

Altbier

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **25**
- SRM **11.6**
- Style **Northern German Altbier**

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 **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **15.8 liter(s)**
- Total mash volume **20.3 liter(s)**

Steps

- Temp **56 C**, Time **1 min**
- Temp **65 C**, Time **30 min**
- Temp **73 C**, Time **40 min**
- Temp **75 C**, Time **1 min**

Mash step by step

- Heat up **15.8 liter(s)** of strike water to **61.1C**
- Add grains
- Keep mash **1 min** at **56C**
- Keep mash **30 min** at **65C**
- Keep mash **40 min** at **73C**
- Keep mash **1 min** at **75C**
- Sparge using **14 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------|----------------|-------|-----|
| Grain | Monachijski | 2.7 kg (60%) | 80 % | 16 |
| Grain | Pilzneński | 1.5 kg (33.3%) | 81 % | 4 |
| Grain | Strzegom Karmel 300 | 0.3 kg (6.7%) | 70 % | 299 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-----------|--------|--------|------------|
| Boil | Tradition | 40 g | 60 min | 5.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|------|---------|------------|
| Safale US-05 | Ale | Dry | 17.25 g | Fermentis |