

wit na święta

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **20**
- SRM **3.6**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **12.5 liter(s)**
- Total mash volume **17.5 liter(s)**

Steps

- Temp **44 C**, Time **20 min**
- Temp **63 C**, Time **40 min**
- Temp **72 C**, Time **20 min**

Mash step by step

- Heat up **12.5 liter(s)** of strike water to **48.8C**
- Add grains
- Keep mash **20 min** at **44C**
- Keep mash **40 min** at **63C**
- Keep mash **20 min** at **72C**
- Sparge using **19 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pszeniczny	3 kg (50%)	75 %	4
Grain	Pilzński	2 kg (33.3%)	75 %	4
Sugar	cukier	1 kg (16.7%)	--- %	---

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lomik	60 g	45 min	3.8 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-33	Ale	Dry	11 g	Safale

Extras

Type	Name	Amount	Use for	Time
Flavor	rodzynki	400 g	Boil	20 min
Flavor	skórka pomarańczowa	180 g	Boil	20 min
Spice	kolendra	10 g	Boil	20 min

Spice	goździki	3 g	Boil	20 min
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