

# #1 ALT

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- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **28**
- SRM **12.4**
- Style **Northern German Altbier**

## Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

## Mash information

- Mash efficiency **75 %**
- 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 **60 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 **60 min** at **66C**
- Keep mash **5 min** at **78C**
- Sparge using **16.6 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

## Fermentables

| Type  | Name                   | Amount         | Yield | EBC  |
|-------|------------------------|----------------|-------|------|
| Grain | Pilznieński            | 3 kg (60.6%)   | 81 %  | 4    |
| Grain | Monachijski            | 1.5 kg (30.3%) | 80 %  | 16   |
| Grain | Strzegom Karmel<br>150 | 0.4 kg (8.1%)  | 75 %  | 150  |
| Grain | Strzegom Barwiący      | 0.05 kg (1%)   | 68 %  | 1300 |

## Hops

| Use for             | Name      | Amount | Time   | Alpha acid |
|---------------------|-----------|--------|--------|------------|
| Boil                | Tradition | 50 g   | 60 min | 4.3 %      |
| Aroma (end of boil) | Tradition | 20 g   | 15 min | 4.3 %      |
| Aroma (end of boil) | Tradition | 5 g    | 0 min  | 4.3 %      |