

Pszenżyto

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **42**
- SRM **10.6**
- Style **American Wheat or Rye Beer**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.3 liter(s)**
- Total mash volume **17.7 liter(s)**

Steps

- Temp **55 C**, Time **20 min**
- Temp **65 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **15 min**

Mash step by step

- Heat up **13.3 liter(s)** of strike water to **60.8C**
- Add grains
- Keep mash **20 min** at **55C**
- Keep mash **45 min** at **65C**
- Keep mash **15 min** at **72C**
- Keep mash **15 min** at **78C**
- Sparge using **16.4 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneńsk Weyerman	1.665 kg (37.7%)	81 %	4
Grain	Pszeniczny	1.53 kg (34.6%)	85 %	1
Grain	Żytni	0.477 kg (10.8%)	85 %	8
Grain	Viking Smoked Malt torfowy	0.6 kg (13.6%)	80 %	18
Grain	Weyermann - Acidulated Malt	0.05 kg (1.1%)	80 %	6
Grain	Barwiący	0.1 kg (2.3%)	55 %	985

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	25 g	60 min	6.8 %
Boil	Oktawia	15 g	60 min	8.7 %
Aroma (end of boil)	Oktawia	40 g	5 min	8.7 %

Yeasts

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

Type	Name	Amount	Use for	Time
Other	Kwas ascorbinowy	4 g	Primary	14 day(s)