

## Bitter premium

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- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **29**
- SRM **7.6**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

### Batch size

- Expected quantity of finished beer **27 liter(s)**
- Trub loss **5 %**
- Size with trub loss **28.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **34.2 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **15.8 liter(s)**
- Total mash volume **22.1 liter(s)**

### Steps

- Temp **55 C**, Time **10 min**
- Temp **68 C**, Time **60 min**
- Temp **74 C**, Time **3 min**

### Mash step by step

- Heat up **15.8 liter(s)** of strike water to **62C**
- Add grains
- Keep mash **10 min** at **55C**
- Keep mash **60 min** at **68C**
- Keep mash **3 min** at **74C**
- Sparge using **24.7 liter(s)** of **76C** water or to achieve **34.2 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5.5 kg (84.6%)	80 %	5
Grain	Strzegom Monachijski typ I	0.6 kg (9.2%)	79 %	16
Adjunct	Zyto	0.2 kg (3.1%)	75 %	3
Grain	Strzegom Karmel 300	0.2 kg (3.1%)	70 %	299

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	35 g	60 min	8.8 %
Boil	East Kent Goldings	20 g	0 min	5.1 %
Boil	East Kent Goldings	10 g	50 min	5.1 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM10 O czym szumią wierzby	Ale	Liquid	150 ml	Fermentum Mobile

### Notes

- drodze 2 po biter  
*Apr 5, 2019, 11:38 PM*