

Happy Grodzisk

- Gravity **7.6 BLG**
- ABV **2.9 %**
- IBU **19**
- SRM **2.3**
- Style **American Amber Ale**

Batch size

- Expected quantity of finished beer **11 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **14.6 liter(s)**

Mash information

- Mash efficiency **77 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **5.7 liter(s)**
- Total mash volume **7.3 liter(s)**

Steps

- Temp **64 C**, Time **15 min**
- Temp **72 C**, Time **45 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **5.7 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **15 min** at **64C**
- Keep mash **45 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **10.5 liter(s)** of **76C** water or to achieve **14.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Jęczmienny wędzony dębem	0.8 kg (49.4%)	80 %	3
Grain	Grodziski Bruntal	0.4 kg (24.7%)	80 %	3
Grain	Weyermann - Grodziski	0.42 kg (25.9%)	80 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	4 g	60 min	13.3 %
Boil	Chinook	10 g	5 min	13 %
Dry Hop	Citra	25 g	3 day(s)	12 %

Notes

- + 80g łuski ryżowej, US-05
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