

## APA 48

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- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **55**
- SRM **4**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **10 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **4.5 liter(s) / kg**
- Mash size **22.5 liter(s)**
- Total mash volume **27.5 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**

### Mash step by step

- Heat up **22.5 liter(s)** of strike water to **73.3C**
- Add grains
- Keep mash **60 min** at **68C**
- Sparge using **7.8 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pilsner Malt	5 kg (100%)	81 %	5

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	40 g	60 min	10.6 %
Aroma (end of boil)	Citra	20 g	5 min	11.1 %
Whirlpool	Citra	30 g	10 min	11.1 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Lallemand - LalBrew Voss Kveik	Ale	Slant	50 ml	Lallemand