

Alt (Marxam Brewing)

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **32**
- SRM **12.4**
- Style **Düsseldorf Altbier**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **7 %**
- Size with trub loss **22.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.1 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.3 liter(s)**
- Total mash volume **22.3 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **17.3 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **5 min** at **78C**
- Sparge using **14.8 liter(s)** of **76C** water or to achieve **27.1 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 150 (Viking Malt) | 0.4 kg (8.1%) | --- % | 140 |
| Grain | Barwiący viking malt | 0.05 kg (1%) | --- % | 1400 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|---------------------|--------|--------|------------|
| Boil | Hallertau Tradition | 50 g | 60 min | 5 % |
| Boil | Hallertau Tradition | 20 g | 15 min | 5 % |
| Aroma (end of boil) | Hallertau Tradition | 5 g | 0 min | 5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safbrew S-33 | Ale | Dry | 11.5 g | Fermentis |