

Pale Ale Pionner

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **35**
- SRM **3.6**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **28.6 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.8 liter(s) / kg**
- Mash size **20.9 liter(s)**
- Total mash volume **26.4 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **20.9 liter(s)** of strike water to **74.3C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **5 min** at **78C**
- Sparge using **13.2 liter(s)** of **76C** water or to achieve **28.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3.5 kg (63.6%)	81 %	4
Grain	Pszeniczny	1.5 kg (27.3%)	85 %	4
Grain	Płatki owsiane	0.5 kg (9.1%)	85 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	13 g	50 min	13 %
Boil	Pioneer	20 g	20 min	9 %
Boil	Pioneer	30 g	9 min	9 %
Dry Hop	Pionner	50 g	3 day(s)	9 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	300 ml	Fermentis