

Altbier

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **37**
- SRM **9.8**
- Style **Düsseldorf 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 **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.5 liter(s)**
- Total mash volume **20.6 liter(s)**

Steps

- Temp **63 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **15.5 liter(s)** of strike water to **70.1C**
- Add grains
- Keep mash **40 min** at **63C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **15 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|----------------|-------|-----|
| Grain | Strzegom Monachijski typ I | 3.5 kg (68%) | 79 % | 16 |
| Grain | Strzegom Pilzneński | 1.5 kg (29.1%) | 80 % | 4 |
| Grain | Strzegom Karmel 300 | 0.15 kg (2.9%) | 70 % | 299 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------------------|--------|--------|------------|
| Boil | Premiant | 10 g | 60 min | 8 % |
| Boil | Lublin (Lubelski) | 45 g | 45 min | 4 % |
| Boil | Marynka | 10 g | 60 min | 10 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-----------------------|------|--------|--------|------------------|
| FM42 Stare Nadreńskie | Ale | Liquid | 200 ml | Fermentum Mobile |