

Ech

- Gravity **12.4 BLG**
- ABV ---
- IBU **32**
- SRM **4.5**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **14 liter(s)**
- Trub loss **10 %**
- Size with trub loss **15.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **19.3 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **10.2 liter(s)**
- Total mash volume **13.1 liter(s)**

Steps

- Temp **68 C**, Time **60 min**

Mash step by step

- Heat up **10.2 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **68C**
- Sparge using **12 liter(s)** of **76C** water or to achieve **19.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------------------|---------------|-------|-----|
| Grain | Briess - Pale Ale Malt | 2.9 kg (100%) | 80 % | 7 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|----------|--------|--------|------------|
| Boil | Chinook | 5 g | 60 min | 12.8 % |
| Boil | Chinook | 20 g | 10 min | 12.8 % |
| Boil | Amarillo | 30 g | 1 min | 8.9 % |
| Boil | Citra | 50 g | 1 min | 12 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|---------------|------|------|--------|------------|
| US West Coast | Ale | Dry | 10 g | Gozdawa |