

Northern Altbier

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **33**
- SRM **15.5**
- Style **Northern German Altbier**

Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **2 %**
- Size with trub loss **19.4 liter(s)**
- Boil time **90 min**
- Evaporation rate **7 %/h**
- Boil size **21.9 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **15.1 liter(s)**
- Total mash volume **18.9 liter(s)**

Steps

- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **15 min**

Mash step by step

- Heat up **15.1 liter(s)** of strike water to **70.6C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **15 min** at **72C**
- Sparge using **10.6 liter(s)** of **76C** water or to achieve **21.9 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|----------------|-------|-----|
| Grain | Strzegom Monachijski typ I | 3.2 kg (84.8%) | 79 % | 16 |
| Grain | Weyermann Caramunich 3 | 0.5 kg (13.2%) | 76 % | 150 |
| Grain | Carafa II | 0.075 kg (2%) | 70 % | 812 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|----------------------|--------|--------|------------|
| Boil | lunga | 20 g | 60 min | 11 % |
| Aroma (end of boil) | Hellertau Mittelfrüh | 20 g | 15 min | 3.7 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|-------|--------|------------|
| Safale K-97 | Ale | Slant | 200 ml | Fermentis |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|------------------|--------|---------|--------|
| Water Agent | soda oczyszczona | 2 g | Boil | 60 min |