

# War Criminal

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- Gravity **14.3 BLG**
- ABV ---
- IBU **58**
- SRM **4.8**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

## Steps

- Temp **65 C**, Time **70 min**
- Temp **78 C**, Time **0 min**

## Mash step by step

- Heat up **18 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **70 min** at **65C**
- Keep mash **0 min** at **78C**
- Sparge using **17 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Vienna Malt	1 kg (16.7%)	77.5 %	7
Grain	Strzegom Pilzniejszy	3 kg (50%)	80 %	4
Grain	Briess - Pale Ale Malt	2 kg (33.3%)	80 %	7

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Merkur	30 g	40 min	14 %
Boil	Merkur	15 g	25 min	14 %
Boil	Merkur	15 g	10 min	14 %
Whirlpool	Merkur	30 g	0 min	14 %
Dry Hop	Merkur	90 g	6 day(s)	14 %

## Yeasts

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