

## To normalne

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- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **19**
- SRM **3.6**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **45 min**
- Evaporation rate **3 %/h**
- Boil size **24.6 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

### Steps

- Temp **69 C**, Time **80 min**

### Mash step by step

- Heat up **15 liter(s)** of strike water to **77.2C**
- Add grains
- Keep mash **80 min** at **69C**
- Sparge using **14.6 liter(s)** of **76C** water or to achieve **24.6 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Simpsons - Golden Promise	5 kg (100%)	80 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Cascade PL	50 g	45 min	4 %
Dry Hop	Cascade PL	50 g	10 day(s)	5.2 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	23 g	Fermentis