

## BPA

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- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **33**
- SRM **11.8**
- Style **Belgian Pale Ale**

### Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **20 %/h**
- Boil size **13.2 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **9.8 liter(s)**
- Total mash volume **12.3 liter(s)**

### Steps

- Temp **64 C**, Time **25 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **9.8 liter(s)** of strike water to **69.5C**
- Add grains
- Keep mash **25 min** at **64C**
- Keep mash **40 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **5.9 liter(s)** of **76C** water or to achieve **13.2 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	0.8 kg (32.7%)	80 %	4
Grain	Specjal B - Castle	0.15 kg (6.1%)	80 %	280
Grain	Strzegom Wiedeński	0.15 kg (6.1%)	79 %	10
Grain	Fawcett - Dark Crystal	0.05 kg (2%)	71 %	300
Grain	Viking Pale Ale malt	1.3 kg (53.1%)	80 %	5

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	12.5 g	30 min	12 %
Boil	Marynka	15 g	5 min	8.8 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM21 Odkrycie sezonu	Ale	Slant	80 ml	Fermentum Mobile

### Extras

Type	Name	Amount	Use for	Time
Water Agent	Whirlfloc T	1 g	Boil	15 min