

## Strong malt APA

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- Gravity **18.9 BLG**
- ABV **8.2 %**
- IBU **49**
- SRM **8.7**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **58 liter(s)**
- Trub loss **2 %**
- Size with trub loss **59.2 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **68.7 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **55.5 liter(s)**
- Total mash volume **74 liter(s)**

### Steps

- Temp **51 C**, Time **15 min**
- Temp **62 C**, Time **45 min**
- Temp **72 C**, Time **25 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **55.5 liter(s)** of strike water to **56.2C**
- Add grains
- Keep mash **15 min** at **51C**
- Keep mash **45 min** at **62C**
- Keep mash **25 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **31.7 liter(s)** of **76C** water or to achieve **68.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Munich barke malt	4.5 kg (24.3%)	80 %	18
Grain	Jęczmień niesłodowany	1 kg (5.4%)	75 %	2
Grain	Pszeniczny	5 kg (27%)	85 %	4
Grain	Monachijski typ I	8 kg (43.2%)	80 %	15

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	20 min	7.5 %
Boil	Target	30 g	40 min	9 %
Boil	English Golding	230 g	60 min	4.8 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	9000 g	Fermentis

### Extras

Type	Name	Amount	Use for	Time
Flavor	płatki dębowe macerowane w koniaku	400 g	Secondary	0 day(s)