

Willamette Red

- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **36**
- SRM **9.8**
- Style **American Amber 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 **64 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.1 liter(s)**
- Total mash volume **20.1 liter(s)**

Steps

- Temp **67 C**, Time **60 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **15.1 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **5 min** at **78C**
- Sparge using **15.2 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	4 kg (79.6%)	85 %	7
Grain	Monachijski	0.5 kg (10%)	80 %	16
Grain	Strzegom Karmel 150	0.25 kg (5%)	75 %	150
Grain	Czekoladowy	0.025 kg (0.5%)	60 %	788
Grain	Briess - Victory Malt	0.25 kg (5%)	75 %	55

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	20 g	60 min	10 %
Boil	Willamette	25 g	20 min	5 %
Boil	Willamette	35 g	5 min	5 %

Yeasts

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