

## LEM | Altbier

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **15**
- SRM **12.1**
- Style **Northern German Altbier**

### Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **5 %**
- Size with trub loss **19.4 liter(s)**
- Boil time **70 min**
- Evaporation rate **25 %/h**
- Boil size **26.6 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **18.8 liter(s)**
- Total mash volume **23.5 liter(s)**

### Steps

- Temp **53 C**, Time **15 min**
- Temp **63 C**, Time **30 min**
- Temp **73 C**, Time **30 min**
- Temp **79 C**, Time **0 min**

### Mash step by step

- Heat up **18.8 liter(s)** of strike water to **57.1C**
- Add grains
- Keep mash **15 min** at **53C**
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **73C**
- Keep mash **0 min** at **79C**
- Sparge using **12.5 liter(s)** of **76C** water or to achieve **26.6 liter(s)** of wort

### Fermentables

| Type  | Name                          | Amount         | Yield | EBC |
|-------|-------------------------------|----------------|-------|-----|
| Grain | Viking Malt Monachijski Jasny | 4.5 kg (95.7%) | 79 %  | 16  |
| Grain | Viking Malt Karmelowy 300     | 0.2 kg (4.3%)  | 70 %  | 299 |

### Hops

| Use for | Name                   | Amount | Time   | Alpha acid |
|---------|------------------------|--------|--------|------------|
| Boil    | Hallertau Spalt Select | 20 g   | 55 min | 4.2 %      |
| Boil    | Hallertau Spalt Select | 10 g   | 25 min | 4.2 %      |
| Boil    | Hallertau Spalt Select | 10 g   | 5 min  | 4.2 %      |

### Yeasts

| Name        | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-33 | Ale  | Dry  | 11 g   | Fermentis  |

### Extras

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.

| Type   | Name      | Amount | Use for | Time  |
|--------|-----------|--------|---------|-------|
| Fining | Whirlfloc | 1.29 g | Boil    | 5 min |