

Trzy miotły

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **27**
- SRM **11**
- Style **Specialty Beer**

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 **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.5 liter(s)**
- Total mash volume **20.6 liter(s)**

Steps

- Temp **66 C**, Time **20 min**
- Temp **72 C**, Time **40 min**

Mash step by step

- Heat up **15.5 liter(s)** of strike water to **73.6C**
- Add grains
- Keep mash **20 min** at **66C**
- Keep mash **40 min** at **72C**
- Sparge using **15 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2 kg (38.8%)	80 %	5
Grain	Simpsons - Maris Otter	0.2 kg (3.9%)	81 %	6
Grain	dekstrynowy	0.5 kg (9.7%)	79 %	13
Grain	Caramel/Crystal Malt - 120L	0.1 kg (1.9%)	72 %	236
Grain	Carahell	0.35 kg (6.8%)	77 %	26
Grain	Aromatic Malt	1 kg (19.4%)	78 %	51
Grain	cookie	0.5 kg (9.7%)	72 %	50
Grain	Płatki owsiane	0.5 kg (9.7%)	85 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	92P2/4rpa	10 g	60 min	14.4 %
Boil	92P2/4rpa	40 g	5 min	14.4 %

Yeasts

Name	Type	Form	Amount	Laboratory
esb london	Ale	Dry	11.5 g	---

Extras

Type	Name	Amount	Use for	Time
Other	maka	80 g	Boil	60 min