

# Staruchy! v.3

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- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **44**
- SRM **13.8**
- Style **Düsseldorf Altbier**

## Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.2 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **12.2 liter(s)**
- Total mash volume **15.3 liter(s)**

## Steps

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

## Mash step by step

- Heat up **12.2 liter(s)** of strike water to **68.4C**
- Add grains
- Keep mash **40 min** at **63C**
- Keep mash **20 min** at **72C**
- Sparge using **6.1 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ I	2.6 kg (85.2%)	79 %	16
Grain	red ale viking malt	0.4 kg (13.1%)	75 %	70
Grain	Weyermann - Chocolate Wheat	0.05 kg (1.6%)	74 %	788

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	20 g	60 min	11 %
Aroma (end of boil)	Hallertau Mittelfruh	10 g	5 min	4.1 %
Aroma (end of boil)	Saaz (Czech Republic)	10 g	5 min	4.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
lallemand koelsch yeast	Ale	Slant	200 ml	---