2 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11 g	Fermentis