

## #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