

APA

- Gravity **9.8 BLG**
- ABV **3.8 %**
- IBU **18**
- SRM **4.4**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **40 liter(s)**
- Trub loss **5 %**
- Size with trub loss **43.2 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **52.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **28 liter(s)**
- Total mash volume **36 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **28 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **32.7 liter(s)** of **76C** water or to achieve **52.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (62.5%)	80 %	5
Grain	Viking Munich Malt	1.5 kg (18.8%)	78 %	18
Grain	Briess - Rye Malt	1 kg (12.5%)	80 %	7
Grain	Wheat, Flaked	0.5 kg (6.3%)	77 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Amarillo	20 g	15 min	8.5 %
Boil	Amarillo	35 g	5 min	8.5 %
Boil	Cascade	25 g	15 min	7.1 %
Boil	Cascade	40 g	5 min	7.1 %
Dry Hop	Cascade	20 g	2 day(s)	7.1 %
Dry Hop	Amarillo	20 g	2 day(s)	8.5 %
Boil	Wai-iti	15 g	5 min	2.1 %
Dry Hop	Wai-iti	30 g	4 day(s)	4.1 %
Dry Hop	Cascade	20 g	4 day(s)	6 %

Yeasts

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Liquid	100 ml	Fermentum Mobile

Extras

Type	Name	Amount	Use for	Time
Flavor	Pulpa mango	1000 g	Secondary	4 day(s)