

## Co - Pils na XX warkę!

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **28**
- SRM **4.2**
- Style **German Pilsner (Pils)**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.1 liter(s)**
- Total mash volume **21.5 liter(s)**

### Steps

- Temp **53 C**, Time **10 min**
- Temp **63 C**, Time **45 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **5 min**

### Mash step by step

- Heat up **16.1 liter(s)** of strike water to **58.5C**
- Add grains
- Keep mash **10 min** at **53C**
- Keep mash **45 min** at **63C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **14.6 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Castle Malting - Pilsneński 6-rzędowy	3.5 kg (65.1%)	80 %	5
Grain	Briess - Carapils Malt	0.37 kg (6.9%)	74 %	3
Grain	BESTMALZ - Best Pilsen	1.45 kg (27%)	80.5 %	4
Grain	Weyermann - Acidulated Malt	0.06 kg (1.1%)	80 %	6

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Tradition	30 g	60 min	5.4 %
Boil	Tradition	20 g	20 min	5.4 %
Boil	Hersbrucker	50 g	5 min	3 %

### Yeasts

Name	Type	Form	Amount	Laboratory
WLP838 - Southern German Lager Yeast	Lager	Liquid	12 ml	White Labs

## Notes

- miękka woda <5 d  
*Nov 30, 2017, 8:38 PM*