

ALTMAX

- Gravity **12.6 BLG**
- ABV ---
- IBU **41**
- SRM **15.4**
- Style **Düsseldorf Altbier**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.9 liter(s)**
- Total mash volume **19.8 liter(s)**

Steps

- Temp **66 C**, Time **50 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **14.9 liter(s)** of strike water to **73.6C**
- Add grains
- Keep mash **50 min** at **66C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **19.1 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|----------------|-------|------|
| Grain | Strzegom Pilzneński | 3 kg (60.6%) | 80 % | 4 |
| Grain | Strzegom Monachijski typ I | 1.5 kg (30.3%) | 79 % | 14 |
| Grain | Strzegom Karmel 150 | 0.4 kg (8.1%) | 75 % | 150 |
| Grain | Strzegom Barwiący | 0.05 kg (1%) | 68 % | 1000 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|--------|--------|--------|------------|
| Boil | Perle | 35 g | 60 min | 7 % |
| Boil | Simcoe | 5 g | 60 min | 13.2 % |
| Boil | Perle | 20 g | 15 min | 7 % |
| Aroma (end of boil) | Perle | 10 g | 5 min | 7 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|----------------------------|------|------|--------|------------|
| gozdawa old german altbier | Ale | Dry | 11 g | --- |