

# ale czad

- Gravity **14.5 BLG**
- ABV ---
- IBU **48**
- SRM **26.4**
- Style **Other Smoked Beer**

## Batch size

- Expected quantity of finished beer **30 liter(s)**
- Trub loss **5 %**
- Size with trub loss **31.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **12 %/h**
- Boil size **38.6 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **26.4 liter(s)**
- Total mash volume **35.2 liter(s)**

## Steps

- Temp **62 C**, Time **30 min**
- Temp **67 C**, Time **20 min**
- Temp **72 C**, Time **20 min**

## Mash step by step

- Heat up **26.4 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **30 min** at **62C**
- Keep mash **20 min** at **67C**
- Keep mash **20 min** at **72C**
- Sparge using **21 liter(s)** of **76C** water or to achieve **38.6 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	4 kg (45.5%)	82 %	6
Grain	Viking malt wędzony bukiem	2.5 kg (28.4%)	82 %	10
Grain	Strzegom Karmel 150	1 kg (11.4%)	75 %	70
Grain	Strzegom Karmel 300	0.5 kg (5.7%)	70 %	70
Grain	Strzegom Czekoladowy 400	0.5 kg (5.7%)	68 %	400
Grain	Strzegom Czekoladowy ciemny	0.3 kg (3.4%)	68 %	1200

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	hallertauer taurus	50 g	60 min	14 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Slant	150 ml	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
Water Agent	chlorek magnezu	24 g	Boil	60 min
Water Agent	kwask fosforowy	5 g	Mash	0 min