

APA 1

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **81**
- SRM **5.6**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **60 liter(s)**
- Trub loss **5 %**
- Size with trub loss **63 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **75.9 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **45 liter(s)**
- Total mash volume **60 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **76 C**, Time **0 min**

Mash step by step

- Heat up **45 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **0 min** at **76C**
- Sparge using **45.9 liter(s)** of **76C** water or to achieve **75.9 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	14 kg (93.3%)	80 %	5
Grain	Karmelowy Czerwony	1 kg (6.7%)	75 %	59

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	120 g	60 min	13.5 %
Boil	Amarillo	80 g	5 min	9.5 %
Whirlpool	Citra	80 g	15 min	12 %
Whirlpool	Mosaic	80 g	15 min	10 %

Yeasts

Name	Type	Form	Amount	Laboratory
US 05	Ale	Dry	30 g	---