

# Alt

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **30**
- SRM **9.1**
- Style **Northern German Altbier**

## Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.9 liter(s)**
- Total mash volume **19.9 liter(s)**

## Steps

- Temp **62 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **14.9 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **45 min** at **62C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **16.6 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

## Fermentables

| Type  | Name                     | Amount         | Yield | EBC |
|-------|--------------------------|----------------|-------|-----|
| Grain | Viking Pilsner malt      | 3 kg (60.6%)   | 82 %  | 4   |
| Grain | Viking Munich Malt       | 1.5 kg (30.3%) | 78 %  | 18  |
| Grain | Karmelowy żytni Strzegom | 0.41 kg (8.1%) | 75 %  | 150 |
| Grain | Viking Wheat Malt        | 0.06 kg (1%)   | 83 %  | 5   |

## Hops

| Use for             | Name                | Amount  | Time   | Alpha acid |
|---------------------|---------------------|---------|--------|------------|
| Boil                | Hallertau Tradition | 49.99 g | 45 min | 5 %        |
| Boil                | Hallertau Tradition | 20.01 g | 15 min | 5 %        |
| Aroma (end of boil) | Hallertau Tradition | 5 g     | 1 min  | 5 %        |

## Yeasts

| Name         | Type | Form | Amount  | Laboratory |
|--------------|------|------|---------|------------|
| Safale US-05 | Ale  | Dry  | 11.49 g | Fermentis  |