

## FREE STYLE

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- Gravity **8.8 BLG**
- ABV **3.4 %**
- IBU **29**
- SRM **4.2**
- 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 **10.5 liter(s)**
- Total mash volume **14 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**

### Mash step by step

- Heat up **10.5 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Sparge using **18.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pale Ale Malt	3.2 kg (91.4%)	80 %	7
Grain	Karamel Pils Steinbach	0.15 kg (4.3%)	79 %	6
Grain	Karmelowy Jasny 30EBC	0.15 kg (4.3%)	75 %	30

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	15 g	60 min	10 %
Boil	Willamette	20 g	30 min	5 %
Boil	Willamette	20 g	1 min	5 %
Dry Hop	Amarillo	50 g	7 day(s)	9.5 %
Dry Hop	Vic Secret	100 g	7 day(s)	16.3 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Danstar - Nottingham	Ale	Dry	11 g	Danstar