

# KOLOŃSKIE

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- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **32**
- SRM **3.3**
- 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 **80 %**
- Liquor-to-grist ratio **3.2 liter(s) / kg**
- Mash size **14.4 liter(s)**
- Total mash volume **18.9 liter(s)**

## Steps

- Temp **45 C**, Time **5 min**
- Temp **52 C**, Time **10 min**
- Temp **64 C**, Time **50 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **2 min**

## Mash step by step

- Heat up **14.4 liter(s)** of strike water to **48.9C**
- Add grains
- Keep mash **5 min** at **45C**
- Keep mash **10 min** at **52C**
- Keep mash **50 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **2 min** at **78C**
- Sparge using **16.7 liter(s)** of **76C** water or to achieve **26.6 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	BESTMALZ - Best Pilsen	4 kg (88.9%)	80.5 %	4
Grain	Słód orkiszowy	0.25 kg (5.6%)	80 %	5
Grain	Pszoniczny	0.25 kg (5.6%)	85 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	20 g	60 min	13 %
Boil	Perle	10 g	15 min	7 %