

1 warka czerwona

- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **85**
- SRM **5.5**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **7 %**
- Size with trub loss **22.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **11 %/h**
- Boil size **28.9 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.2 liter(s)**
- Total mash volume **25.6 liter(s)**

Steps

- Temp **68 C**, Time **60 min**

Mash step by step

- Heat up **19.2 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Sparge using **16.1 liter(s)** of **76C** water or to achieve **28.9 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	colorado pale base	3.1 kg (48.4%)	80 %	6
Grain	Caramel/Crystal Malt - 10L	0.2 kg (3.1%)	75 %	20
Grain	colorado honing	0.1 kg (1.6%)	75 %	10
Grain	pale ale wayermann	2.6 kg (40.6%)	80 %	5
Grain	carapils	0.2 kg (3.1%)	75 %	5
Grain	carared	0.2 kg (3.1%)	75 %	40

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	70 min	10 %
Boil	harizon	35 g	70 min	10 %
Boil	harizon	10 g	10 min	10 %
Boil	Cascade	10 g	10 min	6 %
Boil	harizon	15 g	25 min	10 %
Boil	equinox	10 g	25 min	13 %
Aroma (end of boil)	Equinox	30 g	0 min	13.1 %
Aroma (end of boil)	Falconer's Flight	10 g	0 min	10 %
Aroma (end of boil)	Citra	10 g	0 min	12 %
Aroma (end of boil)	Cascade	30 g	0 min	6 %

Dry Hop	Cascade	20 g	4 day(s)	6 %
Dry Hop	Citra	20 g	4 day(s)	12 %
Dry Hop	Falconer's Flight	20 g	4 day(s)	10 %
Dry Hop	Equinox	30 g	4 day(s)	13.1 %

Yeasts

Name	Type	Form	Amount	Laboratory
us-05	Ale	Dry	23 g	---