

# Ris owies+czekolada

- Gravity **28.9 BLG**
- ABV **14.1 %**
- IBU **106**
- SRM **74.6**
- Style **Russian Imperial Stout**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **28.5 liter(s)**
- Total mash volume **38 liter(s)**

## Steps

- Temp **70 C**, Time **90 min**

## Mash step by step

- Heat up **28.5 liter(s)** of strike water to **78.3C**
- Add grains
- Keep mash **90 min** at **70C**
- Sparge using **8.8 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.5 kg (28.2%)	80 %	5
Grain	Biscuit Malt	2 kg (16.1%)	79 %	45
Grain	Caraaroma	1 kg (8.1%)	78 %	400
Grain	Strzegom Czekoladowy jasny	2 kg (16.1%)	68 %	400
Grain	Carafa III	1 kg (8.1%)	70 %	1034
Adjunct	Briess - Oat Flakes	1.2 kg (9.7%)	80 %	5
Liquid Extract	Bruntal ekstrakt słodowy pszeniczny	1.7 kg (13.7%)	80 %	36

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	100 g	60 min	15.5 %
Aroma (end of boil)	Oktawia	100 g	15 min	7.1 %
Aroma (end of boil)	Oktawia	100 g	5 min	7.1 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	23 g	Fermentis