

## s/m apa

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- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **89**
- SRM **6.1**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **27.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **18 %/h**
- Boil size **35.4 liter(s)**

### Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.4 liter(s)**
- Total mash volume **19.2 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**
- Temp **76 C**, Time **10 min**

### Mash step by step

- Heat up **14.4 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **76C**
- Sparge using **25.8 liter(s)** of **76C** water or to achieve **35.4 liter(s)** of wort

### Fermentables

| Type  | Name                                   | Amount        | Yield | EBC |
|-------|--|---------------|-------|-----|
| Grain | Weyermann - Pale Ale Malt              | 3 kg (62.5%)  | 85 %  | 7   |
| Grain | Monachijski typ II 20-25 EBC Weyermann | 1 kg (20.8%)  | 80 %  | 20  |
| Grain | płatki żytnie                          | 0.4 kg (8.3%) | 85 %  | 3   |
| Grain | Płatki owsiane                         | 0.2 kg (4.2%) | 85 %  | 3   |
| Grain | Słód Caramunich Typ II Weyermann       | 0.2 kg (4.2%) | 73 %  | 120 |

### Hops

| Use for       | Name                   | Amount | Time   | Alpha acid |
|---------------|------------------------|--------|--------|------------|
| First Wort    | Columbus/Tomahawk/Zeus | 10 g   | 60 min | 14.4 %     |
| Boil          | Simcoe                 | 20 g   | 30 min | 13.3 %     |
| Boil          | Amarillo               | 20 g   | 30 min | 7.4 %      |
| Boil          | Simcoe                 | 30 g   | 15 min | 13.3 %     |
| Boil          | Amarillo               | 30 g   | 15 min | 7.4 %      |
| Boil          | Simcoe                 | 50 g   | 5 min  | 13.3 %     |
| 40 min 80st > |                        |        |        |            |
| Boil          | Amarillo               | 50 g   | 5 min  | 7.4 %      |

|         |          |       |          |        |
|---------|----------|-------|----------|--------|
| Dry Hop | Simcoe   | 100 g | 5 day(s) | 13.3 % |
| Dry Hop | Amarillo | 100 g | 5 day(s) | 7.4 %  |

## Yeasts

| Name        | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale  | Dry  | 11 g   | Safale     |