

## #39 Pale Ale

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **41**
- SRM **4.8**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

### Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **0 %**
- Size with trub loss **22 liter(s)**
- Boil time **90 min**
- Evaporation rate **15 %/h**
- Boil size **26.9 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **20.8 liter(s)**
- Total mash volume **26 liter(s)**

### Steps

- Temp **67 C**, Time **50 min**
- Temp **74 C**, Time **20 min**

### Mash step by step

- Heat up **20.8 liter(s)** of strike water to **72.9C**
- Add grains
- Keep mash **50 min** at **67C**
- Keep mash **20 min** at **74C**
- Sparge using **11.3 liter(s)** of **76C** water or to achieve **26.9 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2.8 kg (53.8%)	80 %	5
Grain	Strzegom Pilzneński	1.4 kg (26.9%)	80 %	4
Grain	Strzegom Monachijski typ II	0.5 kg (9.6%)	79 %	20
Grain	Weyermann - Carapils	0.2 kg (3.8%)	78 %	4
Grain	Płatki owsiane	0.1 kg (1.9%)	60 %	3
Grain	Płatk jęczmienne	0.1 kg (1.9%)	60 %	2
Grain	Grodziski pszeniczny	0.1 kg (1.9%)	80 %	3

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	20 g	55 min	11 %
Aroma (end of boil)	Oktawia	35 g	10 min	7.1 %
Aroma (end of boil)	Amarillo	8 g	5 min	9.5 %
Aroma (end of boil)	Cascade	17 g	5 min	6 %
Dry Hop	Galaxy	20 g	3 day(s)	15 %
Aroma (end of boil)	Chinook	10 g	5 min	13 %

### Yeasts

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Safale

## Notes

- Fermentacja:
  - Do czasu ruszenia drożdży 18,5-19
  - pierwsza doba 19-19.5
  - potem 19,5-20*Mar 20, 2019, 9:39 PM*