

## Old Ale 1.0

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- Gravity **19.1 BLG**
- ABV **8.3 %**
- IBU **41**
- SRM **22.2**
- Style **Old Ale**

### Batch size

- Expected quantity of finished beer **17.5 liter(s)**
- Trub loss **3 %**
- Size with trub loss **18 liter(s)**
- Boil time **90 min**
- Evaporation rate **13 %/h**
- Boil size **24.9 liter(s)**

### Mash information

- Mash efficiency **68 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.7 liter(s)**
- Total mash volume **23.6 liter(s)**

### Steps

- Temp **63 C**, Time **40 min**
- Temp **72 C**, Time **30 min**
- Temp **77 C**, Time **5 min**

### Mash step by step

- Heat up **17.7 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **40 min** at **63C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **77C**
- Sparge using **13.1 liter(s)** of **76C** water or to achieve **24.9 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4 kg (53.3%)	72 %	5
Grain	Karmelowy Czerwony	0.5 kg (6.7%)	72 %	59
Grain	Carahell	0.5 kg (6.7%)	72 %	26
Grain	Strzegom Karmel 150	0.4 kg (5.3%)	72 %	150
Grain	Strzegom Czekoladowy jasny	0.5 kg (6.7%)	72 %	400
Adjunct	Płatki owsiane	0.5 kg (6.7%)	68 %	3
Adjunct	płatki żytnie	0.4 kg (5.3%)	68 %	4
Sugar	cukier muscavado	0.7 kg (9.3%)	90 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Sybilla	20 g	60 min	6 %
Boil	Perle	30 g	60 min	7 %
Boil	Perle	30 g	15 min	7 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM12 W szkocką kratę	Ale	Slant	200 ml	Fermentum Mobile

### Extras

Type	Name	Amount	Use for	Time
Flavor	płatki dębowe francuskie średnio opiekane	50 g	Primary	13 day(s)
Flavor	płatki dębowe amerykańskie średnio opiekane	50 g	Secondary	13 day(s)