

## #31 Waldbier

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- Gravity **14.7 BLG**
- ABV **6.1 %**
- IBU **38**
- SRM **5.3**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **12 %/h**
- Boil size **25.8 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.53 liter(s) / kg**
- Mash size **21.3 liter(s)**
- Total mash volume **27.3 liter(s)**

### Steps

- Temp **68 C**, Time **80 min**

### Mash step by step

- Heat up **21.3 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **80 min** at **68C**
- Sparge using **10.5 liter(s)** of **76C** water or to achieve **25.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Malt (2 Row) UK	4 kg (66.4%)	78 %	6
Grain	Pszeniczny	0.3 kg (5%)	85 %	4
Grain	Płatki owsiane	0.4 kg (6.6%)	85 %	3
Grain	Płatki pszeniczne	0.25 kg (4.2%)	85 %	3
Grain	Monachijski	0.5 kg (8.3%)	80 %	16
Grain	Briess - Carapils Malt	0.5 kg (8.3%)	74 %	3
Grain	Acid Malt	0.07 kg (1.2%)	58.7 %	6

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	15 g	60 min	12.8 %
Boil	Simcoe	20 g	15 min	11.7 %
Boil	Centennial	10 g	5 min	9.4 %
Whirlpool	Simcoe	30 g	5 min	11.7 %
Whirlpool	Centennial	15 g	5 min	9.4 %