

## PA

- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **35**
- SRM **15.3**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.2 liter(s)**
- Total mash volume **17.6 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **0 min**

### Mash step by step

- Heat up **13.2 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **15 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **16.5 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

| Type  | Name                        | Amount        | Yield | EBC |
|-------|-----------------------------|---------------|-------|-----|
| Grain | Weyermann - Acidulated Malt | 4 kg (90.9%)  | 80 %  | 6   |
| Grain | Caraaroma                   | 0.3 kg (6.8%) | 78 %  | 400 |
| Grain | Weyermann - Carafa I        | 0.1 kg (2.3%) | 70 %  | 690 |

### Hops

| Use for | Name       | Amount | Time   | Alpha acid |
|---------|------------|--------|--------|------------|
| Boil    | Pioneer    | 20 g   | 55 min | 8.8 %      |
| Boil    | Pioneer    | 10 g   | 15 min | 8.8 %      |
| Boil    | Citra      | 5 g    | 15 min | 12 %       |
| Boil    | Willamette | 30 g   | 5 min  | 5 %        |
| Boil    | Citra      | 10 g   | 5 min  | 12 %       |

### Yeasts

| Name        | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale  | Dry  | 11.5 g | Fermentis  |