

Apa

- Gravity **12.1 BLG**
- ABV ---
- IBU **32**
- SRM **4.4**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

Steps

- Temp **67 C**, Time **60 min**
- Temp **77 C**, Time **5 min**

Mash step by step

- Heat up **16.5 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **5 min** at **77C**
- Sparge using **20.7 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 4.5 kg (81.8%) | 80 % | 5 |
| Grain | Pszeniczny | 0.5 kg (9.1%) | 85 % | 4 |
| Grain | Strzegom Monachijski typ I | 0.5 kg (9.1%) | 79 % | 16 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|---------|--------|--------|------------|
| Boil | lunga | 20 g | 60 min | 11 % |
| Aroma (end of boil) | Oktawia | 30 g | 15 min | 7.1 % |
| Whirlpool | Oktawia | 20 g | 0 min | 7.1 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-----------------------|------|--------|---------|------------------|
| FM11 Wichrowe Wzgórza | Ale | Liquid | 1000 ml | Fermentum Mobile |

Notes

- Dana gestwa 2x fm11
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