

## polish

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **40**
- SRM **5.3**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.2 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 **14.3 liter(s)**
- Total mash volume **19 liter(s)**

### Steps

- Temp **66 C**, Time **60 min**
- Temp **74 C**, Time **10 min**

### Mash step by step

- Heat up **14.3 liter(s)** of strike water to **73.6C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **74C**
- Sparge using **19.5 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4 kg (84.2%)	80 %	5
Grain	Strzegom Pszeniczny	0.5 kg (10.5%)	81 %	6
Grain	Karmelowy Strzegom	0.15 kg (3.2%)	75 %	150
Grain	zakwaszający	0.1 kg (2.1%)	80 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	20 g	15 min	8.6 %
Boil	Cascade PL	20 g	15 min	5.5 %
Aroma (end of boil)	Chinook	30 g	5 min	8.6 %
Boil	lunga	20 g	60 min	9.5 %
Aroma (end of boil)	Cascade PL	30 g	5 min	5.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Slant	250 ml	Fermentum Mobile