

Xxx

- Gravity **26.6 BLG**
- ABV **12.6 %**
- IBU **77**
- SRM **22.2**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **25.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **3.8 liter(s)**
- Total mash volume **5 liter(s)**

Steps

- Temp **70 C**, Time **40 min**

Mash step by step

- Heat up **3.8 liter(s)** of strike water to **78.2C**
- Add grains
- Keep mash **40 min** at **70C**
- Sparge using **23.2 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Dry Extract	WES ekstrakt słodowy jasny	0.5 kg (5.8%)	80 %	5
Liquid Extract	Ekstrakt słodowy pale ale	6.8 kg (79.5%)	80 %	35
Grain	Cookie	0.5 kg (5.8%)	72 %	50
Grain	Biscuit Malt	0.5 kg (5.8%)	79 %	45
Grain	Strzegom Karmel 300	0.25 kg (2.9%)	70 %	299

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	English Golding	30 g	60 min	4.8 %
Boil	Warrior	40 g	60 min	15.5 %
Boil	Cascade	20 g	60 min	6 %
Boil	English Golding	30 g	15 min	4.8 %
Boil	Warrior	20 g	15 min	15.5 %
Boil	Cascade	20 g	15 min	6 %
Aroma (end of boil)	Willamette	30 g	5 min	5 %
Aroma (end of boil)	Cascade	20 g	5 min	6 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	23 g	Fermentis