

aTAK cHMIELU ;)

- Gravity **16.4 BLG**
- ABV **6.9 %**
- IBU **62**
- SRM **8.1**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **75 min**
- Evaporation rate **10 %/h**
- Boil size **28.3 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.5 liter(s)**
- Total mash volume **26 liter(s)**

Steps

- Temp **67 C**, Time **75 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **19.5 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **75 min** at **67C**
- Keep mash **10 min** at **78C**
- Sparge using **15.3 liter(s)** of **76C** water or to achieve **28.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|---------------|-------|-----|
| Grain | Weyermann - Pale Ale Malt | 5 kg (76.9%) | 85 % | 7 |
| Grain | Weyermann - Carapils | 0.5 kg (7.7%) | 78 % | 4 |
| Grain | Weyermann - Carared | 0.5 kg (7.7%) | 75 % | 45 |
| Grain | Weyermann - Melanoiden Malt | 0.5 kg (7.7%) | 81 % | 53 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|----------|--------|----------|------------|
| Boil | Simcoe | 50 g | 60 min | 13.2 % |
| Whirlpool | Cascade | 50 g | 10 min | 6 % |
| Dry Hop | Amarillo | 50 g | 5 day(s) | 9.5 % |
| Dry Hop | Citra | 50 g | 5 day(s) | 12 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale | Dry | 23 g | Fermentis |