

Mandaryna

- Gravity **10 BLG**
- ABV **4 %**
- IBU **18**
- SRM **4.2**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **16.2 liter(s)**
- Total mash volume **20.8 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **77 C**, Time **5 min**

Mash step by step

- Heat up **16.2 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **5 min** at **77C**
- Sparge using **16.2 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------|----------------|-------|-----|
| Grain | Pilzneński | 3.5 kg (75.8%) | 81 % | 4 |
| Grain | Strzegom Wiedeński | 1 kg (21.6%) | 79 % | 10 |
| Grain | Weyermann - Carared | 0.12 kg (2.6%) | 75 % | 45 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|-------------------|--------|--------|------------|
| Boil | Mandarina Bavaria | 10 g | 60 min | 10 % |
| Whirlpool | Mandarina Bavaria | 60 g | 5 min | 10 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-----------------------------|------|--------|--------|------------------|
| FM54 Gorączka kalifornijska | Ale | Liquid | 250 ml | Fermentum Mobile |