

Gianni

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **29**
- SRM **9.3**
- Style **Grodziskie/Graetzer**

Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.2 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

Steps

- Temp **68 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **16.5 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **45 min** at **68C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **15.2 liter(s)** of **76C** water or to achieve **26.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Grodziski pszeniczny wędzony dębem	3 kg (54.5%)	70 %	3
Grain	Pilzneński	1 kg (18.2%)	70 %	4
Grain	dekstrynowy	1 kg (18.2%)	70 %	13
Grain	Caramel/Crystal Malt - 10L	0.5 kg (9.1%)	70 %	150

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Summit	15 g	60 min	17 %
Aroma (end of boil)	Minstrel	30 g	5 min	4.5 %
Aroma (end of boil)	summit	15 g	0 min	17 %
Aroma (end of boil)	Minstrel	30 g	0 min	4.5 %
Aroma (end of boil)	Mosaic	15 g	0 min	10 %
Dry Hop	Mosaic	15 g	7 day(s)	10 %
Dry Hop	sabro	30 g	4 day(s)	4 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis