

# PIONEER

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- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **35**
- SRM **3.7**
- Style **Belgian Specialty Ale**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.7 liter(s)**
- Total mash volume **20.9 liter(s)**

## Steps

- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **25 min**
- Temp **77 C**, Time **5 min**

## Mash step by step

- Heat up **15.7 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **30 min** at **62C**
- Keep mash **25 min** at **72C**
- Keep mash **5 min** at **77C**
- Sparge using **21.2 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pale Ale Malt	2 kg (36.9%)	80 %	7
Grain	Pszeniczny	2.1 kg (38.7%)	85 %	4
Grain	Caramel Pils	0.12 kg (2.2%)	--- %	5
Grain	Zakwaszający Bestmaltz	0.5 kg (9.2%)	80 %	5
Grain	Płatki owsiane	0.5 kg (9.2%)	85 %	3
Sugar	cukier	0.2 kg (3.7%)	--- %	---

## Hops

Use for	Name	Amount	Time	Alpha acid
Aroma (end of boil)	pioneer UK	65 g	5 min	9.5 %
Boil	pioneer UK	35 g	30 min	9.5 %
Dry Hop	pioneer UK	100 g	7 day(s)	9.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11 g	Fermentis

## Extras

Type	Name	Amount	Use for	Time
Flavor	sól	25 g	Boil	30 min