

Ale kopiec

- Gravity **16.6 BLG**
- ABV **7 %**
- IBU **72**
- SRM **14.1**
- Style **American Pale Ale**

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 **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.1 liter(s)**
- Total mash volume **26.8 liter(s)**

Steps

- Temp **67 C**, Time **50 min**
- Temp **72 C**, Time **10 min**

Mash step by step

- Heat up **20.1 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **50 min** at **67C**
- Keep mash **10 min** at **72C**
- Sparge using **11.9 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Carapils	1.8 kg (26.9%)	78 %	4
Grain	Weyermann - Carared	1.7 kg (25.4%)	75 %	45
Grain	Weyermann - Melanoiden Malt	1.7 kg (25.4%)	81 %	53
Grain	Weyermann - Pale Ale Malt	1.5 kg (22.4%)	85 %	7

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	falconers fighter	30 g	50 min	10.7 %
Boil	Sorachi Ace	30 g	30 min	10 %
Aroma (end of boil)	Cascade	30 g	15 min	6 %
Aroma (end of boil)	Simcoe	30 g	10 min	13.2 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	12 g	Fermentis