

## 50 PILS

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **30**
- SRM **3.8**

### Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

### Mash information

- Mash efficiency **90 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

### Steps

- Temp **52 C**, Time **10 min**
- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **15 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **19 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	4.5 kg (90%)	80 %	4
Grain	Monachijski	0.5 kg (10%)	80 %	16

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	25 g	60 min	10 %
Boil	Lublin (Lubelski)	30 g	20 min	4 %
Whirlpool	Galaxy	20 g	0 min	15 %
Whirlpool	Motueka	20 g	0 min	7 %
Whirlpool	Citra	10 g	0 min	12 %
Whirlpool	Mosaic	10 g	0 min	10 %
Dry Hop	Galaxy	80 g	3 day(s)	15 %
Dry Hop	Motueka	80 g	3 day(s)	7 %
Dry Hop	Citra	40 g	3 day(s)	12 %
Dry Hop	Mosaic	40 g	3 day(s)	10 %

### Yeasts

<b>Name</b>	<b>Type</b>	<b>Form</b>	<b>Amount</b>	<b>Laboratory</b>
FM30 Bohemska rapsodia	Lager	Liquid	30 ml	Fermentum Mobile