

## bro

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- Gravity **14.7 BLG**
- ABV ---
- IBU **32**
- SRM **14.1**
- 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 **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

### Steps

- Temp **67 C**, Time **90 min**
- Temp **78 C**, Time **15 min**

### Mash step by step

- Heat up **16.5 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **90 min** at **67C**
- Keep mash **15 min** at **78C**
- Sparge using **14.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	4 kg (72.7%)	79 %	6
Grain	Strzegom Monachijski typ I	0.5 kg (9.1%)	79 %	16
Grain	Pszeniczny	0.5 kg (9.1%)	85 %	4
Grain	Strzegom Karmel 150	0.5 kg (9.1%)	75 %	150

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Summit	15 g	40 min	15.8 %
Boil	Equinox	7 g	40 min	13.1 %
Whirlpool	Simcoe	10 g	0 min	13.2 %
Whirlpool	Summit	10 g	0 min	15.8 %
Whirlpool	Cascade	20 g	0 min	6 %
Whirlpool	Citra	10 g	0 min	12 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11 g	Fermentis