

## Sticke Alt

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **29**
- SRM **13.7**
- Style **Düsseldorf Altbier**

### Batch size

- Expected quantity of finished beer **33 liter(s)**
- Trub loss **5 %**
- Size with trub loss **34.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **41.8 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4.3 liter(s) / kg**
- Mash size **36.5 liter(s)**
- Total mash volume **45 liter(s)**

### Steps

- Temp **65 C**, Time **40 min**
- Temp **72 C**, Time **40 min**
- Temp **76 C**, Time **15 min**

### Mash step by step

- Heat up **36.5 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **40 min** at **65C**
- Keep mash **40 min** at **72C**
- Keep mash **15 min** at **76C**
- Sparge using **13.8 liter(s)** of **76C** water or to achieve **41.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ II	3.55 kg (41.8%)	79 %	22
Grain	Pilzneński	3.55 kg (41.8%)	81 %	4
Grain	Caramunich® typ I	0.5 kg (5.9%)	73 %	80
Grain	Caraamber	0.5 kg (5.9%)	75 %	59
Grain	Strzegom pszenica prażona	0.1 kg (1.2%)	70 %	1000
Grain	Słód Caramunich Typ II Weyermann	0.287 kg (3.4%)	73 %	120

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	start gotowania	0.5 g	80 min	1 %
Boil	Perle	50 g	60 min	7.3 %
Boil	Hallertau Tradition	50 g	10 min	4.3 %

### Yeasts

Name	Type	Form	Amount	Laboratory
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FM50 Kłosy Kansas	Wheat	Slant	1000 ml	Fermentum Mobile
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