Grodziskie Wariacje IV USA

- Gravity **7.8 BLG**
- ABV **---**
- IBU **48**
- SRM **2.8**
- Style **Grodziskie**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **10 %**
- Size with trub loss **24.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **30.4 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **8.7 liter(s)**
- Total mash volume **11.6 liter(s)**

Steps

- Temp **65 C**, Time **40 min**
- Temp **70 C**, Time **40 min**
- Temp **77 C**, Time **1 min**

Mash step by step

- Heat up **8.7 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **40 min** at **65C**
- Keep mash **40 min** at **70C**
- Keep mash **1 min** at **77C**
- Sparge using **24.6 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Grodziski	2 kg *(69%)*	80 %	4
Grain	Dymiony IREKS	0.6 kg *(20.7%)*	78 %	5
Grain	Pilzneński	0.3 kg *(10.3%)*	81 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Marynka	10 g	60 min	10 %
Boil	Simcoe	10 g	60 min	13.2 %
Boil	Amarillo	10 g	15 min	8.8 %
Boil	Citra	10 g	15 min	11 %
Aroma (end of boil)	Mosaic	10 g	15 min	11.7 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safbrew S-33	Ale	Slant	200 ml	Safbrew

Extras

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.

Type	Name	Amount	Use for	Time
Other	Łuska Ryżowa	150 g	Mash	60 min