

phi...pa

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **74**
- SRM **3.9**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **13.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **17.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **12.6 liter(s)**
- Total mash volume **16.2 liter(s)**

Steps

- Temp **66 C**, Time **15 min**
- Temp **72 C**, Time **45 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **12.6 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **15 min** at **66C**
- Keep mash **45 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **8.3 liter(s)** of **76C** water or to achieve **17.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------|----------------|-------|-----|
| Grain | Viking Pilsner malt | 2.6 kg (72.2%) | 82 % | 4 |
| Grain | Pszeniczny | 0.7 kg (19.4%) | 85 % | 4 |
| Grain | Oats, Flaked | 0.3 kg (8.3%) | 80 % | 2 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|----------|--------|----------|------------|
| Boil | lunga | 15 g | 60 min | 11 % |
| Whirlpool | Zula | 50 g | 20 min | 13.3 % |
| Whirlpool | Izabella | 50 g | 20 min | 6.8 % |
| Dry Hop | Izabella | 50 g | 3 day(s) | 6 % |
| Dry Hop | Książęcy | 100 g | 3 day(s) | 10.1 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|---------------------------------|------|-------|--------|------------|
| Lallemand - LalBrew Verdant IPA | Ale | Slant | 200 ml | Lallemand |