

## Przepis 2

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- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **23**
- SRM **5.9**

### Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **1 %/h**
- Boil size **27.3 liter(s)**

### Mash information

- Mash efficiency **92 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.1 liter(s)**
- Total mash volume **18.8 liter(s)**

### Steps

- Temp **63 C**, Time **45 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **14.1 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **45 min** at **63C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **17.9 liter(s)** of **76C** water or to achieve **27.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Wiedeński	3.8 kg (80.9%)	79 %	10
Grain	Viking Munich Malt	0.9 kg (19.1%)	78 %	22

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	10 g	60 min	13.5 %
Aroma (end of boil)	Perle	30 g	15 min	7 %
Whirlpool	Sybilla	15 g	0 min	5.7 %
Whirlpool	Perle	15 g	0 min	7 %

### Yeasts

Name	Type	Form	Amount	Laboratory
US-4	Ale	Dry	11.5 g	---