

czajoza

- Gravity **13.3 BLG**
- ABV ---
- IBU **25**
- SRM **6.4**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

Steps

- Temp **45 C**, Time **20 min**
- Temp **62 C**, Time **20 min**
- Temp **68 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **15 liter(s)** of strike water to **49.2C**
- Add grains
- Keep mash **20 min** at **45C**
- Keep mash **20 min** at **62C**
- Keep mash **30 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **15.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Maris Otter Crisp	3 kg (60%)	83 %	6
Grain	Żytni	1 kg (20%)	85 %	8
Grain	Gryczany	0.5 kg (10%)	80 %	10
Grain	Sahti Strzegom	0.5 kg (10%)	80 %	7

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Mosaic	10 g	60 min	10 %
Boil	Sorachi Ace	10 g	30 min	10 %
Boil	Iunga	10 g	10 min	11 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	20 ml	Fermentis
FM52 Amerykański Sen	Ale	Slant	20 ml	Fermentum Mobile

Extras

Type	Name	Amount	Use for	Time
Flavor	Herbata chińska	4 g	Boil	60 min
Fining	Mech irlandzki	6 g	Boil	10 min
Flavor	Herbata chińska	3 g	Secondary	5 day(s)