

Wieleozbożowe

- Gravity **13.1 BLG**
- ABV ---
- IBU **28**
- SRM **6.4**
- Style **Belgian Pale Ale**

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 **80 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **22.5 liter(s)**

Steps

- Temp **44 C**, Time **10 min**
- Temp **54 C**, Time **10 min**
- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **20 min**

Mash step by step

- Heat up **18 liter(s)** of strike water to **47C**
- Add grains
- Keep mash **10 min** at **44C**
- Keep mash **10 min** at **54C**
- Keep mash **40 min** at **64C**
- Keep mash **20 min** at **72C**
- Sparge using **11.8 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pszeniczny	1.3 kg (28.9%)	85 %	4
Grain	Pilzneński	0.7 kg (15.6%)	81 %	4
Grain	Munich Malt	1 kg (22.2%)	80 %	18
Grain	Rye Malt	0.5 kg (11.1%)	63 %	10
Grain	Oats, Malted	0.5 kg (11.1%)	80 %	2
Grain	spelt malt	0.5 kg (11.1%)	80 %	5

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Challenger	20 g	60 min	7 %
Boil	Saaz (Czech Republic)	20 g	60 min	2.5 %
Boil	Sybilla	15 g	15 min	6 %

Yeasts

Name	Type	Form	Amount	Laboratory
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FM20 Białe Walonki	Wheat	Slant	500 ml	Fermentum Mobile
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