

18# Czarna Osiemnastka

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **32**
- SRM **38.9**
- Style **Sweet Stout**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **24.5 liter(s)**
- Total mash volume **31.5 liter(s)**

Steps

- Temp **55 C**, Time **1 min**
- Temp **67 C**, Time **60 min**
- Temp **78 C**, Time **3 min**

Mash step by step

- Heat up **24.5 liter(s)** of strike water to **60C**
- Add grains
- Keep mash **1 min** at **55C**
- Keep mash **60 min** at **67C**
- Keep mash **3 min** at **78C**
- Sparge using **11.5 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Czekoladowy	1 kg (14.3%)	60 %	800
Grain	Barley, Torrefied	5 kg (71.4%)	79 %	4
Grain	Strzegom Karmel 150	1 kg (14.3%)	75 %	150

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	20 g	60 min	7.6 %
Boil	Chinook	20 g	30 min	7.6 %
Boil	Chinook	20 g	10 min	7.6 %
Boil	Chinook	20 g	5 min	7.6 %
Dry Hop	Chinook	20 g	7 day(s)	7.6 %

Yeasts

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