

# Blueberry Muffin

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **13**
- SRM **6.4**
- Style **Fruit Beer**

## 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 **81 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.1 liter(s)**
- Total mash volume **18.8 liter(s)**

## Steps

- Temp **66 C**, Time **50 min**

## Mash step by step

- Heat up **14.1 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **50 min** at **66C**
- Sparge using **19.6 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

## Fermentables

| Type  | Name                          | Amount          | Yield | EBC |
|-------|-------------------------------|-----------------|-------|-----|
| Sugar | mleko                         | 0.75 kg (13.8%) | 51 %  | --- |
| Grain | Malteurop - Pale Ale          | 3.5 kg (64.2%)  | 83 %  | 6.5 |
| Grain | Castle Malting - Biscuit Malt | 0.8 kg (14.7%)  | 79 %  | 50  |
| Grain | Płatki owsiane                | 0.4 kg (7.3%)   | 85 %  | 3   |

## Hops

| Use for   | Name     | Amount | Time   | Alpha acid |
|-----------|----------|--------|--------|------------|
| Boil      | lunga    | 10 g   | 30 min | 9.6 %      |
| Whirlpool | Callista | 50 g   | 25 min | 3.9 %      |

## Yeasts

| Name                        | Type | Form   | Amount     | Laboratory       |
|-----------------------------|------|--------|------------|------------------|
| FM54 Gorączka kalifornijska | Ale  | Liquid | 1522828 ml | Fermentum Mobile |

## Extras

| Type   | Name    | Amount | Use for   | Time |
|--------|---------|--------|-----------|------|
| Flavor | Borówka | 1600 g | Secondary | ---  |