

HOPBY

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **33**
- SRM **7.2**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **11.6 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **5.3 liter(s)**
- Total mash volume **7 liter(s)**

Steps

- Temp **66 C**, Time **60 min**

Mash step by step

- Heat up **5.3 liter(s)** of strike water to **73.6C**
- Add grains
- Keep mash **60 min** at **66C**
- Sparge using **8.1 liter(s)** of **76C** water or to achieve **11.6 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------------|------------------------------------|----------------|-------|-----|
| Grain | Pilzneński | 0.8 kg (40%) | 81 % | 4 |
| Grain | Monachijski | 0.3 kg (15%) | 80 % | 16 |
| Grain | Pszeniczny | 0.5 kg (25%) | 85 % | 4 |
| Grain | Viking Malt Karmelowy | 0.15 kg (7.5%) | 75 % | 140 |
| Sugar | Cukier kandyzowany belgijski biały | 0.15 kg (7.5%) | --- % | 0 |
| Dry Extract | Briess DME - Golden Light | 0.1 kg (5%) | 95 % | 8 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|------------------------|--------|--------|------------|
| Boil | Columbus/Tomahawk/Zeus | 10 g | 15 min | 14.3 % |
| Boil | Columbus/Tomahawk/Zeus | 15 g | 5 min | 14.3 % |
| Boil | Falconer's Flight | 15 g | 1 min | 10.7 % |
| Boil | Citra | 30 g | 1 min | 12 % |