

## #34 Wschodnie wzgorza

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- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **43**
- SRM **4**
- Style **Kölsch**

### Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **5 %**
- Size with trub loss **19.9 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **24.5 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.63 liter(s) / kg**
- Mash size **16 liter(s)**
- Total mash volume **20.4 liter(s)**

### Steps

- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **30 min**

### Mash step by step

- Heat up **16 liter(s)** of strike water to **67.8C**
- Add grains
- Keep mash **30 min** at **62C**
- Keep mash **30 min** at **72C**
- Sparge using **12.9 liter(s)** of **76C** water or to achieve **24.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilsner (2 Row) Ger	4 kg (90.9%)	81 %	4
Grain	Weyermann pszeniczny jasny	0.2 kg (4.5%)	80 %	6
Grain	Carabelge	0.2 kg (4.5%)	80 %	30

### Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Marynka	15 g	70 min	8.5 %
Aroma (end of boil)	Marynka	15 g	30 min	8.5 %
Aroma (end of boil)	Marynka	20 g	15 min	8.5 %
Aroma (end of boil)	Marynka	20 g	5 min	8.5 %
Whirlpool	Marynka	40 g	0 min	8.5 %