

- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **47**
- SRM **3.7**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **40 liter(s)**
- Trub loss **5 %**
- Size with trub loss **42 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **51.4 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **24.5 liter(s)**
- Total mash volume **32.6 liter(s)**

Steps

- Temp **64 C**, Time **40 min**
- Temp **68 C**, Time **20 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **24.5 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **20 min** at **68C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **35.1 liter(s)** of **76C** water or to achieve **51.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|-----------------|-------|-----|
| Grain | Viking Pale Ale malt | 6.64 kg (81.4%) | 80 % | 5 |
| Grain | Strzegom Pszeniczny | 1.52 kg (18.6%) | 81 % | 6 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|---------|--------|--------|------------|
| Boil | Magnum | 32 g | 60 min | 13.5 % |
| Boil | Cascade | 31 g | 60 min | 6 % |
| Boil | Cascade | 30 g | 15 min | 6 % |
| Boil | Equinox | 35 g | 5 min | 13.1 % |
| Aroma (end of boil) | Cascade | 45 g | 0 min | 6 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| us-05 | Ale | Dry | 23 g | fermentis |

Extras

| Type | Name | Amount | Use for | Time |
|--------|----------------|--------|---------|--------|
| Fining | mech irlandzki | 10 g | Boil | 15 min |