

## Liberty Ale vol.4

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- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **39**
- SRM **6.4**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **25 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **30.4 liter(s)**

### Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **27 liter(s)**

### Steps

- Temp **66 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **1 min**

### Mash step by step

- Heat up **21 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **45 min** at **66C**
- Keep mash **15 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **15.4 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale Soufflet	5 kg (83.3%)	80 %	7
Grain	Caramel Sweet Viking	0.5 kg (8.3%)	80 %	65
Grain	Płatki pszeniczne	0.5 kg (8.3%)	85 %	3

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	30 g	60 min	12 %
Boil	Cascade	20 g	15 min	9 %
Aroma (end of boil)	Cascade	30 g	1 min	9 %
Dry Hop	Cascade	50 g	3 day(s)	9 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	150 ml	Fermentis

### Extras

Type	Name	Amount	Use for	Time
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Water Agent	Siarczan wapnia	4 g	Boil	60 min
Water Agent	Chlorek wapnia	2 g	Boil	60 min
Fining	Whirlfloc T	1 g	Boil	20 min

## Notes

- Woda Biedra 2  
*Jul 30, 2020, 10:24 AM*