

Harnaś

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **27**
- SRM **7.3**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **50 liter(s)**
- Trub loss **5 %**
- Size with trub loss **52.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **63.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **34.5 liter(s)**
- Total mash volume **46 liter(s)**

Steps

- Temp **67 C**, Time **100 min**

Mash step by step

- Heat up **34.5 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **100 min** at **67C**
- Sparge using **40.3 liter(s)** of **76C** water or to achieve **63.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ II	6 kg (52.2%)	79 %	22
Grain	Briess - Pale Ale Malt	5 kg (43.5%)	80 %	7
Grain	Oats, Flaked	0.5 kg (4.3%)	80 %	2

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Galaxy	30 g	60 min	15 %
Boil	Motueka	20 g	30 min	7 %
Boil	Lemon drop	15 g	15 min	4.6 %

Yeasts

Name	Type	Form	Amount	Laboratory
Us-05	Ale	Dry	11.5 g	Fermentis

Extras

Type	Name	Amount	Use for	Time
Spice	Świerk	200 g	Boil	10 min