

Red Pale Ale

- Gravity **15.2 BLG**
- ABV **6.3 %**
- IBU **80**
- SRM **6.9**
- Style **American IPA**

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 **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.1 liter(s)**
- Total mash volume **22.8 liter(s)**

Steps

- Temp **63 C**, Time **60 min**
- Temp **73 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **17.1 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **60 min** at **63C**
- Keep mash **30 min** at **73C**
- Keep mash **10 min** at **78C**
- Sparge using **13.9 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2.5 kg (43.9%)	80 %	5
Grain	Viking Pilsner malt	2.4 kg (42.1%)	82 %	4
Grain	Caramel/Crystal Malt - 10L	0.1 kg (1.8%)	75 %	20
Grain	Karmelowy Czerwony	0.3 kg (5.3%)	75 %	60
Grain	Strzegom Bursztynowy	0.2 kg (3.5%)	70 %	49
Grain	Carared	0.2 kg (3.5%)	75 %	39

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	16 g	60 min	13 %
Boil	Amarillo	15 g	60 min	9.5 %
Boil	Tomahawk	15 g	60 min	14.3 %
Aroma (end of boil)	Cascade	25 g	15 min	6.9 %
Aroma (end of boil)	Citra	25 g	15 min	12 %
Aroma (end of boil)	Citra	5 g	5 min	12 %

Yeasts

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

Extras

Type	Name	Amount	Use for	Time
Flavor	Orange peel (dried)	4 g	Boil	30 min
Other	Gypsum	4 g	Boil	30 min
Fining	Irish moss	4 g	Boil	10 min