

48 APA

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **25**
- SRM **4.7**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **30.4 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **15 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **20.4 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------------|------------|--------|-----|
| Grain | BESTMALZ - Bestt Pale Ale | 3 kg (60%) | 80.5 % | 6 |
| Grain | Monachijski | 1 kg (20%) | 80 % | 16 |
| Grain | Pszeniczny | 1 kg (20%) | 85 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|---------|--------|----------|------------|
| Boil | Simcoe | 20 g | 60 min | 13.2 % |
| Whirlpool | Mosaic | 20 g | 0 min | 10 % |
| Whirlpool | Equinox | 20 g | 0 min | 13.1 % |
| Whirlpool | Simcoe | 20 g | 0 min | 13.2 % |
| Dry Hop | Mosaic | 80 g | 3 day(s) | 10 % |
| Dry Hop | Equinox | 80 g | 3 day(s) | 13.1 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-----------------------------|------|--------|--------|------------------|
| FM54 Gorączka kalifornijska | Ale | Liquid | 30 ml | Fermentum Mobile |

Extras

| Type | Name | Amount | Use for | Time |
|--------|--------------------|--------|-----------|----------|
| Herb | Mięta | 2 g | Boil | 20 min |
| Flavor | Zest z limonki | 2 g | Boil | 20 min |
| Flavor | Zesta z grejpfruta | 3 g | Boil | 20 min |
| Herb | Mięta | 2 g | Secondary | 4 day(s) |
| Flavor | Zest z limonki | 5 g | Secondary | 4 day(s) |
| Flavor | Zesta z grejpfruta | 3 g | Secondary | 4 day(s) |