

CASCADE APA

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **42**
- SRM **5.3**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **24 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.3 liter(s) / kg**
- Mash size **14.8 liter(s)**
- Total mash volume **19.4 liter(s)**

Steps

- Temp **64 C**, Time **50 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **14.8 liter(s)** of strike water to **70.7C**
- Add grains
- Keep mash **50 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **13.7 liter(s)** of **76C** water or to achieve **24 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale	3 kg (66.7%)	80 %	5
Grain	Wiedeński	1 kg (22.2%)	79 %	10
Grain	Carahell	0.5 kg (11.1%)	77 %	26

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Cascade	25 g	60 min	5.9 %
Boil	Cascade	25 g	30 min	5.9 %
Boil	Cascade	25 g	15 min	5.9 %
Boil	Cascade	25 g	5 min	5.9 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis