

## Próba puls bzc

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- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **23**
- SRM **4.1**
- Style **German Pilsner (Pils)**

### Batch size

- Expected quantity of finished beer **40 liter(s)**
- Trub loss **5 %**
- Size with trub loss **42 liter(s)**
- Boil time **80 min**
- Evaporation rate **7 %/h**
- Boil size **49 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **27.1 liter(s)**
- Total mash volume **36.1 liter(s)**

### Steps

- Temp **64 C**, Time **50 min**
- Temp **72 C**, Time **15 min**
- Temp **76 C**, Time **5 min**

### Mash step by step

- Heat up **27.1 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **50 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **30.9 liter(s)** of **76C** water or to achieve **49 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	8.55 kg (94.8%)	81 %	4
Grain	Karmelowy Jasny 30EBC	0.47 kg (5.2%)	75 %	30

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	25 g	80 min	9.7 %
Boil	Marynka	15 g	50 min	9.7 %
Aroma (end of boil)	Lublin (Lubelski)	10 g	0 min	4 %