

# 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  |