

Mandaryna Pale Ale

- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **54**
- SRM **4.9**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12.9 liter(s)**
- Total mash volume **17.2 liter(s)**

Steps

- Temp **68 C**, Time **70 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **12.9 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **70 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **16.7 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|----------------|-------|-----|
| Grain | Pilzneński | 2.5 kg (58.1%) | 81 % | 4 |
| Grain | Viking Pale Ale malt | 1.5 kg (34.9%) | 80 % | 5 |
| Grain | Caramel/Crystal Malt - 30L | 0.3 kg (7%) | 75 % | 59 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------------------|--------|--------|------------|
| Boil | Magnum | 10 g | 60 min | 13.5 % |
| Boil | Mandarina Bavaria | 20 g | 15 min | 10 % |
| Boil | Mandarina Bavaria | 40 g | 10 min | 10 % |
| Boil | Mandarina Bavaria | 40 g | 5 min | 10 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| US-05 | Ale | Dry | 11 g | fermentis |