

Ultramaraton

- Gravity **24.9 BLG**
- ABV **11.6 %**
- IBU **87**
- SRM **33**
- Style **Russian Imperial Stout**

Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **120 min**
- Evaporation rate **14 %/h**
- Boil size **17.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **12 liter(s)**
- Total mash volume **16.8 liter(s)**

Steps

- Temp **65 C**, Time **110 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **12 liter(s)** of strike water to **74C**
- Add grains
- Keep mash **110 min** at **65C**
- Keep mash **10 min** at **78C**
- Sparge using **10.6 liter(s)** of **76C** water or to achieve **17.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	słód Pale Ale	4.2 kg (72.4%)	79 %	6
Grain	słód Monachijski II	0.6 kg (10.3%)	78 %	22
Adjunct	słód Carafa Special III	0.2 kg (3.4%)	65 %	140
Adjunct	słód czekoladowy żytni	0.2 kg (3.4%)	--- %	650
Adjunct	słód czekoladowy pszeniczny	0.2 kg (3.4%)	--- %	1000
Adjunct	płatki owsiane	0.4 kg (6.9%)	85 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Warrior	75 g	60 min	7.1 %
Boil	Warrior	25 g	25 min	7.1 %
Boil	Challenger	35 g	15 min	7.4 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safeale US-05	Ale	Liquid	600 ml	Fermentis