

Altbiter

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **44**
- SRM **8.2**
- Style **Düsseldorf 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 **20 %/h**
- Boil size **27.7 liter(s)**

Mash information

- Mash efficiency **83 %**
- Liquor-to-grist ratio **3.4 liter(s) / kg**
- Mash size **17 liter(s)**
- Total mash volume **22 liter(s)**

Steps

- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **10 min**

Mash step by step

- Heat up **17 liter(s)** of strike water to **71.6C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **10 min** at **72C**
- Sparge using **15.7 liter(s)** of **76C** water or to achieve **27.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|--------------|-------|-----|
| Grain | Pale Ale Viking malt | 3.5 kg (70%) | 80 % | 5 |
| Grain | Pszeniczny | 1 kg (20%) | 82 % | 4 |
| Grain | Cara Gold | 0.5 kg (10%) | 75 % | 120 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|---------|--------|--------|------------|
| Boil | Summit | 20 g | 50 min | 18 % |
| Aroma (end of boil) | Chinook | 30 g | 5 min | 13 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|-------|--------|------------|
| Safale US-05 | Ale | Slant | 500 ml | --- |

Extras

| Type | Name | Amount | Use for | Time |
|--------|-----------------|--------|---------|--------|
| Fining | Whirlfloc T | 1 g | Boil | 7 min |
| Flavor | Trawa cytrynowy | 10 g | Boil | 10 min |