

## #45 Polskie Pale Ale

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **45**
- SRM **3.5**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **4 %**
- Size with trub loss **25.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **30.6 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **19.3 liter(s)**
- Total mash volume **24.8 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **5 min**

### Mash step by step

- Heat up **19.3 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **16.8 liter(s)** of **76C** water or to achieve **30.6 liter(s)** of wort

### Fermentables

| Type  | Name               | Amount          | Yield  | EBC |
|-------|--------------------|-----------------|--------|-----|
| Grain | Malteurop Lager    | 3.66 kg (66.5%) | 82 %   | 3.3 |
| Grain | Malteurop Wheat    | 0.5 kg (9.1%)   | 86.8 % | 5   |
| Grain | Malteurop Pale Ale | 1.34 kg (24.4%) | 82 %   | 6   |

### Hops

| Use for | Name              | Amount | Time     | Alpha acid |
|---------|-------------------|--------|----------|------------|
| Boil    | Magnum            | 30 g   | 60 min   | 13.5 %     |
| Boil    | Lublin (Lubelski) | 50 g   | 10 min   | 4 %        |
| Boil    | Lublin (Lubelski) | 20 g   | 5 min    | 4 %        |
| Dry Hop | Lublin (Lubelski) | 80 g   | 4 day(s) | 4 %        |

### Yeasts

| Name                  | Type | Form   | Amount | Laboratory       |
|-----------------------|------|--------|--------|------------------|
| FM42 Stare Nadreńskie | Ale  | Liquid | 90 ml  | Fermentum Mobile |