

aromad

- Gravity **12.4 BLG**
- ABV ---
- IBU **36**
- SRM **6.5**
- 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 **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.4 liter(s)**
- Total mash volume **19.2 liter(s)**

Steps

- Temp **62 C**, Time **60 min**
- Temp **72 C**, Time **30 min**

Mash step by step

- Heat up **14.4 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **60 min** at **62C**
- Keep mash **30 min** at **72C**
- Sparge using **15.7 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	4.5 kg (93.8%)	81 %	4
Grain	Karmelowy Czerwony	0.3 kg (6.3%)	75 %	59

Hops

Use for	Name	Amount	Time	Alpha acid
Aroma (end of boil)	Pacifica (NZ)	50 g	1 min	4.8 %
Aroma (end of boil)	Enigma (AUS)	33 g	1 min	17.2 %
Aroma (end of boil)	Ella (AUS)	50 g	10 min	14.6 %
Dry Hop	Vic Secret (AUS)	50 g	5 day(s)	16.1 %

Yeasts

Name	Type	Form	Amount	Laboratory
us-05	Ale	Dry	11.5 g	---