

Staruchy!

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **47**
- SRM **12.3**
- Style **Düsseldorf Altbier**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **26.4 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **20.1 liter(s)**
- Total mash volume **25.1 liter(s)**

Steps

- Temp **52 C**, Time **20 min**
- Temp **63 C**, Time **40 min**
- Temp **72 C**, Time **20 min**

Mash step by step

- Heat up **20.1 liter(s)** of strike water to **56C**
- Add grains
- Keep mash **20 min** at **52C**
- Keep mash **40 min** at **63C**
- Keep mash **20 min** at **72C**
- Sparge using **11.3 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ I	2 kg (39.8%)	79 %	16
Grain	Strzegom Pilzneński	0.9 kg (17.9%)	80 %	4
Grain	Strzegom Karmel 600	0.12 kg (2.4%)	68 %	600
Grain	Strzegom Monachijski typ II	2 kg (39.8%)	79 %	22

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	30 g	60 min	12.6 %
Aroma (end of boil)	halertauer mittelfruh	18 g	10 min	3.9 %
Aroma (end of boil)	tradition	12 g	10 min	6 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM42 Stare Nadreńskie	Ale	Slant	100 ml	Fermentum Mobile