

## PILS 2 warki x 22L (WLP820 i FM30)

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **51**
- SRM **5.4**

### Batch size

- Expected quantity of finished beer **44 liter(s)**
- Trub loss **5 %**
- Size with trub loss **48.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **58.1 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **37.8 liter(s)**
- Total mash volume **50.4 liter(s)**

### Steps

- Temp **62 C**, Time **40 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **37.8 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **40 min** at **62C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **32.9 liter(s)** of **76C** water or to achieve **58.1 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Bohemian Pilsner Malt	8 kg (63.5%)	81 %	4
Grain	Weyermann - Carapils	2 kg (15.9%)	78 %	4
Grain	Weyermann - Wiedeński	2 kg (15.9%)	79 %	10
Grain	Pale Cookie	0.6 kg (4.8%)	68 %	50

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	80 g	30 min	13.5 %
Boil	Junga	30 g	30 min	7 %
Dry Hop	Perle	50 g	3 day(s)	7 %
Boil	Marynka	30 g	20 min	7 %
Dry Hop	Hallertau Blanc	30 g	3 day(s)	11 %
Dry Hop	Saaz (Czech Republic)	60 g	3 day(s)	4.5 %
Dry Hop	Tettnang	30 g	3 day(s)	4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
WLP820 - Oktoberfest/Märzen Lager Yeast	Lager	Liquid	200 ml	White Labs
FM30 Bohemska rapsodia	Lager	Liquid	200 ml	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
Fining	whirlfloc	5 g	Boil	15 min