

APA

- Gravity **15.9 BLG**
- ABV **6.7 %**
- IBU **44**
- SRM **9.4**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4.54 liter(s) / kg**
- Mash size **34 liter(s)**
- Total mash volume **41.5 liter(s)**

Steps

- Temp **72 C**, Time **60 min**
- Temp **78 C**, Time **2 min**

Mash step by step

- Heat up **34 liter(s)** of strike water to **77.7C**
- Add grains
- Keep mash **60 min** at **72C**
- Keep mash **2 min** at **78C**
- Sparge using **2.5 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	soufflet pale ale	3 kg (40%)	80 %	7
Grain	Carahell	2.5 kg (33.3%)	77 %	25
Grain	weyermann-Monachijski typ I	2 kg (26.7%)	80 %	14

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Centennial	100 g	20 min	8.6 %
Whirlpool	citra	50 g	0 min	13.2 %
Whirlpool	xo0932	100 g	0 min	4.8 %

Yeasts

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