

## Light APA

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- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **33**
- SRM **4.9**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **8 %**
- Size with trub loss **23.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31 liter(s)**

### Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **5.5 liter(s) / kg**
- Mash size **28.6 liter(s)**
- Total mash volume **33.8 liter(s)**

### Steps

- Temp **67 C**, Time **40 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **1 min**

### Mash step by step

- Heat up **28.6 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **40 min** at **67C**
- Keep mash **30 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **7.6 liter(s)** of **76C** water or to achieve **31 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4 kg (76.9%)	80 %	5
Grain	Pszeniczny	1 kg (19.2%)	85 %	4
Grain	Strzegom Karmel 150	0.2 kg (3.8%)	75 %	100

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Cascade PL	10 g	40 min	5.2 %
Boil	Mandarina Bavaria	15 g	30 min	10 %
Aroma (end of boil)	Cascade PL	10 g	5 min	5.2 %
Aroma (end of boil)	Mandarina Bavaria	40 g	5 min	10 %
Whirlpool	Mandarina Bavaria	45 g	10 min	10 %
Whirlpool	Cascade PL	20 g	10 min	5.2 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	23 g	---