

Warka 1

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **23**
- SRM **4**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

Steps

- Temp **62 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **80 C**, Time **10 min**

Mash step by step

- Heat up **15 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **40 min** at **62C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **80C**
- Sparge using **16.5 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (100%)	80 %	5

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	28 g	30 min	10 %
Whirlpool	slodek	15 g	0 min	10 %

Yeasts

Name	Type	Form	Amount	Laboratory
S04	Ale	Dry	11.5 g	---