

Lichtenhainer

- Gravity **8.3 BLG**
- ABV **3.2 %**
- IBU **11**
- SRM **2.5**
- Style **Grodziskie/Graetzer**

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 **3 liter(s) / kg**
- Mash size **10.2 liter(s)**
- Total mash volume **13.6 liter(s)**

Steps

- Temp **64 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **10.2 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **19.7 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Grodziski pszeniczny wędzony dębem	2.7 kg (79.4%)	80 %	3
Grain	Strzegom Pilzneński	0.7 kg (20.6%)	80 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Sybilla	10 g	60 min	4.3 %
Boil	Marynka	5 g	60 min	9.1 %

Yeasts

Name	Type	Form	Amount	Laboratory
WLP090 - San Diego Super Yeast	Ale	Slant	100 ml	White Labs

Extras

Type	Name	Amount	Use for	Time
Water Agent	CaCl2	5 g	Mash	60 min
Water Agent	Kwas Mlekowy	25 g	Mash	60 min

Fining	Whirlflock-T	2.5 g	Boil	10 min
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