

# 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 | ---        |