

## żytnie mocne

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- Gravity **15.9 BLG**
- ABV **6.7 %**
- IBU **27**
- SRM **20.2**
- Style **American Wheat or Rye Beer**

### Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.2 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **11.7 liter(s)**
- Total mash volume **15.6 liter(s)**

### Steps

- Temp **65 C**, Time **50 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **2 min**

### Mash step by step

- Heat up **11.7 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **50 min** at **65C**
- Keep mash **20 min** at **72C**
- Keep mash **2 min** at **78C**
- Sparge using **7.4 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pilsen Malt	2.4 kg (61.5%)	80.5 %	2
Grain	Rye, Flaked	0.7 kg (17.9%)	78.3 %	4
Grain	Monachijski	0.5 kg (12.8%)	80 %	16
Grain	Strzegom Karmel 150	0.1 kg (2.6%)	75 %	150
Grain	Strzegom Karmel 600	0.1 kg (2.6%)	68 %	601
Grain	Strzegom pszenica prażona	0.1 kg (2.6%)	70 %	1000

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Fuggles	15 g	60 min	4.5 %
Boil	East Kent Goldings	15 g	60 min	5.1 %
Boil	Fuggles	7 g	10 min	4.5 %
Boil	East Kent Goldings	7 g	7 min	5.1 %

### Yeasts

<b>Name</b>	<b>Type</b>	<b>Form</b>	<b>Amount</b>	<b>Laboratory</b>
us 05	Ale	Dry	11.5 g	---