

## #9 Prosty Jurli

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- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **25**
- SRM **3.6**
- 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 **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.2 liter(s)**
- Total mash volume **17.6 liter(s)**

### Steps

- Temp **45 C**, Time **15 min**
- Temp **63 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **0 min**

### Mash step by step

- Heat up **13.2 liter(s)** of strike water to **49.2C**
- Add grains
- Keep mash **15 min** at **45C**
- Keep mash **40 min** at **63C**
- Keep mash **20 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **16.5 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3.5 kg (79.5%)	81 %	4
Grain	Pszeniczny	0.4 kg (9.1%)	85 %	4
Grain	Strzegom Wiedeński	0.4 kg (9.1%)	79 %	10
Grain	Sauermalz	0.1 kg (2.3%)	80 %	5

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	10 g	60 min	13 %
Boil	Magnum	5 g	15 min	13 %
Aroma (end of boil)	Tettnang	30 g	15 min	3.6 %