APA

- Gravity **15.7 BLG**
- ABV **6.6 %**
- IBU **36**
- SRM **8**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.9 liter(s)**
- Total mash volume **25.2 liter(s)**

Steps

- Temp **67 C**, Time **90 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **18.9 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **90 min** at **67C**
- Keep mash **10 min** at **78C**
- Sparge using **13.9 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg *(79.5%)*	80 %	5
Grain	Oats, Flaked	0.73 kg *(11.6%)*	80 %	2
Grain	Red ale	0.3 kg *(4.8%)*	70 %	50
Grain	Strzegom Karmel 150	0.26 kg *(4.1%)*	75 %	150

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Simcoe	20 g	60 min	13.2 %
Boil	Centennial	10 g	60 min	10.5 %
Boil	Cascade	50 g	1 min	6 %
Whirlpool	Centennial	40 g	1 min	10.5 %
Whirlpool	Mosaic	40 g	---	10 %
Dry Hop	Centennial	50 g	1 day(s)	10.5 %
Dry Hop	Mosaic	60 g	5 day(s)	10 %

Yeasts

Name	Type	Form	Amount	Laboratory

Lallemand - LalBrew Verdant IPA	Ale	Dry	11 g	Lallemand