

## Dry Stout after RIS

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **68**
- SRM **34.3**
- Style **Dry Stout**

### Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11 liter(s)**
- Boil time **60 min**
- Evaporation rate **20 %/h**
- Boil size **14.4 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **9.6 liter(s)**
- Total mash volume **12.4 liter(s)**

### Steps

- Temp **66 C**, Time **70 min**
- Temp **66 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **9.6 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **20 min** at **66C**
- Keep mash **70 min** at **66C**
- Keep mash **5 min** at **78C**
- Sparge using **7.6 liter(s)** of **76C** water or to achieve **14.4 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale	1.5 kg (54.5%)	79 %	6
Grain	Monachijski	0.2 kg (7.3%)	79 %	15
Grain	Karmelowy 600	0.1 kg (3.6%)	68 %	650
Grain	Czekoladowy 400	0.2 kg (7.3%)	68 %	400
Grain	Melanoidynowy	0.15 kg (5.5%)	75 %	700
Grain	Czekoladowy 1200	0.1 kg (3.6%)	68 %	1000
Grain	BESTMALZ Best Minich	0.25 kg (9.1%)	80.5 %	16
Grain	Płatki owsiane	0.25 kg (9.1%)	85 %	3

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	20 g	60 min	11.5 %
Boil	Magnum	20 g	10 min	11.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
SafAle S-04	Ale	Dry	11.5 g	Safale

## Extras

Type	Name	Amount	Use for	Time
Water Agent	Chlorek wapnia 33% E509	8 g	Mash	75 min
Water Agent	Gips piwowarski	4 g	Mash	75 min