

Harnaś

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **27**
- SRM **7.3**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **50 liter(s)**
- Trub loss **5 %**
- Size with trub loss **52.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **63.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **34.5 liter(s)**
- Total mash volume **46 liter(s)**

Steps

- Temp **67 C**, Time **100 min**

Mash step by step

- Heat up **34.5 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **100 min** at **67C**
- Sparge using **40.3 liter(s)** of **76C** water or to achieve **63.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|---------------|-------|-----|
| Grain | Strzegom Monachijski typ II | 6 kg (52.2%) | 79 % | 22 |
| Grain | Briess - Pale Ale Malt | 5 kg (43.5%) | 80 % | 7 |
| Grain | Oats, Flaked | 0.5 kg (4.3%) | 80 % | 2 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|------------|--------|--------|------------|
| Boil | Galaxy | 30 g | 60 min | 15 % |
| Boil | Motueka | 20 g | 30 min | 7 % |
| Boil | Lemon drop | 15 g | 15 min | 4.6 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| Us-05 | Ale | Dry | 11.5 g | Fermentis |

Extras

| Type | Name | Amount | Use for | Time |
|-------|--------|--------|---------|--------|
| Spice | Świerk | 200 g | Boil | 10 min |