

Wędzone brązowe żyto

- Gravity **13.3 BLG**
- ABV ---
- IBU **39**
- SRM **18.4**
- Style **Other Smoked Beer**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **21.5 liter(s)**

Steps

- Temp **45 C**, Time **20 min**
- Temp **64 C**, Time **50 min**
- Temp **70 C**, Time **10 min**
- Temp **75 C**, Time **5 min**

Mash step by step

- Heat up **16.5 liter(s)** of strike water to **48.8C**
- Add grains
- Keep mash **20 min** at **45C**
- Keep mash **50 min** at **64C**
- Keep mash **10 min** at **70C**
- Keep mash **5 min** at **75C**
- Sparge using **15 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Wiedeński	1 kg (19.5%)	79 %	10
Grain	Wędzony Gruszą	1 kg (19.5%)	80 %	5
Grain	Wędzony Czereśnią	1 kg (19.5%)	80 %	5
Grain	Słód żytni	1 kg (19.5%)	80 %	0
Grain	Pszoniczny	0.5 kg (9.8%)	85 %	4
Grain	Karmelowy żytni Strzegom	0.5 kg (9.8%)	75 %	296
Adjunct	Łuska ryżowa	0.125 kg (2.4%)	80 %	1

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Warrior	20 g	60 min	15.5 %
Aroma (end of boil)	Sybilla	30 g	5 min	5.9 %

Yeasts

Name	Type	Form	Amount	Laboratory
------	------	------	--------	------------

FM13 Irlandzkie Ciemności	Ale	Liquid	500 ml	Fermentum Mobile
------------------------------	-----	--------	--------	------------------