

## #97 Trzecie zwykłe piwo

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **39**
- SRM **3.4**
- Style **German Pilsner (Pils)**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **6 %**
- Size with trub loss **21.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **6 %/h**
- Boil size **22.9 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.25 liter(s) / kg**
- Mash size **13.5 liter(s)**
- Total mash volume **17.6 liter(s)**

### Steps

- Temp **52 C**, Time **5 min**
- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **20 min**
- Temp **75.6 C**, Time **1 min**

### Mash step by step

- Heat up **13.5 liter(s)** of strike water to **56.9C**
- Add grains
- Keep mash **5 min** at **52C**
- Keep mash **30 min** at **62C**
- Keep mash **20 min** at **72C**
- Keep mash **1 min** at **75.6C**
- Sparge using **13.6 liter(s)** of **76C** water or to achieve **22.9 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	3.6 kg (86.7%)	82 %	4
Grain	Weyermann - Carapils	0.4 kg (9.6%)	78 %	4
Grain	Acid Malt	0.15 kg (3.6%)	58.7 %	6

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Tradition PL 2019	50 g	60 min	5.5 %
Aroma (end of boil)	Tettnanger DE 2019	25 g	15 min	3.7 %
Aroma (end of boil)	Tettnanger DE 2019	25 g	1 min	3.7 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM42 Stare Nadreńskie	Ale	Slant	60 ml	Fermentum Mobile