

Resztkowiec

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **32**
- SRM **3.9**
- Style **Kölsch**

Batch size

- Expected quantity of finished beer **27 liter(s)**
- Trub loss **5 %**
- Size with trub loss **28.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **34.2 liter(s)**

Mash information

- Mash efficiency **90 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **20 liter(s)**
- Total mash volume **25 liter(s)**

Steps

- Temp **52 C**, Time **15 min**
- Temp **63 C**, Time **65 min**
- Temp **73 C**, Time **10 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **20 liter(s)** of strike water to **56C**
- Add grains
- Keep mash **15 min** at **52C**
- Keep mash **65 min** at **63C**
- Keep mash **10 min** at **73C**
- Keep mash **5 min** at **78C**
- Sparge using **19.2 liter(s)** of **76C** water or to achieve **34.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	2 kg (40%)	82 %	4
Grain	Strzegom Monachijski typ I	1 kg (20%)	79 %	16
Grain	Strzegom Pszeniczny	1 kg (20%)	81 %	6
Grain	Płatki pszeniczne	0.5 kg (10%)	85 %	3
Grain	Płatki owsiane	0.5 kg (10%)	85 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	5 g	60 min	8.5 %
Boil	Marynka	10 g	50 min	8.5 %
Boil	Marynka	10 g	40 min	8.5 %
Boil	Marynka	10 g	30 min	8.5 %
Boil	Marynka	10 g	20 min	8.5 %
Boil	Marynka	15 g	10 min	8.5 %
Boil	Marynka	10 g	5 min	8.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Us-05	Ale	Dry	11.5 g	---