Altbier

- Gravity **12.7 BLG**
- ABV **---**
- IBU **53**
- SRM **12.9**
- Style **Düsseldorf Altbier**

Batch size

- Expected quantity of finished beer **24.5 liter(s)**
- Trub loss **10 %**
- Size with trub loss **26.9 liter(s)**
- Boil time **70 min**
- Evaporation rate **15 %/h**
- Boil size **31.6 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **13.9 liter(s)**
- Total mash volume **19.5 liter(s)**

Steps

- Temp **63 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **77 C**, Time **5 min**

Mash step by step

- Heat up **13.9 liter(s)** of strike water to **71.6C**
- Add grains
- Keep mash **45 min** at **63C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **77C**
- Sparge using **23.3 liter(s)** of **76C** water or to achieve **31.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	5 kg *(89.8%)*	80 %	4
Grain	Weyermann Caramunich II	0.25 kg *(4.5%)*	71.7 %	120
Grain	Pszeniczny	0.25 kg *(4.5%)*	85 %	4
Grain	Jęczmień palony	0.02 kg *(0.4%)*	55 %	985
Grain	Carafa III	0.05 kg *(0.9%)*	70 %	1034

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	25 g	60 min	13.5 %
Boil	Perle	30 g	30 min	7 %
Boil	Hallertauer	20 g	10 min	4.5 %
Boil	Saaz (Czech Republic)	20 g	10 min	4.5 %
Whirlpool	Hallertauer	20 g	15 min	4.5 %
Whirlpool	Saaz (Czech Republic)	20 g	15 min	4.5 %

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