

## Staruchy! v.2

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- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **46**
- SRM **14.6**
- 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 **25.9 liter(s)**

### Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **18.4 liter(s)**
- Total mash volume **23 liter(s)**

### Steps

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

### Mash step by step

- Heat up **18.4 liter(s)** of strike water to **68.4C**
- Add grains
- Keep mash **40 min** at **63C**
- Keep mash **20 min** at **72C**
- Sparge using **12.1 liter(s)** of **76C** water or to achieve **25.9 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3.5 kg (75.9%)	81 %	4
Grain	red active viking malt	0.93 kg (20.2%)	79 %	35
Grain	Carafa special III 1300-1500	0.08 kg (1.7%)	70 %	1400
Grain	Strzegom Karmel 300	0.1 kg (2.2%)	70 %	299

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	35 g	60 min	9.8 %
Aroma (end of boil)	halertauer mittelfruh	40 g	10 min	3.9 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Wyeast - Kolsch	Ale	Liquid	1000 ml	---