

## Piwo III

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- Gravity **16.6 BLG**
- ABV **7 %**
- IBU **73**
- SRM **12.6**

### Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **12.7 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **11.5 liter(s)**
- Total mash volume **14.8 liter(s)**

### Steps

- Temp **60 C**, Time **30 min**
- Temp **66 C**, Time **30 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **1 min**

### Mash step by step

- Heat up **11.5 liter(s)** of strike water to **65.7C**
- Add grains
- Keep mash **30 min** at **60C**
- Keep mash **30 min** at **66C**
- Keep mash **10 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **4.5 liter(s)** of **76C** water or to achieve **12.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Wędzony czereśnię	2.5 kg (75.8%)	82 %	10
Grain	słód viking malt	0.5 kg (15.2%)	78 %	15
Grain	Strzegom Karmel 150	0.3 kg (9.1%)	75 %	150

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Summit	20 g	55 min	13.7 %
Boil	Summit	10 g	10 min	13.7 %
Boil	Willamette	20 g	10 min	4.5 %
Boil	Willamette	10 g	5 min	4.5 %
Boil	Crystal	30 g	5 min	4.9 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Saflager S-189	Lager	Dry	11.5 g	Fermentis

## Extras

Type	Name	Amount	Use for	Time
Other	cukier biały	60 g	Bottling	---
Other	witamina c	2 g	Bottling	---