

# Czarna Porzeczka Sour Ale

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **12**
- SRM **7.8**
- Style **Saison**

## Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **1 %**
- Size with trub loss **23.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **1 %/h**
- Boil size **23.9 liter(s)**

## Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.2 liter(s) / kg**
- Mash size **11.2 liter(s)**
- Total mash volume **14.7 liter(s)**

## Steps

- Temp **66 C**, Time **60 min**
- Temp **80 C**, Time **5 min**

## Mash step by step

- Heat up **11.2 liter(s)** of strike water to **73.2C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **5 min** at **80C**
- Sparge using **16.2 liter(s)** of **76C** water or to achieve **23.9 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	2.7 kg (49.1%)	81 %	4
Grain	Pszeniczny	0.7 kg (12.7%)	85 %	4
Grain	Karmelowy Jasny 30EBC	0.1 kg (1.8%)	75 %	30
Liquid Extract	Koncentrat soku porzeczkowego	2 kg (36.4%)	40 %	30

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lublin (Lubelski)	20 g	60 min	4 %
Boil	Lublin (Lubelski)	15 g	20 min	4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11 g	Fermentis

## Extras

Type	Name	Amount	Use for	Time
Water Agent	Bakterie l.plantarium	5 g	Mash	1440 min

## Notes

- Po etapie zacierania i słodowania , brzeczke ostudzić do 35 stopni.  
Dodać Bakterie l.plantarum 5g (bakterie kwasu mlekowego) . Po 24 h zacząć gotować brzeczke.  
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