

APA #1

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **47**
- SRM **4**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

Steps

- Temp **67 C**, Time **50 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **15 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **50 min** at **67C**
- Keep mash **10 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **15.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3 kg (60%)	80 %	5
Grain	Pilznieński	1.5 kg (30%)	81 %	4
Grain	Pszeniczny	0.5 kg (10%)	85 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	20 g	30 min	15.5 %
Boil	Citra	15 g	25 min	12 %
Boil	Amarillo	20 g	10 min	9.5 %
Aroma (end of boil)	Citra	20 g	0 min	12 %
Dry Hop	Cascade	100 g	3 day(s)	6 %
Dry Hop	Columbus/Tomahawk/Zeus	30 g	3 day(s)	15.5 %
Dry Hop	Citra	15 g	3 day(s)	12 %

Yeasts

Name	Type	Form	Amount	Laboratory
us-05	Ale	Dry	7 g	---