

## chełmek kylsz 2

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **24**
- SRM **3.4**
- Style **Kölsch**

### 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 **3.5 liter(s) / kg**
- Mash size **9.5 liter(s)**
- Total mash volume **12.2 liter(s)**

### Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **1 min**

### Mash step by step

- Heat up **9.5 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **8.4 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

### Fermentables

| Type  | Name       | Amount         | Yield | EBC |
|-------|------------|----------------|-------|-----|
| Grain | Pilzneński | 2.5 kg (92.6%) | 81 %  | 4   |
| Grain | Pszeniczny | 0.2 kg (7.4%)  | 85 %  | 4   |

### Hops

| Use for             | Name       | Amount | Time   | Alpha acid |
|---------------------|------------|--------|--------|------------|
| Boil                | Iunga      | 10 g   | 60 min | 11 %       |
| Aroma (end of boil) | Tettnanger | 30 g   | 5 min  | 2.5 %      |

### Yeasts

| Name           | Type | Form | Amount | Laboratory |
|----------------|------|------|--------|------------|
| lallemand koln | Ale  | Dry  | 11.5 g | ---        |