

## 2. American Cascade Pale Ale 13 BLG

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **62**
- SRM **6.4**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **17 liter(s)**
- Trub loss **5 %**
- Size with trub loss **19.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **13 %/h**
- Boil size **23.1 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **19.3 liter(s)**

### Steps

- Temp **66 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **15 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **78C**
- Sparge using **12.4 liter(s)** of **76C** water or to achieve **23.1 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2 kg (46.5%)	80 %	5
Grain	Strzegom Wiedeński	1 kg (23.3%)	79 %	10
Grain	Monachijski	1 kg (23.3%)	80 %	16
Grain	Caramel/Crystal Malt - 20L	0.3 kg (7%)	75 %	39

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Cascade	40 g	60 min	7.7 %
Boil	Cascade	10 g	30 min	7.7 %
Aroma (end of boil)	Cascade	10 g	15 min	7.7 %
Aroma (end of boil)	Cascade	25 g	10 min	7.7 %
Aroma (end of boil)	Cascade	10 g	5 min	7.7 %
Whirlpool	Cascade	10 g	1 min	7.7 %
Dry Hop	Cascade	25 g	7 day(s)	7.7 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	10 g	Fermentis