

Pipa

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **47**
- SRM **4.4**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **17.3 liter(s)**
- Boil time **50 min**
- Evaporation rate **10 %/h**
- Boil size **20.4 liter(s)**

Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.8 liter(s)**
- Total mash volume **18.4 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **72 C**, Time **15 min**

Mash step by step

- Heat up **13.8 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **15 min** at **72C**
- Sparge using **11.2 liter(s)** of **76C** water or to achieve **20.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pilsner Malt	3.8 kg (82.6%)	81 %	5
Grain	Pszeniczny	0.5 kg (10.9%)	85 %	4
Grain	Weyermann - Carapils	0.2 kg (4.3%)	78 %	4
Grain	Płatki owsiane	0.1 kg (2.2%)	60 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Izabella	50 g	40 min	6.8 %
Boil	Rody Hodowlane	25 g	5 min	9.3 %
Whirlpool	Rody Hodowlane	25 g	0 min	9.3 %
Whirlpool	Książęcy	100 g	0 min	8.3 %

Yeasts

Name	Type	Form	Amount	Laboratory
saflager us 05	Ale	Dry	23 g	---