

## Kolsh II roboczy

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- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **30**
- SRM **4.3**
- Style **Kölsch**

### Batch size

- Expected quantity of finished beer **38 liter(s)**
- Trub loss **5 %**
- Size with trub loss **39.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **48.1 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **4.1 liter(s) / kg**
- Mash size **40.5 liter(s)**
- Total mash volume **50.4 liter(s)**

### Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **0 min**

### Mash step by step

- Heat up **40.5 liter(s)** of strike water to **69.4C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **17.5 liter(s)** of **76C** water or to achieve **48.1 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	9.5 kg (96.2%)	80 %	4
Grain	Pszeniczny	0 kg	85 %	4
Grain	Weyermann - Carapils	0.28 kg (2.8%)	78 %	4
Grain	Słód Caramunich Typ II Weyermann	0.1 kg (1%)	73 %	120

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	28.5 g	60 min	10 %
Boil	Marynka	28.5 g	30 min	10 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM42 Stare Nadreńskie	Ale	Culture	1.9 g	Fermentum Mobile