

APA

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **30**
- SRM **4.6**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **13 %/h**
- Boil size **27.8 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.7 liter(s) / kg**
- Mash size **24.1 liter(s)**
- Total mash volume **30.6 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **24.1 liter(s)** of strike water to **72.2C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **5 min** at **78C**
- Sparge using **10.2 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	1.5 kg (23.1%)	80 %	5
Grain	Viking Pilsner malt	1.9 kg (29.2%)	82 %	4
Grain	Simpsons - Maris Otter	1 kg (15.4%)	81 %	6
Grain	Słód owsiany Fawcett	1 kg (15.4%)	61 %	5
Grain	Pszeniczny	0.8 kg (12.3%)	85 %	4
Grain	Weyermann - Carapils	0.3 kg (4.6%)	78 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	20 g	60 min	15.5 %
Aroma (end of boil)	Mosaic	24 g	0 min	10 %
Aroma (end of boil)	Mandarina Bavaria	28 g	0 min	10 %
Aroma (end of boil)	Calypso	20 g	0 min	12 %
Aroma (end of boil)	Simcoe	20 g	0 min	13.2 %
Aroma (end of boil)	Chinook	20 g	0 min	13 %
Dry Hop	Galaxy	50 g	3 day(s)	16.3 %

Dry Hop	Chinook	20 g	3 day(s)	13 %
Dry Hop	Mandarina Bavarian	20 g	3 day(s)	10 %
Dry Hop	Calypso	20 g	3 day(s)	12 %

Yeasts

Name	Type	Form	Amount	Laboratory
Lallemand - LalBrew Verdant IPA	Ale	Dry	22 g	Lallemand