

Ciemne

- Gravity **16.6 BLG**
- ABV **7 %**
- IBU **43**
- SRM **17.6**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **20.1 liter(s)**
- Total mash volume **25.9 liter(s)**

Steps

- Temp **70 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **20.1 liter(s)** of strike water to **77.2C**
- Add grains
- Keep mash **60 min** at **70C**
- Keep mash **10 min** at **78C**
- Sparge using **12.2 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	5 kg (77.5%)	80 %	4
Grain	Słód barwiący obłuszczoney	0.25 kg (3.9%)	65 %	1000
Grain	Płatki owsiane	0.5 kg (7.8%)	85 %	3
Sugar	Cukier biały	0.7 kg (10.9%)	100 %	1

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Junga	50 g	30 min	12.4 %
Aroma (end of boil)	East Kent Goldings	30 g	0 min	5.4 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	1000 ml	---