

## old ale PK

- Gravity **19.3 BLG**
- ABV **8.4 %**
- IBU **45**
- SRM **14.2**
- Style **Old Ale**

### Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **5 %**
- Size with trub loss **19.9 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **25.2 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.3 liter(s) / kg**
- Mash size **25.4 liter(s)**
- Total mash volume **33.1 liter(s)**

### Steps

- Temp **55 C**, Time **1 min**
- Temp **68 C**, Time **90 min**
- Temp **76 C**, Time **1 min**

### Mash step by step

- Heat up **25.4 liter(s)** of strike water to **60.3C**
- Add grains
- Keep mash **1 min** at **55C**
- Keep mash **90 min** at **68C**
- Keep mash **1 min** at **76C**
- Sparge using **7.5 liter(s)** of **76C** water or to achieve **25.2 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale Best	6 kg (75.9%)	80 %	6
Grain	Carared	0.3 kg (3.8%)	75 %	39
Grain	Special X Best	0.3 kg (3.8%)	75 %	350
Grain	Bestmalz Red X	0.3 kg (3.8%)	79 %	30
Grain	Carahell Best	0.3 kg (3.8%)	75 %	30
Grain	Oats, Flaked	0.5 kg (6.3%)	80 %	2
Sugar	Brown Sugar, Light	0.2 kg (2.5%)	100 %	16

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	30 g	60 min	12.1 %
Boil	Perle	10 g	15 min	7.3 %
Boil	Galaxy	15 g	15 min	15 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Danstar - Nottingham	Ale	Slant	400 ml	Danstar

## Notes

- 2 ml kwas mlekowy  
*Feb 12, 2021, 11:31 PM*