

Test

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **28**
- SRM **4.1**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **10 %**
- Size with trub loss **14.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **25 %/h**
- Boil size **21.8 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.75 liter(s) / kg**
- Mash size **13.3 liter(s)**
- Total mash volume **16.9 liter(s)**

Steps

- Temp **50 C**, Time **0 min**
- Temp **67 C**, Time **50 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **13.3 liter(s)** of strike water to **54C**
- Add grains
- Keep mash **0 min** at **50C**
- Keep mash **50 min** at **67C**
- Keep mash **10 min** at **78C**
- Sparge using **12.1 liter(s)** of **76C** water or to achieve **21.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------------|----------------|-------|-----|
| Grain | Weyermann - Pilsner Malt | 1.5 kg (42.1%) | 81 % | 5 |
| Grain | Weyermann - Pale Ale Malt | 1.5 kg (42.1%) | 85 % | 7 |
| Grain | Oats, Flaked | 0.5 kg (14%) | 80 % | 2 |
| Grain | Weyermann - Carapils | 0.06 kg (1.7%) | 78 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|----------|--------|----------|------------|
| Boil | Citra | 5 g | 60 min | 13.5 % |
| Boil | Citra | 5 g | 0 min | 13.5 % |
| Whirlpool | Citra | 15 g | 30 min | 13.5 % |
| Whirlpool | Amarillo | 15 g | 30 min | 9.5 % |
| Dry Hop | Citra | 10 g | 3 day(s) | 13.5 % |
| Dry Hop | Amarillo | 10 g | 3 day(s) | 9.5 % |
| Dry Hop | Citra | 28 g | 3 day(s) | 13.5 % |
| Dry Hop | Amarillo | 25 g | 3 day(s) | 9.5 % |

Yeasts

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