

## #13 Grodziski Twist

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- Gravity **8 BLG**
- ABV **3.1 %**
- IBU **17**
- SRM **3.3**
- Style **Grodziskie/Graetzer**

### Batch size

- Expected quantity of finished beer **38 liter(s)**
- Trub loss **7 %**
- Size with trub loss **40.7 liter(s)**
- Boil time **75 min**
- Evaporation rate **10 %/h**
- Boil size **50.1 liter(s)**

### Mash information

- Mash efficiency **77 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **27 liter(s)**

### Steps

- Temp **39 C**, Time **50 min**
- Temp **51 C**, Time **20 min**
- Temp **66 C**, Time **30 min**
- Temp **72 C**, Time **15 min**

### Mash step by step

- Heat up **21 liter(s)** of strike water to **41.7C**
- Add grains
- Keep mash **50 min** at **39C**
- Keep mash **20 min** at **51C**
- Keep mash **30 min** at **66C**
- Keep mash **15 min** at **72C**
- Sparge using **35.1 liter(s)** of **76C** water or to achieve **50.1 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Grodziski pszeniczny wędzony dębem	2.1 kg (35%)	78 %	8
Grain	Viking Wheat Malt	2.5 kg (41.7%)	80 %	5
Grain	Słód Wędzony Steinbach	1.4 kg (23.3%)	80 %	5

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	15 g	60 min	10.5 %
Boil	Sybilla	30 g	20 min	3.5 %
Aroma (end of boil)	Galaxy	10 g	5 min	15 %
Dry Hop	Simcoe	30 g	5 day(s)	13.2 %

### Yeasts

Name	Type	Form	Amount	Laboratory
us-05	Ale	Slant	200 ml	---

## Extras

Type	Name	Amount	Use for	Time
Fining	karuk	99999 g	Secondary	5 day(s)