

# Warka XXXI

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- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **117**
- SRM **3.6**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **1 %**
- Size with trub loss **24.2 liter(s)**
- Boil time **70 min**
- Evaporation rate **2 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

## Steps

- Temp **63 C**, Time **80 min**

## Mash step by step

- Heat up **15 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **80 min** at **63C**
- Sparge using **15.3 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	1.5 kg (30%)	85 %	5
Grain	Strzegom Pilzneński	3.5 kg (70%)	85 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	70 g	60 min	13 %
Boil	Simcoe	25 g	25 min	13.2 %
Boil	Simcoe	25 g	5 min	13.2 %
Aroma (end of boil)	Citra	50 g	0 min	12 %
Boil	liść eukaliptusa	15 g	5 min	1 %

## Yeasts

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