

## 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<br>macerowane w<br>koniaku | 400 g  | Secondary | 0 day(s) |