

## #28 Kolsh

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- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **26**
- SRM **2.8**
- Style **Kölsch**

### Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **0 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.6 liter(s)**

### Mash information

- Mash efficiency **91 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12.9 liter(s)**
- Total mash volume **17.2 liter(s)**

### Steps

- Temp **45 C**, Time **0 min**
- Temp **52 C**, Time **10 min**
- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **0 min**

### Mash step by step

- Heat up **12.9 liter(s)** of strike water to **49.2C**
- Add grains
- Keep mash **0 min** at **45C**
- Keep mash **10 min** at **52C**
- Keep mash **45 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **18 liter(s)** of **76C** water or to achieve **26.6 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Słodownia Strzegom - pilzneński	3.9 kg (90.7%)	80 %	3
Grain	Weyermann - słód orkiszowy	0.2 kg (4.7%)	82 %	5
Grain	Słodownia Strzegom - pszeniczny	0.2 kg (4.7%)	83 %	3

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	16 g	60 min	12.1 %
Boil	Tradition	20 g	15 min	5.2 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM50 - Kłosa Kansas	Ale	Culture	200 g	Fermentum Mobile