Düsseldorf Altbier 22L

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **36**
- SRM **15.5**
- Style **Düsseldorf Altbier**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **21.2 liter(s)**
- Total mash volume **27.3 liter(s)**

Steps

- Temp **53 C**, Time **35 min**
- Temp **64 C**, Time **30 min**
- Temp **70 C**, Time **30 min**
- Temp **77 C**, Time **10 min**

Mash step by step

- Heat up **21.2 liter(s)** of strike water to **57.7C**
- Add grains
- Keep mash **35 min** at **53C**
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **70C**
- Keep mash **10 min** at **77C**
- Sparge using **12.7 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	2.51 kg *(41.5%)*	80 %	4
Grain	Strzegom Monachijski typ II	1.95 kg *(32.2%)*	79 %	22
Grain	Słód Caramunich Typ II Weyermann	0.94 kg *(15.6%)*	73 %	120
Grain	Weyermann - Caraamber	0.63 kg *(10.4%)*	75 %	65
Grain	Strzegom pszenica prażona	0.03 kg *(0.4%)*	70 %	1000

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Perle	25.14 g	50 min	7.2 %
Boil	Perle	18.86 g	20 min	7.2 %
Boil	Tradition	12.57 g	30 min	5.5 %
Boil	Tradition	31.43 g	10 min	5.5 %