

Bridge of Khazad-dûm 11 litrów

- Gravity **14.7 BLG**
- ABV **6.1 %**
- IBU **39**
- SRM **6**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **16.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **19.8 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **4.5 liter(s) / kg**
- Mash size **22 liter(s)**
- Total mash volume **26.9 liter(s)**

Steps

- Temp **55 C**, Time **10 min**
- Temp **68 C**, Time **60 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **22 liter(s)** of strike water to **58.9C**
- Add grains
- Keep mash **10 min** at **55C**
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **76C**
- Sparge using **2.7 liter(s)** of **76C** water or to achieve **19.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--------------------------|----------------|-------|-----|
| Grain | Pilzneński | 2.8 kg (57.1%) | 81 % | 4 |
| Grain | Monachijski | 1 kg (20.4%) | 80 % | 16 |
| Grain | Żytni | 1 kg (20.4%) | 85 % | 8 |
| Grain | Viking Malt Caramel Pale | 0.1 kg (2%) | 80 % | 8 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|----------|--------|----------|------------|
| Boil | Iunga PH | 30 g | 20 min | 10 % |
| Whirlpool | Waimea | 40 g | 10 min | 14.3 % |
| Whirlpool | WAI-ITI | 40 g | 10 min | 2 % |
| Dry Hop | Waimea | 60 g | 5 day(s) | 14.3 % |
| Dry Hop | WAI-ITI | 60 g | 5 day(s) | 2 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-----------------------|------|-------|--------|------------------|
| FM42 Stare Nadreńskie | Ale | Slant | 250 ml | Fermentum Mobile |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|------|--------|---------|--------|
| Water Agent | NaCl | 6 g | Mash | 60 min |