

## 40# kolsch

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- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **23**
- SRM **4.3**
- Style **Kölsch**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **23.1 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **11.4 liter(s)**
- Total mash volume **15.2 liter(s)**

### Steps

- Temp **62 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **11.4 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **40 min** at **62C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **15.5 liter(s)** of **76C** water or to achieve **23.1 liter(s)** of wort

### Fermentables

| Type  | Name                             | Amount          | Yield | EBC |
|-------|----------------------------------|-----------------|-------|-----|
| Grain | Pilzneński                       | 2.8 kg (73.7%)  | 81 %  | 4   |
| Grain | Pszeniczny                       | 0.75 kg (19.7%) | 85 %  | 4   |
| Grain | Weyermann - Carapils             | 0.15 kg (3.9%)  | 78 %  | 4   |
| Grain | Słód Caramunich Typ II Weyermann | 0.1 kg (2.6%)   | 73 %  | 120 |

### Hops

| Use for | Name      | Amount | Time   | Alpha acid |
|---------|-----------|--------|--------|------------|
| Boil    | lunga     | 5 g    | 60 min | 9 %        |
| Boil    | lunga     | 5 g    | 45 min | 9 %        |
| Boil    | Tradition | 15 g   | 30 min | 5.5 %      |
| Boil    | Tradition | 15 g   | 15 min | 5.5 %      |

### Yeasts

| Name        | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-33 | Ale  | Dry  | 11 g   | Fermentis  |