

# 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 |