

## Liberty Ale vol.3

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- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **43**
- SRM **5.3**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23 liter(s)**
- Boil time **60 min**
- Evaporation rate **7 %/h**
- Boil size **28 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **27 liter(s)**

### Steps

- Temp **64 C**, Time **60 min**
- Temp **76 C**, Time **1 min**

### Mash step by step

- Heat up **21 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **1 min** at **76C**
- Sparge using **13 liter(s)** of **76C** water or to achieve **28 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	5 kg (83.3%)	81 %	5
Grain	Caramalt Fawcett	0.5 kg (8.3%)	76 %	35
Grain	Pszenica	0.5 kg (8.3%)	80 %	3

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	35 g	60 min	13.2 %
Aroma (end of boil)	Cascade LupuLN2 Cryo	12 g	1 min	11.4 %
Whirlpool	Cascade LupuLN2 Cryo	13 g	1 min	11.4 %
Dry Hop	Cascade LupuLN2 Cryo	25 g	3 day(s)	11.4 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	250 ml	Fermentis

### Extras

Type	Name	Amount	Use for	Time
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Water Agent	Chlorek wapnia	2 g	Boil	60 min
Water Agent	Siarczan wapnia	5 g	Boil	60 min
Water Agent	Cynk + odżywka	1 g	Boil	60 min
Fining	Whirlfloc T	1 g	Boil	15 min

## Notes

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*Apr 18, 2020, 5:59 PM*