

#13 Tropical Lager - Twój Browar

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **61**
- SRM **5.8**
- Style **Vienna Lager**

Batch size

- Expected quantity of finished beer **35 liter(s)**
- Trub loss **5 %**
- Size with trub loss **36.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **44.3 liter(s)**

Mash information

- Mash efficiency **83 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **29.1 liter(s)**
- Total mash volume **37.4 liter(s)**

Steps

- Temp **52 C**, Time **1 min**
- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **2 min**

Mash step by step

- Heat up **29.1 liter(s)** of strike water to **56.6C**
- Add grains
- Keep mash **1 min** at **52C**
- Keep mash **40 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **2 min** at **78C**
- Sparge using **23.5 liter(s)** of **76C** water or to achieve **44.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	6.8 kg (81.9%)	81 %	4
Grain	Vienna Malt	1.2 kg (14.5%)	78 %	8
Grain	Strzegom Karmel 150	0.3 kg (3.6%)	75 %	150

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	50 g	60 min	10 %
Boil	Enigma (AUS)	80 g	10 min	17.2 %

Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W 34/70	Lager	Dry	22 g	Fermentis