

Janusz Hoperson

- Gravity **11.7 BLG**
- ABV ---
- IBU **16**
- SRM **6.5**
- Style **Special/Best/Premium Bitter**

Batch size

- Expected quantity of finished beer **28 liter(s)**
- Trub loss **5 %**
- Size with trub loss **29.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **35.4 liter(s)**

Mash information

- Mash efficiency **82 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.2 liter(s)**
- Total mash volume **21.6 liter(s)**

Steps

- Temp **65 C**, Time **30 min**
- Temp **65 C**, Time **30 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **16.2 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **30 min** at **65C**
- Keep mash **30 min** at **65C**
- Keep mash **1 min** at **78C**
- Sparge using **24.6 liter(s)** of **76C** water or to achieve **35.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	3 kg (55.6%)	82 %	4
Grain	Viking Pale Ale malt	1 kg (18.5%)	80 %	5
Grain	Viking Munich Malt	0.5 kg (9.3%)	78 %	18
Grain	Strzegom Karmel 30	0.5 kg (9.3%)	75 %	30
Grain	Oats, Flaked	0.2 kg (3.7%)	80 %	2
Grain	Melanoiden Malt	0.2 kg (3.7%)	80 %	39

Hops

Use for	Name	Amount	Time	Alpha acid
Mash	Marynka	10 g	65 min	10 %
Boil	Marynka	15 g	60 min	10 %
Boil	Magnat	15 g	5 min	11.2 %
Dry Hop	Magnat	30 g	14 day(s)	11.2 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale K-97	Ale	Dry	11.5 g	Fermentis