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- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **33**
- SRM **4.5**

Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **13.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **12.3 liter(s)**
- Total mash volume **15.8 liter(s)**

Steps

- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **0 min**

Mash step by step

- Heat up **12.3 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **7 liter(s)** of **76C** water or to achieve **15.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	słód pilzneński	2.5 kg (71.4%)	80 %	4
Grain	Strzegom Wiedeński	1 kg (28.6%)	80 %	8

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	10 g	50 min	12.9 %
Boil	Magnum	10 g	20 min	12.9 %
Dry Hop	Magnum	10 g	4 day(s)	12.9 %
Dry Hop	Cascade	15 g	2 day(s)	6 %

Yeasts

Name	Type	Form	Amount	Laboratory
us 05	Ale	Slant	100 ml	---

Extras

Type	Name	Amount	Use for	Time
Other	płatki jęczmienne	100 g	Mash	60 min
Flavor	dzika róża	60 g	Boil	60 min

Fining	mech irlandzki	5 g	Boil	15 min
Flavor	dzika róža	50 g	Secondary	14 day(s)