

Narodowe

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **33**
- SRM **3.4**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **35 liter(s)**
- Trub loss **10 %**
- Size with trub loss **42 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **50.8 liter(s)**

Mash information

- Mash efficiency **89 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **29.1 liter(s)**
- Total mash volume **37.4 liter(s)**

Steps

- Temp **68 C**, Time **90 min**

Mash step by step

- Heat up **29.1 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **90 min** at **68C**
- Sparge using **30 liter(s)** of **76C** water or to achieve **50.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--------------------------|---------------|-------|-----|
| Grain | Viking Pilsner malt | 7 kg (84.3%) | 82 % | 4 |
| Grain | Viking Vienna Malt | 1 kg (12%) | 79 % | 7 |
| Grain | Słód pszeniczny Bestmalz | 0.3 kg (3.6%) | 82 % | 5 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|-------------------|--------|----------|------------|
| Boil | Magnat | 30 g | 60 min | 11.2 % |
| Whirlpool | Lublin (Lubelski) | 50 g | 30 min | 4 % |
| Whirlpool | Marynka | 50 g | 30 min | 10 % |
| Dry Hop | Lublin (Lubelski) | 50 g | 5 day(s) | 4 % |
| Dry Hop | Marynka | 50 g | 5 day(s) | 10 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|-------|--------|------------|
| Safale US-05 | Ale | Slant | 50 ml | --- |