

## #217 Świąteczne piwo firmowe

- Gravity **10.5 BLG**
- ABV **4.2 %**
- IBU **23**
- SRM **4**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **20.8 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **23.4 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **13.3 liter(s)**
- Total mash volume **17.1 liter(s)**

### Steps

- Temp **63 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **1 min**

### Mash step by step

- Heat up **13.3 liter(s)** of strike water to **69.1C**
- Add grains
- Keep mash **40 min** at **63C**
- Keep mash **20 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **13.9 liter(s)** of **76C** water or to achieve **23.4 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann pilzniejszy klepiskowy	3.3 kg (86.8%)	80 %	6.7
Grain	Viking Pilsner malt	0.2 kg (5.3%)	82 %	4
Grain	Carabody	0.3 kg (7.9%)	80 %	6

### Hops

Use for	Name	Amount	Time	Alpha acid
Aroma (end of boil)	Cascade US 2023	42 g	10 min	7.8 %
Aroma (end of boil)	Citra US 2023	16 g	10 min	12.1 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM704 Lutra kveik	Ale	Liquid	40 ml	Fermentum Mobile

### Extras

Type	Name	Amount	Use for	Time
Flavor	Pączki sosny	50 g	Boil	10 min