

# Polski Pale Ale - kontrakt 1

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **37**
- SRM **5.4**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **60 liter(s)**
- Trub loss **5 %**
- Size with trub loss **63 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **75.9 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **48 liter(s)**
- Total mash volume **64 liter(s)**

## Steps

- Temp **67 C**, Time **60 min**
- Temp **78 C**, Time **0 min**

## Mash step by step

- Heat up **48 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **0 min** at **78C**
- Sparge using **43.9 liter(s)** of **76C** water or to achieve **75.9 liter(s)** of wort

## Fermentables

| Type  | Name                 | Amount        | Yield | EBC |
|-------|----------------------|---------------|-------|-----|
| Grain | Viking Pale Ale malt | 12 kg (75%)   | 80 %  | 5   |
| Grain | cookie               | 1.2 kg (7.5%) | 80 %  | 40  |
| Grain | Płatki owsiane       | 1.2 kg (7.5%) | 60 %  | 3   |
| Grain | Płatki pszeniczne    | 0.8 kg (5%)   | 60 %  | 3   |
| Grain | Viking Wheat Malt    | 0.8 kg (5%)   | 83 %  | 5   |

## Hops

| Use for   | Name    | Amount | Time     | Alpha acid |
|-----------|---------|--------|----------|------------|
| Boil      | lunga   | 75 g   | 60 min   | 11 %       |
| Boil      | Zula    | 60 g   | 5 min    | 8.3 %      |
| Boil      | Oktawia | 60 g   | 5 min    | 7.1 %      |
| Whirlpool | Zula    | 120 g  | 0 min    | 8.3 %      |
| Whirlpool | Oktawia | 120 g  | 0 min    | 7.1 %      |
| Dry Hop   | Zula    | 180 g  | 7 day(s) | 8.3 %      |
| Dry Hop   | Oktawia | 180 g  | 7 day(s) | 7.1 %      |

## Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

|        |     |     |      |     |
|--------|-----|-----|------|-----|
| s - 33 | Ale | Dry | 50 g | --- |
|--------|-----|-----|------|-----|