Stout Grodziski v2

- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **52**
- SRM **34.5**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **22 liter(s)**
- Total mash volume **29.3 liter(s)**

Steps

- Temp **67 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **22 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **78C**
- Sparge using **13 liter(s)** of **76C** water or to achieve **27.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Grodziski pszeniczny wędzony dębem	5.4 kg *(73.7%)*	80 %	3
Grain	Brown Malt (British Chocolate)	0.5 kg *(6.8%)*	70 %	128
Grain	Barley, Flaked	0.4 kg *(5.5%)*	70 %	4
Grain	Weyermann - Dehusked Carafa III	0.25 kg *(3.4%)*	70 %	1024
Grain	Biscuit Malt	0.25 kg *(3.4%)*	79 %	45
Grain	Fawcett - Pale Chocolate	0.2 kg *(2.7%)*	71 %	600
Grain	Simpsons - Black Malt	0.2 kg *(2.7%)*	70 %	1450
Grain	Simpsons - Crystal Medium	0.125 kg *(1.7%)*	74 %	108

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	45 g	60 min	9.1 %
Boil	Marynka	25 g	20 min	9.1 %
Boil	Tomyski	50 g	0 min	3 %

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

Whirlpool	Tomyski	50 g	20 min	3 %
Dry Hop	Tomyski	100 g	3 day(s)	3 %
Dry Hop	Zula	50 g	3 day(s)	8.3 %

Yeasts

Name	Type	Form	Amount	Laboratory
WLP004 - Irish Ale Yeast	Ale	Liquid	1200 ml	White Labs

Extras

Type	Name	Amount	Use for	Time
Water Agent	CaCl2	6 g	Mash	60 min
Other	Łuska gryczana	250 g	Mash	60 min
Water Agent	Lactic Acid	6 g	Mash	60 min
Fining	Whirlfloc-T	2.5 g	Boil	10 min