

APA I

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **44**
- SRM **0.7**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **30.4 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.4 liter(s)**
- Total mash volume **27.2 liter(s)**

Steps

- Temp **63 C**, Time **60 min**
- Temp **70 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **20.4 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **60 min** at **63C**
- Keep mash **15 min** at **70C**
- Keep mash **5 min** at **78C**
- Sparge using **16.8 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4.5 kg (66.2%)	80 %	---
Grain	Strzegom Pilzniejszy	1.5 kg (22.1%)	80 %	---
Grain	Pszeniczny	0.5 kg (7.4%)	85 %	4
Grain	Cara Gold Castlemalting	0.3 kg (4.4%)	78 %	---

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Simcoe	10 g	60 min	13.2 %
Boil	Centennial	5 g	60 min	10.5 %
Boil	Centennial	40 g	15 min	10.5 %
Boil	Columbus/Tomahawk/Zeus	15 g	15 min	15.5 %
Boil	Columbus/Tomahawk/Zeus	10 g	0 min	15.5 %
Dry Hop	Centennial	20 g	7 day(s)	10.5 %
Dry Hop	Columbus/Tomahawk/Zeus	30 g	7 day(s)	15.5 %
Dry Hop	Amarillo	40 g	7 day(s)	9.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Danstar - Nottingham	Ale	Slant	300 ml	Danstar